

**AGREEMENT
FOR THE DESIGN & CONSTRUCTION
of**

Closed and Load Restricted Bridge
Replacement Package 2023-1 (Package 15)

Anderson, Chester, Chesterfield, and Lancaster, South Carolina

A DESIGN-BUILD PROJECT

**BETWEEN
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
AND
E.S. WAGNER COMPANY LLC**

_____ day of May 9, 2023

Contract ID 8862230

Bridge Package 15
Anderson, Chester, Chesterfield, and Lancaster Counties

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WHEREAS, the South Carolina Department of Transportation, as an agency of the State of South Carolina, wishes to improve the safety and operation of the state highway system by replacing four bridges bundled in Bridge Package 15 in Anderson, Chester, Chesterfield, and Lancaster Counties (hereinafter referred to as “the Project”); and

WHEREAS, the South Carolina Department of Transportation, as a servant of the people of the State of South Carolina, wishes to see this strategic project completed; and

WHEREAS, limitations imposed by traditional methods of designing, and constructing highways would mean that the Project could be completed only after an unacceptable delay; and

WHEREAS, the South Carolina Department of Transportation, working with the Federal Highway Administration (FHWA), has devised an innovative plan to allow the commencement and completion of the Project in a timely and cost-effective manner; and

WHEREAS, pursuant to Section 57-5-1625 SC Code of Law, the South Carolina Department of Transportation desires to award a highway construction contract using a Design / Build procedure; and

WHEREAS, after a competitive process, CONTRACTOR has been selected to participate in this venture by designing and building the Project; and

WHEREAS, the South Carolina Department of Transportation wishes to avail itself of and rely on CONTRACTOR’s expertise and proven track record in designing and constructing such projects, on time and within budget; and

WHEREAS, CONTRACTOR wishes to provide that expertise and to participate in this venture for the good of the people of the State of South Carolina;

NOW THEREFORE, this Agreement is executed and made, effective as of the Effective Date as defined herein, between the SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION (“SCDOT”) and E. S. WAGNER COMPANY, LLC (“CONTRACTOR”). In consideration of the covenants hereinafter set forth, the parties hereto mutually agree as follows:

I. CONTRACT DOCUMENTS

The Contract shall be composed of this Agreement and all exhibits, SCDOT's Request for Proposals and all attachments, Request for Qualifications and all attachments, CONTRACTOR's Proposal and all attachments, and CONTRACTOR'S Qualifications and all attachments. In case of conflict, the order of precedence of the "Contract Documents" shall be: (1) this Agreement; (2) Agreement Exhibits; (3) SCDOT Request for Proposals (RFP) document and Attachment B; (4) CONTRACTOR's Proposal and attachments, clarifications, and communications; (5) SCDOT Request for Qualifications (RFQ) and (6) CONTRACTOR's Statement of Qualifications (SOQ). In the event of a conflict between the Contract Documents and Special Provisions identified in the Agreement Exhibits, the order of precedence shall be (1) the Contract Documents and (2) Special Provisions. The Project Information Package is provided for information only and is not a Contract Document. SCDOT makes no representations or warranties regarding the accuracy of the information contained therein.

II. PROJECT SCOPE

A. Scope of Work

CONTRACTOR shall furnish all services, labor, materials, equipment, supplies, tools, transportation, and coordination required to perform all design, preliminary engineering, surveying, geotechnical services, scheduling, permitting, right of way services, procurement, construction, utility coordination, demolition, material disposal and any other services necessary to perform the Project as defined in the Project Scope of Work made a part hereof as Exhibit 3, Project Design Criteria made a part hereof as Exhibit 4, Exhibits 5 through 6, and Attachment B.

B. Design and Construction Responsibilities

1. CONTRACTOR, consistent with applicable state licensing laws, shall provide, through qualified South Carolina licensed design professionals employed by CONTRACTOR or procured from qualified, independent South Carolina licensed design consultants, the design work and quality control, including, but not limited to, surveys, right of way services, roadway design, maintenance of traffic, geotechnical exploration and design, hydraulic analyses, storm water management, erosion control, superstructure design, and foundation and substructure design including seismic analyses for the preparation of the required drawings, specifications and other design submittals to permit CONTRACTOR to complete the work in accordance with the Contract.
2. CONTRACTOR may rely on geotechnical and survey information provided in Attachment B – Supplemental Design Criteria. The CONTRACTOR shall incorporate the information into the final Project Documents. CONTRACTOR shall supplement the geotechnical and survey information provided as required for its design.

3. CONTRACTOR shall provide through itself or subcontractors the necessary supervision, labor, inspection, testing, material, equipment, machinery, temporary utilities and other temporary facilities to permit performance of all demolition, earthwork, drainage, foundation work, maintenance of traffic, roadway work, structural work, excavation, erosion and sediment control work, field layout work, construction management, engineering and inspection, utility coordination and relocation, railroad coordination, CONTRACTOR quality control, maintenance, and all other work necessary to complete construction of the Project in accordance with the Contract. CONTRACTOR shall perform all design and construction activities efficiently and with the requisite expertise, skill and competence to satisfy the requirements of the Contract. CONTRACTOR at all times shall exercise control over the means, methods, sequences and techniques of construction. CONTRACTOR's operations and construction methods shall comply with all applicable federal, state and local regulations with regard to worker safety, protection of health and protection of the environment and applicable permit requirements.
4. CONTRACTOR shall design and construct the project in accordance with the approved environmental document. Where new right of way is required to construct the Project, the CONTRACTOR shall design and construct the Project so as to minimize the additional rights of way needed while adhering to the design criteria herein. Right of way services shall be the responsibility of the CONTRACTOR and shall be done in accordance with Article VIII of this Agreement. CONTRACTOR shall furnish the SCDOT a copy of any agreements for the use of additional properties not acquired as right of way that are used in conjunction with the construction of this Project. CONTRACTOR shall abide by the provisions of all applicable environmental permits, any conditions of individual right of way agreements, and all environmental commitments. The CONTRACTOR shall sign the Contractor Certification Form and these terms will be made part of the contract.
5. It shall be the responsibility of CONTRACTOR to comply with all applicable federal, state, and local laws in connection with the services set forth in this Contract. CONTRACTOR shall remain in good standing with the State and promptly notify SCDOT in writing if it is determined to be disqualified, suspended, debarred, or otherwise excluded from bidding, proposing, or contracting with any federal or state department or agency. This obligation shall include, but not be limited to, procurement of all permits and licenses not obtained by SCDOT provided, however, that with respect to any permit or licenses that must be obtained in the name of SCDOT, CONTRACTOR shall perform all functions within its power to obtain the permit, including mitigation, and SCDOT will fully cooperate in this effort and perform any functions that must be performed by SCDOT. CONTRACTOR shall be responsible for payment of all charges, fees, and taxes, and for providing all notices necessary and incident to the performance of the Project as of the Effective Date of this Agreement. The Contract Price shall include all charges, fees and taxes related to the above obligations and if any charges, fees

or taxes are waived by the regulatory or governmental entity, then the amount waived shall be deducted from the Contract Price.

6. CONTRACTOR shall remain in good standing with the State and promptly notify SCDOT in writing if it is determined to be disqualified, suspended, debarred, or otherwise excluded from bidding, proposing, or contracting with any federal or state department of agency.

C. Design Criteria

It shall be the responsibility of CONTRACTOR to design all aspects of the Project in accordance with the Contract Documents. For the Project, CONTRACTOR shall provide a completed set of construction plans signed and sealed by a licensed professional engineer in South Carolina. CONTRACTOR shall be fully responsible for the accuracy of the design and compliance with specifications, standards and Project Criteria.

D. Design Review

1. Prior to the Preconstruction Meeting, CONTRACTOR shall provide a Design Review Submittal Schedule to SCDOT. The Design Review Submittal Schedule shall include a Gantt chart of the submittal packages and will serve as the basis for reviewing the design and construction plans. The Design Review Submittal Schedule shall be updated and included with each submittal package. CONTRACTOR, CONTRACTOR's design consultant, subcontractors, suppliers and SCDOT shall discuss the schedule and procedures for submitting design plans at the Preconstruction Meeting. CONTRACTOR, CONTRACTOR's design consultant, subcontractors and suppliers shall not provide any design deliverables until the Design Review Submittal Schedule is approved by SCDOT. The Design Review Submittal Schedule shall be included in Submittal 000.
2. A Design Quality Control (QC) Plan shall be submitted for review and approval prior to any design or plan production. The plan shall clearly detail the processes and steps utilized by the designer and contractor to consistently produce quality designs and plans. The Design QC Plan shall be the first submittal listed in the Design Review Submittal Schedule. CONTRACTOR shall not provide any design deliverables until the Design QC Plan is approved by SCDOT. The Design QC Plan shall be included in Submittal 000.
3. All submittal packages shall be uploaded electronically to ProjectWise and an email shall be sent to SCDOT that verifies the contents of the upload. A complete submittal package shall be limited to one phase (ex. Preliminary/Right Of Way (ROW)/Final/Release For Construction (RFC)) of one roadway segment or structure and include all design deliverables specified in Exhibit 4z. Prior to beginning any construction activities, permanent or temporary, the Traffic Management Plan and Conceptual Work Zone Traffic Control plans for the entire project shall be submitted by the CONTRACTOR and approved by SCDOT.

4. If approved by SCDOT, one Maintenance of Traffic submittal package, including but not limited to, an NPDES permit application and related plans, may be allowed to provide the opportunity to begin construction of non-permanent work items, such as clearing and grubbing, shoulder strengthening, minor demolition not adversely impacting traffic or operations.
5. CONTRACTOR shall provide submittal packages as defined in Exhibit 4z. Prior to commencement of permanent construction activities on any defined segment or structure, SCDOT will have the right, but not the obligation, to review and comment upon all submittal packages pertaining to the said segment or structure. SCDOT reserves the right to provide comments on the design or plans at any time when an issue is identified that is not compliant with the Project Design Criteria, the RFP or is an error or omission.
6. All documents of a submittal package must be uploaded to ProjectWise by 11:59PM for the review period to begin the next business day. No more than one new submittal package shall be uploaded to ProjectWise within a five business day period. SCDOT reserves the right to utilize Bluebeam Studio to facilitate design reviews between SCDOT and the CONTRACTOR. The initial review period for each submittal package shall be 15 business days following the date SCDOT receives an accurate and complete submittal in conformity with the contract. SCDOT review comments will be sent to the CONTRACTOR, who shall respond within five business days and prior to subsequent phase submittals. SCDOT will then status CONTRACTOR'S responses and will provide additional comments, if any, within five business days. If any open comments remain after the initial 15 day review and subsequent 5 day review and comment periods, there will be no time constraint for the CONTRACTOR to respond. For all subsequent rounds of CONTRACTOR responses, SCDOT will status CONTRACTOR'S responses and will provide additional comments, if any, within five business days. Review comments for Preliminary, ROW, and Final phases of each segment or structure shall be closed before the associated RFC plans are authorized to be submitted and prior to commencement of construction, demolition or disposal activities.
7. CONTRACTOR shall revise design deliverables and upload to ProjectWise for verification to allow SCDOT to close review comments. Verification design deliverables are not required for preliminary phase submittal packages. Verification design deliverables are required to close SCDOT comments in order to approve ROW and authorize RFC phase submittal packages. CONTRACTOR shall clearly identify and describe any changes made to a verification design deliverable that are unrelated to SCDOT review comments. A complete verification package shall include revised contents for all design deliverables with open SCDOT review comments and be submitted along with CONTRACTOR responses. After comments are closed and before RFC submittal packages are uploaded to ProjectWise, any changes made to design deliverables may, at the sole discretion of SCDOT, require a new submittal package be provided and require adjustment to the CONTRACTOR's Design Review Submittal Schedule.

8. SCDOT's participation in the review and comment process is fully discretionary to SCDOT; however, no review or comment nor any failure to review or comment by SCDOT shall operate to absolve CONTRACTOR of its responsibility to design and build the Project in accordance with the Contract Documents or to shift responsibility to SCDOT.
9. SCDOT reserves the right to reject any submittal package that is deficient or incomplete. SCDOT will provide a written notice, including cause for rejection, for any submittal package that does not demonstrate the work can be completed in accordance with the Contract. Rejected submittal packages must be revised to comply with the Contract. Revised submittal packages will be considered a new submittal package and reviewed as described above. Rejected submittal packages shall not in any way serve to extend the Construction Time.

E. Maintenance of Traffic

1. The SCDOT work zone mobility requirements found within the documents known as *Rule on Work Zone Safety and Mobility: The Policy for South Carolina Department of Transportation* and *Rule on Work Zone Safety and Mobility: Implementation, Maintenance, and Safety Guidelines* (Policy) shall apply to this Project. These requirements apply to the CONTRACTOR, all subcontractors, and designated representatives acting on behalf of the CONTRACTOR performing duties with responsibilities relative to a work zone, including but not limited to planning, project development, design, construction, and maintenance.
2. The CONTRACTOR shall design, develop, implement and maintain a set of coordinated strategies to manage the work zone impacts of the Project designated as the Transportation Management Plan. These strategies will include a Temporary Traffic Control plan (TMP), a Transportation Operations component, and a Community and Public Relations Plan component. The Policy and the anticipated work zone impacts of the Project shall determine the level of detail, content, and scope of the TMP. The primary component, the Temporary Traffic Control plan shall address traffic control and safety throughout and adjacent to the Project site. A secondary component, the Transportation Operations plan, will address management of traffic operations in the Project site and all adjacent areas impacted by the Project. The final component, the Community and Public Relations Plan, addresses communications with the public and entities impacted by the Project. The CONTRACTOR's Transportation Management Plan and its components shall comply with the requirements of this Agreement and subsequent Exhibits, Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD) latest edition, and SCDOT policies, standard specifications and all addendums to the standard specifications, the typical traffic control standard drawings for road construction, and procedures.

F. Ownership of Documents

1. The Project Documents are intended by the parties each to be a “work-made-for-hire” as used in 17 U.S.C. § 101, et seq., and SCDOT shall be the owner of the Project Documents and, except as expressly set forth otherwise in this clause F., all associated Intellectual Property.
2. Upon the Effective Date of this Agreement, CONTRACTOR grants SCDOT an irrevocable, transferable, perpetual, fully paid-up, worldwide, royalty-free, nonexclusive license, with right to grant sublicenses, to reproduce the Proprietary Intellectual Property and Project Documents for the purposes of, but not limited to, promoting, using, maintaining, upgrading, or adding to the Project. The foregoing license includes license to reproduce, modify, adapt, and disclose the Proprietary Intellectual Property in connection with the Project and any interstate or state highway, whether tolled, owned, or operated by SCDOT. The foregoing right to transfer is limited to any governmental entity that succeeds to SCDOT’s ownership of the Project.
3. Upon completion of the Project, SCDOT step-in, or upon early termination of this Agreement, CONTRACTOR shall provide all Project Documents to SCDOT in the format designated by SCDOT.
4. All Proprietary Intellectual Property shall remain exclusively the property of CONTRACTOR (or its subcontractors, suppliers, or vendors).
5. To the extent permitted by applicable law, SCDOT will not disclose any Proprietary Intellectual Property other than to authorized transferees and sublicensees that, to the extent permitted by applicable law, agree to be bound by the foregoing nondisclosure obligation relating thereto. Notwithstanding any provision of this Agreement to the contrary, in no event shall SCDOT or any of its directors, officers, employees, consultants or agents be liable to CONTRACTOR, any of its subcontractors, suppliers, or other vendors, or any affiliate of any of the foregoing, for any losses caused by, arising out of, relating to, or resulting from any breach of the duty of confidentiality set forth in this clause 5 and in clause 2 if such breach is not the result of gross negligence or intentional misconduct, and CONTRACTOR hereby irrevocably waives, and shall cause all such subcontractors, suppliers, and other vendors, to waive, any and all claims against SCDOT or the State of South Carolina to any such losses.
6. With respect to any Proprietary Intellectual Property owned by a person or entity other than CONTRACTOR, CONTRACTOR shall obtain from such owner, concurrently with the execution of any contract with such owner or in connection with the first use or adaptation of the Proprietary Intellectual Property for the Project, both for CONTRACTOR and SCDOT, a license on the same terms as described in clause 2 above. The foregoing requirement shall not apply, however, to mass-marketed software products (sometimes referred to as “shrink wrap software”) owned by such a person or entity, where such a license cannot be extended to SCDOT using commercially reasonable efforts. The limitations

imposed upon SCDOT described in clauses 2 and 5 above shall also apply to SCDOT's licenses in such Proprietary Intellectual Property.

7. Definitions. For purposes of this Article II.F., the following terms have the meanings ascribed:
- a. Intellectual Property means all current and future legal and/or equitable rights and interests in know-how, patents (including applications), copyrights (including moral rights), trademarks (registered and unregistered), service marks, trade names, trade secrets, trade secret rights, designs (registered and unregistered), design rights, utility models, circuit layouts, plant varieties, business and domain names, inventions, solutions embodied in technology, and other intellectual activity, and applications of or for any of the foregoing, subsisting in or relating to the Project, Project design data or Project traffic data. Intellectual Property includes traffic management algorithms, and software used in connection with the Project (including software used for management of traffic on the Project), and associated source code and source code documentation. Intellectual Property is distinguished from physical construction and equipment itself and from other Project Documents (i.e., documents that disclose Intellectual Property).
 - b. Project Documents means any drawings, specifications, test data, inspection reports, QC documents, QA documents, daily diaries, other data, and any other documents (including plans, elevations, sections, details, diagrams, specifications, samples, drawings, sketches, charts, calculations, depictions, specifications, layouts, manuals, files, artwork, correspondence, and other submittals made under this Agreement), including those in electronic form, whether prepared by or on behalf of CONTRACTOR.
 - c. Proprietary Intellectual Property means Intellectual Property created, used, applied or reduced to practice in connection with the Project or with CONTRACTOR's scope of the work that derives commercial value from its protection as a trade secret under applicable law or from its protection under patent law.

G. Construction Criteria

CONTRACTOR shall construct the Project in accordance with all applicable Federal, State, and local statutes and regulations. All construction shall be performed in accordance with the following criteria, which are incorporated herein by reference and made a part hereof. The construction criteria are intended to be complementary and to describe and provide for a complete work. Where the following construction criteria conflict, the order of precedence shall be as listed below:

1. Approved Alternative Technical Concepts (ATCs) in CONTRACTOR's Response to RFP

2. Exhibit 4 – Project Design Criteria
3. Exhibit 5 – Special Provisions
4. Exhibits 6 - Environmental
5. Final Construction Plans provided by SCDOT
6. SCDOT Standard Drawings, effective as of the most recent Standard Highway Letting prior to the release of the Final RFP ([see Design Build Website - https://www.scdot.org/business/design-build.aspx](https://www.scdot.org/business/design-build.aspx))
7. SCDOT Supplemental Specifications and Supplemental Technical Specifications, effective as of the release of the Final RFP ([see Design Build Website - https://www.scdot.org/business/design-build.aspx](https://www.scdot.org/business/design-build.aspx))
8. SCDOT Standard Specifications for Highway Construction, effective as of the release of the Final RFP ([see Design Build Website - https://www.scdot.org/business/design-build.aspx](https://www.scdot.org/business/design-build.aspx))
9. SCDOT Construction Manual, effective as of the release of the Final RFP
10. Qualified Products Policies and Qualified Products List are available on SCDOT internet website.

H. Project Management

1. CONTRACTOR shall be responsible for ensuring that the Project is constructed in conformance with the Contract, all referenced documents and specifications, and applicable laws and regulations.
2. CONTRACTOR shall provide project management services sufficient to supervise the activities of his own personnel and subcontractors. CONTRACTOR shall provide a sufficient number of persons on site, to the satisfaction of SCDOT, to provide for the construction management of the Project.
3. SCDOT will provide representatives assigned to the Project to monitor the construction and provide necessary coordination between SCDOT and CONTRACTOR. All costs for salary and equipment to maintain SCDOT employees will be provided by SCDOT at no expense to CONTRACTOR. SCDOT and FHWA, if applicable, representatives will have unrestricted access to the Project, the work in progress, the “Daily Diaries”, and to other technical documents and project records associated with design, construction, demolition, material disposal, materials, quality control, materials installation, and testing. SCDOT will receive reasonable notice of and have the opportunity to participate in any meetings that may be held concerning the Project or the relationship between CONTRACTOR and its consultants and subcontractors when such meetings are associated with technical matters, progress, or quality of the Project. As used in

this paragraph, “notice” shall require actual written notice to SCDOT or SCDOT’s Agent.

I. Control of the Work

1. CONTRACTOR shall determine the appropriate means, methods and scheduling necessary to complete the work timely and in accordance with all construction requirements. SCDOT and FHWA, if applicable, will have the right to review and inspect the work at any time.
2. If, at any time, SCDOT observes or has actual notice of any fault or defect in CONTRACTOR’s performance of this Agreement, SCDOT will comply with the provisions of Article XVII, Default, Suspension and Termination. SCDOT is not required to discover or to accept defective or faulty work. SCDOT’s right to have defective or faulty work promptly corrected shall not be waived by any action of SCDOT.
3. SCDOT will have the authority to suspend the work, in accordance with Article XVIII of this Agreement.

J. Contract Deliverables

CONTRACTOR shall submit deliverables including, but not limited to, the following as set forth in the CONTRACT. All deliverables shall contain proper references to both the Contract ID number and the appropriate Project ID number for that specific location. Deliverables noted below with an asterisk shall be included in the Design Review Submittal Schedule and follow Design Review procedures as outlined in Article II, Section D of the Agreement.

1. Contract Deliverable Matrix
2. All deliverables as specified in Exhibit 4z*
3. CPM Schedule, as specified in Article IV
4. Design Review Submittal Schedule including Gantt Chart of Submittals*
5. Schedule of Values, as specified in Exhibit 2
6. Design QC Plan*
7. Construction QC Plan
8. Clearing and Grubbing Plan
9. CONTRACTOR’s Erosion Control Plan

10. SCDHEC Notice of Intent (NOI) for Stormwater Discharges Covered Under SC NPDES Construction General Permit SCR160000) & Storm Water Pollutant Prevention Plan and signed Contractor Certification Form (SCDHEC 0437)
11. Wetland and Stream Mitigation
12. Crane Operator Documents
13. Community and Public Relations Support Plan, as specified in Article X and Exhibit 5
14. EEO, DBE, and OJT Requirements, as specified in Article XVIII & Exhibit 5
15. Right-of-Way documents, as specified in Article VIII
16. Escrow Proposal Documents
17. CONTRACTOR's Materials Certification
18. Railroad Coordination Documents & Insurance Certificates per Exhibit 6
19. HAZMAT surveys for structures not already surveyed, SCDHEC Notice of Demolition for RCE Signature
20. Utility Coordination Reports, including Utility Agreements, and Supporting Documentation
21. Right of Way Plats and Monuments (per Preconstruction Advisory Memorandum #8)
22. Shop Plans and Working Drawings
23. As-Built Plans

K. Incorporation of ATCs

1. In the event that the approved ATCs incorporated into the Contract Documents require additional third-party approvals, governmental approvals, permits, analysis, assessment, or findings prior to implementation, CONTRACTOR shall (a) be solely responsible for the cost and schedule impact of any related review, analysis, assessment, approvals, permits and findings; (b) be solely responsible for the risk that any approvals, permits or findings are not granted, issued, approved or obtained or timely granted, issued, approved or obtained; and (c) not be entitled to any increase in the Contract Price or extension of the Contract Time as a result of any delay or cost associated with any such approvals, permits, analysis, assessment, or findings related to such ATC, including the inability to obtain any approvals, permits or findings.

2. If the Contract incorporates any approved ATCs and: (a) CONTRACTOR does not comply or is unable to comply with one or more of SCDOT conditions, restrictions, or other constraints on implementation imposed in connection with approval of the ATC, (b) CONTRACTOR is unable to obtain any approval, permit, or finding required for the ATC, or (c) the ATC otherwise proves to be infeasible, then CONTRACTOR shall comply with the Contract requirements that would have been applicable but for the ATC, without any increase in the Contract Price, extension of the Contract Time or any other entitlement to a change order hereunder. In such case and depending upon the circumstances (including if CONTRACTOR fails to use all reasonable efforts to implement the ATC or obtain any such approvals, permits, or findings, SCDOT may also be entitled to (i) a reduction in the Contract Price in an amount equal to the estimated value of the ATC on the Cost Proposal, as reasonably determined by SCDOT, but which in no event shall be less than cost (plus mark-up and profit) of the ATC as reflected in the Cost Proposal, and (ii) a reduction in the Contract Time in an amount equal to the estimated schedule savings as a result of the ATC not being implemented, as reasonably determined by SCDOT.
3. ATCs submitted by unsuccessful Proposers who have accepted the stipend may, in SCDOT's sole discretion, be presented to CONTRACTOR as a Contract Change Request.

L. Subcontracts

1. CONTRACTOR shall retain or cause to be retained only subcontractors that are qualified, experienced and capable in the performance of the portion of the work assigned. CONTRACTOR shall assure that each subcontractor has at the time of execution of the corresponding subcontract, supply agreement, or other vendor contract, and maintains at all times during performance of the assigned work, all licenses required by applicable laws. For purposes of this clause, "subcontract, supply agreement, or other vendor contract" shall be referred to as a "Subcontract."
2. The retention of subcontractors by CONTRACTOR will not relieve CONTRACTOR of its responsibility hereunder or for the quality of the work or materials provided by it. CONTRACTOR shall supervise and be fully responsible to SCDOT for the acts, omissions, negligence, intentional misconduct, or breach of applicable law, contract, governmental approval or permit by any subcontractor, vendor, supplier, or other contractor to CONTRACTOR (a "subcontractor", or by any member or employee of CONTRACTOR or any such subcontractor, vendor, supplier, or other contractor (each, a "Contractor-Related Entity"), as though CONTRACTOR directly employed all such individuals. No subcontract entered into by CONTRACTOR will impose any obligation or liability upon SCDOT to any such subcontractor or any of its employees. Nothing in this Agreement will create any contractual relationship between SCDOT and any subcontractor.
3. Each Subcontract shall:

- a. Set forth a standard of professional responsibility or a standard for commercial practice equal to the requirements of this Agreement and prudent industry practices for work of similar scope and scale and shall set forth effective procedures for claims and change orders.
- b. Require the subcontractor to carry out its scope of work in accordance with this Agreement, all applicable governmental approvals and permits, and applicable law.
- c. Physically Include Form FHWA-1273.
- d. Incorporate the general wage decisions applicable to the Project.
- e. Without cost to CONTRACTOR or SCDOT, expressly permit assignment to SCDOT or its successor, assign or designee of all CONTRACTOR's rights under the Subcontract, contingent only upon delivery of request from SCDOT following termination of this Agreement, allowing SCDOT or its successor, assign or designee to assume the benefit of CONTRACTOR's rights with liability only for those remaining obligations of CONTRACTOR accruing after the date of assumption, such assignment to include the benefit of all subcontractor warranties, indemnities, guarantees and professional responsibility.
- f. Expressly state that any acceptance of assignment of the Subcontract to SCDOT or its successor, assign or designee shall not operate to make the assignee responsible or liable for any breach of the Subcontract by CONTRACTOR or for any amounts due and owing under the Subcontract for work or services rendered prior to assumption (but without restriction on the Subcontractor's rights to suspend work or demobilize due to CONTRACTOR's breach).
- g. Expressly include a covenant to recognize and attorn to SCDOT upon receipt of notice from SCDOT that it has exercised its rights under this Agreement (including specifically step-in rights in the context of Contractor Defaults), without necessity for consent or approval from CONTRACTOR or to determine whether SCDOT validly exercised its rights, and CONTRACTOR's covenant to waive and release any claim or cause of action against the subcontractor arising out of or relating to its recognition and attornment in reliance on any such notice.
- h. Not be assignable by the subcontractor to any person or entity other than SCDOT (or its assignee) without CONTRACTOR's prior consent.
- i. Not be assignable by the CONTRACTOR to any person other than SCDOT (or its assignee) without SCDOT's prior consent.
- j. Expressly include requirements that the Subcontractor will: (i) maintain usual and customary books and records for the type and scope of business operations in which it is engaged (e.g., constructor, equipment supplier, designer, service

provider); (ii) permit audit thereof with respect to the Project or work by each of CONTRACTOR, FHWA and SCDOT pursuant to this Agreement, (iii) provide progress reports to CONTRACTOR appropriate for the type of work it is performing sufficient to enable CONTRACTOR to provide the reports it is required to furnish SCDOT under this Agreement.

- k. Include the right of CONTRACTOR to terminate the Subcontract in whole or in part upon any termination by SCDOT of this Agreement for SCDOT's convenience without liability of CONTRACTOR or SCDOT for the subcontractor's lost profits, business opportunity, or any consequential, incidental, indirect, special, or punitive damage.
- l. Expressly require the Subcontractor to participate in meetings between CONTRACTOR and SCDOT, upon SCDOT's request, concerning matters pertaining to such Subcontract or its work.
- m. Include an agreement by the subcontractor to give evidence in any dispute resolution proceeding pursuant to this Agreement, if such participation is requested by either SCDOT or CONTRACTOR.
- n. Expressly include a provision prohibiting cross-contract offset between the parties thereto, meaning that if a subcontractor is performing work on multiple contracts for the other party to the Subcontract or the other party's affiliates, the other party or its affiliate shall not withhold payment from the subcontractor on its Subcontract because of disputes or claims on another contract.
- o. Expressly require the subcontractor to make payments to sub-subcontractors, and be liable for interest payments to sub-subcontractors, under applicable law.
- p. Contain no waiver of the prompt payment protections for the subcontractor provided under applicable law.
- q. Expressly provide that all claims and charges of the subcontractor and its subcontractors at any time shall not attach to any interest of SCDOT in the Project or the Project ROW.
- r. Expressly include a covenant, expressly stated to survive termination of the Subcontract, to promptly execute and deliver to SCDOT a new contract between the subcontractor and SCDOT on the same terms and conditions as the Subcontract, in the event: (i) the Subcontract is rejected by CONTRACTOR in bankruptcy or otherwise wrongfully terminated by CONTRACTOR; and (ii) SCDOT delivers request for such new contract following termination or expiration of this Agreement.
- s. Be consistent in all other respects with the terms and conditions of this Agreement to the extent such terms and conditions are applicable to the scope of work of such subcontractors, and include all provisions required by this Agreement.

- t. Expressly require the Subcontractor to notify CONTRACTOR and SCDOT, in writing, promptly following any determination by any federal or state department or agency that the subcontractor is disqualified, suspended, debarred, or otherwise excluded from bidding, proposing, or contracting with any such federal or state department or agency.
- 4. CONTRACTOR shall not amend any Subcontract with respect to any of the foregoing matters without the prior consent of SCDOT.
- 5. CONTRACTOR shall not enter into any Subcontracts with any person or entity then debarred or suspended from submitting bids by any agency of the State.
- 6. Additional Requirements Relating to Subcontracts
 - a. Prior to any subcontractor performing any work on the Project, CONTRACTOR shall submit the Subcontractor/Hauler Approval Request Form for approval. SCDOT reserves the right to request the subcontract at any time. If requested by SCDOT, then CONTRACTOR shall submit a true and complete copy of the proposed Subcontract to SCDOT for such review and approval. SCDOT may disapprove any proposed Subcontract for reasons to include but not limited to default or delinquency of subcontractor.
- 7. Subcontracts with Affiliates
 - a. For purposes of this clause, "Affiliate" means (i) any equity member of CONTRACTOR, (ii) any person or entity who directly or indirectly, through one or more intermediaries, controls or is controlled by, or is under common control with CONTRACTOR or any such equity member, or (iii) any person or entity for which ten percent or more of the equity interest in such person or entity is held directly or indirectly, beneficially, or of record, by CONTRACTOR, any such equity member, or any affiliate of any person or entity described under clause (ii). "Control" means the possession, directly or indirectly, of the power to cause the direction of the management of an entity, whether through voting rights, securities, by contract, family relationship, or otherwise.
 - b. CONTRACTOR shall have the right to have work and services performed by Affiliates only under the following terms and conditions (in addition to all other general requirements for Subcontracts set forth in this Agreement):
 - (i.) CONTRACTOR shall execute a written Subcontract with the Affiliate;
 - (ii.) The Subcontract shall comply with all applicable provisions of this clause, be consistent with prudent industry practices, and be in form and substance substantially similar to Subcontracts then being used by CONTRACTOR or Affiliates for similar work or services with unaffiliated subcontractors;

- (iii.) The Subcontract shall set forth the scope of work and services and all the pricing, terms and conditions respecting the scope of work and services;
 - (iv.) The pricing, scheduling and other terms and conditions of the Subcontract shall be no less favorable to CONTRACTOR than those that CONTRACTOR could reasonably obtain in an arms' length, competitive transaction with an unaffiliated Subcontractor. CONTRACTOR shall bear the burden of proving that the same are no less favorable to CONTRACTOR; and
 - (v.) No Affiliate shall be engaged to perform any work or services which this Agreement states are to be performed by an independent or unaffiliated party.
 - (vi.) No Affiliate shall be engaged to perform any work or services that would be inconsistent with prudent industry practices.
- c. CONTRACTOR shall make no payments to Affiliates for work or services in advance of provision of such work or services, except for reasonable mobilization payments or other payments consistent with arm's length, competitive transactions of similar scope.

III. CONTRACT PRICE/CONTRACT PAYMENTS

A. Contract Price

The "Contract Price" shall be \$13,407,135.00. In consideration for the Contract Price, CONTRACTOR shall perform all of its responsibilities under the Contract. The Contract Price shall include all work identified in the Agreement and subsequent Exhibits and as identified in the Cost Proposal Bid Form – **EXHIBIT 1**.

B. Contract Price Adjustments

1. Allowable adjustments

When expressly permitted hereunder, only to the extent so permitted, and except as otherwise expressly stated with respect to an aspect of the work (or basis for a change to the Contract Price), the Contract Price may be added to or deducted from as a result of any of the following:

- a. A "Change" or "Force Account Directive".
- b. Differing site condition as set forth in Article XIII.
- c. Suspension for Convenience as set forth in Article XVII.
- d. Intentional or bad faith acts or omissions by SCDOT that unreasonably interfere with CONTRACTOR's performance and cause delay of work on the critical path of the Project.

- e. Changes in legal requirements or regulations that are effective subsequent to the date of submission of CONTRACTOR's response to the RFP.
- f. Discovery of hazardous materials not previously identified in Exhibit 6 Project Design Criteria and Attachment B as set forth in Article XI
- g. Discovery of archeological or paleontological sites not previously identified as set forth in Article X.
- h. Actual Premium Right Of Way Acquisition Costs as set forth in to Article VIII. No additional amount for overhead, profit, bonds and insurance will be considered for this item.
- i. Adverse Utility Adjustments impacts meeting the requirements as set forth in Article VII.

If the critical path is not affected, the Contract Price may be adjusted as follows. The additional 10% adjustment accounts for costs attributable to profit and all overheads.

$$\text{Allowable Contract Price Adjustment} = \text{Direct Costs} + (10\% \times \text{Direct Costs})$$

If the critical path is affected, the Contract Price may be adjusted as follows. The additional 10% adjustment accounts for costs attributable to profit and all overheads (except Extended Job Site).

$$\begin{aligned} \text{Allowable Contract Price Adjustment} \\ = \text{Direct Costs} + \text{Extended Job Site Overhead} \\ + (10\% \times (\text{Direct Costs} + \text{Extended Job Site Overhead})) \end{aligned}$$

Extended Job Site Overhead equals the Rate (D), established in Exhibit 5, times an approved Time Extension.

Other than as provided above, the Contract Price shall not be increased for Contract Time extensions or, except as expressly stated otherwise herein, delay damages. Contract Price adjustments shall be documented by change order through the Contract Change Request process signed by both parties and shall be reflected immediately in a revision to the Schedule of Values. No claim by the CONTRACTOR for an adjustment hereunder shall be allowed if notice is not given prior to final payment under this Agreement.

2. Changes

- a. A "Change" shall be any deviation or variation from the Project Scope or the Project Criteria. No Change shall be implemented without the express written approval of SCDOT.

- b. SCDOT or the CONTRACTOR may initiate a “Contract Change Request” in writing via the Contract Requests process in Exhibit 5. If SCDOT approves the change, CONTRACTOR shall perform the services as changed.

3. Force Account Directive

- a. A Force Account Directive is a written order from SCDOT directing a Change prior to agreement with CONTRACTOR on adjustment, if any, to the Contract Price or Contract Time. If a price for the work cannot be agreed upon or a time constraint requires expedited work, CONTRACTOR shall perform the work under Force Account Procedures as outlined in Section 109.5 of SCDOT’s Standard Specifications.

4. Direct Costs

For the purpose of a Contract Price Adjustment, “Direct Costs” shall be defined as:

- a. Costs of labor, including social security, old age and unemployment insurance, fringe benefits required by agreement or custom, and workers’ compensation insurance;
- b. Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- c. Actual costs of machinery and equipment owned by CONTRACTOR or any affiliated or related entity exclusive of hand tools;
- d. Actual costs paid for rental of machinery and equipment exclusive of hand tools;
- e. Costs of premiums for all bonds and insurance, permit fees, and sales, use or similar taxes; and
- f. Costs incurred or fees paid for design work related to the change or event.

C. Contract Payments

1. Schedule of Values

Prior to execution of this Agreement, CONTRACTOR shall provide a Schedule of Values acceptable to SCDOT and work may not start until the Schedule of Values is approved by SCDOT. The Schedule of Values will serve as the basis for cost loading of the CPM Schedule. The CPM schedule shall include sufficient information to provide for monetary and quantitative tracking of the work by SCDOT. Updates to the cost-loaded CPM schedule will serve as the basis for progress payments requested by and made to CONTRACTOR. If the Contract Price is adjusted, CONTRACTOR shall revise its Schedule of Values and the CPM Schedule to reflect the adjustment in the Contract Price. The revised Schedule of Values must be approved by SCDOT prior to

the time for the subsequent request for a progress payment otherwise no progress payments will be made. The Schedule of Values shall be incorporated herein as **EXHIBIT 2**. The Schedule of Values should include Lump Sum items that will serve as measurement and payment for any item referred to in this Contract as a “contract unit bid price” item. A list of minimum items to be included in the Schedule of Values is in Attachment B. This minimum items list may be expanded if desired by the CONTRACTOR and approved by SCDOT. A list of all available Schedule of Value items is included in the Project Information Package.

2. Mobilization

Mobilization shall not exceed 5% of the Total Contract Cost as shown in the Schedule of Values. Mobilization will be paid in two equal installments. The first will be paid in the progress payment immediately following Notice to Proceed, and the second will be paid at the start of construction.

3. Periodic Progress Payment Applications

No application for payment of the Contract Price shall be submitted until SCDOT gives a notice to proceed. Applications for payment of the Contract Price may be submitted once a month. Each application for payment of the Contract Price shall set forth, in accordance with the Schedule of Values and the cost-loaded CPM schedule, the percentage of all items comprising the work completed since CONTRACTOR’s immediately prior request for payment. The application for payment of the Contract Price may also request payment for equipment and materials not yet incorporated into the Project, provided that (i) SCDOT is satisfied that the equipment and materials are suitably stored at either the Project or another acceptable location, (ii) the equipment and materials are protected by suitable insurance and (iii) upon payment, SCDOT will receive title to the equipment and materials free and clear of all liens and encumbrances.

4. Periodic Progress Payments

SCDOT will review each application for payment and respond within seven calendar days. SCDOT will generate an “Estimate Summary to Contractor” and “Contractor Concurrence Form” for CONTRACTOR review. The “Contractor Concurrence Form”, with the attached “Estimate Summary to Contractor”, shall be the undisputed application for payment. SCDOT will make each payment within 21 calendar days of the receipt of the corresponding undisputed application for payment. In the event of a dispute over the quality of work or percentage of the Project completed, SCDOT’s decision is controlling and final. Payment by SCDOT will not preclude or estop SCDOT from correcting any measurement, estimate, or certificate regarding the percentage completion of the Project, and future payments may be adjusted accordingly.

5. Prompt Payment of Subcontractors

CONTRACTOR shall comply with the requirements of the SCDOT Prompt Payment Clause Supplemental Specification.

6. Withholding of Payment

SCDOT may withhold all or part of any payment under the Contract for any of the reasons listed below. Any funds withheld will be released upon CONTRACTOR fully remedying the defect, fault, or failure and will be included in the next regularly schedule pay estimate. Payment will be subject to retainage if applicable.

- a. Any CONTRACTOR default as set forth in Article XVII;
- b. Reasonable evidence that the Work will not be Substantially Complete within the Construction Time as adjusted and that the unpaid balance of the Contract Price will not be adequate to cover Liquidated Damages for the actual unexcused delay;
- c. Any fines or other charges to SCDOT due to CONTRACTOR's failure to comply with permit requirements or other regulations;
- d. Notice of cancellation of insurance;
- e. Violation of QC plan requirements;

D. Retainage

Provided the Project is proceeding satisfactorily, SCDOT will not withhold retainage. However, if at any time SCDOT determines that CONTRACTOR fails to meet contract terms or the Project is not proceeding satisfactorily, SCDOT may retain up to 10% of the Contract Price as retainage.

IV. CONTRACT TIME

A. Project Schedule

1. Time for Completion of Project: Time is of the essence. The Project shall be Substantially Complete within 630 calendar days from Notice to Proceed. The Notice to Proceed shall be no later than 45 days from the effective date of the Agreement. For all currently closed bridges, teams shall establish and begin maintaining their detour signage within 45 days of Notice to Proceed. Final Completion shall be reached as defined in paragraph 5 below.
 - a. Contract Time shall be the number of calendar days from effective date of agreement to Final Completion.
 - b. Construction Time for currently closed bridges is defined as calendar days from Notice of Demolition set forth by the date of bridge demolition to Substantial Work Completion on the Project. Each bridge shall be substantially complete

within the calendar days specified in the table below. Notice of Demolition shall be submitted to the Resident Construction Engineer a minimum of 30 days prior to beginning bridge demolition.

- c. For the S-108 bridge site, the CONTRACTOR shall provide the Resident Construction Engineer a written Notice of Closure indicating the effective date for the full closure of the S-108 bridge to through traffic. Notice of Closure shall be submitted to the Resident Construction Engineer a minimum 30 days prior to official closure of the bridge. Construction time will start when the bridge is fully closed to traffic. A travel lane in one direction may be closed prior to the Notice of Closure if all traffic movements are accommodated under a two-way, one-lane operation.
- d. Contractor may perform clearing and grubbing and utility relocations in advance of the Notice of Closure/Demolition provided detour/construction signage is in place.

Number	Route	Crossing	Structure Number	Asset Number	Construction Time [calendar days]
1	S-4-294 E Broad St	WILSONS CREEK	0470029400200	2650	150
2	S-12-53 Old Winnsboro Road	LITTLE ROCKY CREEK	1270005300200	5909	210
3	S-13-108 Outen Road	BROWN CREEK	1370010800100	7228	180
4	S-29-765 Hanging Rock Creek Road	HANGING ROCK CREEK	2970076500100	2771	180

- 2. Substantial Completion: When CONTRACTOR believes that it has reached Substantial Completion, it shall notify SCDOT in writing. Substantial Completion is the point in the Project when the work has been constructed to the typical section in the plans over the entire length of the Project, including tie ins to adjacent projects or existing roads, all travel lanes are open to the public, all safety features are installed and are being properly maintained, no lanes will have to be closed to complete any remaining work, and all work is completed except for “Project Close-out Activities”. “Project Close-out Activities” are defined as punch list items, site clean-up, demobilization, and final Project documentation, including but not limited to as-built plans.
- 3. Critical Path Method Schedule: CONTRACTOR shall prepare and maintain a schedule for the Project using the Critical Path Method of scheduling (hereinafter called “CPM Schedule”). Prepare a Level II CPM Schedule in accordance with this agreement and the SCDOT Supplemental Specifications with the following exceptions:

- a. Submit to the SCDOT the initial baseline CPM schedule within 30 days from the Effective Date of this Agreement. No contract payment will be made to Contractor and no construction work may begin until a CPM baseline schedule is received and accepted by SCDOT. Update the baseline CPM schedule for monetary and quantitative tracking purposes as RFC plans are developed.
- b. Cost-load the CPM schedule using the expenses identified in the schedule of values. Use the schedule of values to establish Expense Categories and assign to the correct activities.
- c. Include submittal activities. Allow duration for these activities to include SCDOT review periods.
- d. Reuse of deleted activity ID's from schedule update to schedule update is not allowed.
- e. Failure to include any element of work or any activity including but not limited to utility relocation, right of way acquisition, and permitting will not relieve the CONTRACTOR from completing all work within the Construction Time at no additional time or cost to the SCDOT, notwithstanding the acceptance of the schedule by SCDOT.
- f. Develop project specific calendars reflecting all seasonal restrictions included in this Agreement and non-work days. Address durations for weather within activity duration, not within the calendar.
- g. Use only a Work Breakdown Structure (WBS) to organize schedule activities. At a minimum, breakout the design and construction phases. These two breakouts should have the same parent within the structure.
- h. Submit monthly updates no later than 15 days following the most recent estimate period end date, whether or not an estimate was generated. Set the data date the same as the most recent estimate period end date.
- i. If SCDOT determines any schedule submission is deficient, it will be returned to the CONTRACTOR. A corrected schedule shall be provided within 7 calendar days from the SCDOT's transmittal date.
- j. The CONTRACTOR may plan for early completion; however, the schedule shall never reflect a completion date earlier than the original Substantial Completion date. SCDOT will not be liable in any way for CONTRACTOR's failure to complete the Project prior to the original Substantial Completion date. Any additional costs, including extended overhead incurred between CONTRACTOR's scheduled early completion date and the original Substantial Completion date, shall be the responsibility of the CONTRACTOR.

- k. Include in each narrative a detailed listing of crews utilized on activities and their responsibilities. In lieu of this, the Contractor may request to submit a Resource Loaded CPM schedule.
4. Progress Review Meetings:
 - a. Review Meetings shall be held between CONTRACTOR and SCDOT at least every 2 weeks. Periodic construction meetings shall be held by CONTRACTOR with its consultants and subcontractors to coordinate the work, update the schedule, provide information and resolve potential conflicts.
 - b. SCDOT and CONTRACTOR will hold a regular CPM Progress Meeting at which all principal parties are expected to attend. These meetings will be held the week before the application for payment is due so that job progress will coincide with the payment application. At this meeting, CONTRACTOR shall provide the most recent schedule with notations showing actual start dates, actual finish dates, and activity progress. If the schedule provided indicates an actual or potential delay to the completion of the Contract, CONTRACTOR shall provide a narrative identifying the problems, causes, the activities affected and describing the means and methods available to complete the Project by the Contract Time.
5. Final Completion: Final Completion shall be achieved within 90 calendar days of Substantial Completion as defined in this Agreement. When CONTRACTOR believes that all elements of its work on the Project, including all of the requirements of the Contract, have been completed, it shall notify SCDOT in writing. Within 30 days thereafter, SCDOT will acknowledge project completion or will advise CONTRACTOR in writing of any aspect of the Contract or the Project Scope that is incomplete or unsatisfactory. CONTRACTOR shall complete all corrective action within thirty (30) days after written notification of incomplete or unsatisfactory items. CONTRACTOR will notify SCDOT in writing upon completion of necessary corrective action. SCDOT will verify satisfactory completion of the corrective action in writing to CONTRACTOR. The number of days referenced above to achieve Final Completion does not include SCDOT's review period and the CONTRACTOR's corrective action time. Upon verification, the Project shall be deemed to have achieved Final Completion.
6. Long Stop: Long Stop Dates shall be defined as 90 calendar days after Substantial completion and 90 calendar days after Final Completion.
7. Inspection/Acceptance; No Waiver: No inspection, acceptance, payment, partial waiver, or any other action on the part of SCDOT will operate as a waiver of any portion of this Agreement or of any power reserved herein or any right to damages or other relief, including any warranty rights, except insofar as expressly waived by SCDOT in writing. SCDOT will not be precluded or estopped by anything contained herein from recovering from CONTRACTOR any overpayment as may be made to CONTRACTOR.

B. Time Extensions

Time may be extended if there is a delay to the critical path of the Project caused by an event listed below. All requests for time extensions shall be made in writing to SCDOT within 20 days of the event causing the delay. All time extensions must be approved in writing by SCDOT. Time extensions for weather shall not be allowed, except as provided under Force Majeure. Time extensions may be allowed for the following events that affect the critical path:

1. Force Majeure as that term is defined in this Agreement in Article XIV;
2. Changes or Force Account Directives;
3. Differing site conditions as defined under Article XIII;
4. Injunctions, lawsuits, or other efforts by individuals or groups that hinder, delay, or halt the progress of the Project, provided that such efforts are not premised on alleged wrongs or violations by CONTRACTOR or its subcontractors;
5. Interference with or delay of work on the critical path of the Project by SCDOT; however, CONTRACTOR shall not be entitled to a time extension if SCDOT's actions are necessitated by CONTRACTOR's actions, omissions, failure to perform quality work, or failure to comply with contract requirements;
6. Changes in the legal requirements or regulations which are effective subsequent to the date of this Agreement;
7. Discovery of hazardous materials not previously identified as set forth in Article XI;
8. Discovery of archeological or paleontological remains not previously identified as set forth in Article X; or
9. Adverse utility relocation impacts meeting the requirements set forth in Article VII.
10. Adverse Railroad coordination impacts as set forth in Article VII.
11. Adverse permit acquisition impacts as set forth in Article IX.

C. Owner's Right to Stop Work

SCDOT will have the authority to suspend the work, wholly or in part, for such periods, as SCDOT may deem necessary, due to CONTRACTOR's failure to meet the requirements of the Contract in the performance of the work. Such suspension of the work shall not constitute grounds for claims for damages, time extensions, or extra compensation.

D. Liquidated Damages

1. CONTRACTOR shall pay liquidated damages to SCDOT in the amount of \$750.00 for each day for which each bridge is not substantially complete, as defined in Article IV.
2. CONTRACTOR shall pay liquidated damages to SCDOT in the amount of \$750.00 for each day for which the Project is not substantially complete, as defined in Article IV.
3. CONTRACTOR shall pay liquidated damages to SCDOT in the amount of \$250.00 for each day at each bridge that Final Completion, as defined in Article IV, is not achieved.
4. CONTRACTOR shall pay liquidated damages to SCDOT in the amount of \$250.00 for each day that Final Completion, as defined in Article IV, is not achieved.
5. The parties acknowledge, recognize and agree that because of the unique nature of the Project, it is difficult or impossible to determine with precision the amount of damages that would or might be incurred by SCDOT as a result of the CONTRACTOR's failure to complete the Project as specified in the Contract. Therefore, any sums payable under this provision are in the nature of liquidated damages, and not a penalty, and are fair and reasonable and such payment represent a reasonable estimate of fair compensation for the losses that may reasonably be anticipated from such failure. Liquidated damages are SCDOT's sole remedy for delayed completion; however, liquidated damages do not apply to CONTRACTOR's liability for other contractual breaches, duties, or obligations.

V. CONSTRUCTION QUALITY ASSURANCE PROGRAM

A. CONTRACTOR's Responsibilities

CONTRACTOR shall be responsible for the QUALITY CONTROL Portion of the Program to include the items listed below. Work shall not commence until CONTRACTOR has met these requirements.

1. Quality Control Plan: CONTRACTOR shall submit a Quality Control (QC) Plan that outlines how CONTRACTOR shall assure that the materials and work are in compliance with the contract documents. The initial plan shall be submitted to SCDOT for review and approval at least five business days prior to the beginning of any construction activity. The plan shall be updated as necessary prior to the start of any specific construction operation. The plan shall include a list of SCDOT certified personnel responsible for management and quality control of the Project, and define the authority of each individual. The plan shall also include how CONTRACTOR will monitor quality and deal with failing materials. The QC Plan shall include the QC testing and sampling frequencies and shall indicate the frequency at which the QC Manager will provide QC test results to SCDOT.

CONTRACTOR shall include a summary of quantities to SCDOT for the purposes of meeting the minimum acceptance and independent assurance sampling and testing requirements for the Project.

2. Personnel: CONTRACTOR shall provide a sufficient number of SCDOT certified personnel to adequately control the work of the Project. Any personnel required to obtain samples or conduct material testing shall be SCDOT certified. CONTRACTOR shall provide SCDOT with copies of each individual's certifications for review and approval by SCDOT. Approved CONTRACTOR QC personnel shall be on the job at all times that permanent work items and materials are being incorporated into the project. CONTRACTOR's QC personnel shall not have any other project responsibilities.
3. CONTRACTOR Testing: Notwithstanding any required sampling and testing stipulated in Article II.G, the CONTRACTOR should establish additional sampling and testing to ensure that all workmanship and materials are in compliance with the contract requirements. Although not used for acceptance, QC testing and inspection shall ensure that quality has been incorporated into all elements of work prior to requesting acceptance testing and inspection. The QC Program should be sufficient in scope to remedy repeated discoveries of non-compliant work by those performing acceptance inspection and testing. Repeated observations of QC quality shortfalls shall be considered a breakdown of the QC program and shall be cause for investigation and corrective action prior to commencement of work areas affected. Corrective action may include the addition of new QC procedures, revision to existing QC procedures, re-training of QC personnel, removal and replacement of QC personnel, or other such actions which will restore the effectiveness of the QC program. All QC testing shall be performed in accordance with existing AASHTO, ASTM, or test methods used by SCDOT. The cost of these activities will be borne by CONTRACTOR.
4. Testing Laboratories: Hot Mix Asphalt testing laboratories require SCDOT certification. All other testing laboratories used on the Project must be AASHTO certified and approved by SCDOT 30 days prior to beginning the portion of work for which the laboratory will be performing the testing.
5. Mix Designs: Copies of all initial hot-mix asphalt mix designs and Portland Cement Concrete mix designs, along with supporting data, shall be submitted to SCDOT for review at least five business days prior to use. All hot-mix asphalt mix designs will be prepared by personnel certified in Mix Design Methods. Portland Cement Concrete mix designs will be prepared by a certified concrete technician or a Professional Engineer. The Portland Cement Concrete mix proportions given in the specifications are to be followed. CONTRACTOR shall design the mix to obtain the strength and water/cement ratios given in the specifications, and shall provide workability, air content, gradation and suitable set times as set forth in the Standard Specifications. The SCDOT will be notified of any revisions to CONTRACTOR's mix design. Copies of such revisions will be sent to SCDOT for review at least 10 business days prior to use.

6. Materials Certifications: CONTRACTOR's QC Manager shall submit all material certifications to SCDOT prior to the CONTRACTOR incorporating the material into the project.

B. SCDOT Responsibilities

SCDOT will be responsible for the QUALITY ACCEPTANCE portion of the program to include: conducting inspections, acceptance testing, independent assurance testing and final project material certification.

1. Acceptance Testing: SCDOT personnel assigned to the Project, or qualified personnel retained by SCDOT, will conduct sampling and testing, separate from CONTRACTOR's testing, at the frequencies set forth in SCDOT's Quality Acceptance Sampling and Testing Guide. This testing will be used by SCDOT to determine the acceptability of the materials. All sampling and testing will be in accordance with existing AASHTO, ASTM, or SC test methods used by SCDOT. The cost of these activities will be borne by SCDOT. CONTRACTOR's QC Manager is required to coordinate all activities closely with SCDOT to allow the necessary acceptance testing to be conducted prior to proceeding to the next operation. The disposition of failing materials must be approved by SCDOT.
2. Independent Assurance Testing: SCDOT will be responsible for conducting Independent Assurance Testing. Personnel performing these tests will be SCDOT employees or qualified persons retained by SCDOT. Persons performing these tests will not be involved in Acceptance Testing. This testing will be used to ensure that proper sampling and testing procedures are being followed, and that testing equipment is functioning properly. This testing will consist of observing sampling and testing by both SCDOT personnel performing Acceptance Testing and CONTRACTOR personnel performing Quality Control Testing, as well as taking split samples for the purposes of comparison testing. Independent Assurance Testing will be at an approximate frequency of one-tenth of the Acceptance Testing frequency. Independent Assurance test results will not be used for acceptance. The cost of these activities will be borne by SCDOT.
3. Materials Certification: SCDOT will be responsible for preparing the Materials Certification as required by the FHWA on federally funded projects.

C. CONTRACTOR's Obligation

SCDOT's testing in no way relieves CONTRACTOR of its obligation to comply with the Contract requirements. All materials incorporated into the Project must meet or exceed contract requirements and specifications. Further, any testing by SCDOT will not relieve CONTRACTOR of any of its warranty obligations.

VI. INSURANCE AND BONDING

A. Insurance

1. CONTRACTOR shall purchase and maintain insurance using a company or companies that maintain an A.M. Best rating of not less than A-VII with coverage forms acceptable to SCDOT. The insurance described below shall be maintained uninterrupted for the duration of the Project, including warranty periods, and shall protect CONTRACTOR from claims set forth below which may arise out of or result from CONTRACTOR's operations under the Contract, whether such operations be performed by CONTRACTOR or by any subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable:
 - a. Claims under workers' or workmen's compensation, disability benefit and other similar employee benefit acts;
 - b. Claims for damages because of bodily injury, occupational sickness or disease, or death of CONTRACTOR's employees;
 - c. Claims for damages because of bodily injury, sickness or disease, or death of any person other than CONTRACTOR's employees;
 - d. Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by CONTRACTOR, or (2) by any other person;
 - e. Claims for damages, other than to the work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;
 - f. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
 - g. Claims involving contractual liability insurance applicable to the Contractor's obligations under the indemnity provisions of this contract.
 - h. Claims involving professional liability.
2. The minimum limits of liability for the following types of insurance are required, except where greater limits are required by statute:
 - a. Workers' Compensation, including: Worker's Compensation Insurance/Employer's Liability

State Statutory limits	Employer's Liability \$100,000 per accident \$500,000 per disease \$100,000 each employee
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 - b. Commercial General Liability

	\$1,000,000 per occurrence \$2,000,000 annual aggregate
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Commercial General Liability insurance shall be written on ISO occurrence form CG 00 01 (or substitute for providing equivalent coverage) and shall cover liability arising from premises, operations, independent contractors, products-completed operations, contractual liability and personal injury and advertising injury. The policy shall contain the per project endorsement.

- c. Business Automobile Liability \$1,000,000 per occurrence

This policy shall cover Any Auto, including Owned, Hired and Non-owned Automobiles. Business auto coverage shall be written on ISO form CA 00 01, CA 00 05, CA 00 12, CA 00 20, or a substitute form providing equivalent liability coverage.

- d. Umbrella Liability Coverage \$5,000,000 per occurrence
 \$10,000,000 annual aggregate

The general aggregate limit shall apply separately to the Project.

- e. Professional Liability Coverage: \$1,000,000 per claim
 \$2,000,000 annual aggregate

This policy shall cover all claims arising from the performance of professional services on the Project (Professional Liability also known as Errors and Omissions Insurance). Evidence of such insurance shall be provided to SCDOT at the time of the execution of the Agreement. This policy is written on a claims-made basis and CONTRACTOR warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of eight (8) years beginning at the time worked under this Contract is completed. CONTRACTOR shall obtain, or require the Lead Designer to obtain, Professional Liability insurance for this Project.

3. Certificates of Insurance acceptable to SCDOT will be provided to SCDOT prior to execution of this Agreement. These certificates shall name SCDOT as an additional insured under the Commercial General Liability (CGL) arising out of both the on-going operations and completed operations of CONTRACTOR. Such additional insured coverage shall be endorsed to Contractor's CGL policy using ISO Additional Insured Endorsement form CG 2010 (10/01) and CG 2037 (10/01) or a substitute providing equivalent coverage, and included under the commercial umbrella. CONTRACTOR shall maintain continual additional insured status for SCDOT under the products-completed operations coverage for eight years after Substantial Completion. CONTRACTOR shall also name SCDOT as additional insured under Business Automobile and Umbrella policies and reference the Project to which the certificate applies. The policies must contain a provision that coverage afforded will not be canceled until at least 30 days prior written notice has been given to SCDOT and that the policies cannot be cancelled for non-payment of premiums until at least 10 days prior written notice has been provided to SCDOT.

Send Notice of Cancellations to Director of Construction Room 330, PO Box 191, Columbia, SC 29202. Make certain that the policies are endorsed to reflect this requirement. Verification of additional insured status shall be furnished to SCDOT by including a copy of the endorsements with the Certificate of Insurance. This insurance, including insurance provided under the commercial umbrella shall apply as primary and noncontributory insurance with respect to any other insurance or self-insurance programs, including any deductibles, afforded to, or maintained by, SCDOT. CONTRACTOR'S deductibles shall not exceed \$250,000 without written consent of the SCDOT and that the certificates show the deductible amounts. CONTRACTOR shall provide a notarized letter from a Certified Public Accountant showing that they have the financial ability to cover the amount of the deductible at the time of the execution of the agreement and for every year thereafter until the insurance obligation ends.

4. Limits shown in this provision are minimum acceptable limits and in no way limit available coverage to the additional insured. CONTRACTOR's CGL and commercial umbrella policies shall contain no provision providing that the limits available to an additional insured are less than the limits available to the CONTRACTOR. SCDOT shall be given all the same rights and insurance coverage as CONTRACTOR.
5. There shall be no endorsements or modifications of the CGL limiting the scope of coverage for liability arising from explosion, collapse, underground property damage or work performed by contractors on behalf of SCDOT.
6. Hazardous Materials: If the CONTRACTOR is required to remove and haul any hazardous waste from the Project, or if the Project involves such similar environmental exposure, pollution liability coverage equivalent to that provided under the ISO Pollution Liability – Broadened Coverage for Covered Autos Endorsement (CA 99 48), shall be provided, and the Motor Carrier Act Endorsement (MCS 90) shall be attached. Limits of pollution liability shall be not less than \$250,000 per occurrence and \$1,000,000 annual aggregate. Coverage shall apply on an "occurrence form" basis, shall cover at a minimum bodily injury, property damage, defense costs and clean-up costs and be extended to include non-owned disposal sites and transportation coverage. This insurance shall remain in effect after acceptance by Owner for the time period required to satisfy the statute of limitations in South Carolina. However, if coverage is written on a "claims made form", then the Contractor's Pollution Liability coverage shall include a retroactive date that precedes the commencement of work under this Agreement. Such coverage shall apply as primary and non-contributory insurance with respect to any other insurance or self-insurance programs, including any deductibles, afforded to, or maintained by SCDOT. Pollution Liability policy must include contractual liability coverage.
7. Waiver of Subrogation: CONTRACTOR shall waive its rights against SCDOT, other additional insured parties, and their respective agents, officers, directors and employees for recovery of damages, or any other claims, to the extent these

damages are covered by the CGL, business auto, pollution liability, workers compensation and employer's liability or commercial umbrella maintained pursuant to this section of the Agreement.

8. CONTRACTOR is not required to purchase Builder's Risk Insurance; however, CONTRACTOR must bear all risk normally covered by Builder's Risk Insurance. If CONTRACTOR purchases Builder's Risk Insurance, it shall be at its own cost.
9. After Final Completion of the work, CONTRACTOR shall maintain CGL, professional liability, and commercial umbrella coverage to include liability coverage for damage to insured's completed work equivalent to that provided under ISO CG 00 01 for eight years after substantial completion.
10. By execution of the contract, the CONTRACTOR accepts the responsibility to provide the liability insurance policies and endorsements as specified herein. Failure of SCDOT to identify a deficiency in the Certificate of Insurance submitted by the CONTRACTOR's insurance agent as evidence of the specified insurance or to request other evidence of full compliance with the liability insurance specified shall not be construed as a waiver of the CONTRACTOR's obligation to provide and maintain the required insurance for the duration of the contract. The CONTRACTOR shall assess its own risks and if it deems appropriate and/or prudent, maintain higher limits and/or broader coverages. The CONTRACTOR is not relieved of any liability or other obligations assumed or pursuant to the Contract by reason of its failure to obtain or maintain insurance in sufficient amounts, duration, or types.

B. Bonding

1. CONTRACTOR shall at the time of the execution of this Agreement, provide SCDOT the following bonds:
 - a. A Performance and Indemnity Bond from a surety or sureties satisfactory to SCDOT. The amount of bond shall be equal to the Contract Price.
 - b. A Payment Bond from a surety or sureties satisfactory to SCDOT. The amount of bond shall be equal to the Contract Price.
2. These bonds shall be in accordance with the requirements of S.C. Code Ann. §57-5-1660, (1976 as amended) and S.C. Code Ann. §29-6-250 (2000). Bonds shall be issued by a surety company licensed in the State of South Carolina with an "A" minimum rating of performance as stated in the most current publication of "A.M. Best Key Rating Guide, Property Liability" and signed by the surety's agency or attorney-in-fact. Surety must be listed on the current U.S. Department of the Treasury Financial Management Service list of approved bonding companies as approved for an amount equal to or greater than the amount for which it obligates itself in the Bond. If surety qualifies by virtue of its Best's listing, the amount of

the Bond may not exceed ten percent of policyholders' surplus as shown in the latest A.M. Best's Key Rating Guide.

3. CONTRACTOR shall also provide a warranty bond, acceptable to SCDOT, in the amount of \$500,000 to cover the warranty obligations of the contract.

VII. UTILITIES AND RAILROAD COORDINATION

A. Utilities

1. As part of the Project Scope, CONTRACTOR shall have the responsibility of coordinating the Project construction and demolition activities with all utilities that may be affected. CONTRACTOR shall be responsible for the cost of all utility coordination unless defined otherwise herein. If applicable, all temporary relocation costs as well as any other conflict avoidance measures shall be the responsibility of the CONTRACTOR. For those utilities that have prior rights SCDOT will be responsible for permanent relocation costs as defined by the Federal code. For those utilities where the CONTRACTOR determines that the SCDOT has prior rights, CONTRACTOR may exercise these rights and require the utility company to bear the costs of relocation. If there is a dispute over prior rights, SCDOT shall be responsible for resolving the dispute. SCDOT shall have final determination of the utility's prior rights.
2. For those utilities requiring relocation, CONTRACTOR shall conform with SCDOT's "A Policy for Accommodating Utilities on Highway Rights of Way", the applicable State laws, and the Code of Federal Regulations, Title 23, Chapter 1, Subchapter G, part 645, subparts A and B. The CONTRACTOR is responsible for all costs associated with relocating utilities owned by SCDOT.
3. For those utilities who qualify for relocation assistance under S.C. Act 36 passed into law on May 13, 2019, SCDOT shall assist in the cost according to how the utility company qualifies for relocation under the Senate Bill for non-betterment work. The CONTRACTOR shall not include any costs associated with relocating the qualifying utilities as part of the Contract Price. The CONTRACTOR shall bear the responsibility to conduct all coordination activities for said utilities as stated in Article VII section A except as identified herein. The CONTRACTOR shall notify SCDOT within 30 days of the identification of the unavoidable conflict or at such time as to not impact the approved Critical Path. Upon written notification by the CONTRACTOR, SCDOT shall enter into a Memorandum of Agreement with said utility and shall provide the CONTRACTOR with the utility's approved design, minimum of three qualified contractors, design specifications, and criteria to be used to conduct all relocation activities for said utility. CONTRACTOR shall utilize the approved design and a subcontractor from the approved list or become approved by said utility to self-perform the relocation.
4. The resolution of any conflicts between utility companies and the construction of the Project shall be the responsibility of the CONTRACTOR. If said utility

companies interfere or fail to relocate conflicting utilities in a timely manner, SCDOT may, on an individual basis, consider a time extension for utility company delays when CONTRACTOR can demonstrate that appropriate coordination efforts have been made to expedite the utility relocation, and that the delay has a direct impact on the approved Critical Path. CONTRACTOR shall not be entitled to additional compensation for interference or delays in utility relocations. CONTRACTOR shall meet with the Department's Utilities Office within 30 days of the Notice to Proceed to gain a full understanding of what is required with each utility submittal.

5. CONTRACTOR shall design the Project to avoid conflicts with utilities where possible, and minimize impacts where conflicts cannot be avoided. If there is a dispute between the CONTRACTOR and SCDOT as to whether a utility relocation is required, SCDOT shall have the final determination. Additional utility relocations desired by the CONTRACTOR for but not limited to construction staging, access or convenience, shall be the sole responsibility of CONTRACTOR and all associated costs shall be borne by the CONTRACTOR.
6. CONTRACTOR shall initiate early coordination with all utilities and provide the utility companies with design plans for their use in developing Relocation Sketches as soon as the plans have reached a level of completeness adequate to allow the companies to fully understand the Project impacts. If a party other than the utility company prepares Relocation Sketches, there shall be a concurrence box on the plans where the utility company signs and accepts the Relocation Sketches as shown.
7. CONTRACTOR shall be responsible for collecting and submitting to SCDOT the following from each utility company that is located within the project limits:
 - a. **Relocation Sketches** including letter of "no cost" where the company does not have a prior right;
 - b. **Utility Agreements** including documentation of prior rights, cost estimate and relocation plans where the company has a prior right; and/or
 - c. **Letters of "no conflict"** where the company's facilities will not be impacted by the Project. Include location sketches on SCDOT plans confirming and certifying that facilities are not in conflict.
 - d. **Encroachment Permits** for all relocations regardless of prior rights.
8. CONTRACTOR shall assemble the information included in the Utility Agreements and Relocation Sketches in a final and complete form and in such a manner that the Department may approve the submittals with minimal review. CONTRACTOR shall ensure that there are no conflicts with the proposed highway improvements, or between each of the utility company's relocation plans. CONTRACTOR may not authorize the utility companies to begin their relocation work until authorized

in writing by SCDOT. Any early authorization by CONTRACTOR shall be at the CONTRACTOR's risk.

9. At the time that CONTRACTOR notifies SCDOT that CONTRACTOR deems the Project to have reached Final Completion, CONTRACTOR shall certify to SCDOT that all utilities have been identified and that those utilities with prior rights or other claims related to relocation or coordination with the Project have been relocated or their claims otherwise satisfied or will be satisfied by CONTRACTOR.
10. CONTRACTOR shall accurately show the final location of all utilities on the as-built drawings for the Project. SCDOT reserves the right to request CADD files as needed.

B. Railroad

If Railroad property is impacted by this project, the following provisions shall apply:

1. Under the direction of and in coordination with SCDOT, the CONTRACTOR shall be responsible for all coordination with the involved Railroad Companies, including but not limited to, sending plans, meetings, correspondence, phone calls, writing/reviewing agreements, and etc. as may be necessary to secure the applicable executed railroad agreements, needed for the construction of the project, between the SCDOT and all involved Railroad Companies. All correspondence related to railroad agreements or conditions shall include the railroad file number and railroad milepost information. The CONTRACTOR shall be responsible for the cost of railroad coordination as defined herein.
2. SCDOT will submit for approval, all required railroad agreements necessary for the Preliminary Engineering and Construction of the project. Upon approval, the SCDOT will submit the agreement to the Railroad Company for execution. The CONTRACTOR shall be responsible for assisting SCDOT in the development of the railroad agreement by providing requested information.
3. The CONTRACTOR shall be responsible for all costs to the Railroad Company or Companies for services provided by the Railroad or the Railroad's Agent, as detailed in the executed Railroad Agreement between the SCDOT and the Railroad. This includes all expenses such as railroad flagging operations. The CONTRACTOR shall be responsible for all other costs associated with designing and constructing the project as described in the executed Railroad Agreement between the SCDOT and the Railroad Company. The CONTRACTOR shall include all costs associated with these requirements in the final bid price. Once a contract is executed, SCDOT shall administer invoicing for costs to the Railroad Company or Companies. Monies will be deducted from the CONTRACTOR's progress payments after payments are made to the Railroad Company.
4. All design and construction activities in, adjacent to, over or under the railroad shall comply with all applicable Federal and State laws and standards, all terms identified

in the Special Provisions for Protection of Railway Interests, and all terms of the final agreement executed with the Railroad Company.

5. The CONTRACTOR shall be required to meet the Railroad's Insurance Requirements as specified in the Special Provisions for Protection of Railway Interests.
6. The CONTRACTOR shall attend a mandatory meeting with the SCDOT's Utilities Office and Railroad Projects Office within 30 days after the Notice to Proceed. The CONTRACTOR shall use the SCDOT approved agreement language and procedures, that will be provided in this meeting.
7. CONTRACTOR shall provide project specific information to SCDOT for inclusion into the agreements. The CONTRACTOR shall anticipate and include in the proposed schedule a minimum 90-day approval time-frame for all railroad agreements. If said Railroad Companies interfere or fail to provide information in a timely manner, SCDOT may, on an individual basis, consider a time extension for Railroad Company delays when CONTRACTOR can demonstrate that appropriate coordination efforts have been made to expedite the railroad coordination, and that the delay has a direct impact on the approved Critical Path. CONTRACTOR shall not be entitled to additional compensation for interference or delays related to railroad coordination.
8. CONTRACTOR shall anticipate the need for a separate right-of-entry agreement between the CONTRACTOR and Railroad for surveys, borings, etc. The required PE Agreement, between SCDOT and Railroad, must be executed before Railroad will review or comment on any design questions or submittals from the CONTRACTOR. The Construction Agreement, between SCDOT and Railroad, must be executed before any construction activities can begin at the railroads.
9. CONTRACTOR is advised that all utility relocations required within railroad right-of-way will require separate agreements between the affected utility company and the Railroad.

VIII. RIGHT OF WAY ACQUISITION

A. Right of Way Services

1. CONTRACTOR, acting as an agent on behalf of the State of South Carolina, shall provide right of way services for the Project unless otherwise directed herein. SCDOT's Right of Way office, through its assigned project manager and/or other designee, will retain final authority for approving just compensation, relocation benefits, administrative settlements, and legal settlements.
2. Right of way services shall include written appraisal, negotiation, acquisition, and relocation assistance services. CONTRACTOR shall be responsible for all costs related to these right of way services. CONTRACTOR will provide expert testimony and SCDOT will provide legal services necessary for any cases that are

to be resolved by trial. Experts are defined as engineering and appraisal witnesses. SCDOT will designate a hearing officer to hear any relocation assistance appeals. SCDOT agrees to assist with any out of state relocation by persons displaced within the rights of way by arranging with such other state(s) for verification of the relocation assistance claim.

3. All offers of just compensation will be based on a written approved appraisal unless prior approval is given to CONTRACTOR by SCDOT. If SCDOT decides to utilize cost estimate offers, SCDOT will prepare the cost estimates and provide CONTRACTOR with the approved right of way cost estimate. SCDOT may allow offers to be made based on cost estimates on tracts estimated to be \$20,000 or less and determined by SCDOT to be non-complicated. In the event the cost estimate offer is rejected by the property owner, a written appraisal shall be required.
4. SCDOT will be responsible for reviewing and approving all appraisals and setting just compensation. Appraisals will be reviewed and released within 15 business days of receipt. If appraisal review cannot be completed within 15 business days because of deficiencies within the appraisal, the Rights of Way Consultant will be notified immediately of the appraisal status. SCDOT will provide appraisal reviews complying with the technical review guidelines of SCDOT's Right of Way Appraisal Manual. The review appraiser will be an SCDOT staff appraiser or a review appraiser from SCDOT's approved reviewer list. SCDOT will be responsible for review appraiser costs.
5. CONTRACTOR shall carry out the responsibilities as follows:
 - a. Acquire property in accordance with all Federal and State laws, guidelines, and regulations, including but not limited to the Uniform Relocation and Real Property Acquisition Act of 1970, as amended (the "Uniform Act"), the SCDOT Acquisition Manual, the SCDOT Appraisal Manual, SCDOT Relocation Manual, and the South Carolina Eminent Domain Procedure Act ("The Act"). CONTRACTOR shall not be entitled to an increase in the Contract Price for acquisition of borrow sources.
 - b. Submit procedures for handling right of way acquisitions and relocations to the SCDOT for approval prior to commencing right of way activities. These procedures are to show CONTRACTOR'S methods, including the appropriate steps and workflow required for appraisal, acquisition, and relocation. These procedures shall also include an appropriate time allowance for SCDOT's right of way project manager to approve just compensation, relocation benefits, administrative settlements, and legal court settlements.
 - c. CONTRACTOR shall be granted the authority to negotiate administrative settlements up to a set amount. This maximum administrative settlement amount for this Project shall be set by SCDOT's Right of Way office and provided in writing to the CONTRACTOR upon review and approval of the right of way procedures. SCDOT's right of way project manager will issue

decisions on approval requests within three business days concerning just compensation, relocation benefits, administrative settlements, and legal settlements. This commitment is based on the procedures providing a reasonable and orderly workflow and the work being provided to SCDOT's right of way project manager as completed. Regardless of amount, CONTRACTOR shall send all administrative settlements to SCDOT's right of way project manager for final concurrence and signature.

- d. Utilize SCDOT's right of way project tracking system and provide an electronic status update a minimum of twice per month or upon request by SCDOT's right of way project manager.
- e. As part of the right of way acquisition and relocation procedures, include a right of way quality control plan to the SCDOT for review prior to commencing right of way activities. SCDOT standard forms and documents will be used to the extent possible.
- f. Provide a toll free telephone number for landowners and displaced persons to call and an office near the Project which is located within the State of South Carolina for the duration of the right of way acquisition and relocation services for this Project.
- g. Provide a current title certificate by a licensed South Carolina attorney for each parcel within 90 days of the date of closing or the date of filing of the Condemnation Notice.
- h. Prior to preparing appraisals, CONTRACTOR shall determine the appraisal scope for each tract in conjunction with SCDOT's Chief Appraiser or designee. Appraisals shall be prepared in accordance with SCDOT's Right of Way Appraisal Manual. Appraisals shall be prepared by appraisers from SCDOT's approved list of active fee appraisers.
- i. Prepare and obtain execution of all documents conveying title. Prior to recording, CONTRACTOR shall present these documents to SCDOT's right of way project manager. The SCDOT's right of way project manager will review the documents and provide comments within five business days. SCDOT review comments will be sent to the CONTRACTOR, who shall respond within five business days. SCDOT will review the CONTRACTOR'S revised documents and will provide additional comments, if warranted, within five business days. After documents are accepted by the right of way project manager, documents will be forwarded to Director of Right of Way's Office for final approval, which will be obtained within 15 business days. Upon final approval, SCDOT will provide payment to the property owner and provide a notification to CONTRACTOR within 30 business days. CONTRACTOR shall record documents conveying title to such properties to SCDOT with the Office of the Register of Deeds, and deliver all executed and recorded general warranty deeds to SCDOT. For all properties acquired in conjunction with the

Project, title will be acquired in fee simple (except that SCDOT may, in its sole discretion and by written notification from SCDOT's right of way project manager, direct the acquisition of a right of way easement or permission, in lieu of fee simple title) and shall be conveyed to "The South Carolina Department of Transportation" by general warranty deed, free and clear of all liens and encumbrances except permitted encumbrances.

- j. Because these acquisitions are being made as agent on behalf of the State of South Carolina, SCDOT shall make the ultimate determination in each case as to whether settlement is appropriate or whether the filing of a condemnation action is necessary, taking into consideration the recommendations of the CONTRACTOR. When SCDOT authorizes the filing of a condemnation, CONTRACTOR shall prepare a Notice of Condemnation in the name of SCDOT, and submit it to SCDOT. The SCDOT's right of way project manager will review the documents and provide comments within five business days. SCDOT review comments will be sent to the CONTRACTOR, who shall respond within five business days. SCDOT will review the CONTRACTOR'S revised documents and will provide additional comments, if warranted, within five business days. After documents are accepted by the right of way project manager, documents will be forwarded to the Director of Right of Way's Office for final approval, which will be obtained within 15 business days. Upon final approval, SCDOT will provide payment to the Clerk of Court and provide a notification to CONTRACTOR within 30 business days. SCDOT will serve appropriate condemnation documents and pleadings, and request priority status pursuant to S.C. Code Ann. Section 28-2-310(1976, as amended).
- k. SCDOT shall prosecute condemnation proceedings to final judgment pursuant to the requirements of the South Carolina Eminent Domain Procedures Act. The procedure shall be by way of trial as provided by Section 28-2-240 of "The Act". SCDOT shall be responsible for obtaining legal representation and CONTRACTOR will be responsible for providing expert witnesses, necessary for condemnation actions, at its own expense. All settlements of condemnation cases shall be at SCDOT's sole discretion.
- l. CONTRACTOR shall provide a right of way certification and SCDOT shall approve and sign that certification prior to CONTRACTOR entering the property. Only in exceptional circumstances will a certification be approved based on a right of entry. Certification may be on a tract-by-tract basis.
- m. If after right of entry Certifications have been submitted there remains outstanding remaining tracts that have not been resolved, CONTRACTOR shall exercise care in its operations when working in proximity to adjacent developed properties, properties not yet acquired, and residences or businesses that are to be relocated. CONTRACTOR shall submit a plan to the SCDOT's right of way project manager for approval to:

- (i.) Establish a clear zone adjacent to properties occupied by persons to be displaced in which construction equipment shall not be operated or parked,
 - (ii.) Establish a clear zone for construction for properties occupied by persons to be displaced to prevent undue impacts or hardships,
 - (iii.) Establish a method of protecting equipment from vandalism or unauthorized use,
 - (iv.) Perform all burning in accordance with applicable laws and ordinances, with specific attention to SCDHEC's Bureau of Air Quality Control criteria which require compliance with the South Carolina Air Pollution Control laws, regulations, and standards as they concern the related work included in the Contract.
 - (v.) Provide reasonable and safe access to residences or businesses that are to be displaced until such time as the property is vacant, and
 - (i.) Observe the property rights of landowners of adjacent and/or yet to be acquired properties.
- n. CONTRACTOR shall use reasonable care in determining whether there is reason to believe that property to be acquired for rights of way may contain concealed or hidden wastes or other materials or hazards requiring remedial action or treatment. When there is reason to believe that such materials may be present, CONTRACTOR shall take steps consistent with customary industry standards to investigate. SCDOT shall be notified of the presence of such materials before an offer is made to acquire the property.
- o. During the acquisition process and for a period of three years after final payment is made to CONTRACTOR for any phase of the work, all project documents and records not previously delivered to SCDOT, including but not limited to design and engineering costs, construction costs, costs of acquisition of rights of way, and all documents and records necessary to determine compliance with the laws relating to the acquisition of rights of way and the costs of relocation of utilities, shall be maintained and made available to SCDOT for inspection or audit.

B. Acquisition of Right-of-Way

1. The CONTRACTOR is responsible for verification of all information necessary for acquisition of the right of way.
2. Acquisition of any additional area (not right of way) desired by the CONTRACTOR for, but not limited to, construction staging, access or borrow pits, shall be the sole responsibility of CONTRACTOR, and any title or interest shall be secured in the name of the CONTRACTOR. CONTRACTOR shall provide SCDOT the location and documentation for these additional areas. CONTRACTOR shall furnish SCDOT a copy of any agreements, whether for purchase or lease, for the use of additional properties in conjunction with the construction of the Project. CONTRACTOR shall abide by the provisions of all

applicable environmental permits, any conditions of individual right of way agreements, and all environmental commitments. Any necessary permit modifications are the responsibility of the CONTRACTOR. CONTRACTOR is responsible for all costs associated with these additional areas, including premium right-of-way costs. If additional right-of-way is necessary beyond what has been evaluated in the NEPA documentation, CONTRACTOR shall be responsible for any re-evaluation of the approved Environmental Documents.

3. Right of way acquisition costs shall be defined as amounts paid for: (1) direct payments for ownership or other property rights, and (2) direct payments for eligible relocation expenses as provided for under the Uniform Act less premium right of way acquisition costs.
4. Premium right of way acquisition costs shall be the amount a jury award or a settlement that exceeds "Just compensation." "Just compensation" shall be defined as the value SCDOT approves for a parcel after the following procedure: CONTRACTOR shall submit its recommendation for just compensation based on appraisals/appraisal reviews or cost estimates which support the recommendation. If SCDOT's right of way project manager approves CONTRACTOR'S recommendations, that value becomes just compensation. If SCDOT's right of way project manager does not approve the recommendation, CONTRACTOR or SCDOT shall obtain another appraisal using an appraiser from the SCDOT's approved list and submit this appraisal to SCDOT. SCDOT shall be responsible for the cost of the second appraisal. SCDOT shall assign a value to the parcel which shall be deemed just compensation supported by the appraisals for the parcel.
5. SCDOT shall be responsible for right of way acquisition costs and premium right of way costs except for those additional areas explained above.
6. Upon final completion of the project, if any right of way condemnation actions are still pending, CONTRACTOR shall be responsible for adequate security to cover its contractual obligation relating to right of way acquisition.
7. Under the direction of and in coordination with SCDOT, the CONTRACTOR shall be responsible for all coordination with the involved Railroad Companies, including but not limited to, sending plans, meetings, correspondence, phone calls, writing/reviewing agreements, and etc. as may be necessary to secure the applicable executed railroad agreements, needed for the construction of the project, between the SCDOT and all involved Railroad Companies. All correspondence related to railroad agreements or conditions shall include the railroad file number and railroad milepost information. The CONTRACTOR shall be responsible for the cost of railroad coordination as defined herein.
8. SCDOT will submit for approval, all required railroad agreements necessary for the Preliminary Engineering and Construction of the project. Upon approval, the SCDOT will submit the agreement to the Railroad Company for execution. The

CONTRACTOR shall be responsible for assisting SCDOT in the development of the railroad agreement by providing requested information.

9. The CONTRACTOR shall be responsible for all costs to the Railroad Company or Companies for services provided by the Railroad or the Railroad's Agent, as detailed in the executed Railroad Agreement between the SCDOT and the Railroad. This includes all expenses such as railroad flagging operations. The CONTRACTOR shall be responsible for all other costs associated with designing and constructing the project as described in the executed Railroad Agreement between the SCDOT and the Railroad Company. The CONTRACTOR shall include all costs associated with these requirements in the final bid price. Once a contract is executed, SCDOT shall administer invoicing for costs to the Railroad Company or Companies. Monies will be deducted from the CONTRACTOR's progress payments after payments are made to the Railroad Company.
10. All design and construction activities in, adjacent to, over or under the railroad shall comply with all applicable Federal and State laws and standards, all terms identified in the Special Provisions for Protection of Railway Interests, and all terms of the final agreement executed with the Railroad Company.
11. The CONTRACTOR shall be required to meet the Railroad's Insurance Requirements as specified in the Special Provisions for Protection of Railway Interests.
12. The CONTRACTOR shall attend a mandatory meeting with the SCDOT's Utilities Office and Railroad Projects Office within 30 days after the Notice to Proceed. The CONTRACTOR shall use the SCDOT approved agreement language and procedures, that will be provided in this meeting.
13. CONTRACTOR shall provide project specific information to SCDOT for inclusion into the agreements. The CONTRACTOR shall anticipate and include in the proposed schedule a minimum 90-day approval time-frame for all railroad agreements. If said Railroad Companies interfere or fail to provide information in a timely manner, SCDOT may, on an individual basis, consider a time extension for Railroad Company delays when CONTRACTOR can demonstrate that appropriate coordination efforts have been made to expedite the railroad coordination, and that the delay has a direct impact on the approved Critical Path. CONTRACTOR shall not be entitled to additional compensation for interference or delays related to railroad coordination.
14. CONTRACTOR shall anticipate the need for a separate right-of-entry agreement between the CONTRACTOR and Railroad for surveys, borings, etc. The required PE Agreement, between SCDOT and Railroad, must be executed before Railroad will review or comment on any design questions or submittals from the CONTRACTOR. The Construction Agreement, between SCDOT and Railroad, must be executed before any construction activities can begin at the railroads.

15. CONTRACTOR is advised that all utility relocations required within railroad right-of-way will require separate agreements between the affected utility company and the Railroad.

IX. PERMITS

- A. All permits necessary for completion of this project shall be procured by the CONTRACTOR. The CONTRACTOR shall comply with all local, state, and federal permitting requirements. Regarding any permit or license that must be obtained in the name of SCDOT, the CONTRACTOR shall perform all functions within its power to obtain the permit or license, and SCDOT shall fully cooperate in this effort and perform any functions that must be performed by SCDOT. The CONTRACTOR shall submit permit applications to SCDOT. SCDOT will submit the permit application to the appropriate permitting agency indicating that CONTRACTOR is acting as an agent for SCDOT. If said regulatory agencies fail to issue permits in a timely manner, SCDOT may, on an individual basis, consider a time extension for permit approval delays when CONTRACTOR can demonstrate that the application was submitted in a timely manner, all reasonable efforts have been made to expedite the permit approval, and that the delay has a direct impact on the Critical Path. CONTRACTOR shall not be entitled to additional compensation for delays in permit approval.

X. ENVIRONMENTAL COMPLIANCE

A. Compliance with Environmental Commitments

CONTRACTOR shall comply with all Environmental commitments and requirements including, but not limited to, the following:

1. Compliance with the provisions of all environmental permits applicable to the Project. A copy of the environmental document is included in Attachment B. Environmental Commitments are included in Exhibit 6.
2. Compliance with those stipulations and conditions under which SCDOT received approval of the Environmental Document(s) and any modifications resulting from a re-evaluation of the Document(s). If the CONTRACTOR elects to construct the Project in a manner that is not consistent with the assumptions in the SCDOT prepared environmental documents, the CONTRACTOR will be responsible for revising the environmental documents and provide any additional studies that may be required. All revisions will require SCDOT and FHWA, if applicable, approval prior to any right of way acquisition or construction activity;
3. Compliance with applicable laws and regulations relating to potential or actual hazardous materials that may be encountered in the course of carrying out this Agreement;
4. Carrying out all necessary social, economic, and environmental studies required by regulatory authorities in the course of construction;

5. Cost, preparation, revision, acquisition, compliance, and adherence to conditions of any permits required by federal, state, or local laws or regulations; The CONTRACTOR is responsible for any mitigation required by permits. Compensatory mitigation may be available through an approved mitigation bank or Permittee Responsible Mitigation (PRM) as define in EPA's 2008 Mitigation Rule; and
6. The resolution of any deviations from the contract documents, drawings or other information included in the environmental permits that would violate the intent or spirit of the permits. Any proposed changes within the permitted areas would need to be coordinated with SCDOT's Environmental Services Office.

B. Preconstruction / Partnering Conference(s)

CONTRACTOR shall conduct one (or more, if appropriate) pre-construction / partnering conference(s) prior to any construction activity to discuss environmental and permitting issues, which conference shall include all subcontractors, and, to the extent feasible, representatives from the U.S. Army Corps of Engineers, the S.C. Department of Health and Environmental Control Water Quality Division, the FHWA, CONTRACTOR, and SCDOT.

C. Protection of Archeological and Paleontological Remains and Materials

1. When archeological or paleontological remains are uncovered, CONTRACTOR shall immediately halt operations in the area of the discovery and notify SCDOT.
2. Archeological remains consist of any materials made or altered by man which remains from past historic or prehistoric times (i.e. older than 50 years) Examples include old pottery fragments, metal, wood, arrowheads, stone implements or tools, human burials, historic docks, structures or not recent (i.e. older than 100 years) vessel ruins. Paleontological remains consist of old animal remains, original or fossilized, such as teeth, tusks, bone, or entire skeletons.
3. SCDOT will have the authority to suspend the work for the purpose of preserving, documenting, and recovering the remains and materials of archeological and paleontological importance for the State. CONTRACTOR shall carry out all instructions of SCDOT for the protection of archeological or paleontological remains, including steps to protect the site from vandalism and unauthorized investigations, from accidental damage and from dangers such as heavy rainfall or runoff.
4. CONTRACTOR's Contract Time and or Contract Price shall be adjusted to the extent CONTRACTOR's cost and/or time of performance have been adversely impacted by the presence of archeological or paleontological remains.

D. Community and Public Relations Plan

The CONTRACTOR shall provide to SCDOT for review and written approval a Community Relations Plan as part of the Project in accordance with Exhibit 5. The Community Relations Plan shall describe how the CONTRACTOR will actively promote good relationships with local elected officials, the news media, and the community at large. All costs associated with community relations will be included in the Total Project Cost. SCDOT will expect the CONTRACTOR to maintain positive communications with the local community (including public meetings as necessary), the adjacent property owners, and local businesses. The Community Relations Plan shall be submitted within 45 calendar days after NTP.

XI. HAZARDOUS MATERIALS

A. Identified Hazardous Materials

1. The CONTRACTOR is referred, in addition to this Article, to Exhibit 6, Project Design Criteria and Attachment B for information and requirements regarding Hazardous Materials inspections and other environmental documentation regarding Hazardous Materials. The CONTRACTOR shall be responsible for handling, storage, remediation, and disposal of any materials, wastes, substances and chemicals deemed to be a solid waste or hazardous waste under applicable state or federal law, (hereinafter "Hazardous Materials") encountered at the Site which were identified in the Hazardous Materials inspections or other environmental documentation regarding Hazardous Materials provided in Exhibit 6, Project Design Criteria and Attachment B and the cost of these activities shall be included in the Contract Price.
2. If the CONTRACTOR's plan includes demolition, removal, or disposal of existing structures not previously inspected by SCDOT, the Contractor is required to perform lead-based paint and asbestos inspections on the existing structures prior to performing those activities. The cost of the lead-based paint and asbestos inspections shall be included in the Contract Price. Removal of lead-based paint and asbestos and lead-based paint and asbestos containing materials identified by inspections shall be by a qualified independent firm retained by the Department or by negotiating a Contract Change Request with the CONTRACTOR as outlined in the procedures in Article XI.B.
3. If the CONTRACTOR's plan includes demolition, removal, or disposal of existing structures previously surveyed by SCDOT, but the asbestos inspection reports have expired, the CONTRACTOR is required to perform new asbestos inspections on the existing structures prior to performing those activities. The cost of the asbestos inspections shall be included in the Contract Price. The cost of removal, handling, storage, remediation, and disposal of asbestos containing materials identified in the expired inspection reports shall be included in the Contract Price.
4. A copy of the lead-based paint and asbestos inspection reports and the notification of demolition or renovation forms must be submitted to SCDHEC at least ten (10) working days prior to demolition of an existing structure. Prior to submitting the

reports and forms to SCDHEC, the CONTRACTOR shall obtain the RCE's signature. The CONTRACTOR is responsible for obtaining all required permits to proceed with the work.

5. The CONTRACTOR is responsible for all necessary containment, removal, transportation, and disposal of the subsurface and surface Hazardous Materials identified in inspections or other environmental documentation provided in Attachment B in compliance with all applicable Federal (EPA, OSHA & DOT) and State (SCDHEC & SCDOT) and local (County and Municipality) requirements for Hazardous Materials and worker health and safety. The CONTRACTOR is responsible for obtaining all required permits to proceed with the work.

B. Unexpected Hazardous Materials

Upon encountering any unexpected Hazardous Materials, the CONTRACTOR shall follow the procedures as described below:

1. CONTRACTOR shall stop Work immediately in the affected area and duly notify SCDOT and, if required by state or federal law, all government or quasi-government entities with jurisdiction over the Project or site.
2. Upon receiving notice of the presence of Hazardous Materials, SCDOT will take necessary measures required to verify that the Hazardous Materials are remediated or rendered harmless. Such necessary measures will include SCDOT either (i) retaining qualified independent firm or (ii) negotiating a Contract Change Request with CONTRACTOR.
3. CONTRACTOR shall resume Work at the affected area of the Project only after written notice from SCDOT that the (i) Hazardous Materials have been removed or rendered harmless and (ii) all necessary approvals have been obtained from all government and quasi-government entities having jurisdiction over the Project.
4. CONTRACTOR's Contract Price and/or Contract Time shall be adjusted to the extent CONTRACTOR's cost and/or time of performance has been adversely impacted by the presence of Hazardous Materials.
5. If a Contract Change Request is negotiated, the CONTRACTOR shall comply with Article XI.A.5.

C. General Information

1. For purposes of this Project, the Hazardous Material Generator shall be listed as "SCDOT" of any and all Hazardous Materials and/or hazardous wastes associated with work on the Project, with the exception that CONTRACTOR shall be the generator for all Hazardous Materials it, its consultants, subconsultants, subcontractors or suppliers, brings on to the Project or that is brought to the Project by them and subsequently is caused to be released on the Project by the CONTRACTOR, CONTRACTOR's design consultants, subcontractors and

suppliers. The foregoing shall not preclude or limit any rights or remedies that SCDOT may have against third parties and/or prior owners, lessees, licensees and occupants of the Project's right of way.

2. SCDOT is not responsible for Hazardous Materials actually brought to the Project by CONTRACTOR, CONTRACTOR's design consultants, subcontractors and suppliers or anyone for whose acts they may be or are liable. SCDOT is not responsible for negligent or willful acts by CONTRACTOR, CONTRACTOR's design consultants, subcontractors and suppliers or anyone for whose acts they may be or are liable relating to Hazardous Materials found at the site. CONTRACTOR shall indemnify, defend and hold harmless SCDOT and SCDOT's officers, directors, employees and agents from and against all claims, losses, damages, liabilities and expenses, including attorney's fees and expenses arising out of or resulting solely from those Hazardous Materials actually brought to the Project or negligent or willful acts relating to Hazardous Materials, or both by CONTRACTOR, CONTRACTOR's design consultants, subcontractors and suppliers or anyone for whose acts they may be or are liable.

XII. DEMOLITION, REMOVAL & DISPOSAL OF STRUCTURES

CONTRACTOR shall be responsible for the demolition, removal and disposal of all structures and their appurtenances within SCDOT Right of Way necessary for the completion of the Project, to include those portions which may extend outside the right of way, but were purchased as a part of the acquisition process. Structures shall include the bridges identified in the scope of work and all buildings acquired for the Project. All necessary permitting shall comply with Articles II.B.4 and IX of the Contract. Handling and disposal of Hazardous Materials shall be in accordance with Article XI of the Contract. Before demolition of the structures, the CONTRACTOR shall complete and submit a Notification of Demolition and Renovation form to the South Carolina Department of Health and Environmental Control.

XIII. DIFFERING SITE CONDITIONS

A. Differing Site Conditions, Defined; Burden of Proof

1. "Differing Site Conditions" are concealed or latent physical conditions encountered at the Project site during the term of the Agreement that (i) materially differ from the conditions reasonably assumed to exist at the site (Type 1); or (ii) are of an unusual nature, differing materially from the conditions ordinarily encountered and generally recognized as inherent in the work provided for in the Agreement (Type 2). Type 1 conditions are those geotechnical or geological deviations from what is normally assume to exist based on information provided in the RFP and actual site location. The only Type 2 conditions eligible for relief under this Article XIII are:
 - a. The discovery at the site of any archaeological, paleontological, biological or cultural resource; provided that the existence of such resource was not disclosed in the RFP; and

- b. The discovery at the site of any species listed as threatened or endangered under the federal or State Endangered Species Act, except for those species disclosed as threatened or endangered in the RFP; and
 - c. The discovery at the site of any manmade object or manmade condition not normally found in subsurface material; and
 - d. The discovery at, near or on the site of any unexpected artesian condition.
- 2. The definition of Differing Site Condition excludes unanticipated utilities and unexpected Hazardous Waste.
 - 3. CONTRACTOR shall bear the burden of proving that a Differing Site Condition exists and that CONTRACTOR could not have reasonably (i) designed the Project or (ii) worked around the condition, including by resequencing, relocating, or redeploying its forces to other portions of the Project or other activities unrelated to its work, so as to avoid additional cost. CONTRACTOR shall have no right to claim that any condition constitutes a Differing Site Condition if (A) CONTRACTOR, or any person or entity for which CONTRACTOR is legally responsible, had actual knowledge regarding such conditions prior to submission of the Cost Proposal, or (B) such condition would have become known to CONTRACTOR based upon a Reasonable Investigation prior to the submission of the Cost Proposal, as defined below. Furthermore, CONTRACTOR hereby acknowledges and agrees that, based upon the opportunity to review all available information, seek reasonable additional information, visit the Project site prior to submission of the Cost Proposal, and make any additional subsurface explorations or soil tests that CONTRACTOR determined to have been useful, in each case, prior to the submission of the Cost Proposal, it has assumed all risks with respect to the need to work around locations impacted by Differing Site Conditions.

B. Responsibility

- 1. Type 1: SCDOT is responsible for only Type 1 Differing Site Conditions that exist throughout a specified area around each SCDOT-provided test hole, as listed in the geotechnical data in Attachment B. For purposes of the Type 1 portion of the definition of Differing Site conditions, “reasonably assumed to exist” means that the geotechnical and geological conditions indicated with respect to each SCDOT test hole exist throughout an area represented by a five- foot radius drawn from the center of the test hole.
- 2. Type 2: SCDOT is responsible for only Type 2 Differing Site Conditions listed above.
- 3. CONTRACTOR shall assume responsibility for all other Differing Site Conditions not identified as Type 1 or Type 2.

C. Relief for Certain Differing Site Conditions

1. CONTRACTOR shall submit a Contract Change Request to seek any relief for Differing Site Conditions for which SCDOT has responsibility. So long as CONTRACTOR has met its burden of proof that a condition is a Differing Site Condition for which CONTRACTOR is entitled to certain relief. CONTRACTOR shall be entitled to a change order that provides for:
 - a. additional time, to achieve Substantial Completion for a Differing Site Condition that causes or will result in an identifiable and measurable disruption to the critical path under the then-current CPM Schedule, after consumption of all then-available float; provided, however, that SCDOT may, in its sole discretion, elects to order acceleration, in which case the change order shall not provide for an adjustment to the then-current CPM Schedule as a result of such Differing Site Condition;
 - b. actual, direct, and documented costs incurred solely and directly attributable to the Differing Site Condition;
 - c. acceleration costs, only if SCDOT elects to order acceleration.
2. CONTRACTOR's entitlement to a change order is subject to the following additional limitations:
 - a. CONTRACTOR shall not be entitled to any disruption damages in connection with any additional costs claimed with respect to any Differing Site Condition;
 - b. CONTRACTOR shall not be entitled to any punitive, indirect, special, incidental, or consequential damages in connection with any additional costs claimed with respect to any Differing Site Condition;
 - c. Costs shall not exceed those allowed in, and calculated pursuant to Section 105.16.5 of the SCDOT Standard Specifications, with the exception of extended job site overhead rates which shall be as set forth in Exhibit 5 of the RFP;
 - d. CONTRACTOR shall not be entitled to an extension of time or additional costs if the delay attributable to the Differing Site Condition is concurrent with any other unrelated delay to an activity on the critical path under the then-current CPM Schedule for which CONTRACTOR is responsible under this Agreement.
 - e. If SCDOT directs acceleration of the Work, the as part of CONTRACTOR's CCR, CONTRACTOR shall show all acceleration costs associated with meeting the original scheduled date for Substantial Completion.

D. Differing Site Condition Procedure

1. If CONTRACTOR encounters known or suspected Differing Site Conditions, CONTRACTOR shall promptly notify SCDOT by either submitting a formal notice to SCDOT (for those conditions that CONTRACTOR anticipates are

CONTRACTOR's responsibility) or submitting a Contract Change Request before (for those conditions that CONTRACTOR anticipates are SCDOT's responsibility), in either case without substantially disturbing or altering the affected area. If CONTRACTOR is entitled to relief, then CONTRACTOR shall not resume work that affects or reasonably could affect the condition until a Change Order is executed or a Force Account order is issued for the affected work. If CONTRACTOR is not entitled to relief, or if CONTRACTOR elects not to pursue relief to which it may otherwise be entitled, then CONTRACTOR shall not resume work that affects or reasonably could affect the condition until SCDOT consents to work resuming, subject to applicable law and governmental approvals.

2. Each Contract Change Request relating to a Differing Site Condition shall be accompanied by:
 - a. a statement signed by a qualified professional setting forth (i) all relevant assumptions made by CONTRACTOR with respect to the condition at the relevant portion of the Site, (ii) justifying as reasonable the basis for all such assumptions which includes supporting documentation, (iii) explaining exactly how the condition encountered qualifies as a Differing Site Condition and (iv) listing the specific work-arounds the CONTRACTOR undertook, to mitigate any cost and delay effects of the encounter with the condition, and
 - b. a signed statement certifying that CONTRACTOR, and any person or entity for which CONTRACTOR is legally responsible (i) had no actual knowledge regarding such condition as of the submission of the Cost Proposal and (ii) such condition would not have become known to CONTRACTOR based upon a Reasonable Investigation.
3. If the request is based on Type 1 Differing Site Conditions, the Contract Change Request shall also include detailed information regarding the alleged error in the boring data provided by owner or performed by CONTRACTOR forming the basis for the request, and shall explain how CONTRACTOR's assumptions would have changed had the boring data been accurate.
4. Upon submittal of a Contract Change Request or other notice as set forth above, SCDOT will investigate the conditions within three business days and if it is determined that (1) a Differing Site Condition exists, (2) the condition is SCDOT's responsibility, and (3) the condition causes an increase in the cost or time required for performance of the work, the Contract will be adjusted consistent with the relief provided above.
5. SCDOT shall have the right to require the CONTRACTOR to resume work in the area at any time, even though an investigation may still be ongoing. CONTRACTOR shall promptly resume work in the area upon receipt of notification from SCDOT to do so.

E. Reasonable Investigation

“Reasonable Investigation” means the following activities by appropriate, qualified professionals prior to the submission of the Cost Proposal:

1. Visit and visual, non-intrusive inspection of the site and adjacent locations, except areas to which access rights have not been made available prior to the submission of the Cost Proposal;
2. Review and analysis of all reference documents;
3. Review and analysis of SCDOT-provided governmental approvals or permits, if any, available prior to the submission of the Cost Proposal;
4. Reasonable inquiry with real property, particularly those properties indicating former gas stations/auto garages, and utility owners or occupants, including request for and review of plans provided thereby, if any;
5. Review and analysis of laws, regulations, rules, ordinances, etc. applicable to the Project prior to the submission of the Cost Proposal; and
6. Other activities sufficient to familiarize CONTRACTOR with surface and subsurface conditions, including the presence of utilities, hazardous materials, archeological, paleontological and cultural resources, and threatened or endangered species, affecting the site or surrounding locations.

XIV. FORCE MAJEURE

Delays or failures of performance, in each case, that materially and adversely affect performance of the CONTRACTOR hereunder, shall not constitute breach of the Agreement if and to the extent such delays or failures of performance result in a delay to the critical path identified in the current accepted CPM Schedule that are caused by:

A. Causes

1. acts of God or the public enemy;
2. expropriation or confiscation of facilities;
3. compliance with any order or request of any governmental authority other than SCDOT or a party in privity with it;
4. a change in law after the CONTRACTOR’S submission in response to the RFP that directly and substantially affects performance of the Project;
5. acts of war (including civil and revolutionary); invasion, armed conflict, violent act of foreign enemy, military or armed blockade, military or armed takeover of the Project or the Site;

6. rebellion, terrorism, riot, insurrection, civil commotion or sabotage that causes direct physical damage to, or otherwise directly causes interruption to construction or direct losses during maintenance of the Project;
7. fires, floods, earthquakes, including all foreshocks and aftershocks, where such earthquakes include ground shaking, liquefaction, settlement, or ground movements that directly impact, and cause damage to, temporary or permanent works of the Project; landslides caused by natural events, tornados, hurricanes, tropical storms, sinkholes caused by natural events, in each case directly impacting the physical improvements of the Project or CONTRACTOR'S performance of the scope of the work;
8. explosions, nuclear explosion, including radioactive contamination that triggers CONTRACTOR's obligations pertaining to hazardous materials hereunder and, in each case directly impacting the physical improvements of the Project or performance of the CONTRACTOR's scope of work,
9. national or regional unavailability or shortage of materials;
10. embargos directly affecting materials required to perform the CONTRACTOR'S scope of the work;
11. quarantine or suspension by the Governor, President, or other regional authority, or declared epidemic or pandemic, in each case, directly affecting the CONTRACTOR's performance of the scope of the work;
12. declared state of emergency by the Governor, the U.S. President or regional authority having jurisdiction over the Project or the CONTRACTOR'S performance of the scope of the work;
13. strikes (both national or regional strikes) or other concerted acts of workman not arising out of or relating to CONTRACTOR or any person or entity for which CONTRACTOR is responsible;
14. vehicle, as defined by 56-1-10 of South Carolina Code of Laws, collision that occurs prior to Final Completion, the impact of which causes damage to full pavement structure, bridge structure, noise wall, barrier wall/retaining wall or overhead sign structure of the Project;

(each of the foregoing a "Force Majeure Event"), except, in each case, to the extent that any of the foregoing events or consequences of such events (i) arose out of (A) any breach of Contract by CONTRACTOR or any person or entity for whom CONTRACTOR is legally responsible, (B) any act or omission by CONTRACTOR or any such person or entity, (C) any negligence, recklessness, willful misconduct, fraud, or violation of laws by CONTRACTOR or any such person or entity; or (ii) could reasonably have been avoided by CONTRACTOR or any such person or entity (by the exercise of caution, due diligence or reasonable efforts, or otherwise). Any expense attributable to such occurrence of a Force Majeure Event shall not entitle

CONTRACTOR to an adjustment in the Contract Price, as it is the Parties' intent that these events will be compensated under the CONTRACTOR's appropriate insurance policy. The duration of delay to the critical path identified in the current accepted CPM Schedule directly caused by a Force Majeure Event shall be added to the Contract Time.

CONTRACTOR shall bear the burden of proving that a Force Majeure Event exists and that CONTRACTOR could not have reasonably worked around the condition, including by resequencing, relocating, or redeploying its forces to other portions of the Project or other activities unrelated to its work, so as to avoid additional delay or cost.

XV. WARRANTY

A. CONTRACTOR Warranties

1. CONTRACTOR warrants that it will perform all services in accordance with the standards of care and diligence normally practiced by recognized engineering and construction firms in performing services and obligations of a similar nature. CONTRACTOR warrants that all materials and equipment furnished shall be of good quality and new unless otherwise authorized by SCDOT and that the construction shall conform to the Contract requirements. CONTRACTOR agrees to promptly correct, at its own expense, defects or deficiencies in materials and workmanship that appear prior to and during a period of three years after Final Completion of the Project. This shall include all plant-produced materials (i.e. asphalt, concrete, etc.). CONTRACTOR shall not be responsible for damages caused by SCDOT's failure to provide timely notification of potentially damaged or defective work of which SCDOT had actual knowledge. CONTRACTOR shall properly perform, at the written request of SCDOT made at any time within the warranty period after Final Completion of the Project as defined in Article IV.A.5, all steps necessary to satisfy the foregoing warranty and correct any element of the Project or the services that is defective or does not reflect such standards of care and diligence. The cost of such corrective services shall be CONTRACTOR's responsibility.
2. CONTRACTOR further warrants the performance of all bridge components on all structures for three years from Final Completion of the Project. If a component fails to perform properly for any reason, including but not limited to normal wear and tear, the CONTRACTOR shall replace the failed component at no cost to SCDOT.
3. The warranty periods begin at Final Completion of the Project. CONTRACTOR shall immediately abate any warranty deficiency that poses an unsafe condition to the public; otherwise deficiencies shall be corrected no later than 30 days from the determination of corrective action. In the event CONTRACTOR, after notice, fails to immediately abate the deficiency or fails to make correction within the prescribed 30 days, SCDOT may have the deficiency corrected. All costs associated with such correction by SCDOT shall be the responsibility of the CONTRACTOR and his Surety. With respect to any component that is repaired or

replaced pursuant to this warranty, the warranty period of that component shall be the longer of one year from repair or replacement of the component or the remainder of the original warranty period.

4. CONTRACTOR shall take all steps necessary to transfer to SCDOT any manufacturer's or other third-party's warranties of any materials or other services used in the construction of the Project.
5. These warranties are in addition to all warranties implied by law.

XVI. INDEMNITY

A. Indemnifications by CONTRACTOR

1. Definitions

- a. **Indemnified Parties** means SCDOT, the State of South Carolina, their respective successors, assigns, officeholders, officers, directors, agents, representatives, consultants and employees.
- b. **Loss or Losses** means any loss, damage, injury, liability, obligation, cost, response cost, expense (including attorneys', accountants' and expert witnesses' fees and expenses (including those incurred in connection with the enforcement of any indemnity or other provision of the Agreement)), fee, charge, judgment, penalty, fine or third party claims. Losses include injury to or death of persons, damage or loss of property, and harm or damage to natural resources.
- c. **CONTRACTOR-Related Entity** means:
 - (i.) CONTRACTOR;
 - (i.) CONTRACTOR's shareholders, partners, joint venturers or members;
 - (ii.) Subcontractors and suppliers;
 - (iii.) Any other persons performing any of the work;
 - (iv.) Any other persons for whom CONTRACTOR may be legally or contractually responsible; and
 - (v.) The employees, agents, officers, directors, shareholders, representatives, consultants, successors, assigns and invitees of any of the foregoing.

2. CONTRACTOR shall release, defend, indemnify and hold harmless the Indemnified Parties from and against any and all third-party claims and other Losses (including those incurred in connection with the enforcement of this indemnity) arising out of, relating to or resulting from the following (each an "Indemnified Claim"):

- a. The breach or alleged breach of any of this Contract by CONTRACTOR-Related Entity;

- b. The failure or alleged failure by any CONTRACTOR-Related Entity to comply with any SCDOT approvals, governmental approvals, any applicable environmental laws or other governmental rules (including environmental laws);
- c. Any alleged patent or copyright infringement or other allegedly improper appropriation or use of trade secrets, patents, proprietary information, know-how, copyright rights or inventions in performance of the work, or arising out of any use in connection with the Project of methods, processes, designs, information, or other items furnished or communicated to SCDOT or another Indemnified Party pursuant to the Contract; provided, that this indemnity shall not apply to any infringement resulting from SCDOT's failure to comply with specific written instructions regarding use provided to SCDOT by CONTRACTOR;
- d. The actual or alleged CONTRACTOR fault in or associated with performance of the work;
- e. Any and all claims by any governmental entity or taxing authority claiming taxes based on gross receipts, purchases or sales, the use of any property or income of any CONTRACTOR-Related Entity or any of their respective agents, officers or employees with respect to any payment for the work made to or earned by any CONTRACTOR-Related Entity;
- f. Any and all stop notices, liens and claims filed in connection with the work, including all expenses and attorneys', accountants' and expert witness fees and costs incurred in discharging any stop notice, lien or claim, and any other liability to subcontractors, laborers and suppliers for failure to pay sums due for their work, services, materials, goods, equipment or supplies, provided that SCDOT is not in default in payments owing (if any) to CONTRACTOR with respect to such work and such SCDOT payment default is the direct reason for the stop notice, lien or claim;
- g. Any release of Hazardous Materials or threatened release of Hazardous Materials
 - (i.) which was brought onto the Project site by any CONTRACTOR-Related Entity, or
 - (ii.) attributable to any CONTRACTOR fault, regardless of the source, origin, or method of deposit of such Hazardous Materials;
- h. To the extent of CONTRACTOR fault, the claim or assertion by any other person (excluding persons in privity of contract with SCDOT) that any CONTRACTOR-Related Entity (i) interfered with or hindered the progress or completion of work being performed by such other contractor, so as to cause inconvenience disruption, delay, or loss, except where the CONTRACTOR-Related Entity was not in any manner engaged in

performance of the work, or (ii) failure of any CONTRACTOR-Related Entity to cooperate reasonably with other contractors in accordance therewith;

- i. Any dispute between CONTRACTOR and a Utility Owner, or any CONTRACTOR-Related Entity's performance of, or failure to perform, the obligations with respect to such Utility Owner;
- j. Any dispute between CONTRACTOR and the Railroad, or any CONTRACTOR-Related Entity's performance of, or failure to perform, or obtain approval with respect to the Railroad;
- k. Any CONTRACTOR-Related Entity's breach of or failure to perform an obligation that SCDOT owes to a third person, including governmental entities, railroads, and Utility Owners, under law or under any agreement between SCDOT and a third person, where (i) SCDOT has delegated performance of the obligation to CONTRACTOR under the Contract or (ii) the acts or omissions of any CONTRACTOR-Related Entity which render SCDOT unable to perform or abide by an obligation that SCDOT owes to a third Person, including governmental entities and Utility Owners, under any agreement between SCDOT and a third person, where the agreement was expressly disclosed to CONTRACTOR;
- l. Inverse condemnation, trespass, nuisance or similar taking of or harm to real property by reason of: (i) the failure of any CONTRACTOR-Related Entity to comply with good industry practices, requirements of the Contract or governmental approvals, (ii) any CONTRACTOR default, or (iii) the actual physical entry onto or encroachment upon another's property by any CONTRACTOR-Related Entity;
- m. The failure of CONTRACTOR to fully comply with any insurance requirements described in the Contract;
- n. Any failure to protect and/or maintain valuable papers and records that the Contract require CONTRACTOR to maintain;
- o. Any act, claim or amount arising or recovered under workers' compensations law;
- p. Any errors, inconsistencies or other defects in the design or construction of the Project and/or of Utility Adjustments included in the work;
- q. Any violation of any representation, warranty, or other covenant, obligation or agreement under the Contract or governmental laws and rules to be complied with by CONTRACTOR hereunder or thereunder;
- r. Any failure to pay any liquidated damages under the Contract;

- s. Errors in the design documents provided by CONTRACTOR (including those pertaining to Utility Adjustments), regardless of whether such errors were also included in the RFP, Exhibits and Attachment B. CONTRACTOR agrees that, because the concepts in the RFP, Exhibit and Attachment B are subject to review and modification by CONTRACTOR, it is appropriate for CONTRACTOR to assume liability for errors in the completed Project even though they may be related to errors in the RFP, Exhibits and Attachment B; and/or
 - t. any act or omission of any CONTRACTOR-Related Entity or any CONTRACTOR default in any way causing, contributing to, relating to or arising out of (i) any bodily injury (including death) to any person or (ii) any Losses to the tangible property of third parties.
3. Subject to the releases and disclaimers herein, CONTRACTOR's indemnity obligation shall not extend to any third-party Losses to the extent directly caused by:
- a. The gross negligence, recklessness, willful misconduct, bad faith, or fraud of the Indemnified Party;
 - b. SCDOT's breach of any of its material obligations under the Contract;
 - c. An Indemnified Party's violation of any governmental laws, regulations, ordinances, zoning, permits, certifications, or approvals; or
 - d. Any material defect inherent in a prescriptive design, construction, operations or maintenance specification included in the design criteria, exhibits and Attachment B, but only where prior to occurrence of the third-party Losses, CONTRACTOR complied with such specification and did not actually know, or would not reasonably have known, while exercising reasonable diligence, that it was deficient or, if CONTRACTOR actually knew of the deficiency, unsuccessfully sought SCDOT's waiver or approval of a deviation from such specification.
4. In claims by an employee of CONTRACTOR, a subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section A above, shall not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for CONTRACTOR or a subcontractor under workers' compensation, disability benefit or other employee benefits laws.
5. CONTRACTOR is advised that Utility Agreements and the Railroad Agreement may include certain agreements by SCDOT to indemnify, defend, save and hold harmless the Utility Owners and Railroad, respectively, with respect

to certain matters. CONTRACTOR's obligations under this Indemnity Article shall automatically apply to require CONTRACTOR, to release, indemnify, defend, save and hold harmless the Utility Owners, Railroad and their employees and agents, in addition to the Indemnified Parties, with respect to all such matters.

6. For purposes of this Section I, "third party" means any Person other than an Indemnified Party and CONTRACTOR, except that a "third party" includes any Indemnified Party's employee, agent or contractor who asserts a claim that is (a) against an Indemnified Party, (b) within the scope of the indemnities and (c) not covered by the Indemnified Party's worker's compensation program.
7. SCDOT, and the State shall have no obligation to indemnify, defend and hold harmless CONTRACTOR or any other CONTRACTOR-Related Entity.
8. The requirement to provide an indemnity as specified in this Section I is intended to provide protection to SCDOT with respect to third-party claims associated with the event giving rise to the indemnification obligation, and is not intended to provide SCDOT with an alternative cause of action against CONTRACTOR for Losses incurred directly by SCDOT with respect to the event giving rise to the indemnification obligation.

B. Defense and Indemnification Procedures

1. If SCDOT receives notice of a claim or otherwise has actual knowledge of a claim that it believes is within the scope of the indemnities under Section I, and if SCDOT gives notice thereof, then SCDOT shall have the right to conduct its own defense unless either an insurer accepts defense of the claim within the time required by governmental law and rules or CONTRACTOR accepts the tender of the claim in accordance with Section B.5 below.
2. If the insurer under any applicable insurance policy accepts the tender of defense, SCDOT and CONTRACTOR shall cooperate in the defense as required by the insurance policy and, for purposes of the Contract and proceedings relating to such matter, the applicable Indemnified Party/ies shall be deemed to be (an) insured party/ies. If no insurer under potentially applicable insurance policies provides defense, then Section B.9. below shall apply.
3. If the defense is tendered to CONTRACTOR, then within 30 days after receipt of the tender, CONTRACTOR shall provide to the Indemnified Party written notice whether it has tendered the matter to an insurer, and, if not tendered to an insurer or if the insurer has rejected the tender, shall deliver a written notice stating that CONTRACTOR:
 - a. Accepts the tender of defense and confirms that the claim is subject to full indemnification hereunder without any "reservation of rights" to deny or disclaim full indemnification thereafter;

- b. Accepts the tender of defense but with a "reservation of rights" in whole or in part; or
 - c. Rejects the tender of defense based on a determination that it is not required to indemnify against the claim under the terms of this Contract.
- 4. If CONTRACTOR has tendered the matter to an insurer, and the insurer has not rejected the tender, then, for purposes of the Contract and proceedings relating to such matter, the applicable Indemnified Party/ies shall be deemed to be (an) insured party/ies.
- 5. If CONTRACTOR accepts the tender of defense under Section B.3.a or B.3.b above, CONTRACTOR shall have the right to select legal counsel for the Indemnified Party, subject to reasonable approval by the Indemnified Party, and CONTRACTOR shall otherwise control the defense of such claim, including settlement, and bear the attorneys', consultants' and expert witness fees and costs of defending and settling such claim. During such defense:
 - a. CONTRACTOR shall fully and regularly inform the Indemnified Party of the progress of the defense and of any settlement discussions; and
 - b. The Indemnified Party shall reasonably cooperate in said defense, provide to CONTRACTOR all materials and access to personnel it requests as necessary for defense, preparation and trial and which or who are under the control of or reasonably available to the Indemnified Party, and, subject to governmental laws and rules, maintain the confidentiality of all communications between it and CONTRACTOR concerning such defense.
- 6. If CONTRACTOR responds to the tender of defense as specified in Section B.3.c, the Indemnified Party shall be entitled to select its own legal counsel and otherwise control the defense of such claim, including settlement.
- 7. Notwithstanding Sections B.1 and B.2, the Indemnified Party may elect to temporarily assume its own defense at any time by delivering to CONTRACTOR written notice of such election and the reasons therefor, if the Indemnified Party, at the time it gives written notice of the claim or at any time thereafter, reasonably determines that:
 - a. A conflict exists between it and CONTRACTOR which prevents or potentially prevents CONTRACTOR from presenting a full and effective defense;
 - b. CONTRACTOR is otherwise not providing an effective defense in connection with the claim; or
 - c. CONTRACTOR lacks the financial capacity to satisfy potential liability or to provide an effective defense.

8. If the Indemnified Party is entitled and elects to conduct its own defense pursuant hereto of a claim for which it is entitled to indemnification, CONTRACTOR shall reimburse on a current basis all costs and expenses the Indemnified Party incurs in investigating and defending such claim. If the Indemnified Party is entitled to and elects to conduct its own defense, then:
 - a. In the case of a defense that otherwise would be conducted under Section B.3.a the Indemnified Party shall have the right to settle or compromise the claim with CONTRACTOR's relevant insurer(s)' prior written consent, which, in each case, shall not be unreasonably withheld or delayed;
 - b. In the case of a defense that otherwise would be conducted under Section B.3.b, the Indemnified Party and CONTRACTOR shall consult with each other on a regular basis to determine whether settlement is appropriate and, subject to the rights of any insurer providing coverage for the claim under a policy required under this Contract and the Indemnified Party shall have the right to settle or compromise the claim with CONTRACTOR's prior written consent without prejudice to the Indemnified Party's rights to be indemnified by CONTRACTOR; and
 - c. In the case of a defense conducted under Section B.3.c, the Indemnified Party shall, subject to the rights of any insurer providing coverage for the claim under a policy required under this Contract, have the right to settle or compromise the claim without CONTRACTOR's prior written consent and without prejudice to its rights to be indemnified by CONTRACTOR.
 - d. Where CONTRACTOR has the right under these procedures to settle a claim, in no event shall CONTRACTOR agree to a settlement that will increase the risk, liability or costs of SCDOT or any other Indemnified Party or adversely affect the Project, the work or the completion deadlines without the prior written consent of SCDOT or such Indemnified Party, in its sole discretion.
9. A refusal of, or failure to accept, a tender of defense, as well as any dispute over whether an Indemnified Party which has assumed control of defense is entitled to do so under Section B.8, shall be resolved according to the Claims Procedure. CONTRACTOR shall be entitled to contest an indemnification claim and pursue, through the Claims Procedure, recovery of defense and indemnity payments it has made to or on behalf of the Indemnified Party.

C. No Effect on Other Rights

The foregoing obligations shall not be construed to negate, abridge, or reduce other rights or obligations which would otherwise exist in favor of an Indemnified Party hereunder.

D. CERCLA Agreement

1. The indemnities set forth in Section A.7 are intended to operate as agreements pursuant to Section 107(e) of CERCLA to insure, protect, hold harmless and indemnify the Indemnified Parties..

XVII. DEFAULT; SUSPENSION; TERMINATION

A. CONTRACTOR Events of Default (Contractor Default).

1. CONTRACTOR shall be in default of this Agreement if:
 - a. CONTRACTOR fails to begin performance of the scope of the work promptly following issuance of the Notice to Proceed;
 - b. CONTRACTOR fails to perform the scope of the work in accordance with (i) the documents described in Article I (contract documents), (ii) the final, and as applicable, as-approved deliverables under Article II.J, (iii) applicable standards set forth therein;
 - c. CONTRACTOR refuses to remove, replace, and correct rejected materials, or nonconforming or unacceptable work;
 - d. CONTRACTOR (i) suspends, ceases, or stops performance of the scope of the work, or (ii) fails to perform the scope of the work continuously and diligently to completion, in either case (A) where CONTRACTOR fails to resume performance or to prosecute the work, as determined in SCDOT's reasonable discretion) as is identified in Preliminary Notice of Delinquency and thereafter in any Notice of Delinquency (as each such term is defined in Section 108 of the Standard Specification), within 15 days after dispatch of such Notice of Delinquency, and (B) excluding work stoppages directed by SCDOT, approved by SCDOT, or for other reasons expressly permitted under this Agreement;
 - e. CONTRACTOR abandons all or a material part of the Project, which abandonment is deemed to occur if (i) CONTRACTOR demonstrates through statements, acts, or omissions an intent not to continue, for any reason other than for a reasons expressly permitted under this Agreement, or (ii) no satisfactory progress in the work is performed for a continuous period of more than 15 days unless due to CONTRACTOR's compliance with work stoppages directed by SCDOT or for reasons expressly permitted under this Agreement;
 - f. CONTRACTOR fails to resume performance of the scope of the work that has been suspended or stopped within five calendar days after (i) cessation of the event preventing performance (and for which CONTRACTOR is expressly permitted to have suspended or stopped performance under this Agreement) or (ii) receipt of notice from SCDOT to resume performance;
 - g. Insolvency, Bankruptcy Events:

- (i.) CONTRACTOR commences a voluntary case seeking liquidation, reorganization or other relief with respect to CONTRACTOR or CONTRACTOR's debts under any U.S. or foreign bankruptcy, insolvency or other similar law; seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of its, or any substantial part of its, assets; becomes insolvent, or generally does not pay its debts as they become due; provides notice of its inability to pay its debts; makes an assignment for the benefit of creditors; or takes any action to authorize any of the foregoing;
 - (ii.) An involuntary case is commenced against CONTRACTOR seeking liquidation, reorganization, dissolution, winding up, a composition or arrangement with creditors, a readjustment of debts or other relief with respect to such CONTRACTOR or CONTRACTOR's debts under any U.S. or foreign bankruptcy, insolvency or other similar law; seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of it or any substantial part of its assets; seeking the issuance of a writ of attachment, execution, or similar process; or seeking like relief, and such involuntary case shall not be contested by it in good faith or shall remain undismissed and unstayed for a period of 60 days;
 - (iii.) In any voluntary or involuntary case seeking liquidation, reorganization or other relief with respect to CONTRACTOR or its debts under any U.S. or foreign bankruptcy, insolvency or other similar law, this Agreement or any of the other Contract Documents, is rejected, including a rejection under 11 U.S.C. Section 365 or any successor statute; or
 - (iv.) Any voluntary or involuntary case or other act or event described in clause (g)(i) or (g)(ii) shall occur (and in the case of an involuntary case shall not be contested in good faith or shall remain undismissed and unstayed for a period of 60 days) with respect to (i) any equity member, partner or joint venture member of CONTRACTOR, or (ii) any equity member, partner or joint venture member of CONTRACTOR for whom transfer of ownership or management authority would constitute an impermissible assignment hereunder;
- h. Allows any final judgment to remain unsatisfied for a period that, in SCDOT's sole judgment, poses a material adverse effect on CONTRACTOR's ability to perform the scope of the Work and, in particular, to pay for its obligations to SCDOT, subcontractors, and suppliers in connection therewith;
 - i. CONTRACTOR makes, attempts to make, or suffers a voluntary or involuntary assignment or transfer of all or any portion of this Agreement or its interest in the Project;
 - j. CONTRACTOR materially fails to observe or to perform, or to cause to be observed or performed, timely any other material covenant, agreement, obligation, term, or condition required to be observed or performed by CONTRACTOR under the Agreement including but not limited to:

- (i.) Fails to supply a sufficient number of properly skilled workmen, tools, materials and equipment to assure the prompt completion of the work;
or
 - (ii.) Failure to comply with applicable permits, law, or use of the Project violates such permits, law, or this Agreement;
- k. Any representation or warranty in the Agreement, the SOQs and Proposal (which representations and warranties of CONTRACTOR are incorporated into the Proposal explicitly or by reference), or the Proposal is false in any material respect, materially misleading, or inaccurate in any material respect when made (except as relates to continuing representations and warranties), or omits material information when made (except as relates to continuing representations and warranties);
- l. Any certificate, schedule, report, instrument, or other document delivered by or on behalf of CONTRACTOR to SCDOT under the Agreement is false or incorrect in any material respect, materially misleading, or inaccurate in any material respect when made (except as relates to continuing representations and warranties in any such certificates, schedules, reports, instruments, or other documents), or omits material information when made (except as relates to such continuing representations and warranties);
- m. CONTRACTOR (i) fails to make any payment owing to SCDOT under the Agreement in full and when due (including specifically payment of any liquidated or stipulated damages hereunder); or (ii) fails to make, absent a bona fide and valid dispute, payment in full and when due for labor, equipment, or materials in accordance with applicable law and with its agreements with consultants, subcontractors, subconsultants, vendors, or suppliers;
- n. CONTRACTOR fails (i) to obtain, provide, and maintain any insurance, surety bonds, guarantees, letters of credit, or other payment or performance security as is required under the Agreement for the benefit of the relevant parties, or (ii) to comply with any requirement of the Agreement pertaining to the amount, terms, or coverage of the insurance or security, or (iii) to pay the associated premiums, deductibles, self-insured retentions, co-insurance, or any such other amounts with respect to the insurance or security as and when due;
- o. Unless continued performance of this Agreement is permitted under the terms of a debarment agreement with the State of South Carolina or otherwise as permitted under clause 2.e. below, and after any rights of appeal have been exhausted, if CONTRACTOR, any equity or joint venture member of CONTRACTOR, any consultant, subcontractor, subconsultant, vendor, or supplier, or any person or entity for which CONTRACTOR is legally responsible (i) is determined to be disqualified, suspended, or debarred, or otherwise is excluded from bidding, proposing, or contracting with a federal or state department or agency, or (ii) has not dismissed any consultant, subcontractor, subconsultant, vendor, or supplier whose work is not

substantially complete and who is determined to be disqualified, suspended, debarred, or otherwise excluded from bidding, proposing, or contracting with a federal or state department or agency;

- p. CONTRACTOR fails to comply with any order by SCDOT issued under, and pursuant to a contractual right in, this Agreement, including specifically orders to suspend CONTRACTOR's performance of the scope of work, in whole or in part, within the time allowed in such order; or
 - q. CONTRACTOR fails to achieve Substantial Completion or Final Completion by the Long Stop Date pursuant to Article IV.
2. Cure Periods. The following list identifies CONTRACTOR's rights to receive notice and opportunity to cure before SCDOT may exercise its remedies under clause 3 below, and this list also identifies other Contractor Defaults that are not subject to cure:
- a. Except as otherwise specifically set forth in this clause 2, CONTRACTOR and the surety providing the bond(s) pursuant to Article VI.B shall be entitled to 15 days prior written notice and opportunity to cure any Contractor Defaults before SCDOT may exercise any remedies hereunder, including specifically those under clause 3 below.
 - b. CONTRACTOR and the surety providing the bond(s) pursuant to Article VI.B shall be entitled to seven days prior written notice and opportunity to cure the Contractor Defaults under clauses XVII.A.1.h., m., and n. before SCDOT may exercise any remedies hereunder, including specifically those under clause 3 below.
 - c. Except with respect to those Contractor Defaults listed in clauses d. and e. below, if Contractor Defaults under clauses XVII.A.1.a., f., m., and n. are capable of cure (as determined by SCDOT in its sole discretion) but, by its nature, cannot be cured within such seven or 15 day period, as applicable, (also as determined by SCDOT in its sole discretion), then CONTRACTOR shall commence to cure such Contractor Default within such seven or 15 day period, as applicable, and thereafter diligently prosecute such cure to completion within 60 days or such other later time as determined by SCDOT, in its sole discretion, before SCDOT may exercise any remedies hereunder, including specifically those under clause 3 below.
 - d. Except with respect to those Contractor Defaults listed in clause c. above and clause e. below, if a Contractor Default under clause XVII.A.1.e. cannot be cured within 15 days (as determined by SCDOT in its sole discretion), then CONTRACTOR shall commence to cure such Contractor Default within such 15 day period, and thereafter diligently prosecute such cure to completion within 30 days or such other later time as determined by SCDOT, in its sole

discretion, before SCDOT may exercise any remedies hereunder, including specifically those under clause 3 below.

- e. CONTRACTOR hereby acknowledges and agrees that no notice and no opportunity to cure is required with respect to the Contractor Defaults under clauses XVII.A.1.g., i., k., l., o.(ii), p. and q., and SCDOT has the right to exercise its remedies hereunder immediately, including specifically those under clause 3 below.
- f. With respect to the Contractor Default under clause XVII.A.1.o., CONTRACTOR shall take appropriate steps to obtain, or to require its equity or joint venture member of CONTRACTOR, any consultant, subcontractor, subconsultant, vendor, or supplier, or any person or entity for which CONTRACTOR is legally responsible to obtain, a debarment agreement with the State of South Carolina in connection with any pending action for disqualification, suspension or debarment or any pending agreement for voluntary exclusion from bidding, proposing or contracting. If a debarment agreement is obtained that permits continued performance under this Agreement, then the disqualification, suspension, debarment or agreement for exclusion shall not be considered a Contractor Default. If, however, such a debarment agreement is not obtained, the CONTRACTOR shall have the following cure rights:
 - (i.) With respect to a Contractor Default under clause XVII.A.1.o(i) involving CONTRACTOR, CONTRACTOR shall have 60 days after the effective date of the disqualification, suspension, debarment or agreement for exclusion to (i) obtain a debarment agreement allowing continued performance or (ii) otherwise cure the Contractor Default;
 - (ii.) With respect to a Contractor Default clause XVII.A.1.o(i) involving any equity or joint venture member of CONTRACTOR involving any equity or joint venture member of CONTRACTOR, CONTRACTOR shall have 60 days after the effective date of the disqualification, suspension, debarment or agreement for exclusion (i) to remove the affected equity or joint venture member and obtain SCDOT's approval of the change in the ownership structure of CONTRACTOR, (ii) to obtain a debarment agreement allowing continued performance or (iii) otherwise cure the Contractor Default; and
 - (iii.) With respect to a Contractor Default under clause XVII.A.1.o(i) involving a consultant, subcontractor, subconsultant, vendor, or supplier, or any other person or entity for which CONTRACTOR is legally responsible, CONTRACTOR shall have 60 days after the effective date of the disqualification, suspension, debarment or agreement for exclusion to obtain a debarment agreement allowing continued performance or otherwise cure the Contractor Default.

3. Remedies.

a. General Provisions.

- (i.) Failure to provide notice to CONTRACTOR's surety providing the bond(s) pursuant to Article VI.B shall not preclude SCDOT from exercising its remedies under this clause 3.
- (ii.) SCDOT shall also be entitled to exercise any other rights and remedies available under this Agreement, or available at law.
- (iii.) SCDOT's rights under this Agreement shall be cumulative and shall be in addition to every other right provided under this Agreement or at law, and the exercise or beginning of the exercise by SCDOT of any one or more of any of such rights or remedies shall not preclude the simultaneous or later exercise by SCDOT of any or all other such rights or remedies.
- (iv.) Except as expressly stated otherwise in this Agreement, SCDOT's exercise of any right or remedy does not waive or release, nor shall be deemed to waive or release, CONTRACTOR from any obligations or limiting other remedies that may be available to SCDOT,

b. SCDOT Step-In

- (i.) Subject to any surety rights under surety bond(s) placed for the Project pursuant to Article VI.B., SCDOT shall have the right, but not the obligation, to pay such amounts and or perform such acts as may then be required of CONTRACTOR under the Agreement or contracts with consultants, subcontractors, subconsultants, vendors, or suppliers, whether assigned to SCDOT.
- (ii.) SCDOT may appropriate any or all materials and equipment on the Site as SCDOT determines may be suitable and acceptable and, if and when consistent with the terms of any surety bond(s) placed pursuant to Article VI.B, SCDOT may direct the Surety to complete the Project, may enter into an agreement for the completion of the Project (with the surety or another contractor), or may complete the Project itself. If SCDOT exercises any right to perform any obligations of CONTRACTOR, then SCDOT may, but is not obligated to, among other things: (A) perform or attempt to perform, or cause to be performed, such work; (B) spend such sums as SCDOT deems necessary and reasonable to employ and pay such architects, engineers, consultants, and contractors, and obtain materials and equipment as may be required to complete such work; (C) execute all applications, certificates, and other documents as may be required to complete the Project, including paying such amounts and performing such other acts as may then be required from CONTRACTOR pursuant to its subcontracts with consultants, subcontractors, vendors, and suppliers; (D) modify or terminate any contractual arrangements; (E) take any other actions that SCDOT may, in its sole discretion, consider necessary to complete the Project; and (vi) prosecute and defend any action or proceeding incident to completion of the Project.

- (iii.) SCDOT may deduct from any amounts payable by SCDOT to CONTRACTOR such amounts payable by CONTRACTOR to SCDOT, including those damages listed in clause c. below.

c. Performance Security

- (i.) SCDOT may make demand upon and enforce any surety bond, and make demand upon, draw on and enforce and collect any letter of credit, guaranty or other payment or performance security available to SCDOT under this Agreement, with respect to such Contractor Default in any order.
- (ii.) SCDOT will apply the proceeds of any such action to the satisfaction of CONTRACTOR's obligations under this Agreement, including payment of amounts due to SCDOT.
- (iii.) The provisions of clauses (i) and (ii), shall not apply where access to any such surety bond, letter of credit, guaranty or other payment or performance security is for the purpose of satisfying damages owing to SCDOT, in which case SCDOT shall be entitled to make demand, draw, enforce and collect regardless of whether Contractor Default is subsequently cured.
- (iv.) SCDOT will notify CONTRACTOR at the same time or promptly after it takes any action to make demand upon, draw on, enforce or collect any such surety bond, letter of credit, guaranty or other payment or performance security.

d. Damages

- (i.) Without limiting SCDOT's right to deduct in the event of self-performance under clause 3.b. above, and except as limited by SCDOT's agreement to liquidate certain damages as specified in the Agreement, SCDOT shall be entitled to recover any and all damages available at law on account of the occurrence of a Contractor Default. CONTRACTOR shall owe any such damages that accrue after the occurrence of Contractor Default regardless of when any notice regarding any Contractor Default is given or whether Contractor Default is subsequently cured. Such damages include, but are not limited to:
 - a) the aggregate of reimbursements owing SCDOT;
 - b) any liquidated or stipulated damages accrued;
 - c) 125% of the amounts SCDOT deems advisable to cover any existing or threatened claims of consultants, subcontractors, subconsultants, vendors, suppliers, other laborers, or other persons or entities;

- d) amounts of any losses incurred or reasonably expected to be incurred by SCDOT in completing the Project;
 - e) the cost to complete or remediate uncompleted or other nonconforming work, plus an administrative charge equal to 10% of such costs;
 - f) throw-away costs for unused portions of the completed portions of the Project
 - g) increased financing costs of SCDOT, if any,
 - h) other damages or amounts that SCDOT has or will be incurred to rectify any breach or failure to perform by CONTRACTOR and/or to bring the condition of the Project to the standard it would have been in if CONTRACTOR had complied with its obligations to carry out and complete the Work in accordance with the Contract Documents; and
 - i) other damages or amounts that SCDOT has determined are or may be payable to SCDOT under this Agreement.
- (ii.) Where this Agreement is terminated, the damages recoverable by SCDOT shall also include the present value of
- a) actual and projected costs to SCDOT to terminate, take over the Project, re-procure and replace CONTRACTOR;
 - b) actual and projected delay costs; and
 - c) actual and projected increases in costs to SCDOT to complete the Project.
- (iii.) Damages owed to SCDOT under this clause c. shall bear interest at the statutory rate of interest under S.C. Code Ann. 34-31-20 from and after the date any amount becomes due to SCDOT until the date paid. The interest rate shall accrue on all amounts SCDOT has had to pay in excess of the remaining balance of the Contract Price from the date of SCDOT's payment.
- (iv.) Additional Provisions pertaining to costs.
- a) If, after termination, it is determined that the Contractor was not in default, or that the default was excusable, the rights and obligations of the parties shall be the same as a termination by SCDOT for its convenience.
 - b) In lieu of the provisions of this Article XVII for terminating this Agreement for cause, SCDOT may pay CONTRACTOR for the work already completed in accordance with the Agreement and

may treat the work remaining undone as if they had never been included or contemplated by this Agreement. No claim under this clause (C) will be allowed for prospective profits on, or any other compensation relating to, work remaining and uncompleted by CONTRACTOR.

e. Termination of the Agreement by SCDOT.

- (i.) CONTRACTOR acknowledges and agrees that any Contractor Default would result in material and substantial harm to SCDOT's rights and interests under this agreement, and therefor justifies termination of this Agreement unless fully and completely cured within the applicable cure period, if any, under clause XVII.A.2.
- (ii.) Upon expiration of any applicable cure period (if any), and after complying with other obligations of SCDOT, if any, under any surety bonds provided by CONTRACTOR under Article VI.B., if CONTRACTOR's surety providing such bond(s) refuses to complete the work or fails to take over the work under the terms of the performance bond, then SCDOT may in its sole discretion terminate this Agreement for cause. If SCDOT terminates this Agreement for cause, SCDOT shall deliver a notice to the CONTRACTOR so stating, and termination will be effective three days after dispatch, unless otherwise specified in such notice.

f. Joint and Several Liability of CONTRACTOR and Surety/ies

If a Contractor Default occurs, CONTRACTOR, and any surety providing the bond(s) pursuant to Article VI.B shall be jointly and severally liable to SCDOT for all costs, damages, and expenses of SCDOT listed under clause XVII.A.3.d., including specifically any interest that accrues thereon, whether by virtue of late payment by CONTRACTOR or late payment by surety.

g. Final Release

Except as otherwise expressly provided in this Agreement, if this Agreement is earlier terminated for any reason, then SCDOT's payment to CONTRACTOR of the amounts required under this Agreement (if any) shall constitute full and final satisfaction of, and upon payment SCDOT shall be forever released and discharged from, any and all claims, causes of action, suits, demands and losses, known or unknown, suspected or unsuspected, that CONTRACTOR may have against SCDOT caused by, arising out of, relating to, or resulting from this Agreement or termination thereof, or the Project. Upon such payment, CONTRACTOR shall execute and deliver to SCDOT all such releases and discharges as SCDOT may reasonably require to confirm the foregoing, but no such written release and discharge shall be necessary to give effect to the foregoing satisfaction and release.

A. Suspension of the work for cause

1. Notwithstanding the notice and cure period provisions of this Article XVII, if not substantially cured promptly after SCDOT notifies CONTRACTOR of any of the following, SCDOT has the authority to suspend the Work by written order, wholly or in part, for CONTRACTOR's failure to:
 - a. handle (i) Hazardous Waste, or (ii) any archaeological, paleontological, biological, or cultural resource, in any case, in accordance with prudent industry practices, applicable laws, governmental approvals, or permits; or
 - b. comply with any law, governmental approval or permit.
2. If not substantially cured within three days after SCDOT delivers notice thereof to CONTRACTOR, SCDOT has the authority to suspend the Work by written order, wholly or in part, for CONTRACTOR's failure to:
 - a. observe any conditions to commencement of certain portions of the scope of the Work and thereafter commences performance;
 - b. provide proof of required insurance coverage hereunder;
 - c. maintain any surety bond(s) required hereunder;
 - d. correct any nonconforming work; or
 - e. perform the scope of the work in compliance with the Agreement.
3. CONTRACTOR shall promptly comply with any such written suspension order, even if it disputes the grounds for suspension. CONTRACTOR shall promptly recommence performance of the scope of the work upon receipt of written notice from SCDOT directing CONTRACTOR to resume performance. SCDOT will lift the suspension order promptly after CONTRACTOR fully cures and corrects the applicable breach or failure to perform or any other reason for the suspension order ceases to apply.
4. SCDOT shall have no liability to CONTRACTOR in connection with any such suspension, and CONTRACTOR shall have no right to any adjustment in the Contract Price, additional costs, or additional time on the then-current CPM Schedule in connection with any suspension of Work founded on any of the grounds set forth in this clause XVII.B.
5. If SCDOT orders suspension of Work on one of the foregoing grounds but it is finally determined under the Agreement's dispute resolution procedures that such grounds did not exist, it shall be treated as a suspension for SCDOT's convenience under clause XVII.C.

B. Suspensions for Convenience; Suspensions for Safety

1. SCDOT may, at any time and for any reason, by written notice, order CONTRACTOR to suspend all or any part of performance of the scope of the work for the period of time that SCDOT deems appropriate for the convenience of SCDOT. CONTRACTOR shall promptly comply with any such written suspension order. CONTRACTOR shall promptly recommence performance of the scope of the work upon receipt of written notice from SCDOT directing CONTRACTOR to do so.
2. CONTRACTOR shall be entitled for additional time, on a day-by-day basis (or for such additional time, in SCDOT's sole discretion), to achieve Substantial Completion for each day of delay to the CPM Schedule caused by or will result in an identifiable and measurable disruption of an activity on the critical path under the then-current CPM Schedule, after consumption of all then-available float, any such suspensions directed by SCDOT for its convenience; provided, however, that
 - a. SCDOT shall have the right to direct suspensions of the work for convenience not exceeding 48 hours each, up to a total of 144 hours during the term before any such CONTRACTOR entitlement to additional time shall accrue;
 - b. SCDOT may nonetheless suspend the work for its convenience for lack of appropriations, in which case, any such suspension shall not serve to diminish SCDOT's balance of 144 hours then-existing, but CONTRACTOR shall be entitled to additional time and costs under this clause C for the duration of any such suspension. Subject to clause c. below, if the duration of suspensions for convenience reaches 270 days continuously, then SCDOT will be deemed to have terminated this Agreement for its convenience;
 - c. SCDOT may suspend the work for its convenience during any period of governmental shutdowns, government-declared restrictions, or other direction of the State or federal executive (including specifically any quarantine or other governmental and non-governmental measures intended to limit the spread of disease), and the duration of any such suspension shall not serve to diminish SCDOT's balance of 144 hours then-existing, nor shall continuation of any such suspension beyond 270 days continuously shall not be deemed to be a termination for SCDOT's convenience;
 - d. SCDOT may suspend the work for its convenience upon discovery of any known or suspected Hazardous Waste or any known or suspected archaeological, paleontological, biological, or cultural resource, and without limiting clause B.1.a above, the duration of any such suspension shall not serve to diminish SCDOT's balance of 144 hours then-existing, nor shall continuation of any such suspension beyond 270 days continuously shall not be deemed to be a termination for SCDOT's convenience.
3. CONTRACTOR shall not be entitled to any additional costs incurred or additional compensation arising out of, relating to, resulting from, or caused by any such suspension directed by SCDOT for its convenience not exceeding 48 hours each,

up to a total of 144 hours during the term, but CONTRACTOR shall be entitled to actual, direct, and documented costs incurred resulting from suspensions directed by SCDOT for its convenience beyond any 48 hour period or beyond the aggregate of 144 hours, so long as CONTRACTOR establishes in any CCR that any delay to the CPM Schedule could not have reasonably been mitigated or avoided, and subject to the following further limitations:

- a. CONTRACTOR shall not be entitled to any disruption damages in connection with any additional costs claimed with respect to any suspension directed by SCDOT for its convenience;
 - b. CONTRACTOR shall not be entitled to any punitive, indirect, special, incidental, or consequential damages in connection with any additional costs claimed pursuant to any suspension directed by SCDOT for its convenience;
 - c. Delay and such other actual, direct, and documented additional incremental costs shall not exceed those calculated pursuant to Section 105.16.5 of the SCDOT Standard Specifications, with the exception of extended job site overhead rates which shall be as set forth in Exhibit 5 of the RFP.
4. CONTRACTOR shall not be entitled to an extension of time or additional costs if the delay arising out of, relating to, or resulting from any suspension directed by SCDOT for its convenience is concurrent with any other unrelated delay to an activity on the critical path under the then-current CPM Schedule for which CONTRACTOR is responsible under this Agreement.
5. Notwithstanding anything to the contrary herein, CONTRACTOR acknowledges that among SCDOT's functions and purposes under SC. Code Ann. 57-1-30(B) is to provide safe transportation for the movement of people and goods throughout the state, and accordingly, SCDOT may issue an order suspending work wholly or in part and to take appropriate action when public safety is jeopardized. CONTRACTOR shall promptly comply with any such written suspension order. CONTRACTOR shall promptly recommence performance of the scope of the work upon receipt of notice from SCDOT directing CONTRACTOR to resume performance. Any such suspension shall not be, nor be deemed to be, (a) a suspension directed by SCDOT for its convenience or (b) a suspension for cause under clause XVII.A.3.e, requiring notice and opportunity to cure or otherwise. SCDOT shall have no liability to CONTRACTOR in connection with any such suspension, and CONTRACTOR shall have no basis to submit a CCR or otherwise claim entitlement to additional cost or accommodation of delay.

C. Responsibilities of CONTRACTOR During Suspension Periods

During any suspension periods directed by SCDOT hereunder, CONTRACTOR shall continue to be responsible for the Project and shall prevent damage, loss or injury to the Project. Without limiting the generality of the foregoing, CONTRACTOR shall specifically provide for drainage, protect any known or suspected Hazardous Waste or

known or suspected archaeological, paleontological, biological, or cultural resources (including taking affirmative steps to protect the site from vandalism and unauthorized investigations), protect the site from accidental damage, heavy rainfall, runoff, and shall erect necessary temporary structures, signs or other facilities required to maintain the Project. CONTRACTOR shall also maintain all insurance policies and bonds required to be in place under this Agreement, comply with all applicable governmental approvals and other permits. CONTRACTOR shall, unless otherwise directed by SCDOT, continue to be responsible for traffic control, erosion control, and maintenance of the roadway in accordance with this Agreement.

D. Termination for Convenience

1. SCDOT reserves the right to terminate the Agreement at any time, in whole or in part, and upon 30 days written notice to CONTRACTOR, if SCDOT determines it to be in the public interest. Should the Agreement be so terminated by SCDOT for its convenience, CONTRACTOR shall be paid for the value of the work, based upon the Schedule of Values, performed to the effective date of termination and reasonable demobilization costs, together with any reasonable, pre-agreed cancellation charges by vendors, suppliers, and subcontractors. CONTRACTOR shall also be entitled to the cost of securing that portion of the work as directed by SCDOT, provided such cost is reasonable and is approved by SCDOT. In no event, shall CONTRACTOR recover any amount for work not performed. The total payment to CONTRACTOR pursuant to any termination by SCDOT for its convenience shall not exceed the Contract Price.
2. Termination of all or a portion of this Agreement shall not relieve CONTRACTOR of any responsibility it would otherwise have for the work completed, or for any claims arising from that work.
3. For avoidance of doubt, any termination by SCDOT for lack of appropriations would be a termination for convenience under this clause E.

E. Responsibilities of CONTRACTOR Following Notice of Termination of the Agreement

1. CONTRACTOR shall timely comply with the following provisions independently of, and without regard to, the timing for determining, adjusting, settling, and paying any amounts due CONTRACTOR or SCDOT on account of termination, if any:
 - a. CONTRACTOR shall promptly deliver to SCDOT or its designee possession of all Project Documents, as defined in Article II.F, in CONTRACTOR's possession or control that relates to the Project and that SCDOT deems necessary for completion of the Project;
 - b. CONTRACTOR shall discontinue performance of the scope of the Work, withdraw from the Site, and shall remove materials, equipment, tools, and instruments used by, and any debris or waste materials generated by

CONTRACTOR and any subcontractor, vendor, or supplier in the performance of the scope of the Work;

- c. If and as directed by SCDOT, CONTRACTOR shall confirm the assignment to SCDOT of any contracts with consultants, subcontractors, subconsultants, vendors, or suppliers, and CONTRACTOR shall terminate, at its sole cost, any such contracts not assigned;
 - d. CONTRACTOR shall otherwise promptly and orderly transition the work, demobilize, and transfer management, care, custody, and control of the Project to SCDOT.
2. If SCDOT determines that CONTRACTOR has failed to comply with the foregoing, then upon subsequent notice from SCDOT to CONTRACTOR making reference to this clause, CONTRACTOR acknowledges and agrees that it shall be deemed to have surrendered its access rights to the Site.
3. CONTRACTOR shall, and shall cause its consultants, subcontractors, subconsultants, vendors, and suppliers to, complete all of the foregoing prior to the effective date of the termination of the Agreement as set forth in the notice to CONTRACTOR

XVIII. DISADVANTAGED BUSINESS ENTERPRISES

The DBE goal on this Project is 12.1 percent. In meeting the overall goal, 0.1 percent (a portion of the overall DBE goal) must be met within 30 calendar days of the contract execution with firms certified as a DBE in the Professional Services industry or demonstrate good faith efforts in meeting the goal. The remaining 12.0 percent must be met in any trade in support of Professional Services and/or constructing the project. DBE committals for the .1 percent must be submitted no later than 30 calendar days from contract execution. A DBE Utilization Commitment Plan for the remaining 12 percent is also due within 30 days from contract execution.

Firms that provide Professional Services are those defined under Engineering and Design Related Services set forth in the SCDOT Manual for Procurement, Management and Administration of Engineering and Design Related Services, dated May 1, 2018 [<http://info2.scdot.org/professionalserv/HostDocs/PSCO-Manual-5-1-2018.pdf>].

Whether or not there is a DBE contract goal on the contract, the Proposer is strongly encouraged to obtain the maximum amount of DBE participation feasible on the contract. The selected CONTRACTOR is required to report all DBE participation through the DBE Quarterly Reports required by Part B of the SCDOT DBE Supplemental Specifications. SCDOT will have the right to audit all documentation regarding DBE participation in the Project.

XIX. ON-THE-JOB TRAINING REQUIREMENTS

Not required.

XX. RECORD RETENTION

A. Retention Period

1. CONTRACTOR shall maintain the following documents for a period of three years or a period equal to the warranty period, whichever is longer, after Final Completion of the Project:
 - a. All CONTRACTOR samples and test reports;
 - b. Daily Diaries and any other documents required to be retained in accordance with the Quality Control Plan.
 - c. Documents required to be retained under Article VIII.A.17.
 - d. Documents required to be retained under FHWA 1273.
 - e. Documents items listed in Subsection 109.10 and 105.16.9 of the SCDOT Standard Specification.
2. During the retention period, SCDOT will be granted access to those documents upon reasonable notice. At any time during the retention period, SCDOT will have the option of taking custody of the documents. CONTRACTOR shall obtain a written release from SCDOT prior to destroying the records after the retention period.

XXI. AS-BUILTS

A. Documents

1. In addition to those documents set forth elsewhere in this Agreement, CONTRACTOR shall provide to SCDOT prior to Final Completion, complete sets of as-built drawings (See Article XXI.D for details). As-built plans consist of the final version of the design plan CADD drawings that incorporate all changes, including any adjustments, relocations, additions and deletions that occurred during construction. CONTRACTOR shall certify that the as-built plans are a true and correct representation of the work as constructed. If any design changes occur during construction, the plan sheets (or any other “job site record document” with a seal) revised after award of contract shall include a complete accounting and detail of the revisions and design changes. The P.E. responsible for the revisions shall seal each altered plan sheet (or any other “job site record document” with a seal). This documented information is to be part of the As-Built Plan requirements. The CONTRACTOR shall develop as-built plans in accordance with the SCDOT Manual of Instructions for the Preparation of As-Built Plans, edition effective as of the release of the Final RFP.
2. Information regarding major revisions to the plans shall be noted in a revision box on the plans. The information listed in the revision box shall include: the initiator

of the revision, a brief explanation of the nature of the revision, and acceptance and approval from CONTRACTOR, along with associated dates.

3. In addition to the revisions that incorporated changes during construction, the as-built plans shall include the following information gathered during construction:
 - a. The location and elevation of foundations remaining below grade.
 - b. The final profile of each bridge constructed. The profile shall include the elevation along the centerline (or as specified by SCDOT) and a line three feet inboard of each gutter line. Points on the profile shall be taken at no greater than 25-foot intervals and shall include the beginning and end of each span.
 - c. If any structure has pile foundations, information concerning the pile driving operation shall be listed to include pile and driving equipment data, final pile bearing, elevation of pile tip when plan bearing was obtained, final pile tip elevation, penetration into the ground, and PDA or WEAP analysis data. This information shall be entered on each footing or bent sheet, or be included as a new sheet inserted immediately following the pertinent footing or bent sheet.
 - d. If any structure has drilled shaft foundations, information concerning the installation of the shaft shall be listed to include the drilled shaft report. This information shall be entered on each footing or bent sheet, or be included as a new sheet inserted immediately following the pertinent footing or bent sheet.
 - e. The final horizontal location of all existing and relocated utility lines and structures that are within the right-of-way. Include approved Utility Agreements, No Cost/No Conflict Letters, and Encroachment Permits.
 - f. The final location and elevations of all pipes, culverts, and drainage structures.
 - g. To include all right-of-way revisions, permissions, and an updated right-of-way data sheet to show the date and manner of acquisition of each tract
4. As-built plans shall be submitted as two full size (36 inch x 22 inch) copies and one (1) copy on compact disc in a format acceptable to SCDOT. The levels and symbology of the as-built CADD drawings shall conform to SCDOT standard levels and symbology used to develop the design drawings for the Project.

XXII. ESCROW PROPOSAL DOCUMENTS

The Contractor shall submit bid documentation used to prepare the technical and cost proposals for this contract to the Department in accordance with the Supplemental Specification entitled Escrow Bid Documentation dated October 1, 2014.

XXIII. DISPUTE RESOLUTION

A. Parties

1. Each party hereby waives a trial by jury regarding any dispute between them arising out of this Contract and any such trial will be a non-jury trial before the South Carolina Circuit Court in Richland County.
2. In the event of a dispute between the parties, it shall be a condition precedent to litigation that the parties submit the dispute to the Standing Dispute Review Board pursuant to the Claims Procedure set forth in the Project Supplemental Specifications.
3. CONTRACTOR consents that any papers, notices, or process necessary or proper for the initiation or continuation of any disputes, claims, or controversies relating to the Agreement, any court action in connection therewith, or for the entry of judgment on any award made, may be served on CONTRACTOR by certified mail (return receipt requested) addressed to CONTRACTOR at the address provided in Article XXVI. Notice by certified mail is deemed duly given upon deposit in the United States mail.

XXIV. SCDOT'S AGENT

SCDOT will appoint an individual who will be authorized to act on behalf of SCDOT, with whom CONTRACTOR may consult at all reasonable times, and whose instructions and decisions will be binding upon SCDOT as to all matters pertaining to this Agreement and the performance of the parties hereunder.

XXV. ASSIGNABILITY

A. By CONTRACTOR

1. Neither the Agreement nor CONTRACTOR's interest herein, in whole or in part, shall be voluntarily or involuntarily assigned, sold, conveyed, transferred, pledged, mortgaged, or otherwise encumbered (by way of grant of right of entry, grant of special use, management, or control of the Project, or otherwise) by CONTRACTOR without the prior written consent of SCDOT. Notwithstanding the foregoing, CONTRACTOR may assign this Agreement to any entity in which the organizations signing this Agreement for CONTRACTOR, or the shareholder(s), general partner(s) or member(s) that exercise management control over such organizations, hold and exercise effective management control and hold at least 50 percent of the equity interest.
2. Any purported voluntary or involuntary sale, assignment, conveyance, transfer, pledge, mortgage, or encumbrance of this Agreement, in whole or in part, or other grant of right of entry, or grant of other special use, management or control of the Project in violation of this Article shall be null and void ab initio.

B. By SCDOT.

SCDOT may assign the Contract without the consent of CONTRACTOR.

C. Restrictions on Equity Transfers and Changes of Control

1. Except as permitted in this Article, no voluntary or involuntary Change of Control of CONTRACTOR, including any Equity Transfer that would result in a Change of Control of CONTRACTOR, shall be permitted without the prior written consent of SCDOT.
2. Transfers and transactions within any of the exceptions described in clauses (a) through (e) of the definition of Change of Control are allowed at any time without necessity for SCDOT's approval but, in the case of exceptions described in clauses (a) through (c), subject to the condition that CONTRACTOR delivers to SCDOT, no later than ten days prior to the effectiveness of the transfer or transaction, a written notice describing the transfer or transaction and (if applicable) the names of the transferor and transferee, together with documentation demonstrating that the transfer or transaction is within such an exception.
3. Any purported voluntary or involuntary Equity Transfer or Change of Control in violation of this clause C. shall be null and void ab initio.

D. Definitions.

For purposes of this Article, the following terms have the meanings ascribed.

1. Equity Transfer means any sale, assignment, conveyance, transfer, pledge, mortgage, or other encumbrance of any equity interest in CONTRACTOR.
2. Change of Control means any Equity Transfer, transfer of an interest, direct or indirect, in an equity member, or other sale, assignment, conveyance, transfer, pledge, mortgage, or other encumbrance financing, grant of security interest, hypothecation, transfer of interest or transaction of any type or description, including by or through voting securities, asset transfer, contract, merger, acquisition, succession, dissolution, liquidation, bankruptcy or otherwise, that results, directly or indirectly, in a change in possession of the power to direct or control or cause the direction or control of the management of CONTRACTOR or a material aspect of its business. A change in possession of the power to direct or control or cause the direction or control of the management of an equity member of CONTRACTOR may constitute a Change of Control of CONTRACTOR if such equity member possesses, immediately prior to such Change of Control, the power to direct or control or cause the direction or control of the management of CONTRACTOR. Notwithstanding the foregoing, the following shall not constitute a Change of Control:
 - a. A change in possession of the power to direct or control the management of CONTRACTOR Developer or a material aspect of its business due solely to a bona fide transaction involving beneficial interests in the ultimate parent organization of an equity member, (but not if the equity member is the ultimate parent organization), provided, however, that this exception shall not apply if

the transferee in such transaction is, at the time of the transaction, suspended or debarred, or subject to a proceeding that may result in being suspended or debarred from bidding, proposing or contracting with any federal or state department or agency;

- b. An upstream reorganization or transfer of direct or indirect interests in CONTRACTOR so long as there occurs no change in the entity with ultimate power to direct or control or cause the direction or control of the management of CONTRACTOR;
- c. An Equity Transfer, where the transferring equity member and the transferee are under the same ultimate parent organization ownership, management and control before and after the transfer;
- d. A change in possession of the power to direct or control the management of CONTRACTOR or a material aspect of its business due solely to bona fide open market transactions in securities effected on a recognized public stock exchange, including such transactions involving an initial public offering; or
- e. The exercise of minority veto or voting rights (whether provided by applicable law, by CONTRACTOR's organizational documents or by related member or shareholder agreements or similar agreements) over major business decisions of CONTRACTOR, provided that if such minority veto or voting rights are provided by shareholder or similar agreements, SCDOT has received copies of such agreements.

XXVI. GENERAL PROVISIONS

- 1. This Agreement shall be governed by and interpreted in accordance with the substantive laws of the State of South Carolina.
- 2. Headings and titles of the various parts of this Agreement are for convenience of reference only and shall not be considered in interpreting the text of this Agreement. Modifications or amendments to this Agreement must be in writing and executed by duly authorized representatives of each party.
- 3. In the event that any portion or all of this Agreement is held to be void or unenforceable, the parties agree to negotiate in good faith to reach an equitable agreement which shall affect the intent of the parties as set forth in this Agreement. For purposes of construction of this Agreement, this Agreement will be considered to have been drafted by both parties and will not be construed against SCDOT because it was drafted by SCDOT.
- 4. All notices pertaining to this Agreement shall be in writing and, if to SCDOT, will be sufficient when sent registered or certified mail to SCDOT addressed as follows:

Deputy Secretary for Engineering
South Carolina Department of Transportation

Post Office Box 191
Columbia, South Carolina 29202-0191

All notices to CONTRACTOR shall be sufficient when sent registered or certified mail to CONTRACTOR addressed as follows:

E.S. Wagner Company LLC
1515 Shopton Road, Suite 103
Charlotte, North Carolina 28217

5. The Contract Documents set forth the full and complete understanding of the parties as of the Effective Date defined herein, and supersedes any and all prior agreements, representations, and understandings of any kind.
6. The parties make no representations, covenants, warranties or guarantees, express or implied, other than those expressly set forth herein. The parties' rights, liabilities, responsibilities and remedies within respect to the work shall be exclusively those expressly set forth in this Agreement.
7. In no event shall any failure by either party hereto to fully enforce any provision to this Agreement be construed as a waiver by such party of its right to subsequently enforce, assert or rely upon such provision.
8. Nothing in this Agreement is intended to create any contract rights for any party other than SCDOT and CONTRACTOR, nor are any third-party beneficiary rights intended to be created hereby.
9. All obligations of SCDOT hereunder are subject to all applicable law and appropriations by the South Carolina General Assembly. The obligation of SCDOT to make any payments under this Agreement does not constitute an indebtedness of the State of South Carolina within the meaning or application of any constitutional provision or limitation and does not constitute a pledge of the faith, credit or taxing power of the State of South Carolina or any political subdivision thereof within the meaning or application of any constitutional provision or limitation.
10. CONTRACTOR is an independent contractor, and nothing contained in this Contract shall be construed as constituting any relationship with SCDOT other than that of independent contractor. In no event shall the relationship between SCDOT and CONTRACTOR be construed as creating any relationship whatsoever between SCDOT and CONTRACTOR's employees, suppliers, or other contractors. Neither CONTRACTOR nor any of the employees, suppliers, or contractors of CONTRACTOR or any of CONTRACTOR's affiliates is or shall be deemed to be an employee of SCDOT. Except as otherwise expressly stated or implied in law or under any governmental approval or permit, CONTRACTOR has sole authority and responsibility to employ, discharge, and otherwise control its employees and has complete and sole responsibility as a principal for its agents, for all suppliers, subcontractors, and for all other persons or entities that CONTRACTOR or any

supplier or subcontractor hires to perform or assist in performing the work under this Contract.

11. This Contract shall be binding on and inure to the benefit of SCDOT and CONTRACTOR and each of their successors, permitted assigns, and legal representatives.
12. CONTRACTOR's and SCDOT's representations and warranties, if any, the dispute resolution provisions, the indemnifications, the express obligations of the parties following termination, and all other provisions which by their inherent character should survive expiration or earlier termination of this Contract and/or Final Completion shall survive the expiration or earlier termination of this Contract and/or the Final Completion of the Project.
13. Persons employed by, or contracted to, SCDOT in connection with this Contract are acting solely as agents and representatives of SCDOT when carrying out the provisions of, or exercising the power or authority granted to them under, this Contract. They shall not be liable either personally or as employees of or contractors to SCDOT for actions in their ordinary course of employment or performance of contracted services.
14. It is understood and agreed by the parties hereto that if any part, term, or provision of this Contract is by the courts held to be illegal or in conflict with any law of the State of South Carolina, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular part, term, or provisions to be invalid.
15. The language in all parts of the Contract shall in all cases be construed simply, as a whole and in accordance with its fair meaning and not strictly for or against any party. In the event of an ambiguity in or dispute regarding the interpretation of the Contract, the Contract shall not be interpreted or construed against the party preparing it, and instead other rules of interpretation and construction shall be utilized.
16. This instrument may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

EXHIBIT 1

COST PROPOSAL BID FORM

9. COST PROPOSAL BID FORM

Bridge Package 15
Anderson, Chester, Chesterfield, and Lancaster County

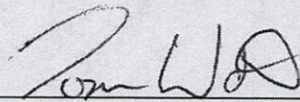
CONTRACTOR: E.S. Wagner Co., LLC

ADDRESS: 427 Oak Road, Piedmont, SC 29673

Provide full Project scope as described in Attachment A.

TOTAL COST TO COMPLETE (A) = \$ 13,407,135.00

No conditional or qualified Bids will be accepted, nor Bids with reservations, assumptions, or that are premised upon changes to the terms of the Contract, and all such Bids will be rejected.



Signature

3-6-2023

Date

Tom Watson

Printed Name

EXHIBIT 2

SCHEDULE OF VALUES

SCHEDULE OF VALUES

FOR

BRIDGE PACKAGE 15

ANDERSON, CHESTER, CHESTERFIELD, AND LANCASTER COUNTIES

A Schedule of Values, submitted by the selected PROPOSER and approved by SCDOT, will be included with the completed agreement.



**Contract Schedule
DBE Interest Report**

Contract ID: 8862230

Item Number	Alternate	Item Description	Estimated Quantity	DBE Pct	Item Units	Unit Price	Item Cost
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No DBE Interest Items



<p>South Carolina Department of Transportation Contract</p>
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Date of Opening : March 06, 2023

Contract ID : 8862230

Projects : P041153, P041154, P041156, P041181

Counties : Anderson, Chester, Chesterfield, Lancaster

Apparent Low Bidder: 1TH039

E.S. WAGNER COMPANY LLC



Contract ID: 8862230

Alternative Delivery Bridge Replacement Package 15 (multit)

Time ID	Completion Date or Number of Units	Min/Max	Unit Type	Time Type	Liquidated Damages Rate	Contract Time Flag
00	630	/	Days	CD	750.00 Days	√

(*) - Indicates Cost Plus Time Site.



Contract Schedule

Contract ID: 8862230

Project(s): P041153, P041154, P041156, P041181

Apparent Low Bidder: 1TH039

E.S. WAGNER COMPANY LLC

SECTION 01

P041153 S-53 - Road

\$2,297,077.21

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0010	9210301 PROJECT MOBILIZATION	264,988.000 DOL	1.00000		264,988.00	
0020	9210303 BONDS / INSURANCE	105,995.000 DOL	1.00000		105,995.00	
0030	9210504 CONSTRUCTION SURVEY	35,647.220 DOL	1.00000		35,647.22	
0040	9210601 QUALITY CONTROL FOR DESIGN/BUILD PROJECTS	142,901.420 DOL	1.00000		142,901.42	
0050	9210700 TRAFFIC CONTROL	18,250.200 DOL	1.00000		18,250.20	
0060	9211101 DESIGN & ENGINEERING FOR DESIGN/BUILD PROJECT DESIGN & ENGINEERING FOR DESIGN / BUILD	592,258.630 DOL	1.00000		592,258.63	
0070	9220102 CLEARING AND GRUBBING	224,296.140 DOL	1.00000		224,296.14	
0080	9220304 GRADING	75,354.600 DOL	1.00000		75,354.60	
0090	9220306 EARTHWORK	438,424.210 DOL	1.00000		438,424.21	
0100	9240300 ASPHALT PAVING	253,723.600 DOL	1.00000		253,723.60	
0110	9262701 PAVEMENT MARK. & DELINEATION	19,620.460 DOL	1.00000		19,620.46	
0120	9280500 GUARDRAIL	55,222.400 DOL	1.00000		55,222.40	
0130	9281500 EROSION CONTROL	70,395.330 DOL	1.00000		70,395.33	



Contract Schedule

Contract ID: 8862230

Project(s): P041153, P041154, P041156, P041181

Apparent Low Bidder: 1TH039

E.S. WAGNER COMPANY LLC

SECTION 02

P041153 S-53 - Bridge

\$3,002,686.91

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0140	9251100 BRIDGE FOUNDATIONS	579,604.400 DOL	1.00000		579,604.40	
0150	9270130 BRIDGE DEMOLITION	219,487.890 DOL	1.00000		219,487.89	
0160	9270201 BRIDGE SUBSTRUCTURE FOR DESIGN BUILD PROJECT 001	445,768.980 DOL	1.00000		445,768.98	
0170	9270251 BRIDGE SUPERSTRUCTURE FOR DESIGN BUILD PROJECT 002	1,757,825.640 DOL	1.00000		1,757,825.64	



Contract Schedule

Contract ID: 8862230

Project(s): P041153, P041154, P041156, P041181

Apparent Low Bidder: 1TH039

E.S. WAGNER COMPANY LLC

SECTION 03

P041154 S-765 - Road

\$1,601,217.22

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0180	9210301 PROJECT MOBILIZATION	157,022.000 DOL	1.00000		157,022.00	
0190	9210303 BONDS / INSURANCE	62,810.000 DOL	1.00000		62,810.00	
0200	9210504 CONSTRUCTION SURVEY	31,633.590 DOL	1.00000		31,633.59	
0210	9210601 QUALITY CONTROL FOR DESIGN/BUILD PROJECTS	122,459.730 DOL	1.00000		122,459.73	
0220	9210700 TRAFFIC CONTROL	15,145.120 DOL	1.00000		15,145.12	
0230	9211101 DESIGN & ENGINEERING FOR DESIGN/BUILD PROJECT DESIGN & ENGINEERING FOR DESIGN / BUILD	596,926.940 DOL	1.00000		596,926.94	
0240	9220102 CLEARING AND GRUBBING	54,692.510 DOL	1.00000		54,692.51	
0250	9220304 GRADING	94,289.100 DOL	1.00000		94,289.10	
0260	9220306 EARTHWORK	233,574.210 DOL	1.00000		233,574.21	
0270	9240300 ASPHALT PAVING	134,477.770 DOL	1.00000		134,477.77	
0280	9262701 PAVEMENT MARK. & DELINEATION	12,037.190 DOL	1.00000		12,037.19	
0290	9280500 GUARDRAIL	30,901.920 DOL	1.00000		30,901.92	
0300	9281500 EROSION CONTROL	55,247.140 DOL	1.00000		55,247.14	



Contract Schedule

Contract ID: 8862230

Project(s): P041153, P041154, P041156, P041181

Apparent Low Bidder: 1TH039

E.S. WAGNER COMPANY LLC

SECTION 04

P041154 S-765 - Bridge

\$1,539,338.20

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0310	9251100 BRIDGE FOUNDATIONS	281,644.620 DOL	1.00000		281,644.62	
0320	9270130 BRIDGE DEMOLITION	43,189.230 DOL	1.00000		43,189.23	
0330	9270201 BRIDGE SUBSTRUCTURE FOR DESIGN BUILD PROJECT 001	267,277.900 DOL	1.00000		267,277.90	
0340	9270251 BRIDGE SUPERSTRUCTURE FOR DESIGN BUILD PROJECT 002	947,226.450 DOL	1.00000		947,226.45	



Contract Schedule

Contract ID: 8862230

Project(s): P041153, P041154, P041156, P041181

Apparent Low Bidder: 1TH039

E.S. WAGNER COMPANY LLC

SECTION 05

P041156 S-294 - Road

\$1,516,462.87

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0350	9210301 PROJECT MOBILIZATION	139,463.000 DOL	1.00000		139,463.00	
0360	9210303 BONDS / INSURANCE	55,787.000 DOL	1.00000		55,787.00	
0370	9210504 CONSTRUCTION SURVEY	33,804.010 DOL	1.00000		33,804.01	
0380	9210601 QUALITY CONTROL FOR DESIGN/BUILD PROJECTS	129,768.330 DOL	1.00000		129,768.33	
0390	9210700 TRAFFIC CONTROL	9,178.370 DOL	1.00000		9,178.37	
0400	9211101 DESIGN & ENGINEERING FOR DESIGN/BUILD PROJECT DESIGN & ENGINEERING FOR DESIGN / BUILD	492,785.410 DOL	1.00000		492,785.41	
0410	9220102 CLEARING AND GRUBBING	54,078.260 DOL	1.00000		54,078.26	
0420	9220304 GRADING	125,213.190 DOL	1.00000		125,213.19	
0430	9220306 EARTHWORK	219,206.850 DOL	1.00000		219,206.85	
0440	9240300 ASPHALT PAVING	158,885.560 DOL	1.00000		158,885.56	
0450	9262701 PAVEMENT MARK. & DELINEATION	11,116.570 DOL	1.00000		11,116.57	
0460	9280500 GUARDRAIL	26,426.390 DOL	1.00000		26,426.39	
0470	9281500 EROSION CONTROL	60,749.930 DOL	1.00000		60,749.93	



Contract Schedule

Contract ID: 8862230

Project(s): P041153, P041154, P041156, P041181

Apparent Low Bidder: 1TH039

E.S. WAGNER COMPANY LLC

SECTION 06

P041156 S-294 - Bridge

\$1,272,945.77

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0480	9251100 BRIDGE FOUNDATIONS	425,614.480 DOL	1.00000		425,614.48	
0490	9270130 BRIDGE DEMOLITION	88,575.590 DOL	1.00000		88,575.59	
0500	9270201 BRIDGE SUBSTRUCTURE FOR DESIGN BUILD PROJECT 001	305,870.640 DOL	1.00000		305,870.64	
0510	9270251 BRIDGE SUPERSTRUCTURE FOR DESIGN BUILD PROJECT 002	452,885.060 DOL	1.00000		452,885.06	



Contract Schedule

Contract ID: 8862230 **Project(s):** P041153, P041154, P041156, P041181
Apparent Low Bidder: 1TH039 E.S. WAGNER COMPANY LLC
SECTION 07 **P041181 S-108 - Road** **\$1,315,163.72**
Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0520	9210301 PROJECT MOBILIZATION	108,865.000 DOL	1.00000		108,865.00	
0530	9210303 BONDS / INSURANCE	43,454.000 DOL	1.00000		43,454.00	
0540	9210504 CONSTRUCTION SURVEY	31,972.980 DOL	1.00000		31,972.98	
0550	9210601 QUALITY CONTROL FOR DESIGN/BUILD PROJECTS	126,100.030 DOL	1.00000		126,100.03	
0560	9210700 TRAFFIC CONTROL	14,658.270 DOL	1.00000		14,658.27	
0570	9211101 DESIGN & ENGINEERING FOR DESIGN/BUILD PROJECT DESIGN & ENGINEERING FOR DESIGN / BUILD	442,839.500 DOL	1.00000		442,839.50	
0580	9220102 CLEARING AND GRUBBING	42,030.980 DOL	1.00000		42,030.98	
0590	9220304 GRADING	70,403.740 DOL	1.00000		70,403.74	
0600	9220306 EARTHWORK	163,777.500 DOL	1.00000		163,777.50	
0610	9240300 ASPHALT PAVING	141,811.160 DOL	1.00000		141,811.16	
0620	9262701 PAVEMENT MARK. & DELINEATION	11,547.970 DOL	1.00000		11,547.97	
0630	9280500 GUARDRAIL	52,845.330 DOL	1.00000		52,845.33	
0640	9281500 EROSION CONTROL	64,857.260 DOL	1.00000		64,857.26	



Contract Schedule

Contract ID: 8862230

Project(s): P041153, P041154, P041156, P041181

Apparent Low Bidder: 1TH039

E.S. WAGNER COMPANY LLC

SECTION 08

P041181 S-108 - Bridge

\$862,243.10

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price		Bid Amount	
			Dollars	Cents	Dollars	Cents
0650	9251100 BRIDGE FOUNDATIONS	125,495.800 DOL	1.00000		125,495.80	
0660	9270130 BRIDGE DEMOLITION	49,659.740 DOL	1.00000		49,659.74	
0670	9270201 BRIDGE SUBSTRUCTURE FOR DESIGN BUILD PROJECT 001	157,571.360 DOL	1.00000		157,571.36	
0680	9270251 BRIDGE SUPERSTRUCTURE FOR DESIGN BUILD PROJECT 002	529,516.200 DOL	1.00000		529,516.20	
Total Bid:					\$13,407,135.00	

EXHIBIT 3

SCOPE OF WORK

EXHIBIT 3 – SCOPE OF WORK

The South Carolina Department of Transportation (SCDOT) proposes to replace 1 bridges located in Anderson County in SCDOT District 2 and 3 bridges located in Lancaster, Chester and Chesterfield County in SCDOT District 4. This design-build project consists of all work necessary to remove the existing bridges and to design and construct new bridges, including the associated roadway and drainage work necessary to tie the new bridge approaches to the existing roadway.

The bridge replacements and associated roadway tie-ins shall be constructed on the existing roadway alignment on the existing centerline. The work also includes repairing any deficient roadway embankments within the roadway approach limits of each bridge.

Number	Route	Crossing	County	Asset Number
1	S-04-294 E. Broad St	WILSONS CREEK	ANDERSON	2650
2	S-29-765 Hanging Rock Church Rd.	HANGING ROCK CREEK	LANCASTER	2771
3	S-12-53 Ross Dye Rd.	LITTLE ROCKY CR	CHESTER	5909
4	S-13-108 Outen St.	BROWN CREEK	CHESTERFIELD	7228

This scope of work shall include the removal and disposal of all of the existing structures within SCDOT right-of-way. The Contractor shall clear all debris above the existing ground line within the project right-of-way limits. End fill slopes shall be excavated to accommodate the new structures as needed.

All bridges are currently closed to traffic with the exception of S-13-108 (Asset 7228) which has been reopened to traffic after repairs were performed.

With the exception of S-12-53, all bridge sites qualify for “Supplemental Design Criteria for Low Volume Bridge Replacement Projects”, SCDOT PCDM-11, which have been incorporated into Exhibit 4. These criteria shall be used for design of these bridge replacements. S-12-53 shall be designed using standard design criteria for rural collectors.

The Contractor shall coordinate with all utility companies if their proposed design or construction requires the relocation of utilities either due to a physical conflict with the proposed work or due to crane safety clearances. The contractor shall provide utility coordination in accordance with the requirements of the Agreement for all project locations.

For a full understanding of the scope of the project and the criteria for the construction items needed for this project, review Exhibit 4, Exhibit 5, Exhibit 6 and Attachment B.

EXHIBIT 4

PROJECT DESIGN CRITERIA

EXHIBIT 4 – PROJECT DESIGN CRITERIA

This exhibit details the criteria by which the project shall be designed and constructed. These criteria are divided into subsections as listed below:

Exhibit 4a – Roadway Design Criteria

Exhibit 4b – Structures Design Criteria

Exhibit 4c – Pavement Design Criteria

Exhibit 4d – Traffic Design Criteria

Part 1 – Signing and Pavement Markings

Part 2 – Work Zone Traffic Control

Exhibit 4e – Hydraulic Design Criteria

Exhibit 4f – Geotechnical Design Criteria

Exhibit 4g – Environmental Design Criteria

Exhibit 4z – Project Design Deliverables

DESIGN REFERENCES

This exhibit describes the general design considerations and criteria for the proposed roadway approaches, hydraulics, structures, and surveys.

Design standards shall be in accordance with the following design references as supplemented or amended by Sections 4a, 4b, 4c, 4d, 4e, 4f, and 4g of this Exhibit. Any variation in design from the included information shall require written approval from SCDOT.

- AASHTO A Policy on Design Standards Interstate System, 2005
- AASHTO Drainage Manual, 2014 first edition
- AASHTO Guide for the Development of Bicycle Facilities, 1999
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2004
- AASHTO Highway Drainage Guidelines, 2007
- AASHTO LRFD Bridge Design Specifications, 2017, Eight Edition
- AASHTO Roadside Design Guide, with 2006 Chapter 6 update, 3rd Edition
- AASHTO Standard Specifications for Highway Bridges, 17th Edition
- AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, Sixth Edition
- AASHTO/AWS D1.5M/D1.5:2010 Bridge Welding Code, with 2011 interims
- AASHTO “Standard Specifications for Transportation Materials and Methods of Sampling and Testing” 2013 Thirty-Third Edition
- FEMA Regulations, 44CFR Chapter 1
- FHWA Manual on Uniform Traffic Control Devices, 2009
- FHWA Publication No. FHWA NHI-07-071 Earth Retaining Structures, 2008
- NCHRP Report 672, Roundabouts: An Informational Guide – Second Edition
- SCDHEC NPDES Construction Permit # SCR160000
- SCDHEC NPDES MS4 Permit # SCS040001
- SCDOT Access and Roadside Management Standards, August 2008 with updates
- SCDOT Americans with Disabilities Act Transition Plan, January 2009
- SCDOT Bridge Design Manual, 2006
- SCDOT Bridge Design Memoranda, effective between July 1, 2006 and the Final RFP release date
- SCDOT Bridge Drawings and Details, effective as of the Final RFP release date
- SCDOT Engineering Directives, effective as of the Final RFP release date
- SCDOT Geotechnical Design Manual, 2010 Edition (Version 1.1)
- SCDOT Geotechnical Drawings and Details, effective as of the Final RFP release date
- SCDOT Highway Design Manual, 2003, with updates effective as of the Final RFP release date and supplemented with AASHTO A Policy on Geometric Design of Highways and Streets, 2001
- SCDOT Instructional Bulletins, effective as of the Final RFP release date
- SCDOT Pavement Design Guidelines, July 2008 Edition
- SCDOT Plan Preparation Guide, 2000

EXHIBIT 4 – PROJECT DESIGN CRITERIA

- SCDOT Preconstruction Advisory Memorandums, effective as of the Final RFP release date
- SCDOT Preconstruction Design Memorandum, effective as of the Final RFP release date
- SCDOT Preconstruction Survey Manual, effective as of the Final RFP release date
- SCDOT Procedures and Guidelines for Work Zone Traffic Control Design, effective as of the Final RFP release date
- SCDOT Qualified Product Lists, effective as of the Final RFP release date
- SCDOT Requirements for Hydraulic Design Studies, May 2009
- SCDOT Road Design Reference Material for Consultant Prepared Plans, June 2010
- SCDOT Roadside Plants to Avoid/Trees with Limitations on R/W, October 2014
- SCDOT Seismic Design Specifications for Highway Bridges, 2008 (Version 2.0)
- SCDOT Standard Drawings, effective as of the Final RFP release date
- SCDOT Standard Specifications for Highway Construction, 2007
- SCDOT Stormwater Quality Design Manual, effective as of the Final RFP release date;
- SCDOT Supplement to the MUTCD
- SCDOT Supplemental Specifications (2007), effective as of the Final RFP release date
- SCDOT Supplemental Technical Specifications, effective as of the Final RFP release date
- SCDOT Traffic Signal Design Guidelines, 2009 with updates
- SCDOT Traffic Signal Material Specifications, effective as of the Final RFP release date
- SCDOT Traffic Signal Supplemental Specifications, effective as of the Final RFP release date
- SCDOT Street Trees and Sidewalk Planting Suggestions, May 2013
- SCDOT Vegetation Management Guidelines, effective as of the Final RFP release date
- South Carolina State Water Law
- The Rule on Work Zone Safety and Mobility, Policy and Guidelines
- The State Stormwater and Sediment and Erosion Control Regulations administered by DHEC, 26 S.C. Code Ann. Regs. 72-405 (Supp. 1995) et seq.
- TRB Highway Capacity Manual, 2010
- United States Access Board's Revised Draft Guidelines for Accessible Public Rights-of-Way (PROWAG), November 23, 2005
- International Building Code, effective as of the Final RFP release date
- ACI 318 Building Code and Commentary
- ASCE's "Minimum Design Loads for Buildings and Other Structures", latest edition

EXHIBIT 4a

ROADWAY DESIGN CRITERIA

1. GENERAL

Prepare the roadway geometric design for the project using the design standards and criteria that are appropriate based on design speed, functional classification, design traffic volumes, right-of-way, and aesthetics. The design elements shall include, but not be limited to, the horizontal and vertical alignments, lane widths, shoulder widths, sight distance, clearzone, cross slopes, and side slopes.

2. CRITERIA

Use the Supplemental Design Criteria for Low Volume Bridge Replacement Projects, excluding S-53. S-53 shall be designed using standard criteria for rural collectors. Classify the terrain as rolling on all routes within the scope of work.

2.1 Functional Classification

The functional classification for the roadways are as follows:

Anderson County:

- S-294 (E. Broad St.) Rural Major Collector

Chester County:

- S-53 (Ross Dye Rd.) Rural Major Collector

Chesterfield County:

- S-108 (Outen St.) Rural Local Group 4

Lancaster County:

- S-765 (Hanging Rock Church Rd.) Rural Local Group 4

2.2 Design Speed

Anderson County:

- S-294 (E. Broad St.) 35 mph minimum

Chester County:

- S-53 (Ross Dye Rd.) 45 mph minimum

Chesterfield County:

- S-108 (Outen St.) 45 mph minimum

Lancaster County:

- S-765 (Hanging Rock Church Rd.) 40 mph minimum

2.3 Traffic Volume

- For current and future ADT traffic projections, see “Traffic Projections” PDF in Attachment B.

2.4 Lane Width

- Provide 10 feet for all bridge sites except S-53. Provide 11 feet for S-53.

2.5 Shoulder Width

- Provide 4 feet (2 feet paved + 2 feet earth) for low-volume sites. Provide 6 feet (2 feet paved + 4 feet earth) for S-53.

2.6 Horizontal Centerline

- Retain existing centerline for all bridge sites.

2.7 Horizontal Alignment

- Retain existing if horizontal radius is within 15 mph of design speed and the design year volume is less than or equal to 750 AADT for all sites other than S-53. Horizontal alignment of S-53 shall be designed in accordance with RDM criteria for rural collectors.

2.8 Vertical Alignment

- If the existing K value is within 15 mph of the design speed and the design volume is less than or equal to 750 AADT, retain or improve the K value. If the existing K value is not within 15 mph of the design speed, use a K value that is within 15 mph of the design speed. In no case shall a K value be less than the existing. Lighting shall not be used to mitigate vertical alignment deficiencies or to reduce design criteria. Refer to Exhibit 4b for criteria related to low point locations. For S-53, vertical alignment shall be designed in accordance with RDM criteria for rural collectors.
- For all bridges, provide a minimum longitudinal gradient of 0.3 percent.

2.9 Stopping Sight Distance

- Retain existing if value is within 15 mph of design speed and the design year volume is less than or equal to 750 AADT for all sites other than S-53. Stopping Sight Distance for S-53 shall be designed in accordance with its design speed.

2.10 Min/Max Grade

- Retain existing or improve at all sites with exception to S-53. Provide min./max. grades for S-53 in accordance with RDM.

2.11 Cross Slopes

- Use SCDOT Roadway Design Manual.

2.12 Superelevation

- Desirably, the curve superelevation should meet criteria for new construction. On low volume bridge replacement projects, constraints of excessive costs often preclude the use of desirable superelevation rates. If the curve is to remain and minimum superelevation rates cannot be achieved, provide proper signing and pavement markings for the appropriate speed in accordance with the MUTCD. In some cases, reconstruction of substandard horizontal curves to larger radii may be feasible in lieu of increasing the superelevation. In locations where horizontal curves are adjacent to or overlap the proposed bridge footprint, and where superelevation is needed, do not use a cross slope greater than 2% across bridges within tangent sections of roadway. For S-53, design of superelevation shall be in accordance with RDM based on curve radius and design speed. Exclusive of S-53, if a roadway profile is tied in within an existing horizontal curve it will be acceptable for the roadway to transition to the existing superelevation/cross slope at the end of the proposed profile without improving the entire horizontal curve.

2.13 Vertical Clearance

- Use SCDOT Roadway Design Manual.

2.14 Roadside Safety

- Use SCDOT Roadway Design Manual 3R (Non-Freeway) Guidance found in Chapter 18. Provide guardrail and/or barrier on all approaching quadrants of each bridge. Provide guardrail and/or barrier on all trailing end quadrants of each bridge if the guardrail/barrier does not eliminate access to any tract. Provide MASH compliant leading end treatments (MT2 or MT3) in all locations where guardrail is terminated.

2.15 Right-Of-Way

Secure a minimum right-of-way width of 75 feet on each side of the structure centerline and minimum 75 feet from each end of the bridge at each site where any right-of-way is required as described herein; refer to SCDOT Roadway Design Manual Chapter 12 Section 12.1.14.

For bridge sites that currently have a complete 75 feet right-of-way width on each side of the structure and where the length of 75 foot wide right-of-way is at least 45 feet from each end of the proposed bridge, no additional right-of-way is necessary unless the design and construction results in permanent facilities extending outside of the existing right-of-way.

For bridge sites that do not currently have a complete 75 feet right-of-way width on each side of the structure or where the length of 75 foot wide right-of-way is not present at least 45 feet from each end of the proposed bridge, provide a minimum right-of-way width of 75 feet on each side of the structure centerline a minimum of 75 feet from each end of the bridge. Provide right-of-way described within this paragraph regardless of whether the design requires this right-of-way or not.

Provide sufficient right-of-way to cover all permanent facilities. Permanent facilities is defined as area between construction limits left and right. Provide the 75' right-of-way (laterally and longitudinally) described herein at all bridge sites where any right-of-way is

required.

Clear and grub the entirety of the right-of-way that can be accessed without crossing a wet stream, creek, or tributary, with the exception of grubbing in wetlands. Contractor shall clear but not grub in the wetlands. Clearing and grubbing is not required for right-of-way that must be accessed by crossing a wet stream, creek, or tributary. When the NPDES line is outside of the construction limits extend grubbing operations within the limits of the BMPs.

2.16 Roadside Barriers

Develop roadside barriers in compliance with SCDOT Standard Drawings and the AASHTO *Roadside Design Guide*, 2011, 4th Edition. Include the following items in the work:

Guardrail: Ensure that all new MASH guardrail and end treatments are listed on the Qualified Products Policies & Listings.

Provide non-mow strip under guardrail in accordance with the guidance found in the Exhibit 5, Special Provisions Section 805. Non-mow strips shall be constructed of asphalt.

Use additional length guardrail posts with compressed guardrail shoulder break only where right of way or environmental impacts dictate that standard guardrail shoulder break cannot be built.

2.17 Bicycle and Pedestrian

No bridge sites are a part of a South Carolina Bicycle Touring Route or the East Coast Greenway. Nor are they part of any MPO/COG bicycle or pedestrian plan. Therefore, bicycle and pedestrian accommodations are not required.

EXHIBIT 4b

STRUCTURES DESIGN CRITERIA

1. GENERAL

Exhibit 4b contains requirements for:

- The replacement of existing bridges as denoted in the Scope of Work

Refer to Attachment B for additional Structures Design Criteria.

2. CRITERIA

2.1 New Highway Bridges

2.1.1 Bridge Design

Design all new bridges in accordance with the requirements of the AASHTO LRFD Bridge Design Specifications, 8th edition. Use the HL-93 design live loading. See the “Bridge Load Rating” requirements in this exhibit. Rating for legal and/or permit vehicles may control the superstructure design over HL-93. Load rating of substructure is not required during design for this project.

2.1.2 Seismic Design and Detailing

For Sites S-294 over Wilson Creek, S-108 over Brown Creek, and S-765 over Hanging Rock Creek:

No Operational Classification (OC) is assigned in accordance with PCDM-11 and a detailed seismic analysis is not required. All bridges shall meet the seismic design and detailing requirements for Seismic Design Category (SDC) “A” defined in the SCDOT Seismic Design Specifications (SDS). Use $S_{D1-SEE} = 0.25g$ as the design seismic acceleration coefficient for all bridge sites in accordance with PCDM-11. Seismic Design Summary Reports are not required.

For Site S-53 over Little Rocky Creek:

In accordance with the SDS, the Bridge Operational Classification is “II” and the SDC is “A”. Seismic Design Summary Reports are not required.

2.1.3 Dimensions

Construct the new bridges with roadway widths that are equal to or greater than the approach roadway widths (traveled way plus median and shoulders) that are specified in Exhibit 4a. For cored slab and box beam structures, use SCDOT Bridge Design Memorandum DM0120 for the minimum number of units in transverse layout and corresponding roadway width on the bridge. For cored slab and box beam bridges used in conjunction with curving roadway geometry on a

portion of the bridge, the bridge width shall be increased by one additional cored slab or box beam unit to meet minimum shoulder width requirements.

2.1.4 Removal and Disposal of Existing Bridges

Remove and dispose of the existing structures and appurtenances, including non-attached piles and remnants from previous structures, in accordance with Exhibit 6 and the SCDOT Standard Specifications. At site S-12-53, remove and dispose of the previous concrete/rubble masonry pier in the channel.

2.1.5 Vertical Clearances

Provide vertical clearance in accordance with Exhibit 4e.

2.1.6 Span Arrangement and Skew

Provide the minimum channel span length, minimum bridge length, and minimum bent skew angle (measured from a line perpendicular to the alignment centerline) at each site as listed in Attachment B - Hydrology.

The maximum skew angle for cored slab and box beam bridge type is 15 degrees.

The minimum span length for any structure type is 30 feet.

All bents shall be parallel to each other.

2.1.7 Superstructures

Allowable superstructure types are outlined in Sections 12.3.2.1, 12.3.2.2, 12.3.2.3, and 12.3.2.4, and 12.3.2.5 of the BDM.

Section 12.3.2.5 of the BDM is expanded to include the use of adjacent Prestressed Concrete Box Beams with asphalt overlay and detailing similar to that of the SCDOT Cored Slab drawings and details. Prestressed Concrete Box Beam details and additional criteria are included in Attachment B. Three AASHTO shapes are available with the following respective maximum span lengths: 75-feet for the 27-inch deep AASHTO BI-36, 90-feet for the 33-inch deep AASHTO BII-36, and 100-feet for the 39-inch deep AASHTO BII-36.

Cored slab spans and box beam spans may be used on the same, multi-span bridge (for different spans, such as box beam main span and cored slab approach spans). Cored slab / box beam superstructure type shall not be mixed with the concrete or steel beam (and cast-in-place deck) superstructure type on the same, multispan bridge.

Live-load deflection criteria per BDM Section 12.2.2.2 applies to cored slab and box beam bridge span arrangements with one exception: 70-feet is the maximum

span length for the SCDOT 24-inch deep cored slab in accordance with the SCDOT Bridge Drawings and Details.

For prestressed concrete girder superstructures, use prestressed concrete girders that are “I” shaped. Design prestressed concrete girders so that the algebraic sum of the beam camber at prestress transfer due to prestress force, the beam dead load deflections due to non-composite dead load, and superimposed dead load deflections due to applied superimposed dead loads results in a positive (upward) camber. Include the dead load from the future wearing surface in the determination of camber. For cored slab and box beam bridges, do not use positive camber values to reduce the asphalt wearing surface thickness, when calculating dead load contribution from asphalt (i.e. use a straight-line top of unit assumption and account for additional asphalt needed to achieve roadway vertical curvature or straight grade).

For prestressed concrete bulb-tee beams, Florida I-beams, and structural steel plate girders used on this project, BDM Section 12.2.5.3 is amended to increase the maximum girder spacing to 12.0 feet.

BDM Section 15.5.3.3, item 5, is amended to permit debonding of strands in the bottom row of prestressed concrete beams in accordance with AASHTO LRFD requirements. Exterior strands in each horizontal row shall be bonded.

For steel welded plate girder superstructures, use structural steel girders that are “I” shaped. For steel welded plate girder and steel rolled beam superstructures, use unpainted weathering steel that conforms to the requirements of AASHTO M 270 and BDM Section 16.2.1.3

At each support of prestressed concrete girders, steel welded plate girders, and steel rolled beam superstructures, connect all beams and girders to the substructure using anchor bolts.

Floorless culverts are classified as "Other Structure Types" (Section 12.3.3 of the SCDOT Bridge Design Manual) and are not permitted for this project. Box culverts will not be permitted as substitutes for bridges on this project

2.1.8 Concrete Strengths

In prestressed concrete piles and beams, concrete design strengths are not allowed to exceed 8,000 and 10,000 psi maximum, respectively. Utilize Class 4000 concrete in all cast-in-place concrete bridge components except as noted in Section 15.2.1 of the BDM. All precast concrete bridge components with concrete shall have a minimum compressive strength of 5000 psi.

For cast-in-place bridge deck and flat slab pours, optimize the Class 4000 mix design to minimize shrinkage cracking. The use of high-early-strength mix designs are prohibited. The maximum cement content for the mix design is 705 pounds per cubic yard.

2.1.9 Final Finish of Exposed Concrete Surfaces and Waterproofing

Final surface finish is not required on this project.

On the ends of all box beam units and on the exterior vertical face of exterior (facia) box beam units with deck drains, provide an epoxy protective coating system in accordance with ASTM C-881, Type VII, Grade 2, Class D-F.

On cored slab and box beam bridges, prior to placement of the asphalt wearing surface, use a spray-applied bridge deck waterproofing system in accordance with the systems and criteria in Attachment B.

2.1.10 Lightweight Concrete

Lightweight Concrete is only permitted in cast-in-place decks and barrier parapets. Use lightweight concrete that conforms to the requirements of the Sand Lightweight Concrete Special Provision in Exhibit 5. When calculating dead loads, include a minimum allowance of 7 pounds per cubic foot for reinforcing steel.

2.1.11 Post-Tensioning

Post-tensioning is not permitted for this project.

2.1.12 Bridge Decks

For girder and beam spans, construct bridge decks with reinforced cast-in-place concrete.

Apply a transverse Grooved Surface Finish to all concrete bridge deck riding surfaces (permanent and temporary lanes and shoulders) in accordance with Subsection 702.4.16 of the Standard Specifications for Highway Construction.

Asphalt overlays are only permitted on cored slab and box beam spans.

Longitudinal expansion joints are not permitted.

2.1.13 Stay-in-Place Bridge Deck Forms

The Contractor may use permanent stay-in-place bridge deck forms for concrete deck slabs between new beams and girders. Fabricate permanent stay-in-place bridge deck forms and supports from steel conforming to ASTM A 653, Grades 40 or 50, and having a coating class of G165 in accordance with ASTM A 525. Do not use fillers in the flutes of the stay-in-place forms. Fill form flutes with concrete as the deck slab is placed. Do not use permanent stay-in-place steel bridge deck forms in bays in which longitudinal deck construction joints are located and in bays between stages.

2.1.14 Barriers

Provide bridge barrier parapets in accordance with the SCDOT Bridge Design Memo DM0119 and the SCDOT Bridge Drawings and Details for MASH Barrier. Provide two (2) conduits in each barrier as shown in the SCDOT Bridge Drawings and Details.

2.1.15 Bridge Drainage and Low Point

The minimum distance from a bridge end to the roadway profile low point shall be coordinated with concrete flume location shown on guardrail stiffness transition Standard Drawing 805-325-70. When the MTBBC3 (TL3) stiffness transition is used, the low point shall be located minimum of 30 feet beyond where guardrail attaches to either the end of bridge or approach slab. When the MTBBC2 (TL2) stiffness transition is used, the low point shall be located a minimum of 15 feet beyond where guardrail attaches to either the end of bridge or approach slab.

Provide a minimum of two (2) deck drains per span, except where the gutterline is on the high side of superelevation. Provide additional drains if necessary to meet the allowable water spread requirements in BDM Figure 18.2-1. Minimize the placement of drains directly over the channel.

Where less than 25 feet of free fall is available from deck drain to natural ground or an unprotected fill slope (outside top-of-bank limits), provide a riprap pad sized to capture free falling discharge and protect against erosion.

For deck drains on cored slab and box beam bridges, use a block-out in the barrier parapet as specified on the Standard Box Beam Details sheets in Attachment B, instead of the 4" diameter pipe shown on the SCDOT Bridge Drawings and Details for cored slabs.

Bridge end drainage may consist of a single standard concrete flume. Limit bypass flow at the flume to 0.20 cubic feet per second. Include calculations showing discharge at each bridge inlet, flume, and bypass flow at the flume in the Preliminary and Final Hydraulic Reports. Do not provide flumes at locations where the gutter-line is located on the high side of superelevation.

At bridge corners with flumes, provide shoulder paving triangles with 4:1 taper as shown on Standard Drawing 805-325-75. At bridge corners without flumes, provide shoulder paving triangles with 4:1 taper to ensure the entire width of approach slab or end of bridge interfaces with pavement.

2.1.16 Pile Sizes and Types

Minimum pile sizes and acceptable pile types are listed in the following table. No other pile types are permitted. Where the geotechnical report indicates corrosion is a concern, use the entire perimeter of the steel section in contact with

soil/water when determining sacrificial thicknesses for the design life of the member. For S-108 over Brown Creek, use a minimum corrosion rate of 0.0005 inches per year for steel piles exposed to in-situ soil. The sacrificial thickness shall be removed from the pile section properties when determining capacity for all limit states, including seismic.

PILE TYPE	MINIMUM SIZE
Steel H-Piles*	HP12x53
Steel Pipe Piles*	16" Diam. (min. wall thickness equal to 1/2")
Solid Prestressed Concrete Piles	18" Square
Prestressed Concrete Pile Points	W8x58

*Allowed at End Bents only

2.1.17 Steel Pipe Pile Connection Details

The pile connection detail described in Item 2 of Section 19.2.6.3 of the SCDOT Bridge Design Manual does not apply for this project. Terminate steel pipe piles at the bottom of the end bent cap and footing. Connect the piles to the cap and footing using a reinforced concrete infill, with the reinforcing extending into the cap or footing. The minimum clearance of the reinforcement shall satisfy the requirement of SCDOT Design Memorandum DM0107.

2.1.18 Drilled Shafts

SCDOT Bridge Design Memorandum DM0111 contains a requirement to detail the portion of shaft below the construction casing with a diameter that is six inches smaller than the diameter of the casing. This six-inch reduction requirement does not apply to this project. For this project, detail the portion of the shaft below the bottom of the construction casing, whether in soil or rock, with a diameter that is at least two inches smaller than the diameter of the casing.

When the design for the upper portion of a drilled shaft requires a column reinforcement cage to be inserted into a larger diameter drilled shaft reinforcement cage, provide a construction joint in the shaft just below the bottom of the column cage. Prior to casting the upper portion of the shaft, remove all drilling fluids and unsound concrete and roughen the surface of the construction joint. Arrange for CSL testing to be performed prior to placement of the column reinforcement cage. Install the column reinforcement cage in the upper portion of the shaft prior to drilled shaft concrete placement in the splice region.

If a drilled shaft is extended above ground, above the scour line, or through liquefiable soil, structurally design the shaft as a column and detail the longitudinal reinforcing steel with a maximum spacing of 8 inches center-to-center.

See Exhibit 5 for mass concrete specifications that address mix design, concrete placement and temperature control of drilled shafts.

2.1.19 Crosshole Sonic Logging (CSL) Testing

Design and detail drilled shafts to include access tubes in all drilled shafts in accordance with the SCDOT Standard Specifications.

2.1.20 Substructures

Construct Interior Single and Multi-Column Bents using cast-in-place reinforced concrete bent caps and columns supported on cast-in-place reinforced concrete drilled shafts.

Construct Interior Pile Bents using cast-in-place reinforced concrete bent caps and a single row of vertical prestressed concrete piles (with or without prestressed concrete pile points). For corrosion protection of the pile, ensure concrete portions of piles with points extend a minimum of 2 feet below final ground line or predicted scour line, whichever is deeper. Do not use Interior Pile Bents to support an average span length that exceeds 75 feet, considering both adjacent span lengths.

Construct end abutments as spill-through abutments with 2:1 maximum slope. In addition to the requirements of Section 20.2.8 of the SCDOT Bridge Design Manual, set the elevation of the berm so that the top of the berm (embankment fill) is no greater than 5 feet below the superstructure. Limit level-berm-length to 4 feet from the face of bent cap.

End abutments may be supported by spread footings provided the footing is keyed into hard rock (not susceptible to scour) a minimum of 12 inches.

The following applies to bent cap cantilevers for Interior Pile Bents and End Bents:

- For a cap supported by prestressed concrete piles, provide a minimum of the equivalent of 2 pile widths of distance from the centerline of the exterior pile to the end of the cap.
- Do not detail the intersection of the centerlines of bent and exterior beam/girder on the bent cap cantilever.
- Provide a distance from the centerline of exterior pile to the edge of a slab superstructure, measured along the bent cap centerline, that is less than or equal to 30 percent of the average pile spacing of the bent.

The following applies to multi-column interior bents:

- The column spacing shall not exceed 25 feet center to center of columns.

- Provide a cantilever distance from the center of exterior column to the end of the bent cap that is less than or equal to 35 percent of the average column spacing of the bent.

2.1.21 Approach Slabs and Wing Walls

Provide approach slabs for all bridges on this project.

Provide parallel wing walls (wing walls that are parallel to the centerline of bridge or edge of approach slab) at all sites. Detail the bottom of the wing wall level and at the same elevation as the bottom of the bent cap. Detail the top inside face of each wing wall to match the elevations and grades along the outside edge of the approach slab.

2.1.22 Slope Protection

Provide rip rap at bridge ends in accordance with Standard Drawing 804-105-00, with the following exceptions.

If existing ground is excavated to provide a new 2:1 (or flatter) spill-through slope, extend the slope below the design high water elevation. Place riprap on all new spill-through slopes. Ensure riprap is keyed in 2-foot-minimum depth below toe-of-slope or new bench elevation (when a bench is provided).

At S-294 over Wilsons Creek in Anderson County, Standard Drawing 804-105-00 is amended to require riprap to a distance of 50-feet (instead of 30-feet) back from the bridge ends and utilize Class C riprap regardless of D-50 value.

2.1.23 Bridge Plans

As required by the SCDOT Bridge Design Manual, include in the bridge plans Reinforcing Steel Schedules and Quantities Tables for each bridge component (end bents, interior bents, spans, etc.). When these components are required to be constructed in stages, break the Reinforcing Steel Schedules and Quantities Tables down by stage. Immediately following the title sheet, provide a quantities sheet that includes a tabulation of estimated quantities and a summary of estimated quantities.

2.2 Retaining Walls

Retaining Walls are not permitted for this project.

3. BRIDGE LOAD RATING

Perform load capacity ratings in accordance with the SCDOT Load Rating Guidance Document, associated Technical Notes on the SCDOT Bridge Maintenance website, and the Manual for Bridge Evaluation, latest edition.

Request a new bridge Asset ID at Preliminary Plan submittal as directed in the Load Rating Guidance Document.

In the event the load rating indicates the bridge would require load posting (any LRFR rating factors < 1.0), redesign the bridge and update the load until the required capacity is achieved. No new bridge will be accepted by SCDOT which indicates the need for load posting.

Submit Load Rating files for review with the final bridge plan submittal in accordance with Chapter 20 of the LRGD and Technical Note 09. The SCDOT Bridge Maintenance QA review process must be completed prior to releasing the final bridge plans for construction. Following construction, update the load rating and submit final load rating documentation and software files with the as-built plans. All load ratings shall be signed and sealed by a South Carolina registered professional engineer.

EXHIBIT 4c

PAVEMENT DESIGN CRITERIA

1. GENERAL

The design for pavement shall conform to the criteria listed in Section 2.0.

2. CRITERIA

2.1 New Pavement

For new pavement and replacement of mainline, use the following structure:

	Route	Option 1	Option 2
Group 1	Chesterfield S-108	175 psy HMA Surface Type C 450 psy HMA Base Type A or Type B	175 psy HMA Surface Type C 8 inches GABC
Group 2	Lancaster S-765 Anderson S-294	150 psy HMA Surface Type C 175 psy HMA Surface Type C ¹⁾ 450 psy HMA Base Type A or Type B	150 psy HMA Surface Type C 175 psy HMA Surface Type C ¹⁾ 8 inches GABC
Group 3	Chester S-53	175 psy HMA Surface Type C 175 psy HMA Surface Type C ¹⁾ 700 psy HMA Base Type A or B	175 psy HMA Surface Type C 300 psy HMA Intermediate Type C 10 inches GABC

¹⁾ 200 psy HMA Intermediate Type B or C can be substituted

2.2 Existing Pavement

Where new Hot Mix Asphalt (HMA) pavement ties in with existing pavement at the project termini, variable mill as necessary to provide a smooth transition between existing and new HMA Surface. If profile differential between new and existing does not allow for a butt joint, tie in with HMA Surface over a minimum length of 25 feet per inch of grade differential.

Tie down driveways with HMA matching mainline type to the back of the Right of Way or as directed by RCE. Tie down intersecting routes with HMA matching mainline type.

Remove or otherwise modify existing pavement in accordance with Section 205.4.5 of the standard specifications prior to placement of new embankment.

2.3 Additional HMA Paving Notes

In areas where existing pavements are widened outside the travel lanes, use 400 psy of Shoulder Widening material and overlay with Surface course at the rate specified for that road.

Where leveling, build-up or cross slope correction is required, use HMA Surface Type E for 0 to 1.5 inches. Use Intermediate C or Surface Type C for anything greater than 1.5 inches.

EXHIBIT 4c – PAVEMENT DESIGN CRITERIA

Provide full depth asphalt pavement patching as directed per Exhibit 5. Patching quantity in Exhibit 5 includes bridge approaches and detour routes.

Placement and selection of mixes shall be in accordance with Asphalt Mix Design Guidelines found here: http://www.scdot.org/business/pdf/materials-research/Guidelines_Aspphalt_Mix_Selection.pdf

EXHIBIT 4d

TRAFFIC DESIGN CRITERIA

Part 1 – Signing and Pavement Markings

1. GENERAL PROVISIONS FOR PERMANENT PAVEMENT MARKINGS

Pavement marking work on this project consists of preparing detailed pavement marking plans and providing and applying appropriate markings for the length of the project. All edge lines, lane lines, channelization markings, stopbars and word messages and symbols on all roads inside the project limits and all intersecting routes shall be of the width and patterns detailed in the Standard Drawings. Route lane lines and edge lines shall be 4 inches in width with the exception of 8 inch channelization markings. The white edge lines may be 6 inches in width if sufficient shoulder width is present to allow for bicycle traffic. The final roadway surface material will determine which type of permanent marking material is to be applied. The Contractor shall use preformed tape (T-1) markings on all concrete bridge deck surfaces. Thermoplastic markings shall be used on all asphalt surfaces.

Permanent Raised Pavement Markers shall be used on this project in accordance with the publications outlined in Exhibit 4.

All work involved in this contract shall be in accordance with the publications outlined in Exhibit 4.

Pavement marking materials used shall meet the following requirements:

Thermoplastic Pavement Markings (Asphalt Surfaces):

All thermoplastic markings installed shall meet the requirement of Section 627 of the Standard Specifications.

Preformed Patterned Tape (T-1) Pavement Markings (Concrete Surfaces):

The markings applied to the concrete bridge decks on this project shall be pre-formed patterned tape with a raised diamond pattern covered with ceramic elements having a refractive index of 1.9 or greater. These markings shall be installed with a truck mounted application system or other motorized applicator approved by the manufacturer.

The Contractor shall provide to the Department the manufacturer's normal warranty which shall guarantee the tape materials for a period of 72 months from the date of installation from failure to retain the minimum reflectance values provided by the manufacturer and from failure due to loss of material adhesion or complete wear through. If failure occurs, the manufacturer will provide the replacement materials to restore the markings to their original effectiveness.

2. GENERAL PROVISIONS FOR PERMANENT SIGNING

Signing work on this project consists of preparing detailed signing plans; and fabricating, furnishing, and erecting new ground mounted guide, regulatory and warning signs. New signs shall be erected over the entire length of the project, including, at a minimum, stop signs on all intersecting routes. Existing signs, if applicable, shall be maintained during construction.

Development of the signing plans should be coordinated through the District Traffic Engineer. The District Traffic Engineer shall have final approval of all signing plans.

The CONTRACTOR will be required to erect bridge vertical clearance and crossing route number flat sheet signs on the new and existing bridges in both directions of travel. The signs shall be fabricated in accordance with the SCDOT sign numbers shown in the table below. The CONTRACTOR shall determine the actual minimum vertical clearance in each direction after bridge construction is complete.

SCDOT Sign Number	Sign Description	Crossing Route Type
W12-2P-78	Vertical Clearance	All
OHB M1-1-48	Crossing Route Information	Interstate – 2 or 3 digit
OHB M1-4-48	Crossing Route Information	US Route – 2 digit
OHB M1-4-60	Crossing Route Information	US Route – 3 digit
OHB M1-5-48	Crossing Route Information	SC Route – 2 digit
OHB M1-5-60	Crossing Route Information	SC Route – 3 digit
OHB M1-6-78	Crossing Route Information	Secondary Route – 2 digit
OHB M1-6-84	Crossing Route Information	Secondary Route – 3 digit

The vertical clearance sign shall be centered over the centerline of the crossing route travel way. The crossing route number sign shall be placed to the left of the vertical clearance sign with a minimum spacing of 8 feet between the right of the route number sign and the left of the clearance sign.

All work involved in this contract shall be in accordance with the publications outlined in Exhibit 4.

EXHIBIT 4d

TRAFFIC DESIGN CRITERIA

Part 2 – Work Zone Traffic Control

1. GENERAL

The CONTRACTOR shall execute the item of Traffic Control as required by the Standard Specifications, the Standard Drawings For Road Construction, the Special Provisions, all Supplemental Specifications, the SCDOT Procedures and Guidelines for Work Zone Traffic Control Design, the MUTCD, the Plans, and the Engineer. This is an amendment to the Standard Specifications to require the following:

2. CRITERIA

2.1 General Regulations

These special provisions shall have priority to the plans and comply with the requirements of the MUTCD and the standard specifications. Revisions to the traffic control plan through modifications of the special provisions and the plans shall require approval by SCDOT. Final acceptance of any revisions to the traffic control plan shall be pending upon review by the member of the Design-Build team representing the Director of Traffic Engineering through the Design-Review Process.

In accordance with the document, *Rule on Work Zone Safety and Mobility: Implementation, Maintenance, and Safety Guidelines*, this project has been classified as “INTERMEDIATE” and all components of the Transportation Management Plan prepared by the CONTRACTOR are required and shall be implemented.

All signs mounted on portable sign supports shall have a minimum mounting height of 5’ from the bottom of the sign to the ground. All signs mounted on ground mounted u-channel posts or square steel tube posts shall have a minimum mounting height of 7’ from the bottom of the sign to the grade elevation of the near edge of the adjacent travel lane or sidewalk when a sidewalk is present.

When mounting signs on multiple ground mounted sign supports, ensure that each post is of the same type. Do not combine or install both ground mounted u-section and square steel tube posts within the same sign assembly.

When mounting signs on ground mounted u-section or square steel tube posts, utilize either a sign support / ground support post combination with an approved breakaway assembly or a single direct driven post for each individual sign support of a sign assembly installation. Do not combine a sign support / ground support post combination and a direct driven post on the same sign assembly installation that contains two or more sign supports. Regarding sign support / ground support post combination installations, ensure that post lengths, stub heights and breakaway assemblies comply with the manufacturer’s requirements and specifications. Use approved breakaway assemblies found on the *Approved Products List For Traffic Control Devices in Work Zones*.

When covering signs with opaque materials, SCDOT prohibits attaching a covering material to the face of the sign with tape or a similar product or any method that will leave a residue on the retroreflective sheeting. Residue from tape or similar products, as well as many methods utilized to remove such residue, damages the effective reflectivity

of the sign. Therefore, contact of tape or a similar product with the retroreflective sheeting will require replacement of the sign. Cost for replacement of a sign damaged by improper covering methods will be considered incidental to providing and maintaining the sign; no additional payment will be made.

Overlays are prohibited on all rigid construction signs. The legends and borders on all rigid construction signs shall be either reversed screened or direct applied.

Signs not illustrated on the typical traffic control standard drawings designated for permanent construction signs shall be considered temporary and shall be included in the lump sum price bid item for “Traffic Control” unless otherwise specified.

Install “Grooved Pavement” signs (W8-15-48) supplemented with the “Motorcycle” plaque (W8-15P-30) in advance of milled or surface planed pavement surfaces. On primary routes, install these signs no further than 500 feet in advance of the beginning of the pavement condition. On interstate routes, install these signs no less than 500 feet in advance of the beginning of the pavement condition. Install two sign assemblies at each sign location, one on each side of the roadway, on multilane roadways when the pavement condition is present. Install these signs immediately upon creation of this pavement condition and maintain these signs until this pavement condition is eliminated.

Install “Steel Plate Ahead” signs (W8-24-48) in advance of an area of roadway where temporary steel plates are present. Install these signs no further than 300 feet in advance of locations where steel plates are present. On multilane roadways, comply with the same guidelines as applied to all other advance warning signs and install two sign assemblies at each sign location, one on each side of the roadway, when roadway conditions warrant. Install these signs immediately upon installation of a temporary steel plate and maintain the signs until the temporary steel plates are removed.

Install and maintain any necessary detour signing as specified by the typical traffic control standard drawings designated for detour signing, Part VI of the MUTCD, these Special Provisions, and the Engineer. The lump sum price bid item for “Traffic Control” includes payment for installation and maintenance of the detour signing.

The CONTRACTOR shall maintain the travel patterns as directed by the traffic control plans and shall execute construction schedules expeditiously. The CONTRACTOR shall provide the Resident Engineer with no less than a two-week prior notification of changes in traffic patterns.

During nighttime flagging operations, flaggers shall wear a safety vest and safety pants that comply with the requirements of ANSI / ISEA 107 standard performance for Class 3 risk exposure, latest revision, and a fluorescent hard hat. The safety vest and the safety pants shall be retroreflectorized and the color of the background material of the safety vest and safety pants shall be fluorescent orange-red or fluorescent yellow-green.

During nighttime flagging operations, the CONTRACTOR shall illuminate each flagger station with any combination of portable lights, standard electric lights, existing street lights, etc., that will provide a minimum illumination level of 108 Lx or 10 fc.

During nighttime flagging operations, supplement the array of advance warning signs with a changeable message sign for each approach. These changeable message signs are not required during daytime flagging operations. Install the changeable message signs 500' in advance of the advance warning sign arrays. Messages should be "Flagger Ahead" and "Prepare To Stop".

During surface planing and milling operations, grade elevation differences greater than 1 inch in areas with pavements composed of hot mixed asphalt (HMA) base courses, intermediate courses or surface courses and Portland cement concrete are PROHIBITED unless otherwise directed by SCDOT.

Supplement and delineate the shoulder edges of travel lanes through work zones with traffic control devices to provide motorists with a clear and positive travel path. Utilize portable plastic drums unless otherwise directed by SCDOT. Vertical panels may be used where specified by the plans and directed by the RCE. The installation of traffic control devices are required in all areas where those areas immediately adjacent to a travel lane open to traffic have been altered in any manner by work activities, including but not limited to activities such as grading, milling, etc. Install the traffic control devices immediately upon initiating any alterations to the areas immediately adjacent to or within 15 feet of the near edge line of the adjacent travel lane. When sufficient space is available, place the traffic control devices no closer than 3 feet from the near edge of the traffic control device to the near edge line on the adjacent travel lane. When sufficient space is unavailable, place the traffic control device at the maximum distance from the near edge of the adjacent travel lane available.

2.2 Lane Closure Restrictions

The lane closure restrictions stated below are project specific, for all other restrictions, see supplemental specification, "Lane Closure Restriction", dated July 1, 2019.

The CONTRACTOR shall install all lane closures as directed by the Standard Specifications For Highway Construction (latest edition), the Standard Drawings For Road Construction, these special provisions, the MUTCD, and the Engineer. The CONTRACTOR shall close the travel lanes of interstate routes as directed by the typical traffic control standard drawings designated for lane closures on interstate routes and primary and secondary routes as directed by the typical traffic control drawings designated for primary and secondary routes.

2.2.1 Primary and Secondary Routes –

On primary and secondary routes, SCDOT prohibits lane closures during any time of the day that traffic volumes exceed 800 vehicles per hour per direction. SCDOT reserves the right to suspend a lane closure if any resulting traffic backups are deemed excessive by the Engineer. Maintain all lane closure restrictions as directed by the plans, these special provisions, and the Engineer.

All other routes with lane closure prohibitions for this project are listed on the SCDOT website under Doing Business with SCDOT in the Publications and Manuals section for Traffic Engineering.

These restrictions also apply to all road closures and pacing operations. SCDOT reserves the right to suspend a lane closure if any resulting traffic backups are deemed excessive by the Engineer. Maintain all lane closure restrictions as directed by the plans, these special provisions, and the Engineer.

Installation and maintenance of a lane closure is PROHIBITED when the CONTRACTOR is not actively engaged in work activities specific to the location of the lane closure unless otherwise specified and approved by the Engineer. The length of the lane closure shall not exceed the length of roadway anticipated to be subjected to the proposed work activities within the work shift time frame or the maximum lane closure length specified unless otherwise approved by the Engineer. Also, the maximum lane closure length specified does not warrant installation of the specified lane closure length when the length of the lane closure necessary for conducting the work activity is less. The length and duration of each lane closure, within the specified parameters, shall require approval by the Engineer prior to installation. The length and duration of each lane closure may be reduced by the Engineer if the work zone impacts generated by a lane closure are deemed excessive or unnecessary.

The presence of temporary signs, portable sign supports, traffic control devices, trailer mounted equipment, truck mounted equipment, vehicles and vehicles with trailers relative to the installation or removal of a closure and personnel are prohibited within the 15 to 30 foot clear zone based upon the roadway speed limit during the prohibitive hours for lane closures specified by these special provisions.

On multilane primary and secondary routes, a reduced regulatory speed limit of 35 MPH shall be in effect during lane closures. Erect temporary regulatory “Speed Limit” signs (R2-1-48-35) and “Speed Reduction 35 MPH” signs (W3-5-48-35) on temporary supports according to the typical traffic control standard drawings. Cover the existing regulatory speed limit signs when reduced speed limits are in place. Immediately remove or cover the “Speed Limit” signs (R2-1-48-35) and the “Speed Reduction 35 MPH” signs (W3-5-48-35) upon the removal of the lane closures.

The CONTRACTOR shall discontinue and remove a lane closure when the work activities requiring the presence of the lane closure are completed or are discontinued or disrupted for any period of time to exceed 60 minutes unless the presence of unacceptable grade elevation differences greater than 1” in milled areas or greater than 2” in all other areas are present unless otherwise directed by the Engineer.

2.3 Shoulder Closure Restrictions

2.3.1 Primary and Secondary Routes –

On primary and secondary routes, SCDOT prohibits the CONTRACTOR from conducting work within 15’ of the near edge of the adjacent travel lane on an

outside shoulder or a median area under a shoulder closure during any time of the day that traffic volumes exceed 800 vehicles per hour per direction. The routes and times are listed above in Section 2.2. The hourly restrictions for lane closures shall also apply to work activities conducted under a shoulder closure within 15' of the near edge of an adjacent travel lane or a median area. SCDOT reserves the right to suspend work conducted under a shoulder closure if any traffic backups develop and are deemed excessive by the Engineer. Maintain all shoulder closure restrictions as directed by the plans, these special provisions, and the Engineer.

On primary and secondary roadways, SCDOT prohibits the CONTRACTOR from conducting work within 1' or less of the near edge of an adjacent travel lane under a shoulder closure. All work that may require the presence of personnel, tools, equipment, materials, vehicles, etc., within 1' of the near edge of an adjacent travel lane shall be conducted under a lane closure.

2.4 Detour Requirements

The CONTRACTOR shall use the detour routes provided in Attachment B. For bridges currently open to traffic, the CONTRACTOR will not be responsible for installation and maintenance of detour route signing until Notice of Closure has been submitted.

The CONTRACTOR shall not close a bridge more than 15 calendar days prior to the start of demolition or construction activities. SCDOT Weekly Work Zone and Traffic Control (WZTC) inspections and reporting will begin upon installation of these signs and barricades and will continue until work is complete and signs are removed at each bridge location.

Detour Plans must be submitted and approved for all project sites. Detour route will not be required for S-4-294 over Wilson Creek. Detour signs shall include road name panels. Maintain the detour in accordance with the Specifications, the *SCDOT Standard Drawings*, the *MUTCD*, the Special Provision, the Plans and the RCE.

Maintain all detour signing. Monitor the detour during the operation to identify any areas of concern that may arise due to the additional detoured traffic. In the event areas of concern are identified, implement corrective actions within SCDOT guidelines and approved by the RCE to minimize or eliminate the identified areas of concern.

SCDOT will consider failure to maintain the detour within all requirements as set forth by the Specifications, the *SCDOT Standard Drawings*, the *MUTCD*, the Plans, the special provisions and the RCE as failure to provide the traffic control as required and shall result in immediate suspension of all work activities requiring the detour until the condition is corrected.

The CONTRACTOR is responsible for all of the following items related to providing and installing the detour(s) as specified or directed in the detour plan and standard drawings including maintaining and removing the detour as necessary. This includes providing ground embedded sign supports, traffic control devices and properly trained personnel to install, maintain, and remove the detour. For all detours, the

CONTRACTOR shall provide all materials, labor, hardware, equipment, tools, supplies, transportation, incidentals; miscellaneous items and traffic control necessary for installation and maintenance of the detour until completion of the work in accordance with the Plans, the Specifications and other terms of the Contract.

2.5 Mobile Operations

A mobile operation moves continuously at all times at speeds of 3 mph or greater without any stops. The minimal traffic flow impacts generated by these operations involve brief traffic flow speed reductions and travel path diversions. Conduct work operations that cannot be performed at speeds of 3 mph or greater under standard stationary lane closures.

SCDOT prohibits the CONTRACTOR from conducting mobile operations during the hours when lane closures are prohibited. The hourly restrictions for lane closures shall also apply to work activities conducted under mobile operations. SCDOT reserves the right to suspend work conducted under mobile operations if any traffic backups develop and are deemed excessive by the Engineer. Maintain all mobile operation restrictions as directed by the plans, these special provisions, and the Engineer.

The distance intervals between the vehicles, as indicated in the *Standard Drawings For Road Construction*, may require adjustments to compensate for sight distance obstructions created by hills and curves and any other conditions that may obstruct the sight distance between the vehicles. However, adjustments to the distance intervals between the vehicles should be maintained within the range of variable distance intervals indicated in the standard drawings unless otherwise directed by the Engineer.

Maintain two-way radio communication between all vehicles in the vehicle train operating in a mobile operation.

Supplement the work vehicles and the shadow vehicles with amber colored flashing dome lights. The vehicles may also be supplemented with advance warning arrow panels and truck mounted attenuators as directed in the *Standard Drawings For Road Construction* and the Standard Specifications.

The CONTRACTOR shall install, operate and maintain all advance warning arrow panels, truck mounted attenuators and truck mounted changeable message signs as required by these special provisions, the manufacturer's specifications, the *Standard Drawings For Road Construction*, the Standard Specifications, the plans and the Engineer.

2.6 Typical Traffic Control Standard Drawings

The typical traffic control standard drawings of the "Standard Drawings For Road Construction", although compliant with the MUTCD, shall take precedence over the MUTCD. The typical traffic control standard drawings of the "Standard Drawings For Road Construction" shall apply to all projects let to contract.

Install the permanent construction signs as shown on the typical traffic control standard drawings designated for permanent construction signing.

EXHIBIT 4e

HYDRAULIC DESIGN CRITERIA

1.0 GENERAL

Designs, as a minimum, to address:

- Ditch Capacity and Stability
- Storm Sewer Systems and Deck Drainage
- Cross-line Pipes
- Bridge Hydraulics and Scour
- Sediment and Erosion Control
- Best Management Practices
- Stormwater Quality Design

2.0 CRITERIA

2.1 Roadway Drainage

- 2.1.1 Perform all aspects of roadway drainage design for each site, to include approach runoff, cross-line pipes, storm sewer systems, sideline and outfall ditches.
- 2.1.2 Replace 15-inch pipe with minimum 18-inch pipe at all locations where design warrants retaining pipes except for driveways and yard drain connections that meet design standards.
- 2.1.3 At locations where fill height is greater than or equal to ten feet, provide a minimum five foot buffer between the toe of fill and the nearest top of bank of any proposed sideline ditch or swale. A detail is included in Attachment B/Hydrology.

2.2 Bridge Hydraulic Design and Scour

- 2.2.1 Perform hydrologic and hydraulic designs for the referenced bridges in accordance with the “SCDOT’s Requirements for Hydraulic Design Studies”, May 2009, PCDM-11 and apply the noted amendments:

2.2.1.1 Qualitative Site Assessment

- A Level 1 qualitative assessment shall be used to evaluate basin and site conditions that may adversely impact the bridge of interest. This assessment includes a review of the flood history, scour history, and comparative bridge data. When site conditions dictate the need for a higher design standard, the designer shall follow the guidance of the RHDS.
- See Attachment B for SCDOT Bridge Maintenance History. If Bridge Maintenance History could not be acquired then none will be provided in Attachment B. However, these records do not guarantee that the bridges have not overtopped, and this does not

eliminate the need for the designer to perform the qualitative assessment.

- Hydraulic Models and Memos are provided in Project Information Package. These models provide natural, existing, and conceptual designs. Teams will create new geometry files and project runs for proposed designs (including any changes to natural or existing runs) so that original files and runs provided by SCDOT can be identified separately in submittals.
- Not all bridge sites qualify for “Supplemental Design Criteria for Low Volume Bridge Replacement Projects” in accordance with Preconstruction Design Memorandum PCDM 11. S-53 in Chester over Little Rocky Creek does not qualify for criteria set forth in PCDM 11.

2.2.1.2 Design Frequency

- Design for the 25-year storm event.
- If the design flood overtops the existing road grade, the proposed bridge may be designed to account for a comparable amount of overtopping flow on the roadway approaches in accordance with Exhibit 4b. Bridge structure overtopping for the design storm event is not allowed.
- S-53 must meet standard SCDOT design criteria

2.2.1.3 Freeboard

- Shall not be less than 2 feet above the proposed 25 year design event unless the existing freeboard clearance is less than 2 feet. When the existing clearance is less than 2 feet but greater than or equal to 1 foot, that amount of clearance can be maintained provided the Engineer of Record (EOR) researches and certifies to the best of his/her knowledge and belief that debris accumulation at the bridge is of minimal concern and that the bridge has never overtopped. Under no conditions shall the proposed freeboard be less than 1 foot.
- S-53 must meet standard SCDOT design criteria

2.2.1.4 Backwater

- Shall be 1 foot or less unless the hydraulic model results demonstrate the existing backwater is greater than 1 foot. When the existing backwater is greater than 1 foot, this level of hydraulic performance can be improved or maintained, provided the EOR researches and certifies to the best of his/her knowledge and belief that the existing backwater is not causing adverse impacts to upstream and adjacent properties.

- S-53 must meet standard SCDOT design criteria
- S-765 backwater modeling shall be based on future replacement of the downstream S-766 Bridge that produces less than 1 foot of backwater. Two dimensional analysis required to fully determine the impacts to the floodplain in the vicinity of these bridges.

2.2.1.5 Low Chord

- Shall not be less than the existing bridge low chord elevation unless the hydraulic model results demonstrate the low chord elevation passes the 500-year return storm event without putting the bridge under pressure flow. Additionally, the EOR shall research and certify to the best of his/her knowledge and belief that a reduction in elevation should not cause adverse impacts to upstream, adjacent and downstream properties.
- S-53 must meet standard SCDOT design criteria.
- S-765 Set minimum Low Chord elevation of proposed bridge higher than 100 year backwater elevation of existing downstream S-766 Bridge. Minimum Low Chord elevation shall be 387.00 feet or as needed to prevent pressure flow.

2.2.1.6 Bridge Ends

- Bridge ends shall not be inside the limits of the existing bridge ends (as defined along the centerline of roadway).

2.2.1.7 Bridge Span Configuration

- Limited conceptual work has been performed for each site. Attachment B/Hydrology includes a table of the minimum channel span lengths, the minimum bridge length, and the minimum skew angle (measured from a line perpendicular to the alignment centerline). The lengths take into consideration existing topography and the setback requirements below. Additional span length maybe necessary to meet freeboard and backwater requirements.
- Interior bents are not allowed within the channel. Provide a minimum 5-foot setback from the top of the channel bank to the face of the pier (pile or column) on the overbanks.
- S-53 will require 10-foot setback from the top of the channel bank to the face of the pier (pile or column) on the overbanks.

2.2.1.8 Abutments

- Construct in accordance with Exhibit 4b.
- New abutment toes shall not exceed the limits of the existing toe and projection of the new abutment slope (2:1 ground line) shall not

intersect any point on the channel bank or channel bottom (as defined by the existing ground line triple-profile on the bridge plans).

- Provide a minimum 5 foot abutment toe setback from the top of the channel bank.
- S-53 will require a minimum 10 foot abutment toe setback from the top of the channel bank.

2.2.1.9 Scour

- Shall be evaluated for the lesser of the 100-year design storm event or the flow just prior to overtopping, following the guidance in the RHDS.
- Scour evaluation for the 500-year design storm event is not required except for bridges where full design criteria is required.
- Plot the scour line with the design storm event label and the triple profile on the bridge plan and profile sheet.
- S-53 must meet standard SCDOT design criteria and include 500 year scour analysis and design including plotted lines of scour on plans.

222 Model natural, existing, and proposed conditions for each bridge. Use the USGS Regression equations to generate discharges for the SCDOT runs. Include backwater effects from downstream controls. The bridge skew shall be determined from the hydraulic design. Refer to the HEC-RAS Reference Manual v4.1 or latest edition for guidance on setting up cross sections and other inputs within the model. In addition to the four cross sections described within the Manual, add additional cross sections as necessary to achieve a downstream limit where a change in starting elevation will not affect the computed high-water depth at the bridge and the upstream limit extends to the limit of backwater from the bridge.

223 Directions for constructing a HECRAS model when there is a dam upstream of the bridge:

Natural Run: Include the upstream dam without the existing bridge.

Existing Run: Include the upstream dam with the existing bridge.

Proposed Run 1: Include the upstream dam with the proposed bridge.

Proposed Run 2: Include the proposed bridge with no dam in place. Use this Run to design the bridge.

224 The models shall include sensitivity analyses. Summarize the inputs and outputs, to include backwater and freeboard.

2.3 Sediment and Erosion Control, Water Quality, and NPDES

- 231 Develop a plan that meets the requirements of SCDOT's Construction Permit SCR160000 for erosion and sedimentation control during construction at each site. Summarize the plan on the ECDS that is included within the construction plans.
- 232 Determine if there are downstream impairments at each site's receiving waters. When impairments exist downstream, ensure discharges do not contribute to the noted impairments.
- 233 Include treatment at outfalls through vegetative practices where possible and utilize structural controls when vegetative practices are not applicable. Evaluate outfalls for post-construction treatment on a case specific basis against the Maximum Extent Practicable standard.
- 234 Prepare the NPDES permit package(s), to include the plan review checklist under Attachment B, and perform all coordination to obtain the permits. The SCDOT reviews, signs and submits the package to SCDHEC.

EXHIBIT 4f

GEOTECHNICAL DESIGN CRITERIA

1.0 GENERAL

All subsurface exploration, geotechnical design, and construction for the Project shall be carried out in accordance with SCDOT Geotechnical Design Manual (GDM), 2022, Preconstruction Design Memorandum (PDM) 2017-11, the design criteria herein, and the Special Provisions listed in Exhibit 5.

2.0 CRITERIA

The Geotechnical Subsurface Data Reports (GSDR's) and subsurface investigation field testing data files have been provided in Attachment B.

Geotechnical information provided in Attachment B (field and lab data only) as part of this RFP may be used in the design of this project at the CONTRACTOR's discretion. If the CONTRACTOR elects to use the geotechnical information in Attachment B, the CONTRACTOR shall verify that the information provided is applicable to the CONTRACTOR's specific design. The CONTRACTOR shall verify that geotechnical information provided in Attachment B meets the requirements for a geotechnical investigation for the Project as required by the criteria herein. If these requirements are not met, then the CONTRACTOR shall provide additional geotechnical investigation to meet the geotechnical requirements for the Project.

All temporary and permanent shoring submittals shall be reviewed and approved by the Lead Design Engineer and Geotechnical Engineer of Record (GEOR) for the Project prior to submitting to SCDOT's Resident Construction Engineer (RCE).

2.1 Bridge

The CONTRACTOR shall be responsible for the load testing of all foundations used on this project as required by design. All testing reports for driven piles shall bear the legible seal, signature, and date of the testing firm's engineer registered as a Professional Engineer in the State of South Carolina. The CONTRACTOR's designer shall review and approve, in writing, all load test reports prior to submitting the reports to SCDOT for review and acceptance or comment. Comments made by SCDOT shall be reviewed and rectified by the CONTRACTOR's designer prior to the results of the load testing being used in design.

2.1.1 Driven Piles

The Contractor shall provide a Pile Installation Plan (PIP) that shall include the pile index testing program, if index piles are utilized, in addition to the requirements of the Standard Specifications. The pile index testing program shall at a minimum include the Bent and Pile number of each pile to be tested as well as the number of index piles to be tested. The number of index piles shall conform to the SCDOT GDM. The GEOR and EOR shall provide a QC review of the Contractor's PIP

prior to submitting to SCDOT's RCE or CE&I team as designated for QA review. After performing QA review, SCDOT's RCE will submit the PIP to the SCDOT Bridge Construction Engineer (BCE) for final acceptance.

In addition to the design methods and pile bearing verification methods of driven piles outlined in the SCDOT GDM and Standard Specifications, the Contractor may also elect to utilize the FHWA modified Gates Formula and Static Analysis methods in accordance with Sections 10.7.3.8.5 and 10.7.8.6 of the AASHTO LRFD Bridge Design Specifications, 8th Edition with interims. Resistance factors for the FHWA modified Gates Formula and Static Analysis Methods shall be in accordance with the AASHTO LRFD Bridge Design Specifications, 8th Edition with interims.

If Pile Driving Analyzer (PDA) testing is required for driven piles by the GEOR's design, the Contractor's PDA testing shall be performed by a PDA certified operator with a Certificate of Proficiency from Pile Dynamics, Inc. of Advanced or higher. The PDA certification shall have been renewed within 4 years of the date of pile installation. In addition to the PDA testing, CAPWAP (Case Pile Wave Analysis Program) analysis shall also be performed.

The GEOR shall review the PDA testing data and reports and develop driving criteria for the production piles. Following installation of the production piles, the GEOR shall perform a QC review of all production pile driving logs, PDA testing reports, and RFC plans to verify that all criteria have been met. If all criteria have not been met, the Design-Build Team shall perform additional work as necessary to ensure all criteria have been met. The EOR shall submit an As-Installed Driven Pile Foundation Package for each structural element supported on driven pile foundations that includes all PDA testing reports and production pile driving logs with a certification statement that all criteria have been met.

The As-Installed Driven Pile Foundation Package shall be submitted to SCDOT's RCE or CE&I team as designated for QA review. After performing QA review, SCDOT's RCE will submit the As-Installed Driven Pile Foundation Package to the SCDOT BCE for final acceptance. As-Installed Driven Pile Foundation Packages submitted with any deficiencies in criteria that have not been specifically addressed will be rejected. This process shall also be followed when PDA testing is not required by the GEOR's design.

2.1.2 Drilled Shafts

The CONTRACTOR is responsible for all crosshole sonic logging (CSL) and temperature monitoring of mass concrete for drilled shaft foundations on the Project. The CONTRACTOR shall select a testing firm to provide these services from those firms currently approved to provide foundation

testing services on SCDOT's On-Call Structure Foundation Testing and Engineering Services Contract.

The CONTRACTOR shall provide a Drilled Foundation Installation Plan (DFIP) in accordance with the requirements of the Standard Specifications. The GEOR and EOR shall provide a QC review of the CONTRACTOR's DFIP prior to submitting to SCDOT's RCE or CE&I team as designated for QA review. After performing QA review, SCDOT's RCE will submit the DFIP to the SCDOT Bridge Construction Engineer (BCE) for final acceptance.

The GEOR shall review load test data and reports when load tests are performed. Following installation of the drilled shafts, the GEOR shall perform a QC review of all production drilled shaft logs, CSL test reports, temperature monitoring results, and RFC plans to verify that all criteria have been met. If all criteria have not been met, the Design-Build Team shall perform additional work as necessary to ensure all criteria have been met. The EOR shall submit an As-Installed Drilled Shaft Foundation Package for each structural element supported on drilled shaft foundations that includes all testing and monitoring reports and production drilled shaft logs with a certification statement that all criteria have been met.

The As-Installed Drilled Shaft Foundation Package shall be submitted to SCDOT's RCE or CE&I team as designated for QA review. After performing QA review, SCDOT's RCE will submit the As-Installed Drilled Shaft Foundation Package to the SCDOT BCE for final acceptance. As-Installed Drilled Shaft Foundation Packages submitted with any deficiencies in criteria that have not been specifically addressed will be rejected.

2.2 Roadway

Fill slopes or ditch slopes steeper than 2H:1V are not allowed.

Miscellaneous overhead structure foundations such as lighting and signage shall be designed in accordance with AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, effective as of the Final RFP release date.

2.3 Seismic – S-12-53 over Rocky Creek

Seismic design of the bridge structures, roadway structures, and bridge embankments shall be required in accordance with the SCDOT Geotechnical Design Manual and SCDOT Seismic Design Specifications for Highway Bridges.

EXHIBIT 4f – GEOTECHNICAL DESIGN CRITERIA

The Simplified Newmark method described in Section 13.15.2 and Equation 13-72 of the GDM shall be used to analyze seismic ground displacements along a shear plane.

Use of discrete elements or rigid inclusions for soil shear strength loss (SSL) mitigation using area replacement ratio, shear modulus ratio, and shear stress reduction methodology are not permitted. Additionally, methods proposed to mitigate soil SSL that do not include densification or excess pore pressure reduction are not permitted.

Three-Point Acceleration Design Response Spectrum (ADRS) curves have been generated for the Project and are provided below.

Design EQ	PGA	S _{DS}	S _{D1}
FEE	0.04	0.10	0.01
SEE	0.08	0.19	0.02

The range of natural period of the soil column on the project has been calculated for the project site and is provided in the ADRS curve. The Structural Engineer of Record (SEOR) shall calculate the fundamental period range of interest of each seismically designed structure and compare the earthquake period, soil column period, and structure period. If these three fundamental periods coincide, the SEOR shall demonstrate that structural design has accounted for this greatest potential of damage as referenced in LRFD Seismic Analysis and Design of Transportation Geotechnical Features and Structural Foundations, FHWA-NHI-11-032, GEC No. 3.

EXHIBIT 4f – GEOTECHNICAL DESIGN CRITERIA

3-Point Acceleration Design Response Spectrum

SCDOT v3.1 - 03/31/2022

Project ID:	P041153	Latitude:	35.4899
Route:	S-12-53	County:	12 - Chester
Project:	RBO Little Rocky Creek		
		Longitude:	80.9741

Designer:	N. Harman - Support
Date:	9/6/2022

Design EQ	PGA	S _{DS}	S _{D1}	M _W	R	PGV	D _{as-95}	T' _o
	g	g	g	-	km	inches/sec	sec	sec
FEE	0.04	0.10	0.01	7.30	158.13	0.34	42.84	0.03
SEE	0.08	0.19	0.02	7.30	147.60	0.80	41.26	0.09

Damping:	5%
Geologic Condition:	Geologically Realistic (Q = 100)*
ADRS Location within Soil Column:	SCP
	At Ground Surface

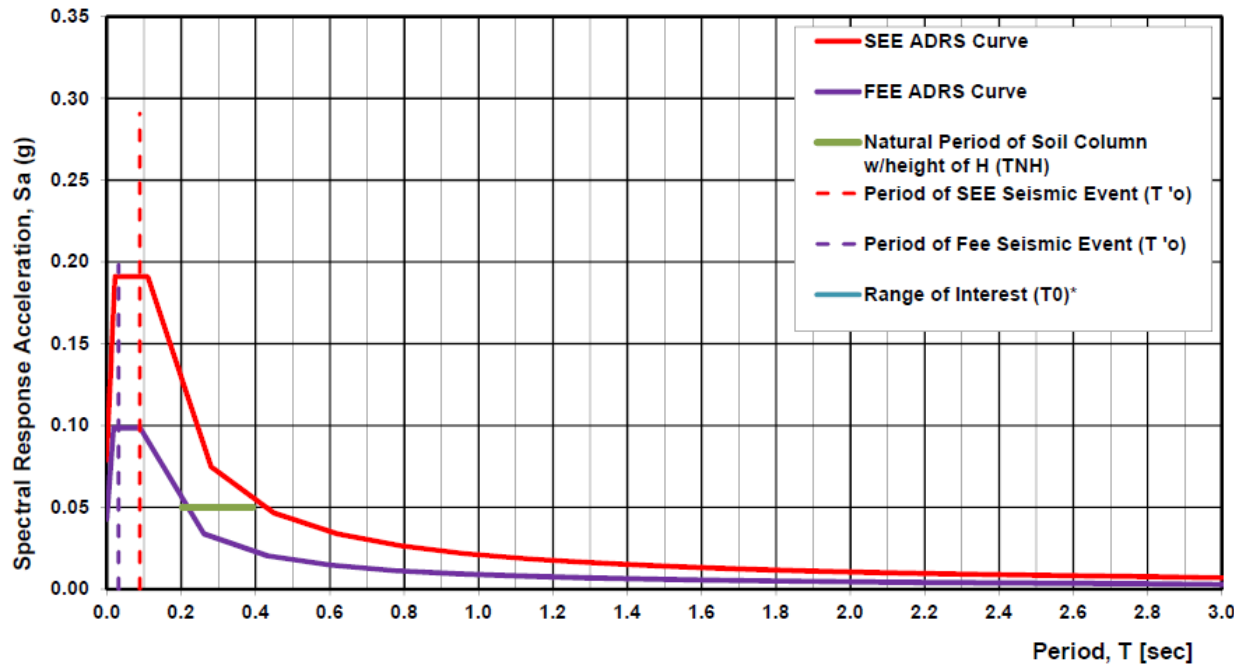
South Carolina Piedmont

*Same Geologic Condition as used in SCENARIO_PC (2006)

Fundamental Period of Structure, T_0^*	Range of Interest		$V_{s,H}$	H	T_{NH}	
	sec				sec	
sec	0.5^*T_0	2.0^*T_0	ft/sec	ft	$(4^*H)/V_{s,H}$	$(6^*H)/V_{s,H}$
0.00	0.00	0.00	1273.89	83.30	0.20	0.39
0.00	0.00	0.00	H = B-C Boundary			

H = B-C Boundary

SC Seismic ADRS Curve



FEE Data		SEE Data	
T	S _a	T	S _a
0.00	0.043	0.00	0.079
0.00	0.052	0.00	0.098
0.01	0.061	0.01	0.116
0.01	0.071	0.01	0.135
0.01	0.080	0.01	0.154
0.02	0.089	0.02	0.172
0.02	0.098	0.02	0.191
0.02	0.098	0.03	0.191
0.03	0.098	0.04	0.191
0.04	0.098	0.04	0.191
0.04	0.098	0.05	0.191
0.05	0.098	0.06	0.191
0.05	0.098	0.07	0.191
0.06	0.098	0.07	0.191
0.07	0.098	0.08	0.191
0.07	0.098	0.09	0.191
0.08	0.098	0.10	0.191
0.08	0.098	0.10	0.191
0.09	0.098	0.11	0.191
0.26	0.034	0.28	0.075
0.43	0.021	0.45	0.047
0.60	0.015	0.62	0.034
0.77	0.011	0.79	0.027
0.95	0.009	0.96	0.022
1.12	0.008	1.13	0.019
1.29	0.007	1.30	0.016
1.46	0.006	1.47	0.014
1.63	0.005	1.64	0.013
1.80	0.005	1.81	0.012
1.97	0.004	1.98	0.011
2.14	0.004	2.15	0.010
2.32	0.004	2.32	0.009
2.49	0.004	2.49	0.008
2.66	0.003	2.66	0.008
2.83	0.003	2.83	0.007
3.00	0.003	3.00	0.007

3.0 DELIVERABLES

Refer to Exhibit 4z for information regarding geotechnical deliverables.

EXHIBIT 4z

PROJECT DESIGN DELIVERABLES

1.0 GENERAL

This exhibit describes the makeup of submittal packages used for Design Review and permanent record retention by SCDOT. All submittals shall be in accordance with Departmental guides, including but not limited to, the Road Design Reference Material for Consultant Prepared Plans, as amended herein, and shall include all checklists, indexes and electronic files in the specified format and folder structure.

1.1 Document Naming Conventions

Documents submitted on SCDOT Design-Build projects shall follow the Design-Build file naming conventions that can be found under Design-Build Resources at the following link: <https://www.scdot.org/business/pdf/design-build/Design-Build-File-Naming-Conventions.pdf>

2.0 SUBMITTAL PACKAGES

SUBMITTAL PACKAGE CONTENTS****
Preliminary Submittal Packages
Preliminary Road Submittal Packages shall include:
<ul style="list-style-type: none"> • Preliminary Road Plans
<ul style="list-style-type: none"> • Survey Control Data Sheet
<ul style="list-style-type: none"> • Conceptual Work Zone Traffic Control Plans*
<ul style="list-style-type: none"> • Conceptual ITS Design Plans*
<ul style="list-style-type: none"> • Preliminary Roadway Drainage Design Report
<ul style="list-style-type: none"> • Preliminary Roadway Geotechnical Report
Preliminary Bridge Submittal Packages shall include:
<ul style="list-style-type: none"> • Preliminary Bridge Plans
<ul style="list-style-type: none"> • Preliminary Bridge Hydraulic Design Report
<ul style="list-style-type: none"> • Preliminary Bridge Geotechnical Report
Right-of-Way Submittal Packages

EXHIBIT 4z – PROJECT DESIGN DELIVERABLES
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Right of Way Submittal Packages shall include:
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|---|
| <ul style="list-style-type: none"> • Right-of-Way Plans |
| <ul style="list-style-type: none"> • Survey Control Data Sheet |
| <ul style="list-style-type: none"> • Conceptual Work Zone Traffic Control Plans* |
| <ul style="list-style-type: none"> • Conceptual ITS Design Plans* |
| <ul style="list-style-type: none"> • Right-of-Way Hydraulic Reports |

Final Submittal Packages

Final Road Submittal Packages shall include:
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- | |
|--|
| <ul style="list-style-type: none"> • Final Roadway Plans |
| <ul style="list-style-type: none"> • Survey Control Data Sheet |
| <ul style="list-style-type: none"> • Work Zone Traffic Control Plans |
| <ul style="list-style-type: none"> • Final ITS Design Plans |
| <ul style="list-style-type: none"> • Final Roadway Drainage Design Report |
| <ul style="list-style-type: none"> • Final Roadway Geotechnical Report |

Final Bridge Submittal Packages shall include:
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- | |
|--|
| <ul style="list-style-type: none"> • Final Bridge Plans |
| <ul style="list-style-type: none"> • Final Bridge Hydraulic Design Report |
| <ul style="list-style-type: none"> • Final Bridge Geotechnical Report |
| <ul style="list-style-type: none"> • Bridge Load Rating Documentation |

RFC Submittal Packages

RFC Road Submittal Packages shall include:
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EXHIBIT 4z – PROJECT DESIGN DELIVERABLES
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<ul style="list-style-type: none"> • RFC Roadway Plans
<ul style="list-style-type: none"> • Survey Control Data Sheet***
<ul style="list-style-type: none"> • RFC Work Zone Traffic Control Plans
<ul style="list-style-type: none"> • RFC ITS Design Plans
<ul style="list-style-type: none"> • RFC Roadway Geotechnical Report
<ul style="list-style-type: none"> • RFC Design Calculations
RFC Bridge Submittal Packages shall include:
<ul style="list-style-type: none"> • RFC Bridge Plans
<ul style="list-style-type: none"> • RFC Bridge Hydraulic Design Report
<ul style="list-style-type: none"> • RFC Bridge Geotechnical Report
<ul style="list-style-type: none"> • RFC Design Calculations
<ul style="list-style-type: none"> • Bridge Load Rating Documentation
Construction Submittals (including, but not limited to)**
<ul style="list-style-type: none"> • Traffic Management Plan
<ul style="list-style-type: none"> • Paving Plan
<ul style="list-style-type: none"> • Foundation Installation Plan Submittals
<ul style="list-style-type: none"> • Foundation Testing Submittals
<ul style="list-style-type: none"> • Hazardous Materials Testing Submittals
<ul style="list-style-type: none"> • Shop Plans
<ul style="list-style-type: none"> • Working Drawings
<ul style="list-style-type: none"> • NPDES Submittals
<ul style="list-style-type: none"> • Revised Permit Drawings
<ul style="list-style-type: none"> • As-Built Plans
<ul style="list-style-type: none"> • As-Built ITS Design Plans

* If ROW plans are not anticipated, these plans shall be included with the preliminary road plans.

** Reviews for these submittals are not held to the standard periods as outlined in Article II, Section D of the Agreement.

*** CONTRACTOR may rely on survey information provided in Attachment B – Supplemental Design Criteria. CONTRACTOR shall incorporate the information into the final project documents. CONTRACTOR shall be responsible for supplementing the survey information provided as required for their specific design.

**** CONTRACTOR shall supply hard copies if requested by SCDOT.

3.0 SUBMITTAL PACKAGE CONTENTS

3.1 All Submittal Packages

- Partial submittal of the required contents of the preliminary, right of way, or final submittal packages will not be allowed, with the following exception. For this project, final bridge plans and RFC bridge plans may be submitted as two separate submittals: final/RFC superstructure plans and final/RFC substructure plans. If substructure plans are submitted in advance of superstructure plans, any elements connecting substructure to superstructure, such as anchor bolts and reinforcing extending above the top of bent cap, must clearly be shown with fully developed details and dimensions. If partial structure packages are utilized, the first final submittal package (whether substructure or superstructure) must include the final bridge load rating package for QA review. Once both superstructure and substructure plans are released for construction, they must be combined into one final RFC plan set.
- Perform a thorough QC review of the submittal packages prior to submitting them to SCDOT.
- Digital or inked signatures are allowable for RFC documents. However, only one method of signature, digital or inked, is allowed per Project ID.
- All pdf documents of a submittal package shall be flattened before being uploaded to Projectwise.
- Plans shall be submitted electronically as a landscape 22"x36" pdf file.
- Reports shall be submitted electronically as a portrait 8.5"x11" pdf file. Larger sheets may be included for charts, diagrams, etc.
- At the request of SCDOT or its representative, Contractor shall submit calculations and/or design files, including computer aided drafting files for review with a submittal package.

3.2 Preliminary Submittal Packages

3.2.1 Preliminary Road Plans

- The plans shall include, but not be limited to, the following:
 - title sheet

- roadway typical section
- survey control data
- strip map, including property closures
- roadway plan and profile
- cross sections
- clearing limits on plan view and cross sections
- drainage features
- existing right-of-way
- proposed right-of-way
- roadway structure layout limits
- noise barrier wall alignments

3.2.2 Conceptual Work Zone Traffic Control Plans

- The plans shall include, but not be limited to, the following:
 - Staging Narrative
 - Concept Staging Plans
 - Widening/Rehabilitation Typical Sections for each Stage of Construction and any critical points
 - Where additional Right-of-Way is warranted for the purposes of Staging
 - Separation of Adjacent Travel Lanes / Traffic Splits as described in the SCDOT Procedures and Guidelines for Work Zone Traffic Control Design
 - Where the travel lane leaves the existing roadway bed or direction on new alignment (transition area) and returns (termination area)

3.2.3 Conceptual ITS Design Plans

- The Contractor shall develop and furnish conceptual design plans as indicated in Exhibit 5*

3.2.4 Preliminary Bridge Plans

- The plans shall include, but not be limited to, all items described in Chapter 3 of the SCDOT Bridge Design Manual.

3.2.5 Preliminary Hydraulic Reports

- Preliminary Roadway Drainage Design Reports shall include, but not be limited to, the following:
 - Pre/post outfall summaries
 - HW/D summaries for crosslines
 - Open channel designs
 - Address permitting requirements

- Field Investigation and Pipe Inspection Report
- Preliminary Bridge Hydraulic Design Reports shall include, but not be limited to, the following:
 - Preliminary Hydraulic Model Design and Supporting Documentation including Hydrology Data Sheets, the Hydraulic Design and Risk Assessment Form, and the NEPA Bridge Replacement Scoping Trip Risk Assessment Forms (for each applicable location)
 - Modeling files
 - Address permitting requirements (for each applicable location)
- NPDES permitting-if permitting is going to be phased, address how submittals will be phased and anticipated submission schedules.

3.2.6 Preliminary Roadway & Bridge Geotechnical Reports

- Submit Geotechnical Reports based on applicable design criteria (Low Volume Bridge Criteria or Standard SCDOT Design Criteria)
- The geotechnical reports shall include, but not be limited to, the following:
 - all items described in Preconstruction Design Memorandum (PDM) 2017-11, Chapter 21 of the SCDOT Geotechnical Design Manual, and the latest design memorandums

3.2.7 Preliminary Seismic Design Summary Report

- Seismic Design Summary reports are not required for this project.

3.3 Right-of-Way Submittal Packages

3.3.1 Right-of-Way Plans

- The plans shall include, but not be limited to, the following:
 - title sheet
 - roadway typical section
 - survey control data
 - strip map, including property closures
 - right-of-way data sheet
 - roadway plan and profile
 - cross sections (include sediments basins, dams and crosslines)
 - clearing limits on plan view and cross sections
 - drainage features
 - existing right-of-way
 - proposed right-of-way
 - roadway structure layout limits
 - noise barrier wall alignments

3.3.2 Conceptual Work Zone Traffic Control Plans

- The plans shall include, but not be limited to, the following:
 - Staging Narrative
 - Concept Staging Plans
 - Widening/Rehabilitation Typical Sections for each Stage of Construction and any critical points
 - Where additional Right-of-Way is warranted for the purposes of Staging
 - Separation of Adjacent Travel Lanes / Traffic Splits as described in the SCDOT Procedures and Guidelines for Work Zone Traffic Control Design
 - Where the travel lane leaves the existing roadway bed or direction on new alignment (transition area) and returns (termination area)

3.3.3 Conceptual ITS Design Plans

- The Contractor shall develop and furnish conceptual design plans as indicated in Exhibit 5*

3.3.4 Right-of-Way Hydraulic Reports

- Roadway Drainage Design Reports shall include, but not be limited to, the following:
 - Updates to the preliminary roadway drainage designs
 - Inlet spacing calculations and bridge deck drainage calculations
 - Geopak drainage summaries
 - Storm sewer system profiles for the design storm and the 50-yr event at sag locations
 - Sediment and erosion control designs
 - Water quality and post construction designs
 - Detention designs and supporting documentation
- NPDES package shall be provided for review in preparation for submittal to SCDHEC/OCRM.

3.4 Final Submittal Packages**3.4.1 Final Road Plans**

- The plans shall include, but not be limited to, the following:
 - title sheet
 - roadway typical section
 - survey control data
 - strip map, including property closures
 - right-of-way data sheet

- roadway plan and profile
- cross sections
- clearing limits on plan view and cross sections
- drainage design (include drainage tables per Plan Preparation Guide behind each drainage sheet)
- existing right-of-way
- proposed right-of-way
- summary of estimated quantities
- strip map including property closures
- sediment and erosion control design
- proposed barrier locations
- permanent signing plans
- permanent pavement markings plans
- traffic signal plans
- roadway structure plans
- Electronic files submittals: Information herein is an abbreviated list of electronic deliverables taken from the Road Design Reference Material for Consultant Prepared Plans. Submit Checklists, Indexes and files in accordance with the format and attachments specified in the document.
 - CADD electronic files index with the detailed descriptions of the contents of each file must be provided in a “readme” file. The index should also include detailed descriptions and names of horizontal and vertical alignments and profiles utilized by the GEOPAK software on the project. A copy of the file folder structure is shown in Road Design Reference Material for Consultant Prepared Plans.
 - All surveyed mapping, control points, benchmarks, GPS setup, 2D or 3D contours, spot points, survey notes, DTM, breaklines, TIN files, aerial photos and all other CADD files and data used in developing surveys for the project. Also, the survey points should be provided in ASCII file format (Point number, N, E, Z, and Descriptions). Contact information for the survey company should be provided. All electronic survey files are to be placed in a separate folder.
 - All MicroStation files including all files that would supplement the ability to view files correctly such as reference files and cell libraries.
 - All .gpk files and any other Geopak files, such as input and criteria files that are needed to facilitate the review of plans should be submitted.
 - If other Civil Engineering software packages were utilized for project development then all binary or ASCII files that are software dependent for that package shall be submitted
 - All electronic files that pertain to the construction stake out. Files will be in SMI format and will include all horizontal controls,

vertical controls and templates. SMI data will be provided in a separate folder.

- Copies of all hand written or electronic calculations or notes (non-CADD) that will facilitate verification and review of the plans.
- On each printed sheet in the plans, the electronic folder name, filename, and date must be shown.
- Provide plot setting to include levels used, symbology, line weights and pen tables in order to reproduce all plans sheets
- All roadway structures' design criteria with calculations will be provided in a separate folder.
- Pavement Design will be provided in a separate folder with soil support data, traffic volumes, and ESAL's
- Electronic files for specifications and special provisions in Adobe PDF or Microsoft Word format
- Approved Design Exceptions to AASHTO and/or SCDOT design standards developed during design

3.4.2 Final Bridge Plans

- The plans shall include, but not be limited to all items described in Chapters 3 and 6 of the SCDOT Bridge Design Manual. Partial submittal of the required contents of the final set of plans will not be allowed for this project.
- Electronic files submittals:
 - All MicroStation files including all files that would supplement the ability to view files correctly such as reference files and cell libraries.
 - Copies of all hand written or electronic calculations or notes (non-CADD) that will facilitate verification and review of the plans.
 - Electronic files for specifications and special provisions in Adobe PDF or Microsoft Word format

3.4.3 Work Zone Traffic Control Plans

- The plans shall be in accordance with the SCDOT Procedures and Guidelines for Work Zone Traffic Control Design and all other applicable design references listed in Exhibit 4

3.4.4 Final ITS Design Plans

- The Contractor shall develop and furnish ITS design plans as indicated in Exhibit 5*

3.4.5 Final Hydraulic Report

- Final Roadway Drainage Design Reports shall include, but not be limited to, the following:
 - Updates to the Right-of-Way hydraulic drainage designs
- Final Bridge Hydraulic Design Reports shall include, but not be limited to, the following:
 - Final Hydraulic Model Design and Supporting Documentation including all updated forms
 - Final Modeling files
 - Scour Study- additionally plot the 100- and 500-year lines on the bridge triple profile sheet (for each applicable location)
 - Address CLOMR and/or “No Impact” Certifications (for each applicable location)
 - Include the hydrology data for bridges, culverts and pipes greater than 48 inches on the bridge triple profile sheets
- Complete NPDES package

3.4.6 Final Roadway & Bridge Geotechnical Reports

- Submit Geotechnical Reports based on applicable design criteria (Low Volume Bridge Criteria or Standard SCDOT Design Criteria)
- The geotechnical reports shall include, but not be limited to, the following:
 - all items described in Preconstruction Design Memorandum (PDM) 2017-11, Chapter 21 of the SCDOT Geotechnical Design Manual, and the latest design memorandums
 - design details and plan notes along with data that are consistent with that shown in the final bridge and road plans
 - Contractor’s designer shall prepare the required geotechnical bridge and roadway plan sheets that clearly detail any geotechnical requirements outlined in the reports
- All soil test boring logs and laboratory testing results shall be provided electronically in both a .PDF file and as a gINT® file. In addition, all CPT and DMT data shall be provided electronically as both a .PDF file and as an Excel® (2010) spreadsheet following the order provided in Sections 6.2.2 and 6.2.3 of the SCDOT GDM, respectively.

3.4.7 Final Seismic Design Summary Report

- Seismic Design Summary reports are not required for this project.

3.4.8 Bridge Load Rating Documentation

- See Requirements for Bridge Load Rating in Exhibit 4b, Section 3.

3.5 RFC Submittal Packages

- RFC submittal packages shall be submitted once all comments have been closed on all submittals for each phase (ex. Preliminary/ROW/Final/RFC) of a segment or structure and a request for RFC plans has been issued by the Construction Office.
- After all comments are closed, no changes shall be made to the design deliverables before providing a RFC submittal package.
- Insert RFC Plans into plan folders as detailed in the SCDOT Plan Preparation Guide and the SCDOT Bridge Design Manual if not submitted with digital signatures.
- The Engineer of Record, a licensed and registered Professional Engineer in the State of South Carolina, shall sign and seal all RFC plans and reports. RFC documents shall be original documents if not submitted with digital signatures.
- RFC documents submitted with digital signatures shall comply with the SCDOT Digital Signatures Manual.
- A complete set of design calculations shall be included with the RFC submittal package and at any point prior when requested by SCDOT.

3.6 Revisions to RFC Plans and Reports

- After providing a RFC submittal package, any subsequent changes to the RFC plans and reports will be considered revisions. Revisions shall be denoted as detailed in the design manuals or as directed by the Department.

3.7 Traffic Management Plan

- The Contractor shall submit a Traffic Management Plan in accordance with the document, Rule on Work Zone Safety and Mobility: Implementation, Maintenance, and Safety Guidelines.
- All components of the Transportation Management Plan shall be submitted for review by SCDOT and must be approved before any construction activities can begin.

3.8 Foundation Installation Plan Submittals

- Prepare Drilled Foundation Installation Plans (DFIP) and/or Pile Installation Plans (PIP) in accordance with the SCDOT Standard Specifications for Highway Construction, 2007 Edition. Submit all foundation installation plan submittals electronically. The Contractor's designer shall review and approve all DFIP and PIP (including pile driving criteria) prior to submitting the foundation installation plans to SCDOT for review and acceptance. SCDOT will review the foundation installation plans and provide either acceptance or comments. The Contractor's designer shall resolve all comments prior to re-submittal to SCDOT. SCDOT will review the DFIP

and/or the PIP only to verify that the specifications have been addressed. The Contractor shall provide a supplement to the report containing the actual field conditions encountered and as-built foundation data and information after construction of the foundations is complete.

3.9 Foundation Testing Submittals

- Submit to SCDOT an electronic copy of all applicable foundation testing reports for all bridge and roadway structures to include but not limited to Shaft Load Test and Pile Driving Analyzer test reports.

3.10 Hazardous Materials Testing Submittals

- The Contractor shall submit to SCDOT:
 - Results of any hazardous materials analytical testing of sampled or excavated subsurface materials as outlined in the Agreement.
 - Manifests of all hazardous materials requiring disposal.

3.11 Shop Plans

- Submit shop plans, as defined by the Standard Specifications for Highway Construction, to the Contractor's designer for review and approval. Route all approved shop plans to SCDOT for review and distribution. Provide shop plan submittals that meet the criteria of Subsection 725.1.1 of the Standard Specifications for Highway Construction. After reviewing the plans, SCDOT will either distribute the plans or provide comments. If comments are provided, the Contractor's designer shall review the comments prior to resubmitting to the SCDOT for further review. The Contractor's designer shall stamp the shop plans "approved" prior to submittal to SCDOT. SCDOT will stamp and distribute the plans. Do not commence fabrication and construction/erection until after SCDOT distributes the plans. The responsible engineer, registered as a Professional Engineer in the State of South Carolina, shall seal, sign, and date all design calculations and shop plans.

3.12 Working Drawings

- Submit working drawings and design calculations, as defined by the Standard Specifications for Highway Construction, to the Contractor's designer for review and approval. Route all approved working drawings and design calculations to the SCDOT for review and distribution. Provide working drawings and design calculation submittals that meet the criteria of Subsection 725.1.2 of the Standard Specifications for Highway Construction. SCDOT will review the drawings and calculations and either provide acceptance of the drawings as prepared or provide comments. If comments are provided, the Contractor's designer shall review the comments prior to

resubmittal to SCDOT for further review. The Contractor's designer shall stamp the working drawings and design calculations "approved" prior to submittal to SCDOT. SCDOT will stamp and distribute the drawings and calculations. Do not commence construction/erection until after SCDOT distributes the drawings and calculations. The responsible engineer, registered as a Professional Engineer in the State of South Carolina, shall seal, sign, and date all design calculations and working drawings. SCDOT will review the working drawings and design calculations only to verify that the specifications have been addressed.

3.13 NPDES Submittals

- The appropriate level of design and review shall be completed prior to any NPDES package submittal.

3.14 Revised Permit Drawings

- Contractor shall provide to SCDOT revised permit drawings that show ROW limits that differ from those in the approved USACE Permit.

3.15 As-Built Plans

- Provide a copy of the as-built plans in accordance with the Manual of Instruction for the Preparation of As-built Plans.
- Provide a final copy of all electronic data as noted in section 3.4.1 and 3.4.2 which captures all changes to electronic data since the final plans submittal.
- A complete as-built set of signing plans, including SignCAD copies of all layouts, shall be submitted to the SCDOT as directed by the Director of Traffic Engineering at the conclusion of the project.
- The CONTRACTOR shall provide as-built plans to include: directional bore logs, conduit offsets every 500', GPS data of device locations, all service and pull boxes, power metering points, mid span and reel end splices (three complete sets). An electronic copy of all GPS data will be turned in at the same time as the as-built plans. Allocation drawing and Fiber Trak data entry will be furnished by the Department as part of the integration.
- Provide As-Built "red-lined" signal plans to the District Signal Shop after the signal work is completed.
- Provide as-built load rating(s), updated as needed, with as-built plans if there have been any changes to the bridge(s) that affect the load rating. If no changes are made that affect the load rating(s), provide a certification signed by the engineer of record stating the original load rating(s) remain accurate for the bridge(s).

3.16 As-Built ITS Plans

- The CONTRACTOR shall provide as-built plans to include: directional bore logs, conduit offsets every 500', GPS data of device locations, all service and pull boxes, power metering points, mid span and reel end splices (three complete sets). An electronic copy of all GPS data will be turned in at the same time as the as-built plans. Allocation drawing and Fiber Trak data entry will be furnished by the Department as part of the integration.

EXHIBIT 5

SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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SPECIAL PROVISIONS**(1) SECTION 101: STANDARD DRAWINGS:**

The Bidders are hereby advised that this project shall be constructed using the Current Standard Drawings with all updates effective at the time of this letting. For this design-build project, the time of the letting is the most recent Standard Highway Letting that occurred on or before the Final RFP release date. The Standard Drawings are available for download at <https://www.scdot.org/business/standard-drawings.aspx>. All drawings that are updated are labeled with their effective letting date in red.

All references in the plans, standard specifications, supplemental specifications, supplemental technical specifications or special provisions to drawings under the previous numbering system (prior to 2007) are hereby updated to the new drawing numbers. Refer to sheets 000-205-01 through 000-205-07 to find new drawing numbers when looking for references to older drawing numbers. "Old sheet numbers" are also visible on the website when using the full set of drawings "current" search and are sortable by clicking the header over the appropriate column on the results page. Be aware that some older drawings now span over multiple pages due to detailing changes.

(2) SECTION 102: IMMINENT STANDARD DRAWINGS

On the Standard Drawings search page, enter status of Imminent with other fields blank to see a list of upcoming Standard Drawings and their corresponding effective let date. Imminent drawings may be used at any time they are available if approved by the Resident. Follow procedure shown in imminent drawings when noted in this section.

Imminent Drawings will be made available as soon as they are signed.

(3) SECTION 102: STANDARD DRAWING ERRATA:

The Bidders are hereby advised that the following note changes apply to the published Standard Drawings.

On sheet **000-205-05**, add the following information under the columns below:

OLD DRAWING NAME

NEW DRAWING NAME

720-905-01 to 720-905-05

720-901-01 to 720-993-32

On sheet **605-005-05 (ver 1-1-2013)**, replace entire text of General Note #4 with the following text:

4. The square footage of sign panels attached to 2½" x 2½" 12 gauge sign support secured to a 3" x 3" 7 gauge breakaway anchor shall not exceed 20 square feet.

On sheet **610-005-00 (ver 5-1-18)** added the following definition to Note 1 of Flagging Operations section:

SIDE ROAD FLAGGER – This flagger is stationed on an intersecting side road and controls the side road traffic entering into the roadway where the work activity area is located.

On sheet **610-005-20 (ver 5-1-18)** added Note 5 :

5. When the work proceeds through a "STOP sign controlled""SIDE ROAD" intersection continue the work operations through the intersection to a specific location point within the "DEPARTURE LANE" no less than 300 FT to 500 FT beyond the limits of the intersection to allow the work train and all portions of the lane closure to clear the intersection.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

On sheet 610-005-20 (ver 5-1-18)

Added dimension “300’-500” for the work activity area after the intersection.

On sheet 610-005-30 (ver 5-1-18) added Note 5 :

5. When the work proceeds through a “STOP SIGN CONTROLLED” intersection continue the work operations through the intersection to a specific location point within the “DEPARTURE LANE” no less than 300 FT to 500 FT beyond the limits of the intersection to allow the work train and all portions of the lane closure to clear the intersection.

On sheet 610-005-40 (ver 5-1-18) added Note 5 :

5. When the work proceeds through a “TRAFFIC SIGNAL CONTROLLED” intersection continue the work operations through the intersection to a specific location point within the “DEPARTURE LANE” no less than 300 FT to 500 FT beyond the limits of the intersection to allow the work train and all portions of the lane closure to clear the intersection.

On sheet 610-005-50 (ver 5-1-18) added Note 5 :

5. When the work proceeds through a “TRAFFIC SIGNAL CONTROLLED” intersection continue the work operations through the intersection to a specific location point within the “DEPARTURE LANE” no less than 300 FT to 500 FT beyond the limits of the intersection to allow the work train and all portions of the lane closure to clear the intersection.

On sheet 610-005-60 (ver 5-1-18) Title block changed :

Title block now reads “Flagging Operations – Work Zones Beginning @ Intersections with Two-Lane Two-Way Roadways – Departure Lane.”

On sheet 610-005-70 (ver 5-1-18) Title block changed :

Title block now reads “Flagging Operations – Work Zones Terminating @ Intersections with Two-Lane Two-Way Roadways – Approach Lane.”

On sheet 610-005-80 (ver 5-1-18) Note 6 revised:

6. Dependent upon the location of the work zone in the “Departure Lane” or the “Approach Lane” of the two-lane two-way road, when the work zone progresses to a location that requires conversion from this flagging operation traffic control setup to a standard flagging operation traffic control setup or vice versa, comply with the requirements of Standard Drawing No. 610-005-60 or Standard Drawing No. 610-005-70 as necessary regarding these conversions.

On sheet 610-005-90 (ver 5-1-18) Note 6 revised:

6. Dependent upon the location of the work zone in the “Departure Lane” or the “Approach Lane” of the two-lane two-way road, when the work zone progresses to a location that requires conversion from this flagging operation traffic control setup to a standard flagging operation traffic control setup or vice versa, comply with the requirements of Standard Drawing No. 610-005-60 or Standard Drawing No. 610-005-70 as necessary regarding these conversions.

In Section 714-000 – Pipe Culverts (Permanent) (ver January 2011)

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Delete and replace all references to P1 Biaxial Geogrid with B4 Geogrid on all Drawings within this Section of the Standard Drawings.

On sheet 720-305-00 (ver May 2008), delete the entire note directly above main detail:

On sheet 720-405-00 (ver May 2009) Detail 2 replace dimension 2'-6" maximum with:

2'-6" minimum

On sheet 720-901-01 (ver Feb 2015) replace note 5.04 with:

5.04 When a mid-block crossing is required, consider mid-block staggered crossing (720-955-41) to encourage eye contact between the pedestrian and the oncoming traffic. Always angle the stagger so that the pedestrian travels through the refuge facing the oncoming traffic.

On sheet 722-305-00 (ver May 2010) Detail 4 replace note "French Drain see note 21" with:

French Drain see note 4.5.

On sheet 722-305-00 (ver May 2010) table 722-305A, 4th column, change the following:

Delete (SF)

Replace text "up to 36" with "up to 3'X3' "

Replace text "larger than 36" with "larger than 3'X3' "

On sheet 722-305-00 (ver May 2010) change general note 3.3 2nd sentence & Detail 4:

Place Class 2 Type C Geotextile for Erosion Control under riprap as specified in SCDOT Standard Specification.

On sheet 804-105-00 (ver May 2008) Title Block replace text "Rirap (Bridge End)" with:

Riprap (Bridge End)

On sheet 804-105-00 (ver May 2008) Change Note 2: Geotextile Pay Item to:

8048210 Geotextile for Erosion Control under riprap (Class 2) Type C.... SY

On sheet 804-205-00 (ver May 2009) Change Note 2: Geotextile Pay Item to:

8048210 Geotextile for Erosion Control under riprap (Class 2) Type C.... SY

On sheet 804-305-01 (ver Jul 2017) Change Note 4: Geotextile Pay Item to:

8048210 Geotextile for Erosion Control under riprap (Class 2) Type C.... SY

On sheet 804-305-02 (ver Jul 2017) Change Section A: Geotextile Note to:

Geotextile for Erosion Control under riprap (Class 2) Type C

On sheet 804-310-00 (ver Jul 2017) Change Note 3: Geotextile Pay Item to:

8048210 Geotextile for Erosion Control under riprap (Class 2) Type C.... SY

On sheet 805-001-01 Jan 2019 version, replace note 25.06 with:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

25.06 FOR PROJECTS THAT SPECIFY PREMASH DEVICES (W-BEAM, TYPE T, TBBC, TYPE B, ETC.) INSTALL W-BEAM RAIL HEIGHT AT 29" +/- 1" (PREVIOUSLY NOTED AS 27.75" +3"/-0".)

On sheet 805-220-00 (ver Jul 2018) replace note 5:

FOR SITES WITH BRIDGES, BOLT GUARDRAIL TO BRIDGE PARAPET AS REQUIRED IN STIFFNESS TRANSITION, AND HOLD FACE OF GUARDRAIL POSITION (TYPICALLY 5'-3" FROM FACE OF CURB) THROUGH STIFFNESS TRANSITION. Make any necessary adjustments to face of guardrail within the LONGITUDINAL BARRIER. INSTALL END TREATMENT so that impact head is beyond the back of sidewalk.

On website, drawings between 805-500-00 and 805-779-99 are reserved as PREMASH standards. Do not value engineer or otherwise substitute PREMASH devices in any location where it has been determined that MASH devices fit and are specified. If MASH devices do not fit site condition, install PREMASH only upon approval by the Resident Engineer. Note that during MASH implementation, some PREMASH details may be published with old drawing numbering and a cover sheet that addresses drawing and pay item changes.

On sheets 805-860-xx (05, 10, 15, 20, 24, 30) (ver Jan 2016):

All references to toe drain details are revised to refer to drawing 805-875-10 (correct all notes pointing to drawings 805-895-00 or other incorrect drawing numbers).

(4) SECTION 102: UNIQUE ENTITY ID (SAM) REQUIREMENT FOR ALL PROJECTS:

The Bidders are advised that the Prime Contractor must register and maintain a current registration in the System for Award Management (<http://sam.gov>) at all times during this project. Upon registration, the Contractor will be assigned a SAM Unique Entity ID.

The Bidders are also advised that prior to the award of this contract, they MUST be registered, active, and have no active exclusions in the System for Award Management.

(5) SECTION 103: BONDS AND INSURANCE:

Bonds and Insurance consists of all Bonds and Insurance required of the contractor. A maximum allowable amount of 2.0% of the total contract amount will be paid on the first pay estimate after work begins. If there is a remaining amount of the lump sum price for Bonds and Insurance after payments are made according to the limit above, then the remaining amount will be paid on the final estimate.

If special insurance is required by the contract provisions, such as railroad or coastal insurance, no maximum limit will apply to this bid item.

Item No.	Pay Item	Unit
1032010	BONDS AND INSURANCE	LS

(6) SECTION 103: MOBILIZATION – SUBCONTRACTOR:

Mobilization – Subcontractor consists of the preparatory operations for subcontractors including: moving personnel and equipment to the project site; paying bond and insurance premiums; establishing offices, buildings, and other facilities necessary for work on the project; and all other preparatory work or costs incurred before beginning work on the project.

Mobilization - Subcontractor is paid at the lump sum price bid, which price and payment is full compensation for organizing and moving all subcontractor forces, supplies, equipment and incidentals to the project site, regardless of the number of times such moves are made. The price and payment also includes costs for demobilization.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

When the item Mobilization – Subcontractor is included in the bid items, payment will be made on the first four estimates once construction begins. Each payment is for 25% of the lump sum price for Mobilization - Subcontractor, subject to the maximum total limit of 5.0% of the total contract amount.

If there is a remaining amount of the lump sum price for Mobilization after payments are made according to the limit above, then the remaining amount is paid after all work on the project has been completed and accepted.

Partial payment for this item in no way acts to preclude or limit any of the provisions of partial payments otherwise provided for by the Contract or these specifications.

Payment for this item includes all direct and indirect costs and expenses required to complete the work.

Pay items under this section include the following:

Item No.	Pay Item	Unit
1031100	MOBILIZATION – SUBCONTRACTOR	LS

(7) SECTION 104: CONTRACT CHANGES:

A. PURPOSE

The purpose of this document is to establish the responsibilities and procedures for processing Requests for Information (RFI), Design Change Notifications (DCN), Field Change Notifications (FCN), and Contract Change Requests (CCR) after the execution of the contract for SCDOT design-build projects. These actions require review and either acceptance or approval prior to implementation. The timely review and response to Contractor/SCDOT submittals by the appropriate project officials is imperative to maximize the benefits of design-build contracting and reduce project delays.

B. DEFINITIONS

The following are the four different types of Contract Requests (CR).

Request for Information (RFI): A written request, typically by the Contractor to SCDOT, requesting clarifications or interpretations of the contract, plans, and specifications, including input required to resolve discrepancies. An RFI can also be used to obtain concurrence for construction means and methods that differ from traditional practice. In addition, SCDOT may initiate an RFI to the Contractor requesting clarification of means and methods.

Design Change Notification (DCN): A written notification by the Contractor that states changes within the contract requirements are needed to the design after the plans have been released for construction. These changes to the design will be subject to the same level of quality assurance and quality control reviews as the original design, including SCDOT and Contractor review, respectively.

Field Change Notification (FCN): A written notification by the Contractor to SCDOT to construct the project differently than shown in the Released for Construction (RFC) plans, but still within the contract requirements and SCDOT accepted practices. FCNs typically capture minor changes that do not require review and approval from the Engineer of Record (EOR), but will be noted on the as-built plans.

Contract Change Request (CCR): A written request to change contract requirements or deviate from SCDOT accepted practices. CCRs shall document all changes to contract time and price. CCRs, if approved, will be processed individually or in groups via a Change Order in SiteManager.

C. PROCEDURES

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

1. General

- a. Utilize SCDOT CR Form for all RFIs, DCNs, FCNs, and CCRs.
- b. Contractor will submit a form to the SCDOT RCE via ProjectWise, or vice versa, for all RFIs, DCNs, FCNs, and CCRs. FHWA shall be copied on Projects of Division Interest (PoDI).
- c. A sequential project-specific numbering system should be used for each CR submittal (e.g. CR-001).
- d. The RCE shall track the review progress for all documents in real time in a single spreadsheet in ProjectWise. This spreadsheet shall include:
 - 1) The CR number
 - 2) The duration agreed to for review completion
 - 3) The status of each submittal in each update
 - 4) The party that is currently responsible for reviewing and responding
- e. Initial review times for each of these documents will be 10 business days, unless otherwise agreed upon by the RCE and the Contractor. Review times may be extended if SCDOT's initial comments are not addressed. The Contractor and RCE are responsible for ensuring all parties fully understand the magnitude of potential schedule impacts of each submittal.
- f. If an approved CCR impacts contract time or price, it should be documented expeditiously as a Change Order in SiteManager.
- g. If a CR requires revision, it shall supersede all previous submittals and therefore must include all necessary attachments. A new CR form shall be submitted with the original identification number and applicable revision number (e.g. CR-001-R1).

2. Requests for Information

An RFI may be initiated by the Contractor or SCDOT. RFIs that are internal to the Design-Build Team, i.e. Contractor, should not be tracked by SCDOT.

a. RFIs submitted by the Contractor to SCDOT:

- 1) All RFIs are to be submitted by the Contractor's Project Manager to the RCE using the CR Form. The form and supporting documentation shall be placed in a designated ProjectWise folder that the Contractor, RCE, DOC's Office, and Preconstruction may access. A Bluebeam session may be initiated by SCDOT if multiple reviewers are involved.
- 2) Upon receipt, discipline experts for the Contractor, EOR, or SCDOT may discuss details independently, but any conclusions and supporting information must be documented in a formal response by the RCE utilizing the original CR Form.

b. RFIs sent by SCDOT to the Contractor:

- 1) The RCE will develop the RFI in coordination with SCDOT staff as needed using the CR Form. The RCE will provide all RFIs via a designated ProjectWise folder that the Contractor, RCE, DOC's office, and Preconstruction may access.
- 2) The Contractor will submit the response and supporting information to the RCE in this same ProjectWise folder.
- 3) The RCE will review the Contractor's response and determine whether a separate notification or request is needed.

3. Design Change Notification

- a. The Contractor shall notify the RCE of any design changes being considered on any documents or plans that have been released for construction by utilizing CR Form. The Contractor shall clearly identify all proposed changes on CR Form. Supporting the form should be all revised documents that clearly identify all proposed changes. The form and

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

supporting documentation shall be placed in a designated ProjectWise folder that the Contractor, RCE, DOC's Office, and Preconstruction may access. A Bluebeam session may be initiated by SCDOT if multiple reviewers are involved.

- b. Once the DCN is reviewed and if all comments are resolved, the RCE will accept the DCN using CR Form and submit to the Contractor along with all necessary attachments. If any SCDOT comments cannot be resolved in accordance with the contract requirements, the DCN will be rejected, and SCDOT will provide an explanation for the rejection and comment on the favorability as a CCR.
 - c. Digital and hard copies of revised plans that will become revised RFC plans shall be submitted by the Contractor following the procedures outlined in the contract and as agreed to for the original RFC plans. The Contractor shall provide revised Released for Construction (RFC) plans after SCDOT accepts the DCN.
 - d. The Contractor is to ensure that all parties affected by any design changes and/or plan revisions receive revised RFC plans, i.e. utility companies, subcontractors, sub-consultants, railroad company representatives, etc.
4. Field Change Notification
- a. The Contractor shall notify the RCE of any FCN under consideration utilizing CR Form.
 - b. The Contractor shall clearly identify all proposed changes on CR Form and attach all supporting documents and details needed for SCDOT to fully understand the proposed changes. A Bluebeam session may be initiated by SCDOT if multiple reviewers are involved.
 - c. If the FCN does not require any design changes to the RFC plans, does not violate the contract requirements, and in the opinion of the RCE, complies with SCDOT accepted practices, the RCE will accept the FCN.
 - d. If the FCN requires design changes to the RFC plans, the FCN will be rejected and SCDOT will provide an explanation for the rejection and the need to resubmit as a DCN.
 - e. If the FCN violates the contract requirements, the FCN will be rejected and SCDOT will provide an explanation for the rejection and comment on the favorability as a CCR.
 - f. If the FCN does not comply with SCDOT accepted practices, the FCN may be accepted or rejected. If rejected, SCDOT will provide an explanation for the rejection and comment on the favorability as a CCR.
 - g. The Contractor shall document all SCDOT accepted FCNs as redlines in the as-built plans.
5. Contract Change Request
- a. CCRs sent by Contractor to the SCDOT:
 - 1) The Contractor shall submit a CCR to the RCE using the CR Form with sufficient description, information, calculations, justification, and any impacts to cost and time for SCDOT to make an informed decision. The Contractor shall provide the RCE with additional supporting documents or justification upon request.
 - 2) The RCE is to review the submittal and seek input from SCDOT discipline experts as needed. A Bluebeam session may be initiated by SCDOT if multiple reviewers are involved.
 - 3) Upon concurrence with SCDOT and FHWA staff, the RCE will approve or reject any CCR using CR Form.
 - 4) If the CCR is approved, including any changes to cost and time, a SiteManager Change Order will be issued to the Contractor for review and concurrence.
 - 5) If the CCR is determined to be necessary to the project but cost and time cannot be agreed upon, SCDOT reserves the right to direct the Contractor to perform the work under Force Account Procedures in lieu of rejection. Upon completion of the changed work, a SiteManager Change Order will follow for contractor review and concurrence.

b. CCRs sent by SCDOT to the Contractor:

- 1) The RCE shall submit a CCR to the Contractor using the CR Form with sufficient description and information for the Contractor to respond.
- 2) The Contractor must respond with sufficient information, calculations, and justification for all cost and time changes.
- 3) The RCE is to review the response and seek input from SCDOT discipline experts as needed. A Bluebeam session may be initiated by SCDOT if multiple reviewers are involved.
- 4) Upon concurrence with SCDOT and FHWA staff, the RCE will approve or reject any cost or time changes associated with the CCR using CR Form.
- 5) If the CCR is approved, including any changes to cost and time, a SiteManager Change Order will be issued to the Contractor for review and concurrence.
- 6) If the CCR is determined to be necessary to the project but cost and time cannot be agreed upon, SCDOT reserves the right to direct the Contractor to perform the work under Force Account Procedures in lieu of rejection. Upon completion of the changed work, a SiteManager Change Order will follow for contractor review and concurrence.

(8) SECTION 104: DETOUR ROUTES:

When the contract documents allow/specify detours, SCDOT will maintain detour routes with the exception to detour signage and full-depth patching as required by the Resident Construction Engineer specified in Exhibit 4c – Pavement Design Criteria.

(9) SECTION 105: EXTENDED JOB SITE OVERHEAD:

Delete Paragraph 1, item D of Subsection 105.16.5 of the Standard Specifications and replace it with the following:

D. Extended Job site Overhead as determined by the formula set forth below:

$$D = A \times C / B$$

Where: A = Original Contract Amount

B = Original Contract Time

C = 7%

D = Extended Jobsite Overhead rate per calendar day for compensable delays

(10) SECTION 105: SCDOT COMPUTER USAGE POLICY

The consultant and its designated employees, as well as any subcontractors and subconsultants of any tier, having access to SCDOT electronic data, is required to follow SCDOT's Acceptable Computer Usage Policy (http://iwww.dot.state.sc.us/pdf/departamental_directives/updated/DD37.pdf) which establishes guidelines for acceptable use and confidentiality of SCDOT's information for data entry into SCDOT'S computer system; provided that the section of the Policy pertaining to SCDOT's right to inspect any users email at any time is qualified to reserves unto SCDOT the right to inspect consultant, subcontractor or subconsultant emails that are SCDOT business related, including emails that are related to the services with which consultant is under contract.

The consultant and its designated employees, as well as any subcontractors and subconsultants of any tier, having access to SCDOT electronic data, is required to also follow SCDOT's IT Security Policy (http://iwww.dot.state.sc.us/pdf/IT_Security_Policies_09042012.pdf), which sets forth SCDOT IT Security Policy including Network Security Policy, Network Access and Authentication Policy, Physical Security Policy, Backup Policy, Incident Response Policy, Corporate Security

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Policies, VPN Site-to-Site Policy, Wireless Access Policy, Remote Access Policy, Confidential Data Policy, Guest Access Policy, Third Party Connection Policy, Outsourcing Policy, and Mobile Device Policy; the South Carolina Act 190 of 2008; the Financial and Identity Theft Protection Act; and the Personal Financial Security Act. Prior to access to the SCDOT network, each person designated by the consultant is required to sign an acknowledgment of the DD37 policy requirements.

The consultant's obligations with respect to the provisions of computer use and data confidentiality shall survive termination or expiration of the contract. Without limiting any rights SCDOT may have, and notwithstanding any other term of this contract, the consultant agrees that SCDOT may have no adequate remedy at law for a breach of the consultant's obligations under this clause and therefore SCDOT shall be entitled to pursue equitable remedies in the event of a breach.

Consultant is responsible for ensuring that it, as well as any subcontractors and subconsultants of any tier, having access to SCDOT electronic data, is required to manage and reduce risk by employing and using good cyber threat preventative measures. Consultant, subcontractors and subconsultants shall use the National Institute of Standards and Technology's Risk Management Framework (NIST RMF) as its cybersecurity framework or use other comparable frameworks and standards for cyber security protection. consultant shall insert a NIST RMF or equivalent framework requirement provision in all subcontract for this Project which require or allow a subconsultant or subcontractor to have access to SCDOT data. consultant shall provide SCDOT, upon request, third party certifications to verify implementation of an industry recognized cyber security framework during the Project. Other comparable cyber security frameworks include: NIST RMF; NIST CSF; ISO IES 27001/ISO 27002; SOC 2; IASME Governance; CIS Controls version 7; COBIT 5; FedRAMP; HIPAA; GDPR; FISMA; NERC CIP; HITRUST CSF.

(11) SECTION 105: BRIDGE INSPECTION ACCESS

A. DESCRIPTION:

The contractor shall cooperate with and allow SCDOT personnel or their designee's access to all existing bridges within the project limits to perform periodic bridge condition evaluations. The purpose is to ensure that SCDOT complies with National Bridge Inspection Standards (NBIS) requirements. These evaluations may include routine, underwater, fracture critical, or special inspections. The Department or their designee shall give two weeks' notice to the Contractor of planned inspections. The Contractor shall schedule construction activities to allow unimpeded access to such bridges during NBIS Inspections.

The contractor shall notify the RCE four weeks prior to opening any new, widened, stage constructed or rehabilitated bridge to traffic to allow an initial bridge condition evaluation, an inventory inspection and an inventory underwater inspection (if needed). The contractor shall perform all repairs necessary to correct deficiencies noted in the condition evaluation report. Bridges, to include temporary bridges, should not be opened to traffic prior to completion of the NBIS Inspection(s).

(12) SECTION 106: SOURCE OF PRODUCTION OF IRON AND STEEL PRODUCTS:

- 1 All iron and steel permanently incorporated into federal-aid projects must be produced in the United States. All manufacturing processes, from the initial melting stage through the application of coatings, must occur in the United States. When steel and iron materials are used in a project, the requirements of this section do not prevent a minimal use of foreign steel and iron materials if the cost of such materials used does not exceed one-tenth of one percent (0.1 percent) of the total contract cost or \$2,500, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the steel and iron product. The RCE must approve the use of any foreign steel or iron materials prior to incorporation into the project. Proper tracking of the foreign materials must be done to the satisfaction of the RCE to ensure the maximum allowance is not exceeded.
- 2 A material certification (one per shipment) certifying compliance with this Supplemental Specification must be submitted to the RCE prior to incorporating any steel and iron materials into the project. This includes certification of steel and iron components of manufactured products (i.e., steel wire

mesh or steel reinforcing components of a precast reinforced concrete pipe).

- 3 All construction materials permanently incorporated into federal-aid projects must be produced in the United States. All manufacturing processes must occur in the United States and include at least the final manufacturing process and the immediately preceding manufacturing stage for the construction material. "Construction materials" includes an article, material, or supply that is or consists primarily of:
 - non-ferrous metals;
 - plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
 - glass (including optic glass);
 - lumber; or
 - drywall.

Cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives are excluded from this requirement. There is no minimum use allowance of foreign construction materials.

- 4 Any construction material permanently incorporated into a federal-aid project must have a material certification certifying compliance with this Supplemental Specification, submitted to the RCE prior to incorporation into the project unless the material is already identified as meeting this Supplemental Specification for federal-aid projects on a Qualified Product List (QPL).

(13) SECTION 106: SOURCE OF TELECOMMUNICATION AND VIDEO SURVEILLANCE EQUIPMENT

In accordance with 2 CFR 200.216, Contractors, in the performance of this Contract, are prohibited from procuring or obtaining telecommunication or video surveillance equipment, services, or systems produced by:

- Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
- Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(14) SECTION 106: SOURCE OF SUPPLY AND QUALITY OF MATERIALS:

Delete Paragraph 3 of Subsection 106.1 of the Standard Specifications and replace it with the following:

"When materials, components, or elements that are not specifically covered in the Standard Specifications, Supplemental Specifications, Supplemental Technical Specifications, or Project Special Provisions are proposed to be incorporated into the work, submit to the RCE a specification covering the proposed material, component, or element for review and acceptance prior to incorporating it into the work. Ensure that such materials, components, or elements meet the requirements of the AASHTO specifications that were effective as of the date of the Final RFP. If the materials, components, or elements are not covered in the AASHTO specifications, ensure that they meet the requirements of the ASTM specifications that were effective as of the date of the Final RFP. Submission of a specification for a material, component, or element not covered in the Standard Specifications, Supplemental Specifications, Supplemental Technical Specifications, or Project Special Provisions does not guarantee approval for use on the Project."

(15) SECTION 106: PLANT/FABRICATOR INSPECTION:

Subsection 106.4, **Plant Inspection**, of the Standard Specifications shall be amended with the following:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Change the subsection title to **Plant/Fabricator Inspection** and add the following sentence after the first sentence:

“Provide 14 calendar days written notice to the Materials and Research Engineer prior to beginning fabrication work for Department projects.”

(16) SECTION 106: QUALIFIED PRODUCT LISTINGS:

All references to “Approval Sheet” or “Approval Policy” are to be replaced with “Qualified Products Listings (QPL)” and “Qualified Products Policies (QPP)” respectively. This change includes all references in the SCDOT Standard Drawings, SCDOT Standard Specifications, SCDOT Supplemental Specifications, SCDOT Special Provisions, SCDOT Supplemental Technical Specifications, SCDOT Internet and Intranet websites, and all other documents produced by SCDOT.

(17) SECTION 106: SOUTH CAROLINA MINING ACT:

The South Carolina Mining Act Supplemental Specification dated March 20, 2003 is hereby modified as follows:

Paragraph 9 is hereby deleted and replaced with the following:

The deputy secretary for engineering, or his duly appointed representative, will make a final inspection of the reclaimed area and keep a permanent record of his approval thereof. A map or sketch providing the location and approximate acreage of each pit used on the project will be provided to the resident construction engineer for inclusion in the final plans.

The last paragraph is hereby deleted and replaced with the following:

The contractor shall comply with the provisions of the plan that are applicable to the project as determined by the engineer. Seeding or other work necessary to comply with the plan on pits furnished by the contractor shall be at the expense of the contractor. Seeding shall be in accordance with SC-M-810 (latest version) which can be found at http://www.scdot.org/doing/road_SupTechSpec.aspx.

(18) SECTION 107: PROJECT BULLETIN BOARDS:

In accordance with the Required Contract Provisions Federal-Aid Construction Contracts Section II, Item 3, Part d, add the following:

Single Location Projects – On projects in which work is performed at a single location (such as bridge replacement projects, two-lane to five-lane widening projects, etc.), mount the project bulletin board in a permanent location within the project limits so that it is visible and accessible at all times.

Multiple Location Projects – On projects in which work is being performed or has the capability of being performed at multiple locations (such as resurfacing projects, pavement marking projects, etc.), display a portable bulletin board with at least one of the prime contractor’s work crews. If the prime contractor is not performing work, display the portable bulletin board with at least one of the subcontractor’s work crews. Display the portable bulletin board in a location and a manner that is acceptable to the RCE. Notify the RCE and all subcontractors as to the location of the portable bulletin board. On resurfacing projects, mount an additional project bulletin board in a permanent location at the asphalt plant supplying asphalt mix to the project so that it is visible and accessible at all times.

(19) SECTION 107: FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED:

Attention is directed to this Federal Legislation, which has been enacted into law. The contractor will be responsible for carrying out all of the provisions of this legislation, which may affect this contract.

(20) SECTION 107: CARGO PREFERENCE ACT REQUIREMENTS:

A. Use of United States-flag vessels – General Provisions:

"(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

"(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (A)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

B. Use of United States-flag vessels - The contractor agrees:

"(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

"(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (B)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

"(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract."

(21) SECTION 107: CONTRACT PROVISION TO REQUIRE CERTIFICATION AND COMPLIANCE CONCERNING ILLEGAL ALIENS:

By submission of this bid, the bidder as the prime contractor does hereby agree:

- A. to certify its compliance with the requirements of Chapter 14 of Title 8 of the S.C. Code of Laws regarding Unauthorized Aliens and Public Employment;
- B. to provide SCDOT with any documents required to establish such compliance upon request; and
- C. to register and participate and require agreement from subcontractors and sub-subcontractors to register and participate in the federal work authorization program to verify the employment authorization of all new employees, or to employ only workers who supply the documents required pursuant to S.C. Code 8-14-20(B)(2).

(22) SECTION 107: IRAN DIVESTMENT ACT:

By submission of this bid/proposal, the bidder/proposer as the prime contractor/consultant/vendor does hereby certify his compliance to the following:

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- A. **CERTIFICATION:** (a) The Iran Divestment Act List is a list published pursuant to Section 11-57-310 that identifies persons engaged in investment activities in Iran. Section 11-57-310 requires the government to provide a person ninety days (90) written notice before he is included on the list. The following representation, which is required by Section 11-57-330(A), is a material inducement for the SCDOT to award a contract to you. (b) By signing your Offer, you certify that, as of the date you sign, you are not on the then-current version of the Iran Divestment Act List. (c) You must notify the SCDOT immediately if, at any time before posting of a final statement of award. You are added to the Iran Divestment Act List.
- B. **ONGOING OBLIGATIONS:** (a) You must notify SCDOT immediately if, at any time during the contract term, you are added to the Iran Divestment Act List. (b) Consistent with Section 11-57-330(B), you shall not contract with any person to perform a part of the Work, if, at the time you enter into the subcontract, that person is on the then-current version of the Iran Divestment Act List.
- C. **OPTION TO RENEW RESTRICTION:** Contractor acknowledges that, unless excused by Section 11-57-320, if the contractor is on the then-current Iran Divestment Act List as of the date of any contract renewal, the renewal will be void ab initio.

(23) SECTION 107: APPLICATION OF DAVIS-BACON AND RELATED ACTS TO INDEPENDENT TRUCK DRIVERS AND MISCELLANEOUS CONSTRUCTION ACTIVITIES:

June 13, 1990

- A. The Davis-Bacon and Related Acts apply when:
 - 1. A Contractor or Subcontractor hires a trucking firm or fleet of trucks to haul materials from a plant, pit, or quarry, which has been established specifically to serve (or nearly so) a particular project or projects covered by Davis-Bacon and Related Acts.
 - 2. A Contractor or Subcontractor hires a trucking firm or fleet of trucks to haul material from a non-commercial stockpile or non-commercial storage site outside the limits of the project to the project site.
 - 3. A Contractor or Subcontractor hires a trucking firm or fleet of trucks to haul excavated materials away from a Davis-Bacon covered project.
 - 4. A contractor or Subcontractor rents or leases equipment with an operator to perform work as called for under a Davis-Bacon construction contract.
 - 5. A common carrier is used for the transportation of materials from an exclusive material supply facility to fulfill the specific need of a construction contract.

The fleet owner is not considered a Subcontractor with regard to the 70% subcontracting limitations and would not have to be approved as a Subcontractor. However, payrolls must be submitted by truck fleet owner covering the truck drivers, and all requirements such as predetermined wages, overtime, etc., are applicable. Legitimate owner-operators (truck owner driving his own truck) must appear on the payroll by name and notation "truck Owner Operator" with no hours, etc. shown.

- B. The Davis-Bacon and Related Acts do not apply when:
 - 1. A Contractor or Subcontractor hires a trucking firm or fleet of trucks to haul materials from a commercial plant, pit, or quarry which had previously been established for commercial use and regularly sell materials to the general public.
 - 2. A Contractor or Subcontractor hires a trucking firm or fleet of trucks to haul materials from an established commercial plant, pit, or quarry to a stockpile outside the limits of the project.
 - 3. Bona fide owner-operators of trucks, who are independent contractors, use their own equipment to haul materials to or from or on a Davis-Bacon covered project. (One man-One truck)

The fleet owner is not considered a Subcontractor with regard to the 70% subcontracting limitation and would not have to be approved as a Subcontractor.

(24) SECTION 107: REQUIREMENTS FOR FEDERAL AID CONTRACTS WHICH AFFECT SUBCONTRACTORS, DBE HAULERS, MATERIAL SUPPLIERS AND VENDORS:

March 1, 2010

- A. The contractor's attention is directed to the requirements of Section I.2 in Form FHWA 1273 that is included in your contract documents as the Supplemental Specification "Required Contract Provisions Federal-Aid Construction Contracts". Section I.2 requires that "the contractor shall insert in each subcontract all of the stipulations contained in the Required Contract Provisions". This requirement also applies to lower tier subcontractors or purchase orders. These provisions must be physically included in your subcontracts. A reference to the applicable specification will not suffice.
- B. The contractor's attention is directed to the requirements of the Supplemental Specification "Standard Federal Equal Employment Opportunity Construction Contract Specifications". Section 2 requires that the provisions of this specification must be physically included in each subcontract with a value of \$10,000 or greater.
- C. The contractor's attention is directed to the requirements of the Equal Employment Opportunity Performance certifications in the Proposal Form Certifications and Signatures section of the contract. Section 1 concerning Equal Employment Opportunity must be physically included in each subcontract.
- D. Prior to the issuance of formal approval, all DBE subcontracts must include a signed copy of the subcontract agreement between the Prime Contractor and the DBE Subcontractor.
- E. Prior to the issuance of formal approval, of any DBE haulers, the contractor must submit a signed copy of the hauling agreement.
- F. The contractor's attention is further directed that sections 1, 2, 3, 8, 9, and 11 of Form FHWA 1273, or Sections 1, 3, 8 and 10 of Form 1316 (for Appalachian contracts only) must be physically included in each purchase agreement with a value of \$10,000 or greater with a vendor or supplier, and in open-end contracts where individual purchases are less than \$10,000 but where the total purchases accumulate to \$100,000 or more per year.

(25) SECTION 107: LATE DISCOVERY OF ARCHAEOLOGICAL/HISTORICAL REMAINS ON FEDERAL AID PROJECTS AND APPROVAL OF DESIGNATED BORROW PITS:

August 7, 1991

A. LATE DISCOVERY OF ARCHAEOLOGICAL/HISTORICAL REMAINS ON FEDERAL AID PROJECTS

1. Responsibilities:

The Contractor and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics, flakes, bones, graves, gravestones, or brick concentrations. If any such cultural remains are encountered, the Resident Construction Engineer shall be immediately notified and all work in the vicinity of the discovered materials or site shall cease until the Department's Staff Archaeologist or the State Highway Engineer directs otherwise.

2. Applicability:

This provision covers all areas of ground disturbance resulting from this federal - aid contract, including but not limited to road construction, Department designated borrow pits, Contractor furnished borrow pits, and/or staging areas.

3. Cost Reimbursement and Time Delays:

Any extra work required by A(1) above within the project right of way or on Department designated borrow pits (see below) will be paid for in accordance with Subsection 104.05 of the Standard Specifications. Extra contract time may be provided under Subsection 108.06 of the Standard Specifications for archaeological work within the project right of way or on designated borrow pits.

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NOTE: On Contractor furnished borrow pits the contractor is not entitled to any additional time or money for delay on impact resulting from A(1) above or for extra work required by A(1) above. Therefore, contractors may wish to retain professional archaeological services to better ensure that borrow pit areas are cleared of archaeological/historical remains prior to use on Federal aid projects.

B. APPROVAL OF DESIGNATED BORROW PITS ON FEDERAL AID PROJECTS (PLANT SITES WHICH QUALIFY AS COMMERCIAL ARE NOT INCLUDED)

In instances where the Department specifically designates the location of borrow pits on project plans or in contract specifications for use on a Federal aid project, an archaeological survey will be performed by Department archaeologists prior to award of contract.

This provision also applies to designated disposal sites, staging areas, haul roads, and job site field offices.

(26) SECTION 107: SPECIFIC EQUAL EMPLOYMENT OPPORTUNITY RESPONSIBILITIES TRAINING SPECIAL PROVISIONS:

August 20, 1975

Revised April 1, 2004

This Training Special Provision supersedes Subparagraph 7b of the Special Provision entitled "Specific Equal Employment Opportunity Responsibilities", (Attachment 1), and is in implementation of 23 U.S.C. 140(a).

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The contractor shall provide on-the-job training aimed at developing full journeymen in the type of trade or job classification involved.

THE NUMBER OF TRAINEES TO BE TRAINED UNDER THE SPECIAL PROVISION WILL BE.

Road – 0

Bridge – 0

In the event that a Contractor subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by this Special Provision. The Contractor shall also insure that this training Special Provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the Contractor shall submit to the State Highway Agency for approval the number of trainees to be trained in each selected classification and training program to be used. Furthermore, the Contractor shall specify the starting time for training in each of the classifications. The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program.

Training and upgrading of minorities and women toward journeyman status is a primary objective of this Training Special Provision. Accordingly, the Contractor shall make every effort to enroll

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority and women (trainees)) to the extent that such persons are available within a reasonable area of recruitment. The contractor will be responsible for demonstrating the steps that he has taken in pursuance thereof, prior to a determination as to whether the Contractor is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journeyman status or in which he has been employed as a journeyman. The Contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used the Contractor's records should document the findings in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Contractor and approved by the State Highway Agency and the Federal Highway Administration. The State Highway Agency and the Federal Highway Administration shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average trainee for journeyman status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the U.S. Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau and training programs approved but not necessarily sponsored by the U.S. Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal Aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the State prior to commencing work on the classification covered by the program. It is the intention of these provisions that training is to be provided in the construction crafts rather than clerk-typists or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is oriented toward construction applications. Training in the laborer classification may be permitted provided that significant and meaningful training is provided and approved by the division office. Some off-site training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Except as otherwise noted below, the cost for the training will be included in the contract price. There will be no reimbursement given by SCDOT for the hours of training that are provided on this project. However, a "Statement of Completed Training" will be required at the end of the project. The fact that the cost of the training must be included in the contract does not prohibit the contractor from receiving training program funds from other sources, if he so desires. Training hours may be counted if training is done off-site where the contractor does one or more of the following and the trainees are concurrently employed on a Federal Aid project: contributes to the cost of the training, provides the instruction to the trainee, or pays the trainee's wages during the off-site training period.

The training requirement will not be considered completed by the Contractor if either the failure to provide the required training, or the failure to hire the trainee as a journeyman, is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of this Training Special Provision. It is normally expected that a trainee will begin his training on the project as soon as feasible after start of work the skill involved and remain on the project as long as training opportunities exist in his work classification or until he has completed his training program. It is not required that all trainees be on board for the entire length of the contract. A Contractor will have fulfilled his responsibilities under this Training Special Provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journeyman's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training

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period, and 90 percent for the last quarter of the training period, unless apprentices or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Contractor shall furnish the trainee a copy of the program he will follow in providing the training. The Contractor shall provide each trainee with a certification showing the type and length of training satisfactorily completed.

The Contractor will provide for the maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision, as required under the SCDOT approved training program.

Meeting the On-the-job Training Requirements or Making Good Faith Efforts to Meet the On-the-job Training Requirements. It is the Contractor's responsibility to meet the On-the-job Training Requirements stated in this section. Failure to meet the requirement or demonstrate good faith efforts, as determined by SCDOT, to meet the requirement may result in any one or more of the following sanctions:

- A. Withholding monthly progress payments;
- B. Declaring the Contractor in default pursuant to Section 108.10 of the Standard Specifications and terminating the contract;
- C. Disqualifying the Contractor from bidding pursuant to Regulation 63-306, Volume 25A, of the S. C. Code of Laws; and/or
- D. Requiring the Contractor to obtain On-the-job Training participation on future contracts to the extent the Contractor failed to meet or use good faith efforts to meet the On-the-job training contract requirement.

(27) SECTION 107: MONITORING OF CONSTR.-RELATED EARTHBORNE VIBRATIONS:

July 8, 2015

A. DESCRIPTION

The project construction will generate vibrations that will travel through the earth, which will subsequently be received or "sensed" by nearby structures and inhabitants. Specific procedures that will generate earthborne vibrations during bridge and roadway construction include (but are not limited to) the installation of piles, earthquake drains, shoring walls, general foundation construction, and vibratory compaction of unclassified or borrow excavation. To mitigate the risk of vibration-related damage to nearby structures, this specification outlines the Contractor's responsibility for performing a program of pre-construction condition assessment and vibration monitoring during construction.

This specification is based, in part, on AASHTO R 8-96 (2004) *Standard Recommended Practice for Evaluation of Transportation-Related Earthborne Vibrations*. As discussed in AASHTO R 8-96 (2004), humans respond to a much broader range of vibration frequencies and intensities than structures. Intrusive vibration levels can annoy humans at much lower intensities than levels considered critical for structures. Thus, occupants of adjacent properties may perceive that the construction-induced vibrations may present risk to their structures. The recommended safe vibration limits are intended to mitigate the risk of structure damage, and more specifically, reduce the development of "threshold cracks" or cosmetic cracking. Such cracks may appear at lower vibration levels than the level at which architectural or minor structural damage would be expected to occur.

B. PRE-CONSTRUCTION CONDITION ASSESSMENT

The Contractor shall retain a geotechnical engineering firm to perform a pre-construction condition assessment to document the conditions of nearby buildings and other sensitive nearby structures prior to the beginning of construction. The assessment shall be performed on all properties

adjacent to the project site and any other properties as directed by the Engineer. The assessment shall include any structures within 300 feet of any vibration inducing construction activity. The assessment should include video and photographic documentation of all exteriors and interiors, and installation of crack monitors on cracks that might propagate due to construction vibrations. All documentation of existing building conditions and information concerning the type and location of crack monitors shall be presented to the Engineer in a report prior to construction.

C. CRACK MONITORING DURING CONSTRUCTION

During all construction, the Contractor shall perform periodic readings of the crack monitors that were installed during the pre-construction condition assessment. All readings shall be provided to the Engineer within 48 hours of taking the reading. Provided that the crack readings confirm that vibrations are not contributing to increasing the crack width, the crack monitors may be read once per week. More frequent readings may be directed by the Engineer during activities that are expected to have greater earthborne vibrations (e.g., pile driving). If the crack readings suggest that vibrations from the project site are contributing to crack width, then the Contractor shall immediately notify the Engineer and review those activities that are generating the earthborne vibrations. The Contractor and his or her geotechnical firm shall then submit a detailed plan for repair, perform the repair at no cost to the Department and develop and submit for review a revised construction plan to address the vibration problems and minimize further damage and complaints.

D. VIBRATION MONITORING DURING CONSTRUCTION

1. Procedure - The Contractor shall monitor vibrations at no less than four locations at each specific site of construction activity along the perimeter of the project during all foundation and embankment construction activities. The locations shall be selected by the Contractor based on the location of the construction activities and their relative position to nearby offsite structures. Prior to construction, a plan of the monitoring locations shall be submitted to the Engineer for acceptance. The locations of the vibration monitors shall be adjusted during construction with acceptance by the Engineer. The vibration monitors shall be established at the site so that background vibrations may be determined prior to beginning foundation or embankment construction. The sensitivity range of the seismograph shall be selected so that the recording is initiated below the maximum allowable particle velocity shown in Figure 1 and extends above the highest expected intensity. Specific activities of the vibration source shall be indexed in time to allow correlation with the arrivals on the vibration
2. Project Vibration Criteria - The maximum allowable particle velocity is shown in Figure 1. If the data from the monitors indicate that vibrations are exceeding the established criteria, then the Contractor shall immediately notify the Engineer and suspend those activities which are generating the earthborne vibrations, until the Contractor and his or her geotechnical firm have developed a revised construction plan to resolve the problem. The problem shall be resolved at no additional cost to the Department.
3. Instrumentation – The vibration monitors shall consist of digital seismographs that display the particle velocities and associated frequencies plotted against the criteria for this project (i.e., Figure 1). Each seismograph shall contain geophones with response capability in three mutually perpendicular axes or components: one vertical and two horizontal (radial and transverse). The frequency response of the geophones shall be linear from at least 4 Hz to more than 200 Hz. The sensitivity shall range from less than 0.02 in/sec to more than 5.0 in/sec. The BlastMate III by Instantel is one type of seismograph that is suitable for this project.
4. Calibration and Instrument Use - The Contractor shall field calibrate the vibration monitors before the start of each recording period. The transducer shall be positioned with the longitudinal axis toward the vibration source. Transducers must be adequately coupled with the ground. Operation of all vibration monitors shall be in accordance with the instrument manufacturer's instructions and recommendations. Vibration records shall be collected in waveform plot or strip chart plot. The peak vector sum of the particle velocity in longitudinal, transverse, and vertical planes shall be shown along with the respective dominant or principle frequencies. The highest recorded particle velocity (i.e., the vector sum of the three orthogonal directions), when indexed to a particle vibration event, shall be reported as the peak particle

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velocity. The recorded peak particle velocity shall be compared to criteria appropriate for the subject of concern.

5. Complaints - In the event of a complaint, the Contractor shall immediately contact the Engineer and review those construction activities that are inducing vibrations into the earth. The Contractor shall prepare a report documenting all relevant data such as the time and date presented in the complaint, a description of the construction activities during the subject time/date, data from the monitoring instruments for the subject time/date, complaint information and a description (including photographs, if possible) of the alleged damage. The Contractor and his or her geotechnical firm shall then submit a detailed plan for repair, perform the repair at no cost to the Department and develop and submit for review a revised construction plan to address the vibration problems and minimize further damage and complaints.

E. METHOD OF MEASUREMENT

In addition to the pre-construction condition assessment report, the Contractor shall also provide monthly reports containing the results of the crack monitors and vibration monitors during those activities that generate earthborne vibrations, including (but not limited to) ground improvement and foundation construction. The reports shall document that the Contractor is providing the work described by this specification.

F. BASIS OF PAYMENT

Payment shall be made in proportion with the percent of the project that is complete. Final payment of the remaining lump sum balance shall be made when vibration monitoring is complete as approved by the Engineer. Payments shall be made under:

Item No.	Pay Item	Pay Unit
1075001	MONITORING OF CONSTRUCTION-RELATED EARTHBORNE VIBRATIONS	LS

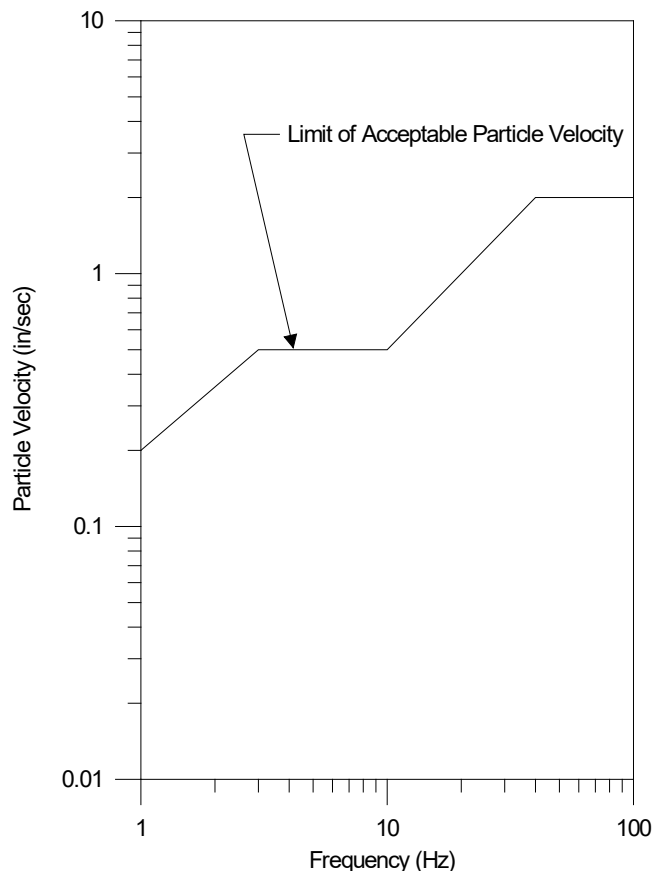


Figure 1 - Vibration Criteria (adapted from AASHTO R8-96)

(28) SECTION 107: COMMUNITY AND PUBLIC RELATIONS PLAN:

SCDOT will take the lead role on this project and be responsible for a portion of the public information efforts. Unless noted otherwise elsewhere in this RFP, the SCDOT responsibilities include:

- A. Developing and maintaining the project website
- B. Soliciting and administering advertisements and media announcements, as deemed necessary

The Contractor shall coordinate with the Department to promote public awareness for this project. The amount of public involvement required for this project is directly based on the Contractor's Transportation Management Plan and construction details. The Design- Build Team's responsibilities shall include:

- A. Providing details surrounding the impacts to the public
- B. Providing advance notice to the Department of upcoming project impacts
- C. Assisting the Department in the development of the target audience list
- D. Hand delivery of time sensitive informational materials
- E. Preparing advertisements and media announcements
- F. Preparing and forwarding direct mailers, flyers, and other promotional materials as necessary

The Contractor shall hold an initial project coordination meeting with SCDOT at least one month prior to start of construction to discuss project impacts to the public. This information will be used by the Contractor to create a Public Information Plan.

The Contractor shall inform the Department at least twenty-one (21) calendar days in advance of any construction activity that will have significant impact on the public, including, but not limited to, the start of construction, major traffic shifts, road closures, ramp closures, detours, night work and project completion.

The Contractor will develop, with the assistance of SCDOT, the specific list of target audiences for this project. The following groups are identified as typical target audiences to receive informational materials:

- A. State Senator(s) and Representative(s)
- B. Chairman of the County Council
- C. County Administrator/Manager
- D. County Planner
- E. City Mayor (as appropriate)
- F. City Manager (as appropriate)
- G. Transportation services
- H. Emergency services
- I. Neighborhood groups and private homes
- J. Industry and businesses
- K. Chamber(s) of Commerce
- L. Individual schools effected by the project
- M. Public School District(s) and Transportation Office(s)
- N. Post Office
- O. Any other organization as deemed necessary by the Department

The minimum public information requirements solely associated with the Transportation Management Plans shall include, but not be limited to the following:

Distribution of Informational Materials - For beginning of construction and for all road closures with detour routes, the Contractor shall be responsible for delivering time sensitive informational material provided by the SCDOT directly to portions of the target audience. If the Contractor informs the Department of the aforementioned activities less than twenty-one (21) calendar days in advance, the Contractor shall hand deliver the informational materials to the impacted target audiences.

The Department will be responsible for establishing, creating, maintaining and updating the project website for this project. However, throughout the project duration, the Contractor shall coordinate with the RCE to ensure the accuracy of the aforementioned project website. At a minimum, the Contractor shall designate a contact for public information inquiries and coordination. Throughout construction, at a minimum, this contact shall provide bi-weekly updates to the RCE, including, but not limited to, traffic control phasing, graphic illustrations, project pictures, etc.

The Contractor shall include in their Total Cost to Complete, all costs associated with their involvement in the Community and Public Relations Plan.

(29) SECTION 107: SCDOT TRADEMARK RIGHTS

A. DESCRIPTION

By execution of this Contract, CONTRACTOR agrees to comply with the following terms with respect to the CONTRACTOR's rights and obligations relating to the use of the SCDOT service/trademark mark(s) (U.S. Registration No(s). 5963731; 5963732; and 6017777).

SCDOT is the owner of the following marks (hereinafter called MARKS)



SCDOT

**SOUTH CAROLINA
DEPARTMENT OF
TRANSPORTATION**

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Additionally, when any of the above-referenced trademarks are used on SCDOT or contractor websites, advertising, or the like, the following Attribution Statement should be placed at the bottom of the page (with the proper year):

"© 2020 – All Rights Reserved – South Carolina Department of Transportation. The South Carolina Department of Transportation is the owner of US Trademark Registration Nos. 5,963,731; 5,963,732 and 6,017,777."

This language need not be used on internal documents, on the sides of trucks, or other places where it would be illegible or difficult for the public to read.

B. GRANT OF TRADEMARK LICENSE

SCDOT grants to CONTRACTOR a nonexclusive, nontransferable license to use the MARKS in connection with the goods and services covered by the above-referenced service mark registrations for the MARKS, and CONTRACTOR accepts the license subject to the following terms and conditions.

C. OWNERSHIP OF MARKS

CONTRACTOR acknowledges the ownership of the SCDOT MARKS, agrees that it will do nothing inconsistent with such ownership and that all use of the MARKS by CONTRACTOR shall inure to the benefit of and be on behalf of SCDOT, and agrees to assist SCDOT in recording this Trademark License with appropriate government authorities, if necessary. CONTRACTOR agrees that nothing in this Trademark License shall give CONTRACTOR any right, title or interest in the MARKS other than the right to use the MARKS in accordance with this Trademark License and CONTRACTOR agrees that it will not attack the title of SCDOT to the MARKS or attack the validity of this Trademark License.

D. QUALITY STANDARDS

CONTRACTOR agrees that the nature and quality of all services rendered by CONTRACTOR in connection with the MARKS, all goods sold or services provided by CONTRACTOR under the MARKS; and all related advertising, promotional and other related uses of the MARKS by CONTRACTOR shall conform to standards set by and be under the control of SCDOT.

E. QUALITY MAINTENANCE

CONTRACTOR agrees to cooperate with SCDOT in facilitating SCDOT's control of such nature and quality, to permit reasonable inspection of CONTRACTOR's operation, and to supply SCDOT with specimens of all uses of the MARKS upon request. CONTRACTOR shall comply with all applicable laws and regulations and obtain all appropriate government approvals pertaining to the sale, distribution and advertising of goods and services covered by this Trademark License.

F. FORM OF USE

CONTRACTOR agrees to use the MARKS only in the form and manner and with appropriate legends as prescribed from time to time by SCDOT, and not to use any other trademark or service mark in combination with the MARKS without prior written approval of SCDOT.

G. INFRINGEMENT PROCEEDINGS

CONTRACTOR agrees to notify SCDOT of any unauthorized use of the MARKS by others promptly as it comes to CONTRACTOR's attention. SCDOT shall have the sole right and discretion to bring infringement or unfair competition proceedings involving the MARKS.

H. TERM

This Trademark License shall continue in force and effect for the effective term of this Agreement.

I. TERMINATION FOR CAUSE

SCDOT shall have the right to terminate this Trademark License upon thirty (30) days written notice to CONTRACTOR in the event of any affirmative act of insolvency by CONTRACTOR, or upon the appointment of any receiver or trustee to take possession of the properties of CONTRACTOR or upon the winding-up, sale, consolidation, merger or any sequestration by governmental authority of CONTRACTOR, or upon breach of any of the provisions hereof by CONTRACTOR.

J. EFFECT OF TERMINATION

Upon termination of this Agreement, CONTRACTOR agrees to immediately discontinue all use of the MARK and any term confusingly similar thereto, and that all rights in the MARK and the good will connected therewith shall remain the property of SCDOT.

(30) SECTION 108: PARTNERING:

A. COVENANT OF GOOD FAITH AND FAIR DEALING

This Contract imposes an obligation of good faith and fair dealing in its performance and enforcement.

The CONTRACTOR and Department, with a positive commitment to honesty and integrity, agree to the following mutual duties:

1. Each will function within the laws and statutes applicable to their duties and responsibilities.
2. Each will avoid hindering the other's performance.
3. Each will proceed to fulfill its obligations diligently.
4. Each will cooperate in the common endeavor of the Contract.

B. PARTNERING

The Department encourages the foundation of cohesive partnering with the CONTRACTOR and its principle subcontractors and suppliers. This partnering is not a legal partnership as defined by South Carolina law. Partnering will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives are effective and efficient contract performance and completion within budget, on schedule, and in accordance with the Contract.

The establishment of a partnering charter will not change the legal relationship of the parties to the contract nor relieve either party from any of the terms of the Contract. Any cost associated with effectuating partnering will be agreed to by the Department and the CONTRACTOR and will be shared equally between them.

(31) SECTION 108: EVALUATION OF DELAYS

The Contractor shall evaluate delays and calculate the appropriate time extension due based on the following:

1. The Contractor shall base all evaluations of delay and all calculations of the appropriate time extensions due on the schedules submitted to and accepted by the Department. The Contractor shall not use schedules that did not exist on the project or create schedules after the delay has occurred to demonstrate entitlement to a time extension.
2. The Contractor shall base evaluations and calculations related to the determination of extensions of time on the Critical Path as established by the schedules submitted to and accepted by the Department. The Contractor is not entitled to a time extension for delays that do not delay the Critical Path. The Critical Path is defined as the longest path through a project schedule.
3. The evaluations and calculations required to establish entitlement to a time extension will vary depending on the nature and timing of the delay and whether the Contract Time is measured in working days, calendar days, or based on a fixed completion date.

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4. The schedules relevant to the evaluation and calculation of time extensions are the most current schedules submitted to and accepted by the Department. For example, if the Department determines that Extra Work is required and the Supplemental Agreement adding this work will be dated June 2, then the determination of the time extension due the Contractor will be based on the last schedule submitted and accepted by the Department prior to June 2 of the same year.
5. The Contractor's evaluations and calculations to document an appropriate time extension shall be performed as follows:
6. The Contractor shall use the method known in the construction industry as the Time Impact Analysis (TIA) to identify and measure critical delays that have not yet occurred (prospective). The Contractor shall not use this method to evaluate delays that have already occurred (retrospective). In general terms, the Contractor shall perform a TIA as follows:
 - a. Develop a "mini" schedule depicting the changed work (hereby referred to as a fragnet).
 - b. Identify the current Progress Schedule as described in paragraph (4), above. Record the scheduled completion date in this schedule.
 - c. Insert the fragnet into the current Progress Schedule by properly linking the fragnet with the existing activities in the current Progress Schedule.
 - d. Recalculate the current Progress Schedule with the fragnet inserted and record its scheduled completion date.
 - e. The difference in the scheduled completion dates (or other Milestone dates) between the current Progress Schedule and the Progress Schedule calculated with a properly inserted and properly composed fragnet is the delay attributable to the changed work. The time extension due, if any, will be based on this delay.
7. The Contractor shall use a Contemporaneous Analysis when evaluating delays that have already occurred. In general terms, the Contractor shall perform a Contemporaneous Analysis as follows:
 - a. Identify the accepted Progress Schedule that is immediately before the start of the delay being evaluated.
 - b. Identify each Progress Schedule in effect during the delay and the Progress Schedule with a data date immediately following the conclusion of the delay.
 - c. Identify the critical path each day from immediately before the start of the delay to the Accepted Progress Schedule immediately following the delay.
 - d. Determine whether the delay falls on the critical path.
 - e. If the delay does not fall on the critical path, then no project delay occurred, and no time extension is due.
 - f. If the delay falls on the critical path, then determine the number of days the critical path is delayed. The time extension due, if any, will be based on this delay to the scheduled completion date

Concurrent Delays are two separate and independent delays that both delay the critical path at the same time. Concurrent Delays can occur when a CONTRACTOR caused delay is concurrent with an SCDOT-caused delay, when a delay that is the responsibility of neither the CONTRACTOR nor SCDOT is concurrent with an SCDOT-caused delay, or when a CONTRACTOR caused delay is concurrent with a delay that is the responsibility of neither the CONTRACTOR nor SCDOT. In each of these scenarios, the Contractor is entitled to an extension of Contract Time but is not entitled to recover additional time-related costs for the period of concurrency.

(32) SECTION 109: FUEL ADJUSTMENT INDEXES:

The Fuel Adjustment Indexes Supplemental Specification dated December 1, 2009 applies to this project. For this project the diesel fuel and unleaded gasoline indexes will be determined on the

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first calendar day of the month cost proposals are due. The indexes and price adjustment tables will be available on the internet at <https://www.scdot.org/business/constructionletting-monthlyindex.aspx>, or from the office of the Contracts' Administrator.

All items of work included in this project that are listed in the table entitled "Items of Work Eligible for Fuel Adjustments" below paragraph 4 of the supplemental specification will be subject to price adjustment.

The following items are hereby included in the table entitled "Items of Work Eligible for Fuel Adjustments" in the Supplemental Specification:

Smooth Wall Pipe (24" or less)	Gallons/LF	0.50	0.15
Smooth Wall Pipe (greater than 24")	Gallons/LF	0.75	0.15
Corrugated Wall Pipe (24" or less)	Gallons/LF	0.50	0.15
Corrugated Wall Pipe (greater than 24")	Gallons/LF	0.75	0.15

The following Section of the Supplemental Specification is hereby modified:

Additional Provisions:

The Department will calculate and apply fuel adjustments to estimates based on index values set at the beginning of the estimate period.

Estimate period begins on the 1st of the month and ends on the last day of the month. The 1st of the month Index will be compared to the contract Base Index to determine index adjustments for the estimate period.

(33) SECTION 109: REFERENCES TO UNIT PRICING:

Except listed below, any references in the contract documents to unit price, measurement, and payment, are typical references for design-bid-build contracts and are not applicable to the extent they effect payment on Design-Build contracts. The Design-Build contractor's schedule of values shall provide sufficient detail to compare work progress to the contractor's schedule and determine appropriate periodic payments.

The following Special Provisions contain unit rate and payment information specifically applicable to this Design-Build contract:

SECTION 401: HOT MIX ASPHALT (HMA) QUALITY ASSURANCE

SECTION 401: HOT-MIX ASPHALT RIDEABILITY

SECTION 401: FULL DEPTH ASPHALT PAVEMENT PATCHING

SECTION 701: NON-CONFORMING CONCRETE

(34) SECTION 202: REMOVAL OF EXISTING GUARDRAIL:

Section 202.4.4.3 applies on this project.

(35) SECTION 202: RECLAIMING EXISTING ROADWAY:

A. DESCRIPTION

This work consists of the restoration of paved areas. These areas are typically shown as hatched areas on the plans when outside the construction limits.

B. MATERIALS

None

C. CONSTRUCTION REQUIREMENTS

1. Asphalt Pavement with Earth Base: Remove and dispose of areas of pavement shown as hatched areas on the plans. Grade the area to properly drain. Seed the area in accordance with Section 810.
2. Asphalt Pavement with Stone Base: Remove and dispose of areas of pavement and base shown as hatched areas on the plans. Grade the area to properly drain. Seed the area in accordance with Section 810.
3. Earth roadway or Bituminous Surfacing with Earth Base: Scarify existing areas of roadway. Grade the area to properly drain. Seed the area in accordance with Section 810.
4. Bituminous Surfacing with Stone Base: Remove and dispose of areas of pavement and base shown as hatched areas on the plans. Grade the area to properly drain. Seed the area in accordance with Section 810.

Suitable materials may be used for embankment construction on the project. In the event that removed materials are used for embankment construction a corresponding deduction in Unclassified Excavation will be made by the Resident Construction Engineer.

D. MEASUREMENT

Removed asphalt pavement greater than 2 inches in depth will be measured by the square yard. Removed bituminous surfacing with stone base will be measured by the cubic yard. Removed stone base will be measured by the cubic yard. Scarified areas will not be measured for payment.

E. PAYMENT

Removed asphalt pavement which is greater than 2 inches in depth will be paid at the unit price bid for Removal and Disposal of Existing Asphalt Pavement. Removed bituminous surfacing with stone base will be paid for at the unit price bid for Unclassified Excavation. Removed stone base will be paid for at the unit bid price for Unclassified Excavation. No payment will be made for scarifying earth roadway or bituminous surfacing with earth base. No separate or additional payment will be made for grading necessary to obtain proper drainage.

(36) SECTION 202: STAGED REMOVAL OF EXISTING BRIDGES:

For existing bridges that will be removed in stages, maintain stability of the existing structure at all times while traffic is on or passing under the bridge. At a minimum, replace all tie rods after removal of any slab sections and maintain bracing on the existing piles at all times while traffic is on or passing under the bridge.

(37) SECTION 203: BORROW EXCAVATION:

Delete paragraph 1 of Subsection 203.2.1.8 of the Standard Specifications and replace it with the following:

1. Borrow consists of material required for the construction of embankments or for other portions of the work where the elevation of the existing subgrade is less than the subgrade elevation required on the Plans or directed by the RCE. When sufficient material is available entirely within the right-of-way, the work is covered by the item Unclassified Excavation and the material shall meet the material requirements of Borrow Excavation in this subsection. When it is necessary to bring material from outside of the right-of-way, the work is covered by the item Borrow Excavation, and the material shall also meet the requirements for Borrow Excavation in this subsection. The material requirements of this subsection apply to all material used in the work regardless of its origin. The requirements of this subsection are not applicable to in situ subgrade material.

(38) SECTION 203: BORROW EXCAVATION (FOR SHOULDERS):

This work shall consist of satisfactory placement of all materials necessary to bring the shoulder grade to within 2 inches of the final pavement edge grade. The Contractor shall furnish all earth

material necessary to eliminate any edge of final pavement to shoulder gradient differential that exceeds 2 inches. The quantities shown on the plans are the Engineering estimate of the number of units that will be necessary for this project, actual field measurements may cause these quantities to vary.

Selected materials shall be used for this operation. The selected material shall consist of a friable material such as topsoil, etc., containing grass roots and having the properties of being comparatively porous, capable of growing grass and of a stable nature in that when compacted it will resist erosion and be capable of supporting vehicles when relatively wet. When the area where material is to be placed, is greater than 4 feet in width, it shall be scarified and/or disked to a minimum depth of 3 inches prior to placing any material. Scarifying or disking is not required for areas less than 4 feet in width. Borrow shall be mixed with the existing scarified and/or disked shoulder material in such a manner as to provide a seed bed in accord with Section 810.15 of the Standard Specifications. The Contractor has the option of placing the borrow material (a) Prior to placing final surface course or (b) Following the placing of the finished surface course.

The method of measurement will be the volume in cubic yards, determined in accordance with Section 203 of the Standard Specifications. The Contractor, at his option, may elect to base the quantity measured on the loose volume at the point of delivery by scaling and counting the loads, with a deduction of 35 percent made for shrinkage. All cost for borrow material including obtaining, hauling, and placing shall be included in the unit price.

(39) SECTION 203: BORROW PITS:

A. PERMITTING OF BORROW PITS

Prior to using borrow material from commercial or other borrow pits located wholly or in part in wetland areas, the contractor shall submit written evidence that operations to obtain fill material from the borrow pit(s) have received all appropriate and necessary authorizations from federal, state, and/or local authorities.

Permitted Borrow Pits

If the appropriate federal, state, and local authorities have issued permits, the contractor shall provide to SCDOT copies of all permits issued for such borrow pit sites.

B. BORROW PITS WITHOUT SECTION 404 PERMIT

For borrow pit sites for which a Section 404 permit under the Clean Water Act has not been issued, the contractor shall provide SCDOT with copies of documentation provided by the contractor or its subcontractor(s) to the U.S. Army Corps of Engineers, which shall, at a minimum, clearly define the location of the borrow pits and any wetlands on the borrow pit site; describe the proposed activities and processes that will be used to prepare the site, obtain fill material from the site, and store material at the site; and request the U.S. Army Corps of Engineers to confirm in writing that no Section 404 permit is required for those operations. No operations shall take place at the borrow sites for at least thirty days from the date of the submission of confirmation request to the U.S. Army Corps of Engineers. After thirty-one days the contractor may begin work. The contractor shall also provide copies to SCDOT of any response(s) provided by the U.S. Army Corps of Engineers to its documentation.

C. RESPONSIBILITY

SCDOT has no obligation or duty to review, assess, evaluate, or act upon such documentation and maintains no authority or responsibility to alter, amend, reject, accept, or otherwise exercise any control over the contractor or subcontractor regarding compliance with Clean Water Act Section 404 and the implementing regulations for Section 404. Documentation submitted to SCDOT is for public information and coordination purposes only. The contractor is responsible for all costs related to the selection, operation, and/or activities at any borrow pit site in wetlands including fines, additional mitigation, and impact delays related to failure to obtain any and all necessary federal, state, and local permits and approvals for borrow pits and operations. Nothing

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

herein shall affect in any way SCDOT's right to accept or reject any fill material not meeting the required technical specifications.

(40) SECTION 205: HIGH-STRENGTH GEOTEXTILE FOR EMBANKMENT REINFORCEMENT:

April 21, 2015

A. DESCRIPTION

This work shall consist of furnishing and installing construction geotextiles in accordance with the details shown in the plans, specifications, or as directed by the RCE.

B. MATERIALS

A geotextile is defined as any permeable polymeric textile used with foundation, soil, rock, earth, or any other geotechnical engineering related material, as an integral part of a civil engineering project, structure, or system. Use geotextiles and thread used in joining geotextiles manufactured from fibers consisting of long-chain polymers, composed of at least 95 percent by weight of polyolefins or polyesters. Use geotextiles with fibers formed into a stable network such that the fibers or yarns retain their dimensional stability relative to each other, including selvages (edges) during shipping, handling, placement, and in service. Use geotextile free from defects or tears.

1. **Minimum Average Roll Values:** All property values, with the exception of Apparent Opening Size (AOS), represent Minimum Average Roll Values (MARV) in the weakest principal direction. Provide geotextiles whose average test results from any roll sampled in a lot for conformance or quality assurance testing meets or exceeds minimum values provided in this Section.
2. **Apparent Opening Size:** Values for Apparent Opening Size (AOS) represent maximum average roll values. Acceptance will be based on ASTM D 4759.
3. **Reinforcement Geotextile:** Use reinforcement geotextile within existing and/or proposed fills for slope reinforcement.

Furnish geotextiles meeting the property requirements outlined in Table 1.

Table 1: High Strength Geotextile Properties (Design Requirements)^{1,2}

Property	Test Method	Geotextile Property Requirements
Long-Term Design Strength, T_{al} , MD		22,800 lb/ft
Long-Term Design Strength, T_{al} , XD		2,280 lb/ft
Sewn Seam Breaking Strength ³	ASTM D4884	900 lbs/ft
AOS	ASTM D4751	$\leq (1.0 \text{ to } 2.0)D_{85(\text{soil})}$
Permeability	ASTM D4491	$\geq 10k_{\text{soil}}$
Default Pullout Friction Factor, F^*	ASTM D6706	$0.6 \tan \Phi$
Default Alpha, α	ASTM D6706	0.6
Ultraviolet Stability	ASTM D4355	$\geq 50\%$ after 500 hrs of exposure

- Notes:
1. The test procedures shall conform to the most recently approved ATSM geotextile test procedures.
 2. All numeric values represent Minimum Average Roll Value (MARV).
 3. Applies to factory or field sewn seams.

4. Source Approval and Certification

Prior to construction, the Contractor shall submit to the Resident Construction Engineer (RCE) a Certification Package prepared by the geotextile reinforcement manufacturer. The Contractor shall allow 21 calendar days from the day the submittals are received by the RCE for review and acceptance. Submit the following information regarding each geotextile proposed for use:

- a. Manufacturer's name and current address;

- b. Full product name/number, including roll number;
- c. Geosynthetic material (i.e. polymer type) and structure (including fiber/yarn type);
- d. Proposed geotextile use(s); and
- e. Certified test results for the properties outlined in Table 1 and below in Section 4.

The Certification shall state that the furnished geotextile soil reinforcement is in full compliance with the design requirements as stated in this specification and the design drawings and is fit for use in long-term critical soil reinforcement applications. In addition to the minimum required properties in Table 1, the submittal shall also certify the following values for each geotextile soil reinforcement used on the project:

- a. The ultimate tensile strength, T_{ULT} , (MARV) for geogrid soil reinforcements, MD/XD
- b. The tensile strength at 5% strain, MD
- c. The creep reduced tensile strength, MD
- d. The geotextile's pullout coefficients (F^* , α)

The Contractor's submittal package shall include, but not be limited to, actual test results for tension, creep, durability, construction damage, joint/seam strength, pullout and quality control. A person having the legal authority to bond the manufacturer shall attest to the certificate. Any tests required shall be performed at no additional cost to the Department. If in the opinion of the RCE, the required documentation is not provided for individual reduction factors (RF) or pullout coefficients (F^* , α), default values for these design parameters shall be used in accordance with this specification.

a. Ultimate Tensile Strength (T_{ult}):

The ultimate tensile strength, T_{ult} , shall be determined from wide width tensile tests (ASTM D 4595). Geotextile samples tested in accordance with ASTM D 4595 shall be with an 8-inch width specimen, or a 4-inch specimen width with correlation to an 8-inch width. Correlation methodology shall be submitted to, and is subject to acceptance by the RCE. All geotextile strength tests (ASTM D 4595 and ASTM D 6637) shall be conducted at a strain rate of 10% per minute based on actual gage length necessary to meet the testing sample dimension requirements. Laboratory test results documenting the ultimate tensile strength, T_{ult} , in the reinforcement direction shall be based on the minimum average roll values (MARV) for the product.

b. Long-Term (Allowable) Design Tensile Strength (T_{al}):

The allowable tensile load per unit width of geotextile soil reinforcement, T_{al} , in accordance to the backfill type used shall be computed as follows:

$$T_{al} = \frac{T_{ult}}{RF}$$

c. Reduction Factor (RF):

The total reduction factor, RF, is the combined reduction factor for long-term degradation due to installation damage, creep, and durability. The total reduction factor, RF, shall be defined as follows:

$$RF = RF_{ID} \times RF_{CR} \times RF_D \geq 3.0$$

The individual reduction factors shall be documented in accordance with the site conditions, design calculations, and specifications. When sufficient documentation is not provided for individual reduction factors, RF_{ID} , RF_{CR} , and RF_D , a reduction factor RF of 7.0

shall be used. The reinforcement manufacturer shall certify and document the individual reduction factors as follows:

d. Installation Damage Reduction Factor (RF_{ID}):

The reduction factor for installation damage, RF_{ID} , shall be documented by field and laboratory test results and literature review, as described in ASTM D 5818 for the reinforced backfill specified or for more severe soils. Samples subjected to installation damage shall be tested for tensile strength and deformation characteristics in accordance with ASTM D 4595. Recommended values for reduction factors for installation damage (RF_{ID}) for various soils shall also be documented. The minimum installation damage reduction factor, RF_{ID} , shall be 1.1, regardless of product specific test results.

e. Creep Reduction Factor (RF_{CR}):

Laboratory test results documenting creep performance over a range of load levels, for a minimum duration of 10,000 hours based on tension creep test (ASTM D 5262) shall be required. Creep test samples shall be of sufficient width to be representative of overall product creep response (fiber creep testing will not be accepted).

The creep-limiting strength, T_I , shall be based on extrapolating the 10,000 hours (or longer duration) tension creep tests to a 75-year design life, unless a 100-year design life is specified in the plans. The creep extrapolation method shall be based on methods described in FHWA NHI-10-025, *"Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes"* - Appendix "D". Laboratory test results and extrapolation methodology shall be documented.

The reduction factor for creep, RF_{CR} , is defined as the ratio of the average lot specific ultimate tensile strength, T_{ULTLOT} , to the creep-limiting strength, T_I . The average lot specific ultimate tensile strength, T_{ULTLOT} , for the lot of material used for creep testing, T_{ULTLOT} , shall be determined from wide width tensile test, ASTM D 4595.

f. Durability Reduction Factor (RF_D):

The total reduction factor for durability, RF_D , shall be defined as the combined effects of chemical and biological degradation. Laboratory test results, extrapolation techniques, and a comprehensive literature review shall document the reduction factor for durability for all material components in accordance with FHWA NHI-09-087, *"Corrosion / Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes"*. The minimum durability reduction factor, RF_D , shall be 1.1, regardless of product specific test results.

g. Soil Reinforcement Pullout Coefficients (F^* , α):

The Certification Package shall document the pullout coefficients (F^* , α) meet or exceed the required coefficients necessary to obtain the T_{al} provided above where,

F^* = Minimum pullout friction factor = $C_i \tan \Phi$,
 C_i = Soil interaction coefficient ≥ 0.6
 Φ = Soil Angle of Internal Friction

The pullout friction factor, F^* , and the scale effect correction factor, α , shall be documented by laboratory testing from pullout tests. Pullout testing shall be conducted for site-specific materials or for materials representative of the reinforced backfill at confining pressures specified by the Engineer. When laboratory tests are used from representative soils, the representative soils shall be documented by providing the soil's angle of internal friction, gradation, and coefficient of uniformity ($C_u = D_{60}/D_{10}$). Recommended pullout coefficients for various soil types shall also be documented. The pullout coefficients shall be determined by using the quick effective stress pullout tests ("Measuring Geosynthetic

Pullout Resistance in Soil” per ASTM D 6706). The soil interaction coefficient, C_i , shall be documented when computing the pullout friction factor, F^* . When sufficient documentation is not provided for pullout coefficients, F^* and α , and the coefficient of uniformity, C_u , is greater or equal to 4, the default values indicated in this specification can be used. If the coefficient of uniformity of the reinforced backfill is less than 4, laboratory pullout test shall be required to determine pullout friction factor, F^* , and the default scale effect factor, α .

5. Sample Approval.

To confirm that the on-site geotextile meets the property values specified, random samples shall be submitted to the RCE for evaluation. The machine direction shall be marked clearly on each sample submitted for evaluation. The machine direction is defined as the direction perpendicular to the axis of the roll.

Cut a sample from the geotextile roll with the minimum dimensions of 4 feet by the full width of the roll beyond the first wrap. The geotextile samples shall be cut from the roll with scissors, sharp knife, or other suitable method that produces a smooth edge and does not cause geotextile ripping or tearing. Submit a manufacturer’s certificate of compliance signed by an authorized manufacturer’s official. The certificate must attest that the geotextile meets all the Minimum Average Roll Value (MARV) requirements specified in Table 1 as evaluated under the manufacturer’s quality control program. Geotextiles supplied for construction of the project shall be certified in accordance with the following criteria. The tests described in the specification shall be conducted by the manufacturer or by an approved independent testing laboratory on samples taken from the same lot number as the material actually shipped to the project and at the specified frequency. The manufacturer or independent testing laboratory shall maintain the appropriate accreditations and must be preapproved by the Department. All rolls shall be marked with individual and distinct roll numbers. All roll numbers shall have traceable certified mill test reports from the given lot that they were manufactured. These test reports must be supplied to the Department prior to installation of any geotextile materials. After the sample and the required information have been submitted to the RCE, allow 30 calendar days for evaluation.

Product acceptance is determined by comparing the average test results of all specimens within a given sample to the Minimum Average Roll Values (MARV) listed in Table 1. Install geotextiles only after the material has been tested and/or evaluated and accepted. Replace all geotextiles installed prior to acceptance that do not meet specifications at Contractor’s expense.

a. Sewn Seam Approval

If the geotextile seams are to be sewn in the field, the Contractor shall provide a section of sewn seam that can be sampled by the RCE before the geotextile is installed. The sewn seam shall be in accordance with ASTM 6193.

The seam sewn for sampling shall be sewn using the same equipment and procedures as will be used to sew the production seams. The seam sewn for sampling must be at least 6 feet in length. If the seams are sewn in the factory, the Contractor shall provide samples of the factory seam at random from any of the rolls to be used. Regardless of whether the seam is to be sewn in the factory or the field, the manufacturer and/or Contractor shall certify that the strength meets the requirement set forth in Table 1. If seams are to be sewn in both the machine and cross-machine direction, provide samples of seams from both directions. The seam assembly description shall be submitted by the Contractor to the Engineer and will be included with the seam sample obtained for testing. This description shall include the seam type, stitch type, sewing thread type(s), and stitch density.

If sewn seams are used for seaming the geotextile, use thread that consists of high strength polypropylene or polyester. Do not use nylon thread. Use thread that is of contrasting color to that of the geotextile itself.

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If the manufacturer can provide a T_{al} MD that is greater than the sum of the required T_{al} MD and sewn seam breaking strength (for each specified in the project plans), the sewn seams may be eliminated and a minimum overlap of 1 foot may be used.

6. Identification, Shipment and Storage

Conform to ASTM D 4873, *Standard Guide for Identification, Storage, and Handling of Geotextiles*. Clearly label each roll of geotextile shipped to the project with the name and address of the manufacturer, full product name/number, quantity, and roll number.

The RCE will reject materials that are mislabeled or misrepresented. Wrap each roll with a material that protects the geotextile, including ends of the roll, from damage due to shipment, water, sunlight, and contaminants. Maintain the protective wrapping during periods of shipment and storage. Do not damage the geotextile or wrapping when unloading or transferring from one location to another. Do not drag the rolls.

During storage, elevate geotextile rolls off the ground and adequately cover to protect them from the following:

- a. Site construction damage;
- b. Precipitation;
- c. Ultraviolet radiation including sunlight;
- d. Chemicals that are strong acids or strong bases;
- e. Flames including welding sparks, temperatures in excess of 140 °F (60 °C); and
- f. Mud, dirt, dust, debris and any other environmental condition that may damage the physical property values of the geotextile

C. CONSTRUCTION REQUIREMENTS

1. General

Prepare the surface on which the geotextile is to be placed so that no damage occurs to the geotextile. Do not drive or operate any construction equipment directly on the geotextile. Dispose of material with defects, rips, holes, flaws, deterioration, or other damage. Do not use defective material in the work. The manufacturer shall be present on site for a minimum of two days of geotextile installation such that the manufacturer observes any field-sewn seams.

2. Installation Plan

Within thirty (30) calendar days after award of the contract or no later than thirty (30) calendar days before beginning high-strength geotextile installation, the Contractor shall submit to the Department for review a high-strength geotextile installation plan that includes as a minimum the following information:

- a. The Contractor shall certify and provide proof to the Department of experience in the work described. The Contractor shall have successfully installed at least 500,000 square yards of any geotextile that has sewn seams during the last five years. In addition, the Contractor shall have successfully completed at least five projects within the last five years of similar size and complexity to that of the Project.

The Contractor's experience shall be documented by providing a project summary that includes for each referenced project, the project start and completion dates, total quantity of geotextile installed (specifically indicate if high-strength geotextile installed), and a detailed description of the project, site conditions, and subsurface conditions. The project description shall include details of the geotextile materials, the equipment and technique used to install the geotextiles, the average and maximum area of geotextile installed, the client name and address, the name and telephone number of the representative of the consultant and owner for whom the work was performed and who can attest to the

successful completion of the work, and any other information relevant to demonstrating the Contractor's qualifications.

- b. Resume of supervisor documenting experience and qualifications in the installation of both normal and high-strength geotextile. The Contractor shall have a full-time supervisor who has been in responsible charge of supervising geotextile installation operations for at least five projects in the last five years. The supervisor shall be present at the work site at all times during installation operations. The acceptability of the supervisor, as well as any replacement for the supervisor, will be subject to the approval of the Department.
- c. Shop drawings showing the planned locations and elevations of all high-strength geotextiles. The installation sequence shall also be provided including any required staging. The shop drawings shall also show the location of the bridge abutment, and the limits of the final embankment and construction staging.
- d. Detailed description of proposed installation procedures
- e. Proposed methods and equipment for sewn seams

3. Site Preparation

Prepare the installation site by clearing, grubbing, and excavating or filling the area to the design grade. This includes removal of topsoil or vegetation. The RCE will identify soft spots and unsuitable areas during site preparation. This may include but not be limited to proof-rolling specific areas defined by the RCE. Excavate these areas and backfill with approved borrow or bridge lift material and compact as specified. The area to be covered by the geotextile shall be graded to a smooth, uniform condition free from ruts, potholes, and protruding objects such as rocks or sticks.

The Contractor may construct a working platform, up to 2 feet in thickness, in lieu of grading the existing ground surface. A working platform is required where stumps or other protruding objects which cannot be removed without excessively disturbing the subgrade are present. These areas shall be prepared in accordance with the 2007 Standard Specifications for Highway Construction. The stumps shall be covered with at least 6 inches of fill before placement of the first geotextile layer.

4. Geotextile Placement

The geotextile shall be spread immediately ahead of the covering operation. The geotextile shall be laid with the machine direction perpendicular or parallel to centerline as shown in Plans. All seams shall be sewn. Seams to connect the geotextile strips end to end will not be allowed. The geotextile shall not be left exposed to sunlight during installation for a total of more than 14 calendar days. The geotextile shall be laid smooth without excessive wrinkles. Under no circumstances shall the geotextile be dragged through mud or over sharp objects, which could damage the geotextile.

Small soil piles or the manufacturer's recommended method shall be used as needed to hold the geotextile in place until the specified cover material is placed. Remove wrinkles and folds by pulling the geotextile taut as required.

Should the geotextile be torn or punctured or the sewn joints disturbed, as evidenced by visible geotextile damage, subgrade pumping, intrusion, or roadbed distortion, the backfill around the damaged or displaced area shall be removed and the damaged area repaired or replaced by the Contractor at no expense to the Department. The repair shall consist of a patch of the same type of geotextile placed over the damaged area. The patch shall be sewn at all edges.

If geotextile seams are to be sewn in the field or at the factory, the seams shall consist of two parallel rows of stitching, or shall consist of a J-seam, Type SSn-2. The two rows of stitching shall be 1 inch apart with a tolerance of plus or minus 0.5 inches and shall not cross, except for re-stitching. The stitching shall be a lock-type stitch. The minimum seam allowance, i.e.,

the minimum distance from the geotextile edge to the stitch line nearest to that edge, shall be 1.5 inches if a flat or prayer seam, Type SSa-2, is used. The minimum seam allowance for all other seam types shall be 1 inches. The seam, stitch type, and the equipment used to perform the stitching shall be as recommended by the manufacturer of the geotextile and as approved by the RCE.

The seams shall be sewn in such a manner that the seam can be inspected readily by the RCE or his representative. The seam strength will be tested and shall meet the requirements stated herein.

5. Fill Placement.

Embankment construction shall be kept symmetrical at all times to prevent localized bearing capacity failures beneath the embankment or lateral tipping or sliding of the embankment. Place fill over the geotextile by dumping onto previously placed material and pushing the material into place. Stockpiling of fill on the geotextile will not be allowed. Do not operate any construction equipment directly on the geosynthetic material under any circumstances.

Place the fill material in uniform layers so that there is a minimum lift thickness (loose) of 8 inches between the geosynthetic material and equipment tires or tracks at all times. The minimum thickness of the first lift is 8 inches. Do not allow construction equipment to turn on the first lift of material above the geosynthetic material. Do not blade the first lift placed over the geosynthetic material. If the subgrade is very soft with an undrained shear strength less than 500 psf, minimize pile heights to less than 3 feet and spread piles as soon as possible after dumping to minimize the potential for localized subgrade failure due to overloading of the subgrade.

Do not use sheepsfoot or studded compaction equipment on the first lift placed over the geosynthetic material. Stop vibrator on compaction equipment if pumping occurs. Do not operate any construction equipment that results in rutting in excess of 3 inches on the first lift. If rutting exceeds 3 inches, decrease the construction equipment size and/or weight or increase the lift thickness. Use only rubber-tired rollers for compaction if any foundation failures occur when placing subsequent lifts. Compact all lifts to the moisture and density requirements for each embankment specified in the Standard Construction Specifications. Do not blade material down to remove ruts. Fill any ruts or depressions with additional material and compact to the specified density.

A sandy material that meets the requirements of an A-2 AASHTO soil classification shall be the only borrow excavation soil allowed for placement between the lowest elevation geotextile and the bottom of the pavement section. The embankment fill soils shall be compacted in accordance with the 2007 Standard Specifications for Highway Construction. Fill shall be placed in 12-inch maximum lift thicknesses where heavy compaction equipment is to be used and 6-inch maximum uncompacted lift thicknesses where hand-operated equipment is used.

The geotextile shall be pretensioned during installation using either Method 1 or Method 2 as described herein. The method selected will depend on whether or not a mudwave forms during placement of the first one or two lifts. If a mudwave forms as fill is pushed onto the first layer of geotextile, Method 1 shall be used. Method 1 shall continue to be used until the mudwave ceases to form as fill is placed and spread. Once mudwave formation ceased, Method 2 shall be used until the uppermost geotextile layer is covered with a minimum of 1 foot of compacted fill. These special construction methods are not needed for fill construction above this level. If a mudwave does not form as fill is pushed onto the first layer of geotextile, then Method 2 shall be used initially and until the uppermost geotextile layer is covered with at least 1 foot of compacted fill.

Method 1

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After the working platform, if needed, has been constructed, the first layer of geotextile shall be laid as outlined in the project plans and the joints sewn together. The geotextile shall be stretched manually to ensure that no wrinkles are present in the geotextile. The fill shall be end-dumped and spread from the edge of the geotextile. The fill shall first be placed along the outside edges of the geotextile to form access roads. These access roads will serve three purposes: to lock the edges of the geotextile to form access roads, to contain the mudwave, and to provide access as needed to place fill in the center of the embankment. These access roads shall be approximately 16 feet wide. The access roads at the edges of the geotextile shall have a minimum height of 2 feet completed. Once the access roads are approximately 50 feet in length, fill shall be kept ahead of the filling operation, and the access roads shall be kept approximately 50 feet ahead of this filling operation. Keeping the mudwave ahead of this filling operation and keeping the edges of the geotextile from moving by use of the access roads will effectively pre-tension the geotextile. The geotextile shall be laid out no more than 20 feet ahead of the end of the access roads at any time to prevent overstressing of the geotextile seams.

Method 2

After the working platform, if needed, has been constructed, the first layer of geotextile shall be laid and sewn as in Method 1. The first lift of material shall be spread from the edge of the geotextile, keeping the center of the advancing fill lift ahead of the outside edges of the lift. The geotextile shall be manually pulled taut prior to fill placement. Embankment construction shall continue in this manner for subsequent lifts until the uppermost geotextile layer is completely covered with 1 foot of compacted fill.

D. METHOD OF MEASUREMENT

Measurement of geotextile is on a square yard basis and will be computed based on the total area of geotextile shown in the plans, exclusive of the area of geotextiles used in any overlaps, seams, and/or joints. This shall include all costs associated with installation of the geotextile. Overlaps and any geotextile waste are an incidental item.

E. BASIS OF PAYMENT

Payment at the contract unit price is full compensation for all resources necessary to complete the item of work under the contract. Payment for the completed and accepted quantities is made under the following:

Item No.	Pay Item	Unit
2037110	GEOTEX REINF.	SY

(41) SECTION 305: MAINTENANCE STONE:

Maintenance Stone used on this project shall conform to the gradation requirements of Section 305, or to the gradation specified for Aggregate No. CR-14 in the Standard Specifications.

(42) SECTION 401: ASPHALT BINDER ADJUSTMENT INDEX:

The Liquid Asphalt Binder Adjustment Index Supplemental Specification dated March 3, 2009 applies to this project. For this project the Basic Bituminous Material Index will be determined on the first calendar day of the month in which cost proposals are due. The index and adjustment table will be available on the internet at http://www.scdot.org/doing/constructionLetting_MonthlyIndex.aspx, or may be obtained from the office of the Contracts' Administrator.

The following is hereby included in the table entitled "Items of Work Eligible for A.C. Binder Adjustments" in the supplemental specification.

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PREVENTATIVE MAINTENANCE SURFACE TREATMENT	SY	0.0026
ASPH. SURF. TREAT. (TRIPLE T-1)	SY	0.0024

All items of work included in this project, that are listed in the table entitled “Items of Work Eligible for A.C. Binder Adjustments” below paragraph 4 of the supplemental specification will be subject to price adjustment.

The following Section of the Supplemental Specification is hereby modified:

Additional Provisions:

The Department will calculate and apply asphalt binder index adjustments to estimates based on index values set at the beginning of the estimate period.

Estimate period begins on the 1st of the month and ends on the last day of the month. The 1st of the month Index will be compared to the contract Base Index to determine index adjustments for the estimate period.

(43) SECTION 401: DRESSING OF SHOULDERS:

Prior to the placement of asphalt mixtures on existing roadways, the contractor will be required to remove all vegetation adjacent to the edge of pavement which impedes the placement of the asphalt mixture to the specified width. The contractor shall also remove and dispose of all excess asphalt which is disturbed during minor grading for widening, or during removal of debris or grass from existing surface during preparation of surface for new lift. After the asphalt mixture has been placed, the contractor shall blade the disturbed material to the extent that the shoulder is left in a neat and presentable condition. All excess material shall be removed from the project. No direct payment shall be made for this work; all costs are to be included in the price of other items of work.

(44) SECTION 401: SURFACE PLANING OF ASPHALT PAVEMENT:

A. GENERAL

1. Description:

This Special Provision replaces all references to Surface Planing of Asphalt Pavement in Subsection 401 of the Standard Specifications in their entirety. It does not replace or amend Subsection 611 of the Standard Specifications. It describes the material and construction requirements for the surfacing planing of existing asphaltic concrete pavement by micro-milling to remove wheel ruts and other surface irregularities, restore proper grade and/or transverse slope of pavement as indicated in the Plans or as instructed by the RCE. Ensure that the planed surface provides a texture suitable for use as a temporary riding surface or an overlay with OGFC with no further treatment or overlays. Do not use the planed surface as a temporary riding surface for more than ten days if no corrective action is required and no more than 21 days if corrective action is required unless otherwise instructed by the RCE.

B. REFERENCED DOCUMENTS

1. SCDOT Standard Specifications, Edition of 2007
2. SC-M-502, Rideability of PCC Pavement

C. EQUIPMENT

1. Provide power-driven, self-propelled micro-milling equipment that is the size and shape that allows traffic to pass safely through areas adjacent to the work. Also, use equipment with the following characteristics.

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- a. Ensure that the equipment is equipped with a cutting mandrel with carbide-tipped cutting teeth designed for micro-milling HMA and bituminous treated pavement to close tolerances.
- b. Ensure that the equipment is equipped with grade and slope controls operating from a string line or ski and based on mechanical or sonic operation.
- c. Ensure that the equipment is capable of removing pavement to an accuracy of 0.0625 inches.
- d. Ensure that the equipment is furnished with a lighting system for night work, as necessary.
- e. Ensure that the equipment is provided with conveyors capable of transferring the milled material from the roadway to a truck located to the side, rear, or front while minimizing airborne dust and debris.

D. CONSTRUCTION REQUIREMENTS

1. Follow the Plans to micro-mill the designated areas and depths, including bridge decks, shoulder, and ramps, as required. Ensure that the following requirements are met.
 - a. Prior to commencement of the Work, construct a test section that is 1156 feet in length with a uniformly textured surface and cross section on the road to be treated as approved by the RCE. Ensure that the final pavement surface has a transverse pattern of 0.2 inches center to center of each strike area and the difference between the ridge and valley of the mat surface in the test section does not exceed 0.0625 inches.
 - b. Milling depth may range up to 2 inches as necessary to fully remove existing OGFC surface, which has a typical nominal depth of one inch, as well as lesser depths on shoulders to provide a planar surface that allows appropriate drainage prior to placement of new OGFC. While milling depths over one inch are anticipated to ensure OGFC removal in low spots as well as to meet rideability requirements, milling depth should be minimized when possible to avoid excessive removal of the pavement structure while still removing all existing OGFC.
 - c. The Department will test the test section for rideability following Subsection 6 of SC-M-502 for diamond ground and textured existing concrete pavement, except that the maximum acceptable rideability is 90 inches per mile for each 0.1 mile segment. The first and last 50 feet of the test section will not be included in the two 0.1 mile segments. Provide the RCE with at least three business days of notice prior to need of rideability testing.
2. If any of the requirements of Section D.1 are not met, do no further work and provide a written plan of action to the RCE detailing what steps will be taken to improve operations. The RCE may require corrective action to the test section prior to acceptance or accept the test section as is. Once the plan has been approved by the RCE, construct a second test section at a different location from the first. If the second test section meets the requirements of Section D.1 and is approved by the RCE, continuous milling may commence. If the second test section fails to meet the requirements of Section D.1, continue to construct test 1156 foot sections until satisfactory results are achieved.
3. Once continuous operations commence, continue to produce a uniform finished surface and maintain a constant cross slope between extremities in each lane.
4. Provide positive drainage to prevent water accumulation on the micro-milled pavement as shown on the Plans or as directed by the RCE.
5. Bevel back the longitudinal vertical edges greater than one inch that are produced by the removal process and left exposed to traffic. Bevel back at least 1.5 inches for each one inch of material removed. Use an attached mold board or other approved method.
6. When removing material at ramp areas and ends of milled sections, the transverse edges may be temporarily tapered 10 feet to avoid creating a traffic hazard and to produce a smooth surface. However, ensure that a neat transverse joint is created prior to the placement of the OGFC; do not terminate OGFC by "pinching" the OGFC over a tapered area.

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7. Remove dust, residue, and loose milled material from the micro-milled surface. Do not allow traffic on the milled surface and do not place overlying layers on the milled surface until removal is complete.

E. ACCEPTANCE

1. Ensure that the micro-milling operation produces a uniform pavement texture that is true to line, grade, and cross section.
2. The Department will test and accept the milled surface for rideability as given in Subsections 6.2 through 6.4 of SC-M-502. The Adjusted Schedule of Payment given in Table 2 of Subsection 6 of SC-M-502 will apply to the contract unit price for the micro-milling as given in Subsection F of this special provision.
3. Micro-milled pavement surfaces are also subject to visual and straightedge inspections. Keep a 10-foot straightedge near the micro-milling operation to measure surface irregularities of the milled surface. Repair any areas exceeding 0.125 inches between the ridge and valley of the mat surface to the satisfaction of the RCE at no additional cost to the Department. Provide a written plan of action to the RCE for approval prior to performing any corrective action on the basis of rideability, grade, or surface texture.

F. MEASUREMENT AND PAYMENT

1. Measurement: The quantity measured for payment under this special provision is the number of square yards of micro-milled surface in place and accepted.
2. Basis of Payment: The quantity, as measured above, will be paid for at the contract unit price subject to the adjustments given herein, for which price and payment is full compensation for furnishing all materials, equipment, tools, labor, hauling, stockpiling, temporary asphalt, and any other incidentals necessary to satisfactorily complete the work. All reclaimed asphaltic pavement (RAP) becomes the property of the Contractor unless otherwise specified. No adjustment in the unit price for this item or other items will be considered for variations in the amount of RAP actually recovered.

Payment includes all direct and indirect costs and expenses required to complete the work. Payment will be made under:

Item No.	Pay Item	Unit
4013099	SURFACE PLANE ASPHALT PAVEMENT, VARIABLE	Square Yard

(45) SECTION 401: HOT MIX ASPHALT (HMA) QUALITY ACCEPTANCE:

Reference is made to the Supplemental Technical Specification "Hot Mix Asphalt (HMA) Quality Acceptance." For the purposes of applying this Supplemental Technical Specification, pay factor adjustments will be based on a unit price of \$75 per ton.

(46) SECTION 401: HOT-MIX ASPHALT RIDEABILITY:

Reference is made to the Supplemental Technical Specification "Hot-Mix Asphalt Rideability." For the purposes of applying this Supplemental Technical Specification, pay factor adjustments will be based on a unit price of \$75 per ton.

(47) SECTION 401: FULL DEPTH ASPHALT PAVEMENT PATCHING:

A. DESCRIPTION:

The Contractor shall patch existing asphalt pavement at locations directed by the Engineer. This work shall consist of the removal of deteriorated pavement and replacing with full depth asphalt plant mix patch.

B. CONSTRUCTION PROCESS:

The deteriorated pavement shall be removed to the width and length indicated by the RCE, with the face of the cut being straight and vertical. The pavement shall be removed to a depth of six

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(6) inches as directed by the RCE. In the event unstable material is encountered at this point, then such additional material shall be removed as directed by the RCE.

The volume of material removed below the patch shall be backfilled with crushed stone and thoroughly compacted in 4-inch layers with vibratory compactors. Prior to placing the asphalt patch material in the hole, the sides of the existing asphalt pavement shall be thoroughly tacked. The patch material shall then be placed in layers not exceeding 3 inches with each layer being thoroughly compacted with a vibratory compactor and pneumatic roller. The patch material shall be an approved SCDOT Asphalt Concrete Binder Course Mix. Patches shall be opened and filled in the same day. Asphalt mixture shall not be applied when the existing surface is wet or frozen. The finished patch shall be smooth riding. The patches are to be no less than six feet by six feet in size and should be spaced at not less than 25 feet between patches.

The quantity of full depth asphalt pavement patching to be paid for will be the actual number of square yards of existing asphalt pavement which has been patched and accepted. The work includes cleaning, removing, and disposing of debris from the patching work, furnishing and placement of crushed stone and asphalt patching material, and all other materials, labor, equipment, tools, supplies, transportation, and incidentals necessary to fulfill the requirements of this item of work.

The Contractor's bid shall include 2000 square yards of full depth asphalt pavement patching. If more than the estimated square yards of patching are required by SCDOT, the Contractor will be paid a unit price of \$75 per square yard. If less than the estimated square yards of patching are required by SCDOT, the Contractor shall reimburse SCDOT at the same unit price for the quantity of full depth patching that was not needed.

(48) SECTION 403: WARM MIX ASPHALT – ASPHALT INTERMEDIATE COURSE TYPE B (SPECIAL):

WMA Intermediate B Special will utilize the same specifications for Intermediate B with several exceptions:

- A. The mix must use WMA Technology using a chemical process on QPL # 77 to utilize maximum reduction in temperature to improve constructability in the field placement operations.
- B. The mix will require the exact same requirements as stated in SC-M-402 with exception of target air voids. The air voids will be targeted at 2.5-3.0% on the mix design to increase binder content and improve field compaction and fatigue resistance.
- C. The placement rate will also be different than conventional mix in order to make necessary repairs to the milled pavement sections during one lane closure sequence.
- D. In place density will be measured and accepted by using the gauge in lieu of taking roadway cores. A test strip will be required on the shoulder of the roadway to set up a roller pattern and establish target density. Ensure in place density is acceptable by taking 6 inch roadway cores at the end of the test strip to verify maximum compaction effort is obtained. All other mix acceptance testing will follow SC-M-400 using the same mixture acceptance criteria as the Intermediate Course Type B.

Item No.	Pay Item	Unit
4112320 X	WMA INTERMEDIATE COURSE TYPE B "SPECIAL"	TON

(49) DIVISION 600: FURNISH AND INSTALL DETECTOR LOOPS:

The Contractor is hereby notified that All Catalog descriptions and documentation are to be submitted within (5) days after the bid openings to the Contracts Administrator.

The loops shall be installed in the surface course on all projects in Engineering Districts 3, 4, 5, 6, & 7.

The loops shall be installed in the binder course for all projects in Engineering District 1.

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The loops shall be on installed in the binder course on new construction projects, and in the surface for resurfacing projects in Engineering District 2.

(50) DIVISION 600: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES:

The Contractor is advised that all work involving design or installation of traffic control devices, including but not limited to signs, pavement markings, elements of work zone traffic control, signals, etc., shall be in compliance with the FHWA's Manual on Uniform Traffic Control Devices (MUTCD), latest edition. The latest edition is defined as the edition that the Traffic Engineering Division of SCDOT recognizes as having been officially adopted (Engineering Directive, Memorandum 19) at the time the project is let, unless stated otherwise in the Special Provisions.

(51) DIVISION 600: MAINTENANCE AND CONTROL OF TRAFFIC

A. CONSTRUCTION (SUB-SECTION 601.4)

1. Sub-section 601.4.2 Construction Vehicles (paragraph 2) -

When working within the rights-of-way of access-controlled roadways such as Interstate highways, the Contractor's vehicles may only change direction of travel at interchanges. These vehicles are prohibited from crossing the roadway from right side to the median or vice versa. Use a flagger to control the Contractor's vehicles when these vehicles attempt to enter the roadway from a closed lane or the median area. Ensure the flagger does not stop roadway traffic, cause roadway traffic to change lanes, or affect roadway traffic in any manner. The Contractor's vehicles may not disrupt the normal flow of roadway traffic or enter the travel lane of the roadway until a sufficient gap is present.

The Contractor shall have flaggers available to control all construction vehicles entering or crossing the travel lanes of secondary and primary routes. The RCE shall determine the necessity of these flaggers for control of these construction vehicles. The RCE shall consider sight distance, vertical and horizontal curves of the roadway, prevailing speeds of roadway traffic, frequency of construction vehicles entering or crossing the roadway and other site conditions that may impact the safety of the workers and motorists when determining the necessity of these flaggers. Ensure these flaggers do not stop roadway traffic, cause roadway traffic to change lanes or affect roadway traffic in any manner. The Contractor's vehicles may not disrupt the normal flow of roadway traffic or enter the travel lane of the roadway until a sufficient gap is present.

When working within the rights-of-way of access-controlled roadways with posted regulatory speed limits of 55 MPH or greater and average daily traffic volumes {ADT} of 10,000 vehicles per day or greater, i.e. Interstate highways, all construction and work vehicles possessing any one or more of the vehicular characteristics listed below are only permitted to enter and exit a right or left shoulder work area during the presence of active lane closures unless otherwise directed by the RCE. These vehicles are not permitted to enter or exit these work areas without the presence of active lane closures unless otherwise directed by the RCE. Shoulder closures are unacceptable and insufficient methods for control of traffic at ingress / egress areas for these vehicles. The restrictive vehicular characteristics include the following:

- Over six (6) tires
- Tandem rear axles
- A base curb weight greater than 8000 lbs.
- A gross vehicular weight greater than 12000 lbs. unless performing duties as a shadow vehicle while supporting a truck mounted attenuator
- A trailer in tow except under the following conditions:
 - Trailers transporting traffic control devices (including but not limited to standard and 42" oversized traffic cones, portable plastic drums, signs, portable sign supports, u-

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- channel and square steel tube sign posts) relative to the installation of lane closures, shoulder closures or other traffic control operations approved by the RCE
- Trailer mounted traffic control devices (including but not limited to advance warning arrow panels, changeable message signs, temporary traffic signals, highway advisory radios, work zone intelligent transportation systems and trailer towed truck mounted attenuators)

2. Sub-section 601.4.2 Construction Vehicles - Auxiliary Warning Lights for Vehicles and Equipment

Supplement all construction and/or construction-related vehicles and equipment that operate in a stationary or mobile work zone within or adjacent to a roadway within the highway rights-of-way with AMBER or YELLOW colored high intensity rotating or strobe type flashing auxiliary warning light devices. Utilize, install, operate and maintain a single or multiple lighting devices as necessary to provide visibility to approaching motorists.

All auxiliary warning light models shall meet *Society of Automotive Engineers (SAE) Class I* standards and SAE Standard J575 relative to *Tests for Motor Vehicle Lighting Devices and Components* and these specifications.

The amber/yellow color of the dome/lens of an auxiliary warning light device shall meet SAE Standard J578 for amber/yellow color specifications.

Auxiliary warning lights with parabolic reflectors that rotate shall rotate around a halogen lamp at a rate to produce approximately 175 flashes per minute. The parabolic reflector shall produce a minimum 80,000 candle power and a minimum 54,000 candela through an SAE Standard J846 approved amber dome.

Equip strobe type flashing auxiliary warning light devices with photosensitive circuit controls to adjust the lighting intensity in response to changes in ambient light conditions such as from day to night. These lights shall have a double-flash capability rated at approximately 80 double flashes per minute and produce a minimum 24 joules of flash energy at the highest power level setting.

Acceptable auxiliary warning light models shall provide sufficient light output to be clearly recognizable at a minimum distance of 1750 feet.

Mount all auxiliary warning light devices intended to function as the auxiliary warning light system or as an element thereof on vehicles and equipment at locations no less than 3 feet above the ground and in conspicuous locations to provide visibility to approaching motorists.

Auxiliary warning light devices and/or models that mount in the locations of the standard vehicle lighting system are unacceptable as the specified auxiliary warning light system due to restrictive simultaneous visibility capabilities from multiple sight angles. However, auxiliary warning light devices that mount in the standard vehicle lighting system locations are acceptable as supplements to the specified lighting devices mounted in locations that do meet the minimum height requirements and provide simultaneous visibility capabilities from multiple sight angles.

Standard vehicle hazard warning lights are only permitted as supplements to the specified auxiliary warning light devices.

3. General Requirements for Providing and Maintaining Traffic Control Devices in the Work Zone (Section 602) – Sub-section 602.4 Construction (paragraph 8) -

Mount flat sheet signs straight and level and with the face of the signs perpendicular to the surface of the roadway. This requirement applies to flat sheet signs whether they are portable or have the embedded supports. Mount advance construction signs 2 feet from the edge of

a paved shoulder or the face of a curb, or if no paved shoulder exists, 6 feet to 12 feet from the edge of an adjacent travel lane to the nearest edge of the signs. The mounting height of single signs mounted on ground embedded sign supports is no less than 7 feet or no greater than 8 feet from the bottom edge of the sign to the grade elevation of the near edge of the adjacent travel lane or sidewalk when a sidewalk is present. Any secondary sign on the same assembly has a minimum mounting height of 6 feet from the ground to the bottom edge of the secondary sign. Ensure that signs mounted on portable sign supports, including advance construction signs, regulatory signs, warning signs, etc., have a minimum mounting height of 5 feet from the ground to the bottom edge of the sign. Provide special sign mounting assemblies, when necessary, in areas of double-layered guardrail, concrete median barrier, or bridge parapet walls.

B. CATEGORY I TRAFFIC CONTROL DEVICES (SECTION 603) –

1. Sub-section 603.2.2 Oversized Traffic Cones (paragraph 6) -

Reflectorize each oversized traffic cone with 4 retroreflective bands: 2 orange and 2 white retroreflective bands. Alternate the orange and white retroreflective bands, with the top band always being orange. Make each retroreflective band not less than 6 inches wide. Utilize Type III – Microprismatic retroreflective sheeting for retroreflectorization on all projects let to contract after May 1, 2010 unless otherwise specified. Separate each retroreflective band with not more than a 2-inch non-reflectorized area. Do not splice the retroreflective sheeting to create the 6-inch retroreflective bands. Apply the retroreflective sheeting directly to the cone surface. Do not apply the retroreflective sheeting over a pre-existing layer of retroreflective sheeting.

2. Sub-section 603.2.3 Portable Plastic Drums (paragraph 3) -

Reflectorize each drum with Type III – Microprismatic retroreflective sheeting: 2 orange and 2 white retroreflective bands, 6 inches wide on all projects let to contract after May 1, 2010 unless otherwise specified. Alternate the orange and white retroreflective bands with the top band always being orange. Ensure that any non-reflectorized area between the orange and white retroreflective bands does not exceed 2 inches. Do not splice the retroreflective sheeting to create the 6-inch retroreflective bands. Apply the retroreflective sheeting directly to the drum surface. Do not apply the retroreflective sheeting over a pre-existing layer of retroreflective sheeting.

C. CATEGORY II TRAFFIC CONTROL DEVICES (SECTION 604) –

1. Sub-section 604.2.1 Type I and Type II Barricades (paragraph 3) -

Reflectorize these barricades with Type VIII or IX Prismatic retroreflective sheeting on all projects let to contract after May 1, 2012 unless otherwise specified. Ensure that the retroreflective sheeting has alternate orange and white stripes sloping downward at a 45-degree angle in the direction of passing traffic. The stripes shall be 6 inches wide.

2. Sub-section 604.2.2 Type III Barricades (paragraph 3) -

Reflectorize these barricades with Type VIII or IX Prismatic retroreflective sheeting on all projects let to contract after May 1, 2012 unless otherwise specified. Ensure that the retroreflective sheeting has alternate orange and white stripes sloping downward at a 45-degree angle. Apply the sloping orange and white stripes in accordance with the requirements of the Plans, SCDOT Standard Drawings and the MUTCD. The stripes shall be 6 inches wide.

D. TEMPORARY CONCRETE BARRIER (SUB-SECTION 605.2.3.2) –

1. Sub-section 605.2.3.2 Temporary Concrete Barrier (paragraph 6) -

Previously used temporary concrete barrier walls are subject to inspection and approval by the RCE before use. Ensure that previously used temporary concrete barrier walls are in good

condition. Defects to a temporary concrete barrier wall that may disqualify a section of wall for use include gouges, cracks, chipped, or spalled areas. A defect that exposes reinforcing steel warrants immediate disqualification. A disqualification grade type defect shall consist of measurements in excess of 1 inch, entirely or partially within the boundaries of the end connection areas and the drainage slot areas as illustrated in the “Standard Drawings for Road Construction”, and/or in excess of 4 inches for all areas beyond the end connection areas. To warrant disqualification, these measurements shall exceed the specified dimensions in all three directions, width, height, and depth. A defect that exceeds the specified dimensions in only one or two of the three directions does not warrant disqualification.

Temporary concrete barrier walls with defects less than 6 inches in all three directions, width, height, and depth that do not expose reinforcing steel may be repaired in accordance with the following requirements. Repair is prohibited on temporary concrete barrier walls with defects 6 inches or greater in all three directions, width, height, and depth.

For repair of temporary concrete barrier walls with defects less than 6 inches in all three directions, width, height, and depth that do not expose reinforcing steel, repair the defect with a premanufactured patching material specifically fabricated for patching structural concrete. The strength of the patch must meet or exceed the design strength of the class 3000 concrete of the temporary concrete barrier wall. Perform the repair procedures in accordance with all requirements and instructions from the manufacturer of the patch material. Use a bonding compound between the patch material and the concrete unless specifically stated by the manufacturer that a bonding compound is not required. If the manufacturer states that application of a bonding compound is optional, SCDOT requires application of a bonding compound compatible with the patch material. If cracking occurs within the patched area, remove the patch material completely and repeat the repair process. The contractor shall submit documentation stating all repairs have been conducted in accordance with these requirements prior to installing any temporary concrete barrier walls with repairs. Utilization of temporary concrete barrier walls with repairs shall require approval by the RCE prior to installation.

The Contractor shall submit certification documents for the patch material utilized for repairs to the Engineer prior to placing temporary concrete barrier walls that have been repaired on the project site.

***** (Effective on all projects let to contract after January 1, 2017)*****

2. Sub-section 605.2.3.2 Temporary Concrete Barrier (paragraph 5) -

In regard to projects let to contract after January 1, 2017, ALL *NCHRP Report 350* compliant temporary concrete barrier walls placed on a project site SHALL comply with the requirements for the recessed approval stamp as directed by the *SCDOT Standard Drawings*. Those *NCHRP Report 350* compliant temporary concrete barrier walls with the original recessed approval stamp that reads "SCDOT 350" will continue to be acceptable on projects let to contract after January 1, 2017. However, those temporary concrete barriers with the "SCDOT 350" identification plate attached to the side of the barrier walls with mechanical anchors previously grandfathered will no longer be acceptable on projects let to contract after January 1, 2017.

E. CONSTRUCTION SIGNS (SUB-SECTION 605.4.1.1) –

***** (Effective on all projects let to contract after January 1, 2016) *****

On all projects relative to interstate highways let to contract after January 1, 2016, all signs attached to portable sign supports on and/or adjacent to interstate highways shall be rigid. Fabricate each of these rigid signs from an approved aluminum laminate composite rigid sign substrate approved by the Department. Utilization of signs fabricated from roll-up fabric substrates attached to portable sign supports installed on and/or adjacent to interstate highways will no longer be acceptable on projects let to contract after January 1, 2016.

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ONLY those portable sign supports specified and approved for support of rigid signs fabricated from approved aluminum laminated composite rigid sign substrates and included on the Approved Products List for Traffic Control Devices in Work Zones, latest edition, are acceptable. To facilitate location of acceptable portable sign supports, the listing of portable sign supports is now separated into two (2) sections; “Portable Sign Supports for Use with Roll-Up Signs ONLY” and “Portable Sign Supports for Use with Roll-Up Sign Substrates and Rigid Sign Substrates”.

The trade names of the approved aluminum laminate composite rigid sign substrates are “Acopan”, “Alpolic”, “Dibond” and “Reynolite”. These rigid sign substrates are restricted to thicknesses no greater than 2 millimeters.

Rigid signs fabricated from standard aluminum sign blanks or any other rigid material other than Acopan, Alpolic, Dibond or Reynolite are PROHIBITED for attachment to portable sign supports. However, rigid signs fabricated from standard 0.080 and 0.100 inches thick aluminum sign blanks will continue to be acceptable for mounting on ground mounted sign supports.

Signs fabricated from roll-up fabric substrates approved by the Department will continue to be acceptable for use on and/or adjacent to secondary and primary roadways unless otherwise directed by the Department.

The minimum mounting height of signs mounted on these portable sign supports shall continue to be 5 feet from the ground to the bottom edge of the sign except where a minimum 7 foot mounting height is required in accordance with the standard specifications, the standard drawings, these special provisions and the MUTCD, latest edition.

F. TRUCK-MOUNTED ATTENUATOR (SUB-SECTION 605.4.2.2) –

1. Sub-section 605.2.2.2.3.3 Color (paragraph 1) -

Use industrial grade enamel paint for cover of the metal aspects of the unit. Provide and attach supplemental striping to the rear face of the unit with a minimum Type III high intensity retroreflective sheeting unless otherwise directed by the Department. Utilize an alternating 4 to 8 inch black and 4 to 8 inch yellow 45-degree striping pattern that forms an inverted “V” at the center of the unit that slopes down and to the sides of the unit in both directions from the center.

2. Sub-section 605.4.2.2 Truck-Mounted Attenuators (paragraph 6) -

A direct truck mounted truck mounted attenuator is mounted and attached to brackets or similar devices connected to the frame of a truck with a minimum gross vehicular weight (GVW) of 15,000 pounds (actual weight) unless otherwise directed. A trailer towed truck mounted attenuator is towed from behind and attached via a standard pintle hook / hitch to the frame of a truck with a minimum gross vehicular weight (GVW) of 10,000 pounds (actual weight) unless otherwise directed.

Each truck utilized with a truck mounted attenuator shall comply with the manufacturer’s requirements to ensure proper operation of the attenuator. The minimum gross vehicular weight (GVW) (actual weight) for each truck shall comply with these specifications unless otherwise directed within the “Remarks” column of the *Approved Products List For Traffic Control Devices in Work Zones* in regard to specific requirements for the device in question.

If the addition of supplemental weight to the vehicle as ballast is necessary, contain the material within a structure constructed of steel. Construct this steel structure to have a minimum of four sides and a bottom to contain the ballast material in its entirety. A top is

optional. Bolt this structure to the frame of the truck. Utilize a sufficient number of fasteners for attachment of the steel structure to the frame of the truck to ensure the structure will not part from the frame of the truck during an impact upon the attached truck mounted attenuator. Utilize either dry loose sand or steel reinforced concrete for ballast material within the steel structure to achieve the necessary weight. The ballast material shall remain contained within the confines of the steel structure in its entirety and shall not protrude from the steel structure in any manner.

G. TRAILER-MOUNTED CHANGEABLE MESSAGE SIGNS (SUB-SECTION 606.3.2) -

1. Sub-section 606.3.2.7 Controller (paragraphs 1-4) -

The controller shall be an electronic unit housed in a weatherproof, rust resistant box with a keyed lock and a light for night operation. Provide the unit with a jack that allows direct communications between the on-board controller and a compatible personal computer. The unit shall have a LCD display screen that allows the operator to review messages prior to displaying the message on the sign.

The controller shall have the capability to store 199 factory preprogrammed messages and up to 199 additional messages created by the user in a manner that does not require a battery to recall the messages. Also, the controller shall allow the operator the capability to program the system to display multiple messages in sequence.

Provide the controller with a selector switch to allow the operator to control the brightness or intensity level of the light source of the sign panel. The selector switch shall include "bright," "dim" and "automatic" modes; inclusion of additional modes is permissible. When the selector switch is in the "automatic" mode, a photosensitive circuit shall control the brightness or intensity level of the light source in response to changes in ambient light such as from day to night and other various sources of ambient light.

Equip each sign with remote communications capabilities, such as utilization of cellular telephone or internet browser technology, to allow the operator to revise or modify the message selection from the office or other remote location. Also, provide protection to prohibit unauthorized access to the controller, (i.e. password protection).

2. Sub-section 606.5 Measurement (paragraph 2) -

Trailer-mounted changeable message signs are included in the lump sum item for Traffic Control in accordance with **Subsections 107.12 and 601.5** of the "2007 Standard Specifications for Highway Construction". No separate measurement will be made for trailer-mounted changeable message signs unless the contract includes a specific pay item for trailer-mounted changeable message signs.

The Contractor shall provide, install, operate, and maintain the trailer-mounted changeable message sign per traffic control set-up as directed by the Plans, the "Standard Drawings for Road Construction", these Special Provisions, the Specifications, and the Engineer.

3. Sub-section 606.6 Payment (paragraph 2) -

In addition to **Subsections 107.12 and 601.6**, the payment for Traffic Control is full compensation for providing, installing, removing, relocating, operating, and maintaining trailer-mounted advance warning arrow panels and trailer-mounted changeable message signs as specified or directed and includes providing the units' primary power source; repairing or replacing damaged or malfunctioning units within the specified time; providing traffic control necessary for installing, operating, and maintaining the units; and all other materials, labor, hardware, equipment, tools, supplies, transportation, incidentals, and any miscellaneous items necessary to fulfill the requirements of the pay item in accordance with the Plans, the Specifications, and other items of the Contract.

4. Sub-section 606.6 Payment (paragraph 3) -

Disregard this paragraph unless the Contract includes a specific pay item for trailer-mounted changeable message signs.

H. TEMPORARY PAVEMENT MARKINGS (SUB-SECTION 609.4.1) –

1. Sub-section 609.4.1.1.1 Application Requirements General (in addition to paragraph 3) -

On two-lane two-way roadways, apply and place temporary or permanent pavement markings, as specified hereupon, prior to the end of each day's work or shift or reopening a closed travel lane to traffic. These pavement markings shall include 4-inch wide solid lines on edge lines and solid center lines and 4-inch wide by 10 feet long broken lines with a 30-foot gap for broken center lines and lane lines unless otherwise specified. The center line pavement markings shall be either double yellow solid lines, yellow broken lines or an appropriate combination of a yellow solid line and yellow broken lines for passing / no passing zones. Placement of a singular yellow solid line for a center line pavement marking is unacceptable. The edge line pavement markings shall be a white solid line.

On multilane primary and secondary roadways, apply and place temporary or permanent pavement markings, as specified hereupon, to the travel lanes prior to reopening a closed travel lane to traffic. These pavement markings shall include 4-inch wide solid lines, utilized for edge lines and solid center lines, and 4-inch wide by 10 feet long broken lines with a 30-foot gap, utilized for lane lines and turn lanes, unless otherwise specified. The center line pavement markings shall be either double yellow solid lines or an appropriate combination of a yellow solid line and 4-inch wide by 10 feet long yellow broken lines for two-way left turn median areas. The right edge line pavement markings shall be a white solid line and the left edge line shall be a yellow solid line except in areas where the travel lanes separate to create a gore type situation and then the color schemes shall comply with SCDOT application practices for gore areas. The lane lines between travel lanes and turn lanes shall be 4-inch wide by 10 feet long white broken lines with a 30-foot gap.

However, on two-lane two-way and multilane primary and secondary roadways, application of a 4-inch wide solid line utilized for an edge line adjacent to an earth shoulder, white or yellow, may be delayed up to 72 hours after eradication of the original line when the length of eradicated line at a single location is no longer than 250 feet. In the event of multiple locations along the same line, each location must be separated from the adjacent location by no less than 250 feet with a cumulative total distance of eradicated line of no more than 1300 feet within any continuous 1 (one) mile length of roadway measured from a selected location. If the length of eradicated line exceeds 250 feet at any single location, the distance interval between multiple adjacent locations is less than 250 feet or a cumulative total distance of multiple locations of eradicated line exceeds 1300 feet within any continuous 1 (one) mile length of roadway measured from a selected location, replace the eradicated line(s) prior to reopening the adjacent travel lane to traffic.

On interstate roadways, apply and place temporary or permanent pavement markings, as specified hereupon, to the travel lanes prior to reopening a closed travel lane to traffic. These pavement markings shall include 6-inch wide solid lines, utilized for edge lines, and 6-inch wide by 10 feet long white broken lines with a 30-foot gap, utilized for lane lines between travel lanes and auxiliary lanes, unless otherwise specified. The right edge line pavement markings shall be a white solid line and the left edge line shall be a yellow solid line except in areas where the travel lanes separate to create a gore type situation and then the color schemes shall comply with SCDOT application practices for gore areas.

Due to excessive wear resulting from high volume traffic and construction activities, replace and reapply all pavement markings on mainline lanes, on and off ramps, and on interchange crossing routes at time intervals not greater than 90 days and as directed by the RCE.

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On all roadways, apply and place white stop bars and white triangle yield bars in all locations where previous stop bars and triangle yield bars have been eradicated by the work. Apply and place white stop bars and white triangle yield bars at intersections controlled by stop and yield signs within 72 hours of the eradication of the original pavement marking. Apply and place white stop bars at signalized intersections controlled by traffic control signals and at railroad crossings prior to reopening a closed travel lane to traffic.

Within the limits of existing turn lanes on all roadways, apply and place white arrows in all locations where previous arrows have been eradicated by the work unless otherwise directed by the RCE. Apply and place white arrows within 72 hours of the eradication of the original pavement markings. However, in regard to newly constructed turn lanes, apply and place white arrows the within turn lanes as directed by the RCE.

Within the limits of existing lane-drop sites on all roadways, apply and place white arrows in all locations where previous arrows have been eradicated by the work prior to the end of each day's work or shift or reopening the closed travel lane to traffic. In regard to newly constructed lane-drop sites, apply and place white arrows within the travel lane to be terminated prior to opening the travel lane to traffic and as directed by the RCE.

2. Sub-section 609.4.1.1.1 Application Requirements General (Revision to paragraph 8) -

On two-lane, two-way roadways, passing zones may be eliminated within the work zone through application of 4-inch double yellow centerline pavement markings if determined feasible and directed to do so by the Plans and/or the RCE. Apply no passing zone markings as specified by the Plans, the Specifications, the *MUTCD* and the RCE.

I. FLAGGING OPERATIONS (SUB-SECTION 610.4.1) –

1. Sub-section 610.4.1.1 Flagging Operations (paragraph 1) -

Use a flagging operation to control the flow of traffic when two opposing directions of traffic must share a common travel lane. A flagging operation may be necessary during a lane closure on a two-lane two-way roadway, an intermittent ramp closure or an intermittent encroachment of equipment onto a portion of the roadway. Utilize flagging operations to direct traffic around work activities and maintain continuous traffic flow at reduced speeds when determined to be appropriate by the RCE. As stated above, flagging operations shall direct traffic around the work activities and maintain continuous traffic flow; therefore, stopped traffic shall not be required to stop for time durations greater than those listed below unless otherwise directed by the RCE. Begin measurement of the time interval immediately upon the moment the Flagger rotates the Stop/Slow paddle to display the "Stop" condition to the approaching motorists.

LENGTH OF CLOSURE	MAXIMUM TIME DURATION FOR STOPPED TRAFFIC
1 MILE or LESS	5 Minutes
1 to 2 MILES	7 ½ Minutes

If the work activities require traffic to be stopped for periods greater than 5 to 7 ½ minutes as stated above, consider alternate work methods, conducting work activities during times of

lowest traffic volumes such as during the hours of darkness or complete road closure with detour installation.

J. PAVING AND RESURFACING (SUB-SECTION 611.4.1) –

1. Sub-section 611.4.1.2 Requirements (paragraph 8) -

Whenever travel lanes with acceptable grade elevation differences are open to traffic, provide “Uneven Lanes” signs (W8-11-48) or “Uneven Pavement” signs (W8-11A-48). Reflecterize these signs with a fluorescent orange colored prismatic retroreflective sheeting unless otherwise specified. Install these signs adjacent to roadways with uneven pavement surfaces between travel lanes or between travel lanes and the adjacent paved shoulders. Install these signs at intervals no greater than 2600 feet.

(52) SECTION 601: PENALTY FOR VIOLATING LANE CLOSURE RESTRICTIONS:

The Contractor is advised that the Lane Closure Restrictions outlined in the Traffic Design Criteria will be strictly enforced. Should lane closures remain in place or not be completely removed by the time specified in the Traffic Design Criteria, a penalty will be assessed at the rate of **\$500 Dollars** for each 1/4 hour interval (or any portion thereof) for each lane closed. Should lane closures remain in place or not be completely removed for a period of longer than one hour beyond the time specified by the Traffic Design Criteria the penalty will increase to **\$1000 Dollars** for each 1/4 hour interval (or any portion thereof) for each lane closed. The penalty also applies to any ramp closures specified in the Traffic Design Criteria.

(53) SECTION 605: PERMANENT CONSTRUCTION SIGNS:

Utility locations must be performed prior to the placement of Permanent Construction Signs. State Law requires that the location of each sign be marked with a white line in the roadway or a stake in the shoulder. The locator company will mark 25 feet on either side of the location. The responsibility for marking the sign locations prior to the contractor calling PUPS for utility locate lies with the party responsible for lines and grades on the project. If Construction Lines and Grades is a pay item, then the Prime Contractor is responsible for marking the sign location. If this is not included, it is the Department’s responsibility to mark the locations.

Prior to marking the sign location, care must be taken when marking the signs to ensure that there are no obstructions or other mitigating factors that will cause the sign to be moved outside of the 50 foot utility window. Any costs associated with staking out the sign locations are considered incidental to the cost of Permanent Construction Signs.

Requests for utility locates must be specific and isolated to the sign locations if no ground disturbing activities are occurring outside of the sign placement.

(54) SECTION 610: WORK ZONE TRAFFIC CONTROL PROCEDURES:

The first sentence of Section 610.3 of the 2007 Standard Specifications is hereby revised to:

“Ensure that background color of personal protective apparel is either fluorescent Yellow-Green or fluorescent Orange-Red, and meets ANSI Standard 107-2004 National Standard for High Visibility Apparel Class 2 (or Class 3 as necessary) Performance Criteria, or latest edition.”

Note #12 of Standard Drawing 610-005-00 is hereby revised to:

“During nighttime flagging operations, flaggers shall wear a Safety Vest and Safety Pants meeting ANSI Standard 107-2004 National Standard for High Visibility Apparel Class 3 Performance Criteria, or Latest Edition, and a Hardhat. The color of the apparel background material shall be either fluorescent Yellow-Green or fluorescent Orange-Red.”

(55) SECTION 653: RETROREFLECTIVE SIGN POST PANELS:

Section 653 is hereby modified as follows:

A. 653.2 MATERIALS

Add the following paragraph:

Use retroreflective sign post panels constructed of a nonmetallic composite or 3mm aluminum composite material approved by the SCDOT covered with a 3-inch wide type III sheeting. Use sheeting that meets the requirements of Section 651.2.3. Use approved panels included on the Approved Products List For Traffic Control Devices in Work Zones.

B. 653.4.2 ERECTION

Add the following paragraph:

Mount the panel for the full length of the post from the sign to within 6 inches above the edge of the roadway. Mount panel only on post specified in the plans or special provisions. Secure the panel to the post with a minimum of 3 5/16-inch bolts and a lock washer and flat washer between post and nut, or tamper-resistant and rust-resistant screws. Use bolts, washers and nuts meeting the requirements of section 651.2.2. Provide the sheeting in the color that matches the background color of the sign except that the color for the "Yield" and "Do Not Enter" signs shall be red. Install panels to both posts, if there are two posts supporting the sign.

C. 653.5 MEASUREMENT

Replace with the following:

653.5 Measurement

The quantity for the pay item U-Section Post for Sign Support – (2 or 3)P, U-Section Post for Sign Bracing –2P or retroreflective sign post panel is the length of U-section post used for sign support or bracing or panel and is measured to the nearest 1/100 of a linear foot (LF) of the required post or panel, complete and accepted.

D. 653.6 PAYMENT

Replace with the following:

653.6 Payment

Payment for the accepted quantity for U-Section Post for Sign Support – (2or 3)P, U-Section Post for Sign Bracing –2P or Retroreflective Sign Post Panel, measured in accordance with Subsection 653.5, is determined using the contract unit bid price for the applicable pay item, and the payment includes all direct and indirect cost and expenses necessary to complete the work.

Payment is full compensation for fabricating and erecting U-section posts or braces or panels as specified or directed and includes providing mounting hardware; removing and disposing of existing signs supports, braces, and mounting hardware removed or replaced; replacing or relocating supports or braces shown on the Plans or directed by the RCE; and all other materials, labor, equipment, tools, supplies, transportation, and incidentals necessary to fulfill the requirements of the pay item in accordance with the Plans, the Specifications, and other terms of the Contract.

Pay items under this section include the following:

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Item No.	Pay Item	Unit
6531205	U-SECTION POST FOR SIGN SUPPORTS – 2P	LF
6531210	U-SECTION POST FOR SIGN SUPPORTS – 3P	LF
6531215	U-SECTION POST FOR SIGN BRACING – 2P	LF
6531500	REFLECTIVE SIGN POST PANELS	LF

(56) SECTION 701: SAND LIGHTWEIGHT CONCRETE:

Use sand lightweight concrete, where specified in the plans, complying with the requirements of this Special Provision.

Sand lightweight concrete is composed of portland cement, fine aggregate, lightweight coarse aggregate, water, and admixtures. Provide sand lightweight concrete that complies with the applicable requirements of Section 701 of the Standard Specifications and the additional requirements herein.

At least 35 days prior to the proposed use, submit for approval a mix design from a testing laboratory accredited by the AASHTO Accreditation Program. Provide a mix that obtains a 28-day design compressive strength equal to or greater than 4000 psi and satisfies the following design criteria:

TEST	TEST METHOD	REQUIREMENT
Max. Unit Weight, plastic, lbs/ft ³	AASHTO T 121	120
Max. Unit Weight, dry, lbs/ft ³	ASTM C567 using equilibrium (air dried) unit weight	115
Min. Relative Dynamic Modulus, (percent)	AASHTO T 161 Procedure A	80

When submitting the mix design, include the source of the aggregates, cement, and admixtures and the gradation, specific gravity, and fineness modulus (fine aggregate only) of the aggregates. Submit test results showing the mix design conforms to the criteria, including the 28 day compressive strength of a minimum of six cylinders. Provide a mix design that produces an average compressive strength sufficient to ensure that a minimum strength of 4000 psi is achieved in the field.

Produce an additional mix in accordance with AASHTO M 195 to determine the drying shrinkage. The maximum drying shrinkage for this mix is 0.07%.

For lightweight coarse aggregate, use expanded shale or slate that meets the requirements of AASHTO M 195. Provide lightweight coarse aggregate that meets the gradation table below.

GRADATION OF LIGHTWEIGHT CONCRETE AGGREGATE	
Sieve Size	Passing Square Opening Sieves (Percent by Weight)
1"	100
3/4"	90-100
3/8"	10-50
No. 4	0-15

Determine the soundness in accordance with AASHTO T 104. Loss of more than 10% of the lightweight aggregate in five cycles of the accelerated soundness test using sodium sulfate is not permitted.

Ensure the lightweight aggregate will have a wear of not more than 40% when tested in accordance with AASHTO T 96.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Ensure that lightweight aggregate has an absorbed moisture content equal to the 24 hours absorption as determined by AASHTO T 84 or T 85 when it is proportioned and incorporated into the mix. Consult with the lightweight aggregate supplier regarding minimum absorption required for proper performance of aggregate in concrete mixtures.

Have a representative from the manufacturer of the lightweight aggregate attend and participate in the Pre-pour Conference and also provide technical assistance in the production of the lightweight concrete at the batch plant and/or site for the first day of lightweight concrete mixing and placement operations.

Do not use AASHTO T 152 to determine the air content. Determine air content in accordance with AASHTO T 196.

Determine the plastic density (unit weight) of lightweight concrete in accordance with AASHTO T 121. Perform density tests for acceptance of lightweight concrete after final corrections for entrained air and slump have been made. When a density test is made and the results of the test exceed the specified maximum, perform a check test immediately from the same load of concrete. If the average of the 2 test results exceeds the specified maximum density, the load is rejected.

The quantity for Sand Lightweight Concrete is the volume of specified concrete within the neat lines of the structure as shown on the Plans or as revised by the RCE and is measured by the cubic yard (CY) of concrete, complete, and accepted. Deductions are made for the volume of embedded items, except for reinforcing steel; however, no deduction is made for edge chamfers of $\frac{3}{4}$ inch or smaller.

(57) SECTION 701: NON-CONFORMING CONCRETE:

For purposes of applying the reduced payment and below strength provisions of Subsection 701.2.12.4 of the Standard Specifications, a unit price of \$1,000 dollars per cubic yard will be used for normal weight concrete and a unit price of \$1,100 dollars per cubic yard will be used for sand lightweight concrete.

(58) SECTION 703: GALVANIZED REINFORCED BARS:

Refer to the latest Reinforcing Steel Supplemental Specification dated July 1, 2020. This special provision covers coating reinforcing bars and mechanical couplers with a hot dipped galvanized coating for use in structures.

Delete Subsection 703.2.3.1 of the Standard Specifications and replace it with the following:

703.2.3.1 USE, TESTING, PRODUCTION, AND BASIS OF ACCEPTANCE

Use zinc-coated galvanized deformed steel reinforcing bars in structural concrete where required by Exhibit 4 and to the limits shown in the Plans. Provide zinc-coated reinforcing steel in structures that is hot-dip galvanized in accordance with ASTM A 767, Class I Coating. Galvanize the steel bars after fabrication and after shop-bending of bent bars.

The coating applicator shall take the necessary precautions to prevent embrittlement by conforming to the requirements of ASTM A143 "Standard Practice for Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedures for Detecting Embrittlement". The test for embrittlement shall be conducted by the coating applicator or his representative according to the bend test described in AASHTO M 31 "Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement". The coating applicator shall include one reinforcing bar test specimen at least 3 feet long for each lot for this testing. The test specimen shall have the same diameter as the lot members and shall be quenched and galvanized in the same manner and at the same time as the bars whose characteristics it is intended to represent. If the test specimen cracks or otherwise fails the bend test, the entire lot it represents shall be rejected. For test purposes, a lot is any one of the following:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

- Reinforcing bars of the same diameter comprising a single order
- A number of reinforcing bars of the same diameter identified as a lot by the coating applicator, proving the bars are all being coated within a single production shift
- One thousand reinforcing bars of the same diameter. Notwithstanding the above two, no lot shall exceed one thousand bars.

The contractor shall coordinate the tagging and identification requirements for the project and for lot identification and shall provide a non-destructive metal tag system for bent reinforcing bars.

The coating applicator shall furnish a Certificate of Compliance with each shipment of coated bars delivered to the project. The Certificate of Compliance and embrittlement test results shall accompany the mill test report required by the Reinforcing Steel Supplemental Specifications. The Certificate of Compliance shall state the representative samples of the coated bars have been tested and that the test results conform to the requirements described herein.

Delete Subsection 703.2.3.2 of the Standard Specifications and replace it with the following:

703.2.3.2 REPAIR OF GALVANIZED REINFORCING STEEL

703.2.3.2.1 SHOP REPAIR

Reject zinc-coated reinforcing steel bars that do not meet the requirements above and do not repair such reinforcing bars.

703.2.3.2.2 FIELD REPAIR

Field repair damaged areas of the rebar coating and replace bars exhibiting severely damaged coatings. Severe damage is defined as more than five (5) $\frac{1}{4}$ x $\frac{1}{4}$ inch or larger areas in a 10 foot length.

Zinc rich paint used for field repairs of galvanized coatings shall meet the following requirements:

- One application of the material shall provide a dry film thickness of 2 mils
- The dried film shall have a minimum zinc dust content of 94% by mass
- The paint shall be compatible with the galvanizing and inert in concrete
- The brand of material used shall be approved by the galvanizer.

Zinc rich paint shall be applied in accordance with manufacturer's instruction for use, using brush or by spray methods. Zinc paint shall be applied in such a quantity as to produce a minimum dry film thickness of 3 mils.

Refer to Subsection 703.2.3.3 of the Standard Specifications for handling, placing, and fastening. This Subsection remains unchanged.

Supplement Subsection 703.2.4.1 of the Supplemental Specifications, Mechanical Couplers for Reinforcing Steel, with the following:

When mechanical couplers are specified for use with galvanized reinforcing bars, provide couplers that are galvanized in accordance with AASHTO M232.

(59) SECTION 704: PRESTRESSED CORED SLABS:

Subsection 704.4.6 of the Standard Specifications is amended as follows:

- A. Delete Paragraph 2 of Subsection 704.4.6.2 and replace it with the following:
"Provide holes and recesses at locations indicated in the Shop Plans for insertion of the 1 $\frac{1}{4}$ -inch diameter transverse tie rods."

- B. Delete the last sentence of Subsection 704.4.6.4 and replace it with the following:
“Make certain of the correct alignment of the holes for the transverse tie rods.”

- C. Delete Subsection 704.4.6.5 and replace it with the following:
704.4.6.5 Transverse Tie Rods

In each span, place 1¼-inch diameter transverse tie rods and tighten to a snug fit. After the 1¼-inch diameter transverse tie rods have been tightened in a span and before any equipment, material or barrier parapet is placed on the span, fill the shear keys, dowel holes, and tie rod recesses with the non-shrink grout as indicated on the Plans and allow curing for a minimum of 3 days. To prevent leakage of grout, place foam backer rod or other material acceptable to the RCE along the bottom of the joint between adjacent slab units. Ensure that the grout reaches a compressive strength of 5000 psi in 24 hours. Properly remove any foreign substance/materials including grease from the exposed portions of transverse tie rods before grouting the recesses.

With the approval of the RCE, material and equipment may be placed on the cored slab spans after the transverse tie rods have been tightened, the grout in shear keys has cured for 3 days minimum, and the grout has reached a compressive strength of 5000 psi.”

(60) SECTION 710: PILE AND DRIVING EQUIPMENT DATA FORM:

Pile and Driving Equipment Data Form is located in the Standard Forms on the SCDOT Design-Build website at <http://www.scdot.org/business/design-build.aspx>.

(61) SECTION 711: GALVANIZED STEEL H PILING AND SWAY BRACES:

March 16, 1999

A. GENERAL

This Supplemental Specification covers the cleaning, hot dip shop galvanizing, field cleaning and field repair of galvanizing for new Steel H Bearing Piling and Steel Sway Bracing where required and detailed in the plans.

B. SURFACE PREPARATION

The coating applicator shall pre-clean the material to be galvanized in accordance with accepted methods to produce an acceptable surface for hot dip galvanizing.

C. SHOP GALVANIZING

Hot dip galvanizing of iron and structural steel shapes shall be produced utilizing lead free technology. Steel H Bearing Piling and Steel Sway Braces shall be hot dip galvanized in accordance with the latest ASTM A 123 Specification to provide a uniform minimum coating thickness of 3.5 mils (89 µm). Shop repair of coatings not meeting the above minimum thickness requirements will not be allowed.

Galvanizing practices and procedures shall protect against possible embrittlement of the steel as described in ASTM A143.

Inspection and testing of hot dip galvanized coatings shall be done under the requirements of ASTM A 123.

The coating applicator shall have available for inspection a quality assurance manual and shall submit an original and two copies of the coating applicator's notarized Certificate of Compliance that the hot dip galvanized coating meets or exceeds the specified requirements of ASTM A 123 as modified by this Specification.

Galvanized members shall be stored, protected, handled and loaded in accordance with industry standards to protect the coating.

D. SHOP INSPECTION

Inspection of galvanizing practices and procedures will be performed by the Department's Research and Materials Laboratory. As soon as the project has been awarded, the Contractor shall notify the Research and Materials Laboratory at (803) 737-6698, P. O. Box 191, Columbia, South Carolina 29202. The Contractor shall provide the name and address of the coating applicator so that the inspection arrangements can be made.

E. FIELD REPAIR OF GALVANIZING

Field repair of galvanized coatings may be used to repair damaged areas, weld areas at pile splices, weld areas at sway braces to piles or other areas of coating damage. All field repairs shall be made in accordance with ASTM A 780. The Engineer shall be the sole judge of damaged areas that require field repair of the galvanized coating.

When galvanized members are to be field welded the Contractor shall clean the area at the weld location for a distance sufficient to provide an area free of coating for the weld metal to be deposited. The Contractor's cleaning method shall be pre-approved by the Engineer and cleaned areas shall be inspected and approved prior to field welding.

F. METHOD OF MEASUREMENT

The galvanizing of Steel H Bearing Piling and Sway Braces will not be measured for payment. All cost for galvanizing shall be included in the price bid for the item galvanized.

G. BASIS OF PAYMENT

All costs for labor, materials, equipment, tools and other incidentals required to galvanize the Steel H Bearing Piling and Sway Braces shall be included in the price bid for those items. No separate payment will be made for galvanizing.

(62) SECTION 711: DRIVEN PILE FOUNDATIONS – DETERMINATION OF BEARING VALUES

Delete Sentence 1 of Paragraph 1 of Subsection 711.4.7 – Determination of Bearing Values of the Standard Specifications and replace it with the following:

Pile bearing will be determined by the Contractor based on the wave equation analysis, Dynamic Pile Analyzer Test (ASTM D 4945), FHWA modified Gates formula, or Static Analysis Methods.

Delete all references to the "Department" in Subsections 711.4.7.1 and 711.4.7.2 of the Standard Specifications and replace it with "Contractor".

Section 711.4.7 of the Standard Specifications is amended by adding the following:

711.4.7.4 – FHWA Modified Gates Formula:

- 1 Drive piling to the required ultimate bearing shown in the Plans. The actual ultimate pile bearing obtained during driving will be determined by the Department based on the FHWA modified Gates Formula in accordance with the AASHTO LRFD Bridge Design Specifications, 8th Edition with Interims, Section 10.7.3.8.5.

711.4.7.5 – Static Analysis Methods:

- 1 Drive piling to the required design tip elevation shown in the Plans. Design tip elevations shall be determined using Static Analysis Methods in accordance with AASHTO LRFD Bridge Design Specifications, 8th Edition with interims, Section 10.7.3.8.6.

(63) SECTION 712: POLYMER SLURRY

Delete Paragraph 1 of Subsection 712.4.9 – Slurry of the Standard Specification and replace with the following:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

If the wet construction method is utilized, use either mineral or polymer (synthetic) slurry as a drilling fluid. Test the selected slurry at the time intervals and maintain within the tolerances indicated in this subsection and this Special Provision. Do not use salt water, high yield mineral slurry and/or natural polymer slurry. Use water as the drilling fluid only when specified on the Plans or in the Special Provisions. Use only potable water when the use of plain water is allowed to be used as the drilling fluid, install temporary casing or construction casing to the estimated tip elevation shown on the Plans or as otherwise specified by the BDGE prior to any drilled shaft excavation.

Subsection 712.4.9 of the Standard Specifications is amended by adding the following:

- 11 Ensure that Polymer Slurries conform to the requirements of the AASHTO LRFD Bridge Construction Specifications, 4th Edition, Section 5: Drilled Shafts: Subsections 5.2.3 – Slurry Technical Assistance; 5.3.5 – Polymer Slurry; and 5.4.3.4 – Slurry.
- 12 Select and use a polymer slurry from one of the Polymer Slurry Supplier/Manufacturers provided in Attachment B of the RFP.
- 13 Have a representative of the Polymer Slurry Supplier/Manufacturer on-site during the construction of the first drilled shaft.
- 14 Test both the in-situ water and water to be used in mixing the polymer slurry to insure that the water has a total hardness less than 50 parts per million (ppm). If the total hardness of the water is greater than 50 ppm, contact the Polymer Slurry Supplier/Manufacturer for requirements and instructions on additives that can be added to the polymer slurry. Conduct water testing in accordance with ASTM D1126 – Standard Test Method for Hardness in Water prior to commencing construction.
- 15 During construction, maintain the level of polymer slurry in the shaft excavation at a level of not less than 10 feet above the highest expected piezometric pressure head along the depth of the shaft. Provide documentation from the Polymer Slurry Supplier/Manufacturer if a lower head pressure is permitted for the site conditions and construction methods being used. If at any time, in the opinion of the RCE, the slurry construction fails to produce the desired results, discontinue the use of polymer slurry and propose an alternate method for acceptance by the BCE.
- 16 Properly dispose of all polymer slurries and any drilling spoils that have been mixed with the slurry in accordance with applicable Federal, State and local regulations. Contact the Polymer Slurry Supplier/Manufacturer to determine the appropriate method of neutralizing and/or disposing of the specific polymer slurry used. Contain polymer slurry and drilling spoils and keep out of any surface water at all times. Disposal of polymer slurries and materials mixed with slurry is considered incidental to the installation and construction of the drilled shaft.

(64) SECTION 712: DRILLED SHAFT FORMS:

Drilled Shaft Forms are included on the Construction Extranet.

(65) SECTION 713: MECHANICALLY STABILIZED EARTH (MSE) WALLS:

Delete Subsection 7.8.3 of the Supplemental Technical Specification SC-M-713 Mechanically Stabilized Earth (MSE) Walls and replace it with the following:

Compact and densify stone backfill material with a minimum of 4 passes with a smooth heavy roller (approximately 15 tons). Compaction testing will not be required for stone backfill materials meeting the requirements of Table 3. Do not use sheepfoot or grid-type rollers for compacting backfill within the reinforced backfill. Stone backfill meeting the requirements of Table 2 shall be compacted in accordance with Subsection 7.8.2.

(66) SECTION 714: SMOOTH WALL PIPE:

A. REFERENCE

SCDOT Supplemental Technical Specification SC-M-714**B. DESCRIPTION**

When bid items for smooth wall pipe are listed in the EBS file and/or proposal, the SCDOT will allow the use of reinforced concrete pipe, spiral ribbed aluminum pipe or high density polyethylene pipe in accordance with the specifications found in SC-M-714 (latest edition), the Standard Drawings, and this Special Provision. The plans may indicate reinforced concrete pipe only and are hereby superseded by this Special Provision.

C. MATERIALS

Smooth wall pipe is either Reinforced Concrete Pipe (RCP: 714-205-XX), Spiral Ribbed Aluminum Pipe (SRAP: 714-605-XX), or High Density Polyethylene pipe (HDPE: 714-705-XX) as described in SCDOT Supplemental Technical Specification SC-M-714 and in the SCDOT Standard Drawings. Use smooth wall pipe culvert from manufacturers listed on Qualified Product Lists 30, 68, or 69. No value engineering application is required in order to use alternate pipe.

For the following counties: Berkeley, Beaufort, Charleston, Colleton, Dorchester, Georgetown, Horry, and Jasper, provide pipe joints meeting AASHTO M 315 for RCP or passing the 13 psi pressure test as indicated on the QPL for SRAP or HDPE. Take care to properly lubricate and equalize pipe gaskets as indicated in the **SCDOT Standard Drawings** and **SC-M-714** to prevent gaskets from “rolling” during installation. For all other counties, provide pipe joints meeting AASHTO M 198, M 315, or passing the minimum 10 psi pressure test unless specific pipe joints are indicated in the plans or special provisions.

No other pipe type will be accepted as an alternate.

D. CONSTRUCTION REQUIREMENTS

Use only pipe that conforms to the minimum and maximum fill height limitations indicated on the appropriate standard drawing. Unless indicated otherwise in the plans, determine pipe fill height based on the following formula:

Fill Height = Elevation (top of curb or max grade above pipe) – Elevation (pipe crown)

For all locations where new pipe is being attached to an existing system, use one of the following options:

1. Any existing pipe may be extended using any acceptable alternate pipe type by using a drainage structure at the interface between the different pipe types. The drainage structure* may consist of standard junction boxes, manholes, catch basins, drop inlets, or circular drainage structures detailed on **SCDOT Standard Drawings**. For larger diameter pipe, custom drainage structures may be required. Field cut existing pipe to remove damaged joint (if applicable) and install new drainage structure at the field cut interface. Always fully clean existing pipe and pipe joints before installing joint sealant or gaskets and attaching new pipe.
2. For locations where existing pipe properties cannot be directly matched, use a custom designed interface* (concrete collar, proprietary mastic wrap, custom coupling band, etc.) appropriate to interface the existing pipe to the new pipe of the same type. Submit interface drawings and design for review by the Engineer of Record and the Design Standards Engineer. Always fully clean existing pipe and pipe joints before installing joint sealant or gaskets and attaching new pipe. Replace existing pipe that has joint damage before connecting new pipe to the system.
3. Any existing pipe may be extended using new pipe with the same joint profile and wall properties of the existing pipe. Always fully clean existing pipe and pipe joints before installing joint sealant or gaskets and attaching new pipe. Verify* the following parameters before ordering new pipe:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

- a. For RCP to RCP, confirm wall thickness, joint profile shape, and compatibility with existing manufacturer's pipe. Replace existing pipe that has joint damage before connecting new pipe to the system.
- b. For SRAP to SRAP, replace existing pipe that has joint damage before connecting new pipe to the system.
- c. For HDPE to HDPE, confirm the manufacturer of the existing pipe and the joint compatibility with the new pipe. Provide a new gasket when connecting to existing spigot end of HDPE pipe. Replace existing pipe that has joint damage before connecting new pipe to the system.
- d. For CAAP to CAAP, confirm the type and size of end corrugations of the pipe. When existing pipe has full helical corrugations, provide new connecting pipe with one end fully helical and fully helical coupling band. When end corrugation size does not match the corrugation size shown on SCDOT Standard Drawings, provide a drainage structure (described above) at the interface. Replace existing pipe that has joint damage before connecting new pipe to the system. Do not install CAAP as smooth wall pipe; however, use these requirements when plans specify installing new CAAP.

The **RCE** will verify that connections between existing pipe and new installed pipe have been handled with one of the options listed above. Repair or replace all existing to new joint interfaces that do not meet the requirements above at no additional cost to **SCDOT**.

In all installations, provide the RCE with a complete pipe table indicating the following: Plan Pay Item, Plan Pipe Description, Plan Quantity, Installed Pipe (diameter, type, class/gage), Installed Quantity, and description of interface used to join new pipe to existing pipe for each occurrence.

In cases where 2 or more different pipe types are installed, provide a copy of the proposed installation layout on the drainage/plan sheets to the RCE indicating which pipe is installed at each location.

E. MEASUREMENT

Measure smooth wall pipe in accordance with methods specified in SC-M-714 for the pipe material installed.

*No measurement will be made for drainage structure, designed interface, or field verification performed at each interface between existing pipe and new pipe unless drainage structure/interface is specified in the plans.

F. PAYMENT

Payment will be made for smooth wall pipe regardless of the type of material installed. Payment for smooth wall pipe is as specified in SC-M-714 for the pipe material installed.

*Include all costs for work related to connecting new pipe to existing pipe in the unit bid price of the new pipe. This connection work includes: drainage structure at the interface, custom designed interface, field verification of existing pipe and compatibility with new pipe, new gaskets, new joint sealant, new coupling bands, removal, and disposal of damaged sections of existing pipe.

ITEM NO.	DESCRIPTION	UNIT
7143XXX	X" SMOOTH WALL PIPE	LF
7143XXX	X"x X" SMOOTH WALL PIPE CUL.TEE	EA
714XXXX	X" x X" SMOOTH WALL PIPE CUL.WYE	EA
7144XXX	X" SMOOTH WALL PIPE X DEG BEND	EA
7144XXX	SMOOTH WALL PIPE INCR.- X" TO X"	EA

(67) SECTION 714: PIPE END TREATMENTS (2/5/2010):

A. REFERENCE

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

SCDOT Supplemental Technical Specification SC-M-714

B. DESCRIPTION

For exposed pipe culvert ends, provide an end treatment in accordance with this special provision.

C. MATERIALS

Rigid pipe culvert is Reinforced Concrete Pipe (RCP: 714-205-00). Flexible pipe culvert is either Spiral Ribbed Aluminum Pipe (SRAP: 714-610-00), High Density Polyethylene pipe (HDPE: 714-705-00), or Corrugated Aluminum Alloy Pipe (CAAP: 714-605-00).

Use minimum Class B riprap for pipe up to 84" diameter. Use minimum Class C riprap for pipe 84" diameter or larger.

Use minimum Class 4000 concrete (4000P for precast).

Use ASTM A-706 grade 60, low-alloy steel deformed rebar.

Use minimum AASHTO M-196 Alclad 3004-H32 alloy aluminum.

Use Type M Mortar Grout unless specified otherwise.

D. CONSTRUCTION REQUIREMENTS

Use one of the following end treatments as specified in the plans or special provisions:



For all exposed crossline pipe ends, when an end treatment is not specified in the plans, use **Pipe Riprap Protection** (804-3xx-xx). For flexible pipe larger than 24" diameter, install pipe straight headwall, pipe end structure, flared end section, or wingwall section in addition to riprap. For all exposed driveway pipe ends where no end treatment is specified in the plans, use **Pipe Riprap Protection** (804-3xx-xx) unless directed otherwise by the engineer.



Use **Beveling of Pipe End** (719-610-00) when specified in the plans or special provisions. Beveled ends may only be used on flexible pipe up to 24" diameter and on rigid pipe up to 60" diameter. When beveling of pipe ends is specified on flexible pipe larger than 24" diameter, install pipe straight headwall, pipe end structure, flared end section, or wingwall section. Use factory fabricated beveled ends for all pipe types unless approved by the Engineer.



Use **Pipe Straight Headwall** (719-605-00) when specified in the plans or special provisions. Use straight headwall only in locations where pipe exposed end does not face the direction of traffic.



Use **Pipe End Structure** (719-615-00) when specified in the plans or special provisions. Use pipe end structure in locations where pipe exposed end faces the direction of traffic. Pipe end structures may be used in other locations if approved by the RCE.



Use **Pipe Flared End Section** when specified in the plans or special provisions.



Use **Pipe Wingwall Section** when specified in the plans or special provisions.

Completely seal interface between pipe and end treatment with grout. If bricks or shims are used to place pipe, take care to remove all air pockets and voids when grouting.

For systems not designed in the SCDOT Standard Drawings, provide shop drawings, installation procedure and design calculations for review by RCE. Design must include provision to control erosion around the structure and prevent the separation of the end treatment from the pipe system. Design must provide for a proper seal at all construction joints including the interface between the pipe and the structure. Design must be self-supporting and not induce any additional loads on the pipe. Submit designs for consideration as new standard drawings to the Design Standards Engineer at the address listed in the SCDOT Standard Drawings book.

E. MEASUREMENT

Measure pipe in accordance with SC-M-714

Measure end treatments in accordance with Standard Specifications, Standard Drawings, or Special Provisions

F. PAYMENT

Beveling of pipe ends will be in addition to the standard pipe pay item. Payment for the item Beveling of Pipe Ends includes all labor required to factory (or field, if approved) fabricate a bevel on one end of pipe.

Pipe culvert and end treatments, measured as provided in **SC-M-714 Subsection x.4**, are paid for at the contract unit price for the respective items, which price and payment is compensation for furnishing all material, labor, equipment, tools including hauling and placing all pipe sections and materials, excavation of the entire standard trench, bedding, and pipe backfill as described in the measurement section (both structural and embankment backfill in this region), removal of existing pipe to be replaced, constructing pipe joints, removal of old end treatments, cleaning out pipe, disposal of surplus materials, all visual inspection, and all incidentals necessary to complete the work.

Add the following paragraph to SC-M-714 subsections x.5:

Payment for riprap and geotextile for erosion control under riprap as measured in subsection x.4 includes all direct and indirect costs and expenses necessary to complete the work.

(68) SECTION 714: TRENCHLESS PIPE INSTALLATION

A. DESCRIPTION

This work consists of installing a reinforced concrete carrier pipe inside a steel casing pipe in the locations designated in the plans or as specified by the Engineer. This procedure enables the installation of reinforced concrete pipes underground without the use of open-cut excavation.

The Contractor is responsible for the design, adequacy, methodology, and line and grade of the pipe jacking installation. The methods and details specified herein are intended to indicate the minimum acceptable standard of quality required for pipe installation.

B. MATERIALS

1. Casing Pipe

The Contractor shall install a steel pipe into place to serve as the casing pipe. The Contractor is responsible for the structural design, size, and wall thickness of the casing pipe based on site conditions, installation methodology, and performance requirements. Ensure that the casing pipe has at least a ½ inch uniform wall thickness. Do not use the steel casing pipe as the carrier pipe.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

2. Carrier Pipe

Ensure the carrier pipe is a reinforced concrete pipe conforming to the current version of Supplemental Technical Specification SC-M-714. Ensure the carrier pipe meets the minimum requirements of a Class V reinforced concrete pipe and is of the size specified in the plans.

3. Grout

Provide a 3000 PSI grout mixture with sufficient water added to produce a flowable mixture that can be delivered at a sufficient pressure to fill any voids outside the casing pipe and to fill in the annular spaces between the casing and the carrier pipes. Furnish and operate suitable equipment for any required grouting operations depending on the condition of the application.

4. Lubrication Material

An accepted lubricant may be used during the pipe jacking installation to lower the friction developed on the surface of the pipe. Submit the lubricating systems and materials to the Engineer for review and acceptance before use. Ensure the lubricant is intended for use in this application.

C. SUBMITTALS

Submit Shop Drawings, Temporary Shoring Plans, Material Certifications, Design Calculations, and other information as specified for all materials in this Section in accordance with the requirement for Submittals in these specifications. Ensure Shop Drawings also include complete erection, installation, and adjustment instructions and recommendations. Ensure all submittals requiring structural design are signed and sealed by a Professional Engineer registered to practice engineering in the State of South Carolina.

Allow a minimum of 20 working days for the review of the submittal by the Engineer. Obtain acceptance of the submittal prior to ordering pipe materials and the start of any excavation or jacking operations. Additional review time may be needed for installation methods not covered in this special provision. Submit the following items for review and acceptance by the Engineer:

1. Manufacturers' data sheets and specifications describing in detail the jacking system to be used and similar projects on which this system has been successfully used.
2. Maximum anticipated jacking loads and supporting calculations signed and sealed by an engineer registered in the State of South Carolina.
3. Calculations for the design of the casing pipe signed and sealed by an engineer registered in the State of South Carolina.
4. Certification by the manufacturer that the pipe materials conform to the requirements of the Specifications and Plans.
5. Casing pipe dimensions to accommodate the carrier pipe size indicated on the plans.
6. Shaft dimensions, locations, surface construction, profile, depth, and method of excavation.
7. Description of method(s) to control and dispose of ground water, spoil, temporary shoring, and other materials encountered in the maintenance and construction of pits and shafts.
8. Layout and design of all shoring, bracing, and thrust block systems, including calculations, signed and sealed by an engineer registered in the State of South Carolina.
9. Description of grouting methods, manufacturer's data, mix designs, and specifications for grouting equipment.
10. A description of the grade and alignment control system
11. Description of lubrication system and materials to be employed during installation of the reinforced concrete pipe.

12. Layout plans and descriptions of the construction sequence.
13. A detailed plan for monitoring ground surface movement (settlement or heave) of all structures, roadways, parking lots, and any other areas of concern within 25 feet on both sides of all tunneling pipelines due to the tunneling operation. Ensure the plan addresses the method and frequency of survey measurements at a maximum spacing of 10 feet along the pipeline route.
14. Contingency plans for acceptance for the following potential conditions: damage to pipeline structural integrity; misalignment; ground surface movement; and change in method.
15. Method of support and guidance of the carrier pipe. Ensure the carrier pipe is installed at the line and grade indicated in the plans.
16. Method of ensuring worker safety for hand tunneling (if applicable) including but not limited to ventilation, air quality, and lighting.
17. Estimated total disturbed area and depth of pits and access roads.

D. CONSTRUCTION

1. Excavations

Ensure all excavations and pits are well sheeted and braced as necessary for safe and adequate access for workmen, inspections, and materials and are of a size suitable to equipment and material handling requirements. Delineate the perimeter of all pits with orange flagging, fencing or other safety devices to notify nearby workers and construction vehicles of the hazardous work area.

Ensure all of the Contractor's plans, specifications, and design computations for pit shoring are signed and sealed by a Professional Engineer registered in the State of South Carolina. Ensure all pits required for the installation of the pipe are located within SCDOT right-of-way and are completely isolated from the roadway traffic with precast concrete barriers installed when necessary in accordance with the Standard Drawings.

2. Dewatering

Perform all dewatering as required for the completion of the work. Dispose of all water removed by dewatering operations in accordance with applicable South Carolina Department of Health and Environmental Control regulations.

Ensure the dewatering system is of sufficient size and capacity as required to control groundwater or seepage to permit proper excavation and tunneling operations. Drawdown groundwater to at least the bottom of excavations at all times in order to maintain a dry and undisturbed condition.

Ensure control, by acceptable means, of all water regardless of source. Ensure the entire periphery of the excavation areas are ditched and diked to prevent water from entering the excavation where applicable. The Contractor is fully responsible for disposal of the water and providing all necessary means at no additional expense to the Owner. The Contractor is solely responsible for proper design, installation, operation, maintenance, and failure of any component of the system.

The Contractor is responsible for and will repair without cost to the Owner, any damage to work in place and the excavation, including damage to the bottom due to heave and including removal of material and pumping out of the excavated area. The Contractor is also responsible for damages to any other area or structure caused by his failure to maintain and operate the dewatering system proposed and installed.

Take all the steps necessary to become familiarized with the surface and subsurface site conditions. Obtain the data that is required to analyze the water and soil environment at the

site to assure that the materials used for the dewatering systems will not erode, deteriorate, or clog to the extent that the dewatering systems will not perform properly during the period of dewatering.

If, in the course of construction, it may be necessary to block a ditch, pipe or other drainage facility, install temporary pipes, ditches or other drainage facilities to maintain adequate drainage, as accepted by the Engineer. Upon completion of the work, remove the temporary facilities and restore the permanent facilities.

3. Surface Settlement Monitoring

Before beginning the jacking operations, establish a settlement monitoring system that has been accepted by the Engineer.

If any settlement or construction damage occurs to pavements, structures, facilities, appurtenances and/or lands, discontinue jacking and submit a revised installation plan for review and acceptance prior to resuming work. Restoration to original conditions or better shall be undertaken and completed as directed by, and to the satisfaction of, the Engineer at the Contractor's expense.

4. Casing Pipe Installation

The Contractor is allowed to use any one of the following excavation methods for the pipe jacking operation:

- a. Boring
- b. Tunneling
- c. Microtunneling

Ensure the excavation method used for installing the jacked pipe is of such size and capacity that it will allow tunneling to proceed in a safe and expeditious manner. Ensure the installation of the casing pipe and the tunnel excavation is done as rapidly as possible to prevent voids, cave-ins, or settlement, and avoid damage to any nearby structures.

Install a steel pipe, serving as the casing pipe, with jacks of sufficient capacity to shove the pipe through the resisting material into position true to required line and grade. Continuously monitor and control the pressure of delivery of any lubrication materials to prevent pipe buckling or ground heave. Ensure the lubrication material is used in accordance with the manufacturers' specifications. Check the vertical and horizontal alignment of the casing pipe by survey instrument at least once during each four feet of advance, or as directed by the Engineer.

Delays between jacking operations may result in soil settling around the jacked pipe, thus making it difficult and sometimes impossible to resume movement. If conditions arise making it impossible to further jack the pipes without damage, construct the balance of the pipe installation with methods accepted by the Engineer.

When jacking is complete, pressure-inject the accepted grout mixture into any voids created outside the casing pipe in excess of 3/4 inch. Ensure the pressure-injected grout completely fills the voids outside the limits of the excavation. Ensure grouting operation does not damage adjacent utilities or other properties. Inject the grout at a pressure that does not distort or imperil any portion of the work or existing installations or structures.

5. Cradle Installation

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Following the completion of the casing pipe installation, furnish pipe cradles, spiders, or guides within the casing for the purposes of guiding and supporting the installation of the carrier pipe.

6. Carrier Pipe Installation

Install the reinforced concrete carrier pipe inside the casing pipe with adequately designed and spaced pipe alignment guides. Bell up the carrier pipe outside of the casing and push the carrier pipe through the casing. Install joint material in accordance with the current version of SC-M-714. Protect the concrete pipe from damage during delivery, staging and installation. Fill the annular space created between the casing and the carrier pipe with the accepted grout mixture.

(69) SECTION 719: CAST IN PLACE CONCRETE PIPE COLLAR:

A. DESCRIPTION

A cast in place concrete pipe collar is used to provide a permanent connection between two pipe culverts of the same diameter but different joint profiles. Pipe collars can be used between two pipe of the same material or different material. Use only pipe that conforms to SC-M-714, Permanent Pipe Culverts.

B. MATERIAL

Use minimum class 4000 concrete.

Use reinforcement steel conforming to ASTM A706 Grade 60.

See SCDOT Standard Drawings or Project Plans for other material requirements and design details.

C. CONSTRUCTION REQUIREMENTS - GENERAL

Follow SCDOT Standard Drawings 719-705-xx for minimum dimensions and details. Use geotextile wrap on joint to minimize concrete intrusion into the joint during the forming and curing process.

D. MEASUREMENT

Measure concrete pipe collars by each location where pipe diameter of different joint profiles are to be connected. Include in measurement all materials and work to complete the pipe collar as shown in the Standard Drawings or plans.

E. PAYMENT

Payment will be made for each location.

ITEM NO.	DESCRIPTION	UNIT
7197051	CONCRETE COLLAR FOR UP TO 12" PIPE	EA
7197052	CONCRETE COLLAR FOR UP TO 24" PIPE	EA
7197053	CONCRETE COLLAR FOR UP TO 36" PIPE	EA
7197054	CONCRETE COLLAR FOR UP TO 48" PIPE	EA
7197055	CONCRETE COLLAR FOR UP TO 60" PIPE	EA
7197056	CONCRETE COLLAR FOR UP TO 72" PIPE	EA

(70) SECTION 724: ELASTOMERIC BEARINGS:

724.4.4 Installation. Paragraph 4 was revised as follows:

Exercise caution where field weld or shop weld is made while elastomeric bearing pad is in contact with the metal. Do not expose the elastomer or elastomer bond to instantaneous temperatures greater than 400°F or any temperature limit set by the fabricator whichever is lower. Any damage to the elastomeric bearing due to welding is cause for rejection. Monitor temperature by use of heat crayons.

(71) SECTION 727: CROSSHOLE SONIC LOGGING AND THERMAL INTEGRITY PROFILING OF DRILLED SHAFT FOUNDATIONS

Amend Subsections 727.1, 727.3, 727.4.1, and 727.4.2 of the Standard Specifications to include the following additional requirements:

727.1 Description. This section includes specifications for Thermal Integrity Profiling (TIP), which consists of measuring the temperature of the concrete resulting from heat of hydration to assess the quality of cast-in-place concrete. CSL testing will be performed on all shafts and acceptance of the shafts will be as indicated in **Subsection 727.4.3**. The Department reserves the right to use the results of the TIP testing to aid in the evaluation of a shaft.

727.3 Equipment. Provide all equipment required for TIP testing will be furnished by the Department or a Department designated firm. Perform TIP testing using the Thermal Wire Cable system and the CSL access tubes.

727.4.1 Preparation. In addition to the access tubes that are required around the inside of the circular reinforcement cage, install an access tube in the center of the shaft. Provide an access platform for the Department's personnel to safely and adequately inspect and observe TIP testing.

727.4.2 Thermal Integrity Profiling. Connect thermal wires to a Thermal Access Port (data logger) within four hours of shaft concrete placement. Data will be collected by the data logger every 30 minutes for the duration of at least 48 hours. The Department reserves the right to increase or decrease the data collection duration based on field conditions, anticipated thermal developments, and/or TIP results.

Furnish information regarding the shaft, tube lengths and depths, construction dates and other pertinent shaft installation observations or details to the RCE at the time of TIP testing.

Ensure CSL tubes remain filled with water until all TIP and CSL testing is completed. Before adding any additional water to CSL tubes during the TIP testing, discuss the issue with the RCE. If water is to be added during the TIP testing, heat the water to within 5 degrees of the existing water in the CSL tube prior to adding it.

Replace Subsections 727.5 and 727.6 of the Standard Specifications with the following:

727.5 Measurement. There is no separate measurement for providing and installing CSL tubes, providing and installing TIP wires, removal and disposal of TIP wires, rental or usage of testing equipment, performing CSL and TIP testing, recording test data, preparing test reports, filling and/or removing the potable water from the CSL tubes, heating water to place in the tubes, and grouting the CSL tubes for each drilled shaft and taking cores as directed by the RCE or BCE. The cost of this work is included in the contract unit bid price for the drilled shaft in which they are placed.

The quantity for the item Crosshole Sonic Logging Set-Up is measured by each (EA) platform setup, complete, and accepted. Each CSL platform includes TIP testing. No separate measurement will be made for TIP platforms.

727.6 Payment. Payment for the accepted quantity for Crosshole Sonic Logging Set-Up, measured in accordance with **Subsection 727.5**, is determined using the contract unit bid price for that pay item. Payment is full compensation for providing an access platform for the Department personnel to safely and adequately perform TIP and CSL testing and preparation of the CSL access tubes required to conduct TIP and CSL testing on a drilled shaft as specified or directed and includes all other materials, labor, equipment, tools, supplies, transportation, and incidentals necessary to fulfill the requirements of the pay item in accordance with the plans, the Specifications, and other terms of the Contract.

Payment includes all direct and indirect costs and expenses necessary to complete the work.

Pay items under this section include the following:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Item No.	Pay Item	Unit
7270010	Crosshole Sonic Logging Set-Up	EA

(70) SECTION 727: CROSSHOLE SONIC LOGGING OF DRILLED SHAFT FOUNDATIONS:

Crosshole Sonic Logging (CSL) Testing is required for all drilled shafts. Contractor shall be responsible for all CSL Testing.

(71) SECTION 805: TL3 TYPE T TANGENT END TERMINALS:

Qualified Product List 49 provides minimum length of continuous w-beam from the impact head for each proprietary Test Level 3 product. All radius, kinks, and transition sections must occur outside of the pay limits of the Leading End Treatments shown on SCDOT Standard Drawings for MASH MT3 and PREMASH Type T TL3 devices. Use only PREMASH devices in locations where existing guardrail installations are retained or adjusted. Where the design requires immediate transition from w-beam to thrie-beam at the end of the tangent end treatment pay limits, provide adequate space and guardrail shoulder break in advance of the impact head to conform or exceed the geometry shown on the corresponding standard drawings. Alternate PREMASH guardrail shoulder break (Standard Drawing 805-605-11 detail 2) may only be considered in locations where upgrading to standard guardrail shoulder break geometry does not fit within SCDOT Right-of-way.

(72) SECTION 805: RESETTING GUARDRAIL:

Existing steel beam guardrail that is determined to be in acceptable condition by the RCE, using the below criteria, may be reset in conformance with Section 805.4.3 of the 2007 SCDOT Standard Specifications, and adjusted to the current PREMASH Standard Drawings. The Contractor shall inspect all guardrail on the project and notify the RCE in writing of any guardrail that will be permanently reset. Provide this notice to the RCE a minimum of two weeks prior to permanently resetting any guardrail on the project. If existing wood posts are planned to be reset, all existing wood posts shall be replaced with steel posts.

Resetting Guardrail Acceptance Criteria:

- A. Any guardrail components that are bent, flattened, torn, deformed, exhibit signs of rust, or damaged in any way shall not be reset.
- B. Guardrail with obsolete components and guardrail systems that are not on the SCDOT Qualified Products List (QPL) shall not be reset.
- C. Section 805.4.3 disallows resetting guardrail posts. This shall only apply to existing wood posts.

(73) SECTION 805: NON-MOW STRIP UNDER GUARDRAIL:

May 7, 2018

Section 805 is expanded as follows:

A. GENERAL

Provide non-mow strip under guardrail as shown in the plans, in accordance with plan details, standard drawings 805-525-01 & 805-525-02, and these special provisions. Non-mow strips under guardrail shall only be placed where shown in the plans, specified in the RFP or as directed by the Engineer.

B. CONSTRUCTION

Place non-mow strips under guardrail where indicated on the plans, specified in the RFP or as directed by the Engineer. Refer to details provided in this special provision and standard drawings for typical limits of non-mow strip and requirements for leave out areas around guardrail posts.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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Provide non-mow strip between the edge of pavement and the face of the guardrail when that distance is less than 20 feet.

Extend non-mow strip under guardrail to bridge end at locations where concrete approach slabs are used.

When at least one opening between parallel lines of guardrail is less than 20 feet wide, provide non-mow strip the entire area between the lines of guardrail.

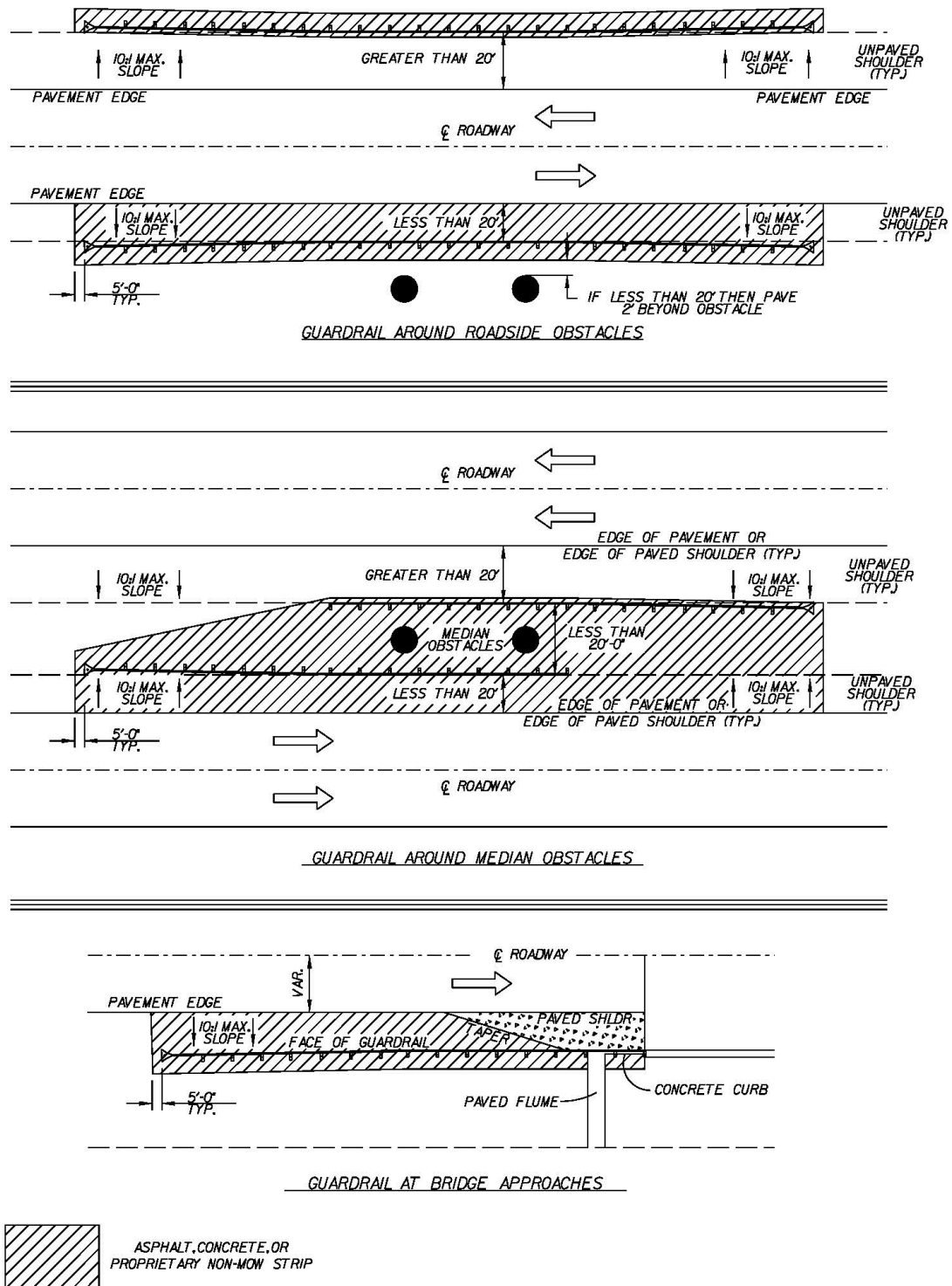
When openings between parallel lines of guardrail are more than 20 feet wide, but obstructions such as bridge columns reduce the access between the guardrail and the obstruction to less than 20 feet and/or the distance between any two obstructions is less than 20 feet then provide non-mow strip for the area with any single point of access less than 20 feet wide.

When areas around obstructions have non-mow strips, no area should remain uncovered that will sustain plant life.

The top of non-mow strips shall be constructed to be flush with surrounding earth shoulders, slopes and finished pavement grade.

Damage to non-mow strips during subsequent construction, especially during driving of guardrail posts, should be minimized. Any damaged non-mow strip must be restored to its original line and grade to the satisfaction of the Engineer.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS



(74) SECTION 806: TEMPORARY BARRIER FENCE FOR ENVIRONMENTAL BOUNDARY:

See attached Supplemental Specification dated **May 1, 2013**.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

The Contractor is hereby advised that all Jurisdictional Waters (i.e. streams & wetlands) that are adjacent to or within the construction limits shall be protected with a double row of Silt Fence or other means of double perimeter control as approved by RCE.

(75) SECTION 809: RIGHT OF WAY PLAT:

A. DESCRIPTION

The contractor by the "Substantial Work Complete" date shall prepare a right of way plat signed and sealed by a Professional Land Surveyor (PLS) licensed to practice in the state of South Carolina. The right of way plat shall be in accordance with the requirements of Section 49-460-A "General Property Survey" as outlined in the South Carolina "Standards of Practice Manual" for land surveyors. A copy of the plat will be recorded, by the contractor, in the Register Mesne Conveyance (RMC) office of the county or counties in which the project resides. The contractor will provide one copy of the plat on a full sized plan sheet(s) (22" X 36") and submit to the resident construction engineer to be included in the as-built plans.

B. MATERIALS: REBAR CAP R/W MARKER

Materials used shall comply with those listed on SCDOT Standard Drawing No. 809-105-00.

C. CONSTRUCTION REQUIREMENT

The PLS shall set right of way markers along all new right of way lines as well as along any present right of way being retained by the Department at intervals listed on the SCDOT Standard Drawings. Right of way markers shall not be placed at points common to side property lines and/or corners. In the event that the plan reflects a break in the right of way along a side property line the right of way marker will not be set without the side property line being retraced and established by way of survey. The PLS shall prepare a plat documenting the location of all Right of Way Markers set and reflecting the as-built station and offset from the plan alignment. The plat shall show the entire project corridor as an enclosed strip or parcel of land to include the mainline and all side roads as defined on the project plan.

D. MEASUREMENT AND BASIS OF PAYMENT

The item Right of Way Plat is paid on a lump sum (LS) basis; and therefore, there is no specific measurement for this item. The unit price bid for Property Right of Way Plat shall include all costs for labor, materials, equipment, services of a PLS and any related fees or costs associated with producing a plat, recording the plat at the RMC office, and all required copies. Each marker placed in accordance with the Standard Drawings complete and accepted will be measured and paid at the unit price bid.

Bid Item Number	Description	Unit
8091010	RIGHT OF WAY MARKER (REBAR AND CAP)	EA
8091000	RIGHT OF WAY MARKER (REINFORCED CONCRETE)	EA
8091050	RIGHT OF WAY PLAT	LS

(76) SECTION 815: ANIONIC POLYACRYLAMIDE FOR EROSION CONTROL:

A. DESCRIPTION

This work consists of applying a product containing anionic polyacrylamide to disturbed land areas as a means of controlling erosion. The work also consists of the use of solid form anionic polyacrylamide as a means of sediment control.

B. MATERIALS

The product to be used is to be specific to the area to be treated. Product selection and application rate is to be determined by a testing laboratory acceptable to SCDOT. Preliminary site-specific assessment (soil and water testing) by a qualified manufacturer must be conducted to select media, additives, application rate, application method and maintenance procedure tailored to site-specific soil characteristics, topography, hydrology, and the type of erosion targeted. A copy of the test results is to be provided to the Engineer.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Anionic polyacrylamide, in pure form, shall have less than or equal to 0.05% acrylamide monomer by weight, as established by the Food and Drug Administration and the Environmental Protection Agency. The maximum application rate of polyacrylamide, in pure form, shall not exceed 200 pounds/acre/year, or 10 pounds/acre per single application event.

The polyacrylamide shall have a charge density of 10% to 55%, by weight. The polyacrylamide shall have a molecular weight of 6 to 24 Mg/mole.

The polyacrylamide and polyacrylamide mixtures shall be noncombustible.

Cationic forms of polyacrylamide are not allowed for use due to their high level of toxicity.

Polyacrylamide shall be non-toxic. A toxicity report is required to be submitted to the Engineer.

C. CONSTRUCTION REQUIREMENTS

Liquid and powder forms of polyacrylamide are to be either applied directly to the exposed soil surface or applied as a tackifier with temporary seeding to prevent detachment of soil particles during the establishment of vegetation.

In the solid form, the polymer is to be placed directly into the storm water runoff to enhance eroded particle settlement in a trapping device.

Polyacrylamide shall be mixed and/or applied in accordance with all Occupational Safety and Health Administration (OSHA) Material Safety Data Sheet (MSDS) requirements and the manufacturer's recommendations for the specified use conforming to all federal, state and local laws, rules and regulations. The Contractor is responsible for obtaining all required permits.

Emulsion batches shall be mixed following recommendations of a testing laboratory that determines the proper product and rate to meet site requirements.

Additives such as fertilizers, solubility promoters, or inhibitors, etc. to polyacrylamide shall be nontoxic.

Care is to be taken when using polyacrylamide adjacent to natural water bodies.

D. METHOD OF MEASUREMENT

The application of polyacrylamide for erosion control will be measured by the surface area treated at the recommended rate of application. Quantities are to be computed to the nearest MSY (Thousand Square Yards). Solid form anionic polyacrylamide is to be measured by weight in pounds, in place and accepted. The Contractor is required to provide, to the Engineer, invoices for all polyacrylamide products used on the project.

E. BASIS OF PAYMENT

The accepted quantity of "Anionic Polyacrylamide For Erosion Control" will be paid at the contract unit price, which price and payment shall be full compensation for all materials, labor, tools equipment, and incidentals necessary to complete the work herein described in a workmanlike and acceptable manner. Solid form anionic polyacrylamide is to be paid for by the pound. Bid Item Numbers and Descriptions are as follows:

Bid Item Number	Description	Unit
8152020	ANIONIC POLYACRYLAMIDE FOR EROSION CONTROL	MSY
8152025	SOLID FORM ANIONIC POLYACRYLAMIDE	LBS

(77) SECTION 815: EROSION CONTROL MEASURES:

In addition to the erosion control measures specified in the Plans, Standard Specifications, Supplemental Technical Specifications and the Special Provisions, the CONTRACTOR is advised

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

that all land disturbing activities (clearing and grubbing, excavation, borrow and fill) are subject to the requirements set forth in the following permits and regulations:

- A. South Carolina Code of Regulations 63-380, Standard Plan for Erosion, Sediment, and Stormwater Runoff Control.
- B. Erosion and Sediment Reduction Act of 1983 (Title 48, Chapter 18 of the South Carolina Code of Laws of 1983, as amended). Section 70 of this code authorized the South Carolina Department of Health and Environmental Control (SCDHEC) to administer this regulation with respect to lands under the jurisdiction of the South Carolina Department of Transportation.
- C. National Pollutant Discharge Elimination System (NPDES) General Permit Number SCR160000, effective January 1, 2013: The Environmental Protection Agency, in accordance with the Federal Clean Water Act, has granted to the South Carolina Department of Health and Environmental Control (SCDHEC) the authority to administer the Federal NPDES permit program in the State of South Carolina.

In accordance with the NPDES General Permit, the Contractor must sign a Contractor Certification. The Contractor shall refer to the Construction Extranet for the certification form. By signing this form, the Contractor acknowledges that upon award and execution of the Contract, he/she accepts/understands the terms and conditions of the *Storm Water Pollution Prevention Plan (SWPPP)* as required by the NPDES General Permit and may be legally accountable to SCDHEC for compliance with the terms and conditions of the *SWPPP*. In addition, the Contractor certifies that the NPDES certification statement status is made part of all its subcontracts.

The Contractor will complete and forward an updated SCDOT approved *Notice of Intent (NOI)* to the SCDOT Construction office to submit to SCDHEC. If the Coastal Zone Consistency (CZC) permit has not been approved it shall be forwarded by the Contractor to SCDOT to submit to SCDHEC as part of *NOI* package. If SCDHEC does not send a letter within 10 business days of receipt of the *NOI*, authorizing coverage, denying coverage, or advising that a review of the *CECP* will take place, coverage will be automatically granted.

Prepare and submit a *Contractor's Erosion Control Plan (CECP)* to the RCE before the pre-construction conference. Ensure that the plan meets the requirements of the NPDES General Permit. The plan will be reviewed and approved by the Department before commencing any land disturbing activities.

At the pre-construction conference, with contractors performing land-disturbing activities present, the *CECP* will be explained and discussed so that the Contractor is made aware of their responsibilities in the *CECP*.

Once approved, fully implement the *CECP*. Coordinate the prompt installation of erosion control devices with construction activities to maintain compliance with the above regulations and NPDES General Permit.

Conduct an Erosion and Sediment Control Inspection by an appointed Certified Erosion Prevention and Sediment Control Inspector (CEPSCI) from the Contractor and the Department at least every 7-calendar days. Both parties will acknowledge participation in the inspection by signing the inspection report and include their inspector's CEPSCI number on the report. Correct deficiencies noted during these inspections within the assigned priority period. If deficiencies are not corrected within this timeframe, the RCE will stop all work (except erosion and sediment control measures) until the deficiencies are corrected.

Give special attention to critical areas within the project limits (i.e., running streams, water bodies, wetlands, etc.). In these areas, the RCE may direct the Contractor to undertake immediate corrective action, but in no case allow these deficiencies to remain unresolved more than 7 days or 48 hours in accordance with their assigned priority after being identified during the Erosion and Sediment Control Inspection.

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Closely follow the grading operations with the seeding operations. Shape and prepare the slopes for seeding as the grading progresses. Unless the RCE grants prior written approval, limit the amount of surface area exposed by land disturbing activities to 750,000 square feet. Commence seeding operations within 7 days following completion of construction activities within an area.

Initiate stabilization measures within 7 days for an area where construction activities will be temporarily or permanently ceased for 14 days or longer.

Coordinate the installation of all other permanent erosion control items with the grading and seeding operations. These items include, but are not limited to, asphalt gutter and riprap. Construct gutter work before or promptly after the seeding is performed. Place riprap at the ends of pipe immediately after the pipe is laid and promptly install riprap ditch checks after ditch work has been performed.

Within existing right of way, clean and repair existing concrete paved ditches that will be retained. Within existing right of way, clean and repair existing asphalt paved ditches that are to be retained and overlay with 200 lbs/sy HMA Surface Course Type C or D. Stabilize new ditches in accordance with the *SCDOT Requirements for Hydraulic Design Studies* (May 26, 2009), the *SCDOT Water Quality Design Manual* (December 2014) and as needed for erosion control utilizing SCDHEC Best Management Practices (BMP's).

Failure to adequately comply with the provisions as detailed above or any other required erosion control measures will result in stoppage of all contract operations (except erosion and sediment control measures) until corrective action has been taken. Additional sanctions may be invoked by the SCDHEC in accordance with their authority.

Keep the following documents at the RCE's office from the start of construction until the site is finally stabilized:

- A. Copy of the *CECP*,
- B. Copies of Contractor Certification statements,
- C. Copy of the permit,
- D. Letter from DHEC authorizing permit coverage if provided by SCDHEC, and
- E. A marked-up set of site plans.

When uniform perennial vegetation achieves a cover density of 70%, submit a *Notice of Termination (NOT)* to SCDHEC to terminate coverage. Include a signed statement with the *NOT* certifying that all work on the site has been completed in accordance with the *SWPPP* and the NPDES General Permit for all sites one acre or greater.

Fines assessed on the Department by SCDHEC as the result of the CONTRACTOR's non-compliance or violation of said permit provisions will be paid by the Department and will subsequently be deducted from any monies due or that may become due to the CONTRACTOR. In case no monies are due or available, the fines incurred will be charged against the CONTRACTOR's Surety.

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FHWA-1273 -- Revised July 5, 2022

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Non-segregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- XI. Certification Regarding Use of Contract Funds for Lobbying
- XII. Use of United States-Flag Vessels:

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design- build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60- 1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (see 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates

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the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR

230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

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8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

- (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
- (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
- (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101.

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Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA- 1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding (29 CFR 5.5)

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The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally- assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics,

including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records (29 CFR 5.5)

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis- Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or

subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees (29 CFR 5.5)

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

a.Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State

Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b.Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the

corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c.Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d.Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5.Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

6.Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7.Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8.Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis- Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9.Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor

set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10.Certification of eligibility (29 CFR 5.5)

a.By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b.No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c.The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1.Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2.Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1 of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph 1 of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1 of this section. 29 CFR 5.5.

* \$27 as of January 23, 2019 (See 84 FR 213-01, 218) as may be adjusted annually by the Department of Labor; pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990).

3.Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 2 of this section. 29 CFR 5.5.

4.Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs 1 through 4 of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1 through 4 of this section. 29 CFR 5.5.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;
- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or

equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish

- (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and
- (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph

- (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance

with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.326.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders

or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.326.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant

who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;.

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

3. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is

submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(a) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(b) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(c) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

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XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

\$100,000. 49 CFR Part 20, App. A.

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

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier

subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS

ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B) This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers,

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3.The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4.If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5.The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6.The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

(23 CFR 633, Subpart B, Appendix B) This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

1. To the extent that qualified persons regularly residing in the area are not available.
2. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.
3. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidders attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. The goals and timetables for minority and female participation expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area are as follows:

Goals for Women Apply Nationwide

<i>Timetable</i>	GOALS AND TIMETABLES <i>Goals (percent)</i>
From Apr. 1, 1976 until March 31, 1979-----	3.1
-	
From Apr. 1, 1979 until March 31, 1980-----	5.1
-	
From Apr. 1, 1980 until March 31, 1981-----	6.9
-	

Goals for Minority Participation

South Carolina

SMSA Counties:.....	16.0
Greenville, Pickens, Spartanburg	
Non-SMSA Counties:.....	17.8
Abbeville, Anderson, Cherokee, Greenwood, Laurens, Oconee, Union	
SMSA Counties:.....	23.4
Lexington, Richland	
Non-SMSA Counties.....	32.0
Calhoun, Clarendon, Fairfield, Kershaw, Lee, Newberry, Orangeburg, Saluda, Sumter	
Non-SMSA Counties.....	33.0
Chesterfield, Darlington, Dillon, Florence, Georgetown, Horry, Marion, Marlboro, Williamsburg	
SMSA Counties:.....	30.0
Berkeley, Charleston, Dorchester	
Non-SMSA Counties.....	30.7
Colleton	
Non-SMSA Counties.....	29.8
Beaufort, Hampton, Jasper	
Non-SMSA Counties.....	15.7
Chester Lancaster York	
Non-SMSA Counties.....	32.8
Barnwell, Edgefield, McCormick, Allendale, Bamberg	
SMSA Counties:.....	27.2
Aiken	

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical areas where the work is actually performed. With regard to this second area, the Contractor is also subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 Shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a) and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees of trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number, estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
4. As used in this Notice and in the contract resulting from this solicitation, the “covered area” is (insert description of the geographical areas where the contract is to be performed giving the state, county, and city, if any). The “covered area is the SMSA County or Counties or Non-SMSA County or Counties in which the contract work is performed.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these specifications:
 - a. “Covered area” means the geographical area described in the solicitation from which this contract resulted;
 - b. “Director” means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority;
 - c. “Employer identification number” means the Federal Social Security number used on the Employers Quarterly Federal Tax Return, U. S. Treasury Department Form 941.
 - d. “Minority” includes:
 - (i) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);
 - (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin regardless of race);
 - (iii) Asian or Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).
2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U. S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor’s or Subcontractor’s failure to take good faith efforts to achieve the Plan goals and timetables.
4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in which it has employees in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notices form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.
5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor’s obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U. S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor’s compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor’s employees are assigned to work. The Contractor where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor’s obligation to maintain such a working environment, with specific attention to minority of female individuals working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available and maintain a record of the organization’s responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may taken.
 - d. Provide immediate written notification to the Director when union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor’s efforts to meet his obligations.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.
 - f. Disseminate the Contractor's EEO policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
 - g. Review at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initialization of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
 - h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
 - i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall sent written notification to organizations such as the above, describing the openings, screening procedures and tests to be used in the selection process.
 - j. Encourage present minority and female employees to recruit other minority persons and women and where reasonable, provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.
 - k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that all seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
 9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).
 10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
 11. The Contractor shall not enter into any Subcontract with any person or firm debarred from the Government contracts pursuant to the executive Order 11246.
 12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and the Equal Opportunity Clause, including suspensions, termination and cancellation of the existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended. and its implementing regulations, by the Office if the Federal Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of the specifications and Executive Order 11246, as amended.
 13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4-8.
 14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any employee identification number when assigned, social security number, race, sex status(e.g., Mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and location at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that the existing records satisfy this requirement, contractors shall not be required to maintain separate records.
 15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents(e.g. those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

GENERAL DECISION NUMBER SC37

Superseded General Decision Number: SC20210037

State: South Carolina

Construction Type: Highway

Counties: Anderson, Greenville, Laurens, Pickens, Spartanburg and York Counties in South Carolina.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.

Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered	. Executive Order 14026
into on or after January 30,	generally applies to the
2022, or the contract is	contract.
renewed or extended (e.g., an	. The contractor must pay
option is exercised) on or	all covered workers at

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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after January 30, 2022:	least \$15.00 per hour (or
	the applicable wage rate
	listed on this wage
	determination, if it is
	higher) for all hours
	spent performing on the
	contract in 2022.

If the contract was awarded on	. Executive Order 13658
or between January 1, 2015 and	generally applies to the
January 29, 2022, and the	contract.
contract is not renewed or	. The contractor must pay
all	covered workers at least
extended on or after January	\$11.25 per hour (or the
30, 2022:	applicable wage rate
listed	on this wage
determination,	if it is higher) for all
	hours spent performing on
	that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Modification Number	Publication Date
0	01/07/2022
1	02/25/2022

* SUSC2011-035 09/15/2011

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 14.44	**
CEMENT MASON/CONCRETE FINISHER....	\$ 12.64	**
IRONWORKER, REINFORCING.....	\$ 15.02	
LABORER		
Asphalt Includes Asphalt Distributor, Shoveler, and Spreader		
Anderson, Greenville, Laurens, Pickens, Spartanburg.....	\$ 11.54	**
York.....	\$ 11.62	**
Common or General		
Anderson.....	\$ 9.71	**
Greenville, Pickens.....	\$ 9.87	**
Laurens.....	\$ 8.89	**
Spartanburg.....	\$ 10.05	**
York.....	\$ 9.63	**
Luteman.....	\$ 10.76	**
Mason tender-		
Cement/Concrete.....	\$ 10.40	**
Pipelayer.....	\$ 13.98	**

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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Traffic Control-Cone Setter.	\$ 11.75	**
Traffic Control-Flagger		
Anderson, Spartanburg,		
York.....	\$ 10.13	**
Greenville, Laurens,		
Pickens.....	\$ 10.62	**

POWER EQUIPMENT OPERATOR:

Backhoe/Excavator/Trackhoe		
Greenville, Laurens,		
Pickens.....	\$ 13.82	**
Spartanburg, York.....	\$ 13.92	**
Bulldozer.....	\$ 12.95	**
Crane.....	\$ 19.73	
Grader/Blade		
Anderson, Spartanburg,		
York.....	\$ 13.13	**
Greenville, Laurens,		
Pickens.....	\$ 12.62	**
Hydroseeder.....	\$ 11.00	**
Loader (Front End).....	\$ 16.80	
Mechanic.....	\$ 17.75	
Milling Machine.....	\$ 11.84	**
Paver		
Anderson, Spartanburg,		
York.....	\$ 12.93	**
Greenville, Laurens,		
Pickens.....	\$ 13.61	**
Roller		
Anderson, Spartanburg,		
York.....	\$ 12.11	**
Greenville.....	\$ 12.59	**
Laurens, Pickens.....	\$ 12.16	**
Scraper.....	\$ 12.71	**
Screed.....	\$ 13.09	**
Tractor.....	\$ 13.28	**

TRUCK DRIVER

Dump Truck		
Anderson, Spartanburg,		
York.....	\$ 12.75	**
Greenville.....	\$ 13.17	**
Laurens, Pickens.....	\$ 12.70	**
Lowboy Truck		

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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Anderson, Spartanburg,
York.....\$ 13.48 **
Greenville, Laurens,
Pickens.....\$ 13.36 **

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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** Workers in this classification may be entitled to a
higher
minimum wage under Executive Order 14026 (\$15.00) or 13658
(\$11.25). Please see the Note at the top of the wage
determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick
Leave
for Federal Contractors applies to all contracts subject to
the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If
this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for
their
own illness, injury or other health-related needs,
including
preventive care; to assist a family member (or person who
is
like family to the employee) who is ill, injured, or has
other
health-related needs, including preventive care; or for
reasons
resulting from, or to assist a family member (or person who
is
like family to the employee) who is a victim of, domestic
violence, sexual assault, or stalking. Additional
information

on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of

the union which prevailed in the survey for this classification, which in this example would be Plumbers.

0198

indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number,

005 in the example, is an internal number used in processing

the wage determination. 07/01/2014 is the effective date of the

most current negotiated rate, which in this example is July 1,

2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA)

governing

this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that

no one rate prevailed for this classification in the survey and

the published rate is derived by computing a weighted average

rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU

indicates

the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA

indicates

the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007

in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion

date for the classifications and rates under that identifier.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
--

* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

GENERAL DECISION NUMBER SC39

"General Decision Number: SC20220039 02/25/2022

Superseded General Decision Number: SC20210039

State: South Carolina

Construction Type: Highway

Counties: Abbeville, Cherokee, Chester, Chesterfield, Clarendon, Dillon, Greenwood, Lancaster, Lee, Marion, Marlboro, McCormick, Oconee and Union Counties in South Carolina.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.

Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered	. Executive Order 14026
into on or after January 30,	generally applies to the
2022, or the contract is	contract.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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<p>renewed or extended (e.g., an option is exercised) on or after January 30, 2022:</p>	<p>. The contractor must pay all covered workers at least \$15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.</p>
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<p>If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:</p>	<p>. Executive Order 13658 generally applies to the contract.</p>
<p>all</p> <p>extended on or after January 30, 2022:</p> <p>listed</p> <p>determination,</p>	<p>. The contractor must pay covered workers at least \$11.25 per hour (or the applicable wage rate on this wage if it is higher) for all hours spent performing on that contract in 2022.</p>

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Modification Number	Publication Date
0	01/07/2022
1	02/25/2022

* SUSC2011-037 09/15/2011

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 14.00	**
CEMENT MASON/CONCRETE FINISHER		
Abbeville, Cherokee, Chester, Greenwood, Lancaster, McCormick, Oconee, Union.....	\$ 11.63	**
Chesterfield, Clarendon, Dillon, Lee, Marion, Marlboro.....	\$ 13.02	**
GUARDRAIL INSTALLER (Includes Guardrail/Post Driver Work)		
Abbeville, Cherokee, Chester, Chesterfield, Clarendon, Dillon, Greenwood, Lancaster, Lee, Marion, Marlboro, McCormick, Union.....	\$ 12.52	**
Oconee.....	\$ 12.65	**

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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IRONWORKER, REINFORCING.....\$ 15.64

LABORER

Asphalt, Includes Asphalt
Distributor, Raker,
Shoverler, and Spreader.....\$ 10.96 **
Common or General
Abbeville, Greenwood.....\$ 8.85 **
Cherokee.....\$ 9.40 **
Chester.....\$ 9.55 **
Chesterfield.....\$ 9.93 **
Clarendon, Dillon, Lee,
Marion, Marlboro.....\$ 10.00 **
Lancaster.....\$ 9.67 **
McCormick, Union.....\$ 9.39 **
Oconee.....\$ 9.47 **
Luteman.....\$ 10.93 **
Pipelayer.....\$ 13.87 **
Traffic Control- Cone
Setter.....\$ 12.47 **
Traffic Control-Flagger
Abbeville, Cherokee,
Chester, Chesterfield,
Clarendon, Dillon,
Greenwood, Lee, Marion,
Marlboro, McCormick,
Oconee, Union.....\$ 10.15 **
Lancaster.....\$ 10.83 **

POWER EQUIPMENT OPERATOR:

Backhoe/Excavator/Trackhoe
Abbeville, Cherokee,
Chester, Greenwood,
Lancaster, McCormick,
Oconee, Union.....\$ 16.25
Chesterfield, Clarendon,
Dillon, Lee, marion,
Marlboro.....\$ 15.08
Bulldozer.....\$ 13.66 ** 3.40
Crane.....\$ 20.12
Grader/Blade
Abbeville, Cherokee,
Chester, Greenwood,

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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Lancaster, McCormick,
 Oconee, Union.....\$ 16.20
 Chesterfield, Clarendon,
 Dillon, Lee, Marion,
 Marlboro.....\$ 15.85
 Loader (Front End).....\$ 15.51
 Mechanic.....\$ 18.22
 Milling Machine.....\$ 15.51
 Paver
 Abbeville, Cherokee,
 Chester, Greenwood,
 Lancaster, McCormick,
 Oconee, Union.....\$ 14.58 **
 Chesterfield, Clarendon,
 Dillon, Lee, Marion,
 Marlboro.....\$ 13.39 **
 Roller
 Abbeville, Cherokee,
 Chester, Greenwood,
 Lancaster, McCormick,
 Oconee, Union.....\$ 11.22 **
 Chesterfield, Clarendon,
 Dillon, Lee, Marion,
 Marlboro.....\$ 11.95 **
 Screed.....\$ 12.45 **
 Tractor.....\$ 13.26 **

TRUCK DRIVER

Dump Truck
 Abbeville, Cherokee,
 Chester, Greenwood,
 Lancaster, McCormick,
 Oconee, Union.....\$ 12.83 **
 Clarendon, Dillon, Lee,
 Marion, Marlboro.....\$ 11.69 **
 Lowboy Truck
 Abbeville, Cherokee,
 Chester, Greenwood,
 Lancaster, McCormick,
 Oconee Union.....\$ 14.19 **
 Chesterfield, Clarendon,
 Dillon, Lee, Marion,
 Marlboro.....\$ 14.16 **
 Single Axle, Includes

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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Pilot Car
Abbeville, Cherokee,
Greenwood, Lancaster,
McCormick, Oconee, Union...\$ 10.83 **
Tractor Haul truck.....\$ 16.25

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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** Workers in this classification may be entitled to a
higher
minimum wage under Executive Order 14026 (\$15.00) or 13658
(\$11.25). Please see the Note at the top of the wage
determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick
Leave
for Federal Contractors applies to all contracts subject to
the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If
this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for
their
own illness, injury or other health-related needs,
including
preventive care; to assist a family member (or person who
is
like family to the employee) who is ill, injured, or has
other
health-related needs, including preventive care; or for
reasons
resulting from, or to assist a family member (or person who
is
like family to the employee) who is a victim of, domestic

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion

date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

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- * a survey underlying a wage determination

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
--

- * a Wage and Hour Division letter setting forth a position on a wage determination matter
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On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator
(See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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3.) If the decision of the Administrator is not favorable,
an
interested party may appeal directly to the Administrative
Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
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Washington, DC 20210

4.) All decisions by the Administrative Review Board are
final.

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END OF GENERAL DECISIO"

EXHIBIT 6

ENVIRONMENTAL DESIGN CRITERIA

1. GENERAL

The CONTRACTOR shall avoid impacts to the environment to the most practicable extent. In cases where impacts cannot be avoided, the CONTRACTOR shall minimize impacts to the environment to the most practicable extent.

As a minimum, the CONTRACTOR shall include the following in the Project:

- The CONTRACTOR shall stake out and delineate potential jurisdictional areas using temporary barrier fence as set forth in Supplemental Specification.
- The CONTRACTOR shall install a double row of silt fence along construction limits adjacent to actual or potential jurisdictional features not authorized for impacts.
- Fines assessed by any agencies to SCDOT as the result of the CONTRACTOR's non-compliance or violation of any permit provisions shall be paid by SCDOT and subsequently deducted from the CONTRACTOR's monthly pay estimate.
- The CONTRACTOR shall coordinate all permitting related tasks through SCDOT's Environmental Services Office (ESO).
- CONTRACTOR shall provide a summary report documenting how all commitments that fall within its responsibility have been satisfied.

2. ENVIRONMENTAL DOCUMENT COMMITMENTS

The CONTRACTOR shall comply with all Environmental Commitments set forth in the relevant project Programmatic Categorical Exclusions (PCE). The following list of Environmental Commitments and instructions outline requirements and responsibilities for SCDOT and the CONTRACTOR regarding fulfilling the Environmental Commitments for the Project.

2.1 PCE Environmental Commitments Applicable to All Project Sites

- a. If avoidance of hazardous materials is not a viable alternative and soils that appear to be contaminated are encountered during construction, the South Carolina Department of Health and Environmental Control (SCDHEC) will be informed. Hazardous materials will be tested and removed and/or treated in accordance with the United States Environmental Protection Agency and the SCDHEC requirements, if necessary.

The CONTRACTOR shall comply with this commitment

- b. The CONTRACTOR(s) will be required to minimize possible water quality impacts through implementation of BMPs, reflecting policies contained in 23 CFR 650B and the Department's Supplemental Specification on Erosion Control Measures (latest edition) and Supplemental Technical Specifications on Seeding (latest edition). Other measures including seeding, silt fences, sediment basins, etc. as appropriate will be implemented during construction to minimize impacts to water quality.

The CONTRACTOR shall comply with this commitment

- c. The federal Migratory Bird Treaty Act, 16 USC § 703-711, states that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. The South Carolina Department of Transportation (SCDOT) will comply with the Migratory Bird Treaty Act of 1918 in regard to the avoidance of taking of individual migratory birds and the destruction of their active nests.

The contractor shall notify the Resident Construction Engineer (RCE) at least four (4) weeks prior to construction/demolition/maintenance of bridges and box culverts. The RCE will coordinate with SCDOT Environmental Services Office (ESO), Compliance Division, to determine if there are any active birds using the structure. After this coordination, it will be determined when construction/demolition/maintenance can begin. If a nest is observed that was not discovered after construction/demolition/maintenance has begun, the contractor will cease work and immediately notify the RCE, who will notify the ESO Compliance Division. The ESO Compliance Division will determine the next course of action.

The use of any deterrents by the contractor designed to prevent birds from nesting, shall be approved by the RCE with coordination from the ESO Compliance Division. The cost for any contractor provided deterrents will be provided at no additional cost to SCDOT.

The CONTRACTOR, in coordination with SCDOT, shall comply with this commitment. The CONTRACTOR is advised that this commitment applies to existing, temporary, and new structures including but not limited to bridges, box culverts, and large diameter pipes.

- d. Stormwater control measures, both during construction and post-construction, are required for SCDOT projects with land disturbance and/or constructed in the vicinity of 303(d), TMDL, ORW, tidal, and other sensitive waters in accordance with the SCDOT's MS4 Permit. The selected contractor would be required to minimize potential stormwater impacts through implementation of construction best management practices, reflecting policies contained in 23 CFR 650 B and SCDOT's Supplemental Specifications on Seed and Erosion Control Measures (latest edition).

The CONTRACTOR shall comply with this commitment.

- e. Based on field investigations, it appears areas within the project study area would be jurisdictional waters of the US. Attempts will be made to avoid these features to the maximum extent practicable. If these areas cannot be avoided during bridge replacement, a Department of the Army Section 404 permit must be obtained from the US Army Corps of Engineers (USACE) for impacts. Based on preliminary examinations, it is anticipated the project would meet stipulations allowable under SCDOT's USACE General Permit (GP) or possibly a Nationwide permit. Required mitigation will come from USACE approved mitigation banks for unavoidable impacts.

The CONTRACTOR shall comply with this commitment. The CONTRACTOR shall delineate potential jurisdictional features onsite and if impacts to the features are unavoidable the CONTRACTOR shall perform the necessary tasks in order to obtain the necessary permit(s) for the impacts. All permits shall be coordinated through the SCDOT Environmental Services Office.

Stream mitigation bank credits are available for S-53 and S-294. Wetland credits will be covered by the SCDOT Black River Mitigation Bank. The CONTRACTOR shall be required to secure appropriate stream mitigation for S-765 and S-108, if needed.

- f. The CONTRACTOR and subcontractors must notify their workers to watch for the presence of any prehistoric or historic remains, including but not limited to arrowheads, pottery, ceramics, flakes, bones, graves, gravestones, or brick concentrations. If any such remains are encountered, the Resident Construction Engineer (RCE) would be immediately notified and all work in the vicinity of the discovered materials and site work shall cease until the SCDOT Chief Archaeologist directs otherwise.

The CONTRACTOR shall comply with this commitment.

- g. The Engineer of Record will send a set of final plans and request for floodplain management compliance to the local County Floodplain Administrator.

The CONTRACTOR shall comply with this commitment

Bridge Package 15
Anderson, Chester, Chesterfield, and Lancaster Counties

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the Effective Date defined herein. The Effective Date is defined as the date signed by the Director of Alternative Delivery on behalf of South Carolina Department of Transportation.

Witnesses:

Maria G. DeWitt
Guyon Adams

Date: MAY 09 2023

SOUTH CAROLINA DEPARTMENT
OF TRANSPORTATION

By: Chris Gaskins
Chris Gaskins, P.E., PG, DBIA, CPM
Director of Alternative Delivery

Recommended:

Jennifer Taylor
Jennifer Taylor
Contract Administrator

Witnesses:

Villy Adams
Cindy Williams

CONTRACTOR

Tom Watson
E.S. WAGNER COMPANY LLC

By: Tom Watson

Its: Senior Vice President & Gen Manager

CERTIFICATION OF CONTRACTOR

I hereby certify that I am the duly authorized representative of CONTRACTOR and that neither I nor the above CONTRACTOR I here represent has:

1. employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above CONTRACTOR) to solicit or secure this contract;
2. agreed, as an express or implied condition for obtaining this contract, to employ or retain the services of any firm or person in connection with carrying out the contract, or
3. paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above CONTRACTOR) any fee, contribution, donation, or consideration of any kind for, or in connection with, procuring or carrying out the contract except as here expressly stated (if any);
4. either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action, in restraint of free competitive bidding in connection with the submitted proposal.

By execution of this Agreement, CONTRACTOR certifies CONTRACTOR and all CONTRACTOR's consultants, sub-consultants, contractors, employees and agents will comply with South Carolina's Ethics, Government Accountability, and Campaign Reform Act of 1991, as amended. The following statutes require special attention: (a) Offering, giving, soliciting, or receiving anything of value to influence action of public employee - §8-13-790, 8-13-705, 8-13-720; (b) Recovery of kickbacks - §8-13-790, (c) Offering, soliciting or recovering money for advice or assistance of public official - §8-13-720, (d) Use or disclosure of confidential information - §8-13-725, (e) Persons hired to assist in the preparation of specifications or evaluation of bids - §8-13-1150, (f) Solicitation of state employees - §8-13-755, 8-13-760 and §8-13-725, (g) False Claims Act - §16-13-240. The state may rescind any contract and recover all amounts expended as a result of any action taken in violation of this provision.

I acknowledge that this certificate is to be furnished to the Department, the Federal Highway Administration, and the U. S. Department of Transportation, and is subject to applicable State and Federal laws, both criminal and civil.

I acknowledge that giving false, misleading, or incomplete information on this certification may subject me to prosecution under Section 16-9-10 of the South Carolina Code of Laws.

CONTRACTOR



E.S. WAGNER COMPANY LLC

By: Tom Watson

Bridge Package 15
Anderson, Chester, Chesterfield, and Lancaster Counties

Date: April 24, 2023

Its: Senior Vice President & Gen Manager

CERTIFICATION OF DEPARTMENT

I hereby certify that I am the Director of Alternative Delivery for the South Carolina Department of Transportation (SCDOT) of the State of South Carolina and that the above CONTRACTOR or its representative has not been required, directly or indirectly, as an express or implied condition in connection with obtaining or carrying out this agreement to:

- I. employ or retain, or agree to employ or retain, any firm or person, or
- II. pay, or agree to pay, to any firm, person, or organization, any fee, contributions, donations, or consideration of any kind, except as here expressly stated (if any).

I acknowledge that this certificate is to be furnished to the Federal Highway Administration, and U. S. Department of Transportation, and is subject to applicable State and Federal laws, both criminal and civil.

SOUTH CAROLINA DEPARTMENT OF
TRANSPORTATION

BY:



TITLE: DIRECTOR OF ALTERNATIVE DELIVERY

Date: MAY 09 2023


DRUG-FREE WORKPLACE CERTIFICATION

In accordance with Section 44-107-30, South Carolina Code of Laws (1976), as amended, and as a condition precedent to the execution of this agreement, the undersigned, who is an authorized representative of the CONTRACTOR certifies on behalf of the CONTRACTOR that the PROPOSER will provide a drug-free workplace by:

- (1) publishing a statement notifying employees that the unlawful manufacture, distribution, dispensations, possession, or use of a controlled substance is prohibited in the CONTRACTOR's workplace and specifying the actions that will be taken against employees for violations of the prohibition;
- (2) establishing a drug-free awareness program to inform employees about:
 - (a) the dangers of drug abuse in a workplace;
 - (b) the person's policy of maintaining a drug-free workplace;
 - (c) any available drug counseling, rehabilitation, and employee assistance programs; and
 - (d) the penalties that may be imposed upon employees for drug violations;
- (3) making it a requirement that each employee to be engaged in the performance of the agreement be given a copy of the statement required by item (1);
- (4) notifying the employee in the statement required by item (1) that, as a condition of employment of this agreement, the employee will:
 - (a) abide by the terms of the statement; and
 - (b) notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after the conviction;
- (5) notifying the South Carolina Department of Transportation within ten days after receiving notice under item (4)(b) from an employee or otherwise receiving actual notice of the conviction;
- (6) imposing a sanction on, or requiring the satisfactory participation in a drug abuse assistance or rehabilitation program by, any employee convicted as required in Section 44-107-50; and
- (7) making a good faith effort to continue to maintain a drug-free workplace through implementation of items (1), (2), (3), (4), (5), and (6)

By execution of this Agreement CONTRACTOR certifies CONTRACTOR and all CONTRACTOR's consultants, sub-consultants, contractors, employees and agents will comply with all applicable provisions of the Drug-Free Workplace Act, Title 44, Chapter 107 of the South Carolina Code of Laws, as amended.

CONTRACTOR:


(Signature)

COMMISSIONER EMPLOYEE INTEREST CERTIFICATION


As a condition precedent to the execution of this Agreement, the undersigned, who is an authorized representative of the CONTRACTOR/CONSULTANT certifies on behalf of the CONTRACTOR/CONSULTANT, that during the procurement and award of this Agreement, and as an ongoing obligation under this Agreement until the end of the contract period, CONTRACTOR/CONSULTANT represents and agrees to comply with the following provisions:

1. In accordance Section 23 of Act 40 of 2017 (now codified as Section 57-1-350(G) of the Code of Laws of South Carolina 1976, as amended):
 - a) No member of the SCDOT Commission has an interest, direct or indirect, in the proposal or bid submitted to SCDOT for this Project, during the member's term of appointment and for one year after the termination of the appointment.
 - b) No member of the SCDOT Commission will have an interest, direct or indirect, in any contract, franchise, privilege, or other benefit granted or awarded by the Department relating in any way to this Project (through subcontractors, consultants, vendor, or suppliers) during the member's term of appointment and for one year after the termination of the appointment.
2. In accordance with SCDOT Departmental Directive 45(a) regarding Post-employment Restrictions on Qualification-Based Procurements dated August 13, 2015 and amended June 2, 2017:

No current or former employee, who served in a management level position or above, may work on or invoice for services performed on this Project within 365 days after their last day of employment with SCDOT. For the purposes of this bright line rule, "management level position" is defined as any SCDOT Pay Band 7 and above position, which includes, but is not limited to, Directors, Assistant Directors, District Engineering Administrators, District-level Engineers, Program Managers, Assistant Program Managers and Resident-level Engineers.

CONTRACTOR/CONSULTANT hereby certifies that it and all of its consultants, sub-consultants, contractors, vendors, suppliers, employees and agents will comply with the above provisions.

CONTRACTOR/CONSULTANT

By: 
(Signature)

Print Name: Tom Watson

Date: April 24, 2023

Its: Senior Vice President & General Manager

PROJECT INFORMATION PACKAGE ACKNOWLEDGMENT FORM

ACKNOWLEDGMENT

NO RIGHT TO RELY ON PROJECT INFORMATION PACKAGE

The undersigned Proposer hereby agrees that it did not rely on the contents, accuracy, thoroughness, and completeness of the Project Information Package (PIP) as part of its response to the Request for Proposals (RFP) process. The information—defined as broadly as possible—contained within the PIP was provided by or on behalf of SCDOT for informational purposes equally to prospective proposers. The undersigned Proposer acknowledges that the information gathered and provided as the PIP is preliminary only and not intended by SCDOT, its officers, employees, consultants, agents, heirs, and assigns to be comprehensive.

Proposer is hereby informed that SCDOT compiled the information contained within the PIP for the purposes of obtaining all necessary permits, to ascertain feasibility, to estimate project duration and/or cost, and other such determinations as SCDOT deemed necessary in determining whether to pursue this Project. Proposer agrees that SCDOT has specifically disclaimed the accuracy and completeness of the information in the PIP from whatever source it is derived or compiled. SCDOT has made no representations, covenants, warranties or guarantees, either express or implied, regarding the accuracy and completeness of the information contained within the PIP.

Proposer also acknowledges and agrees that the information contained in the PIP is of such a preliminary character that is unreasonable to use for technical, engineering, or scientific decisions relating to, necessary to make, or contained within a proposal including, but not limited to, designs, quantities of materials to be excavated, engineering decisions, material quantities required, etc. Proposer agrees that it is its responsibility to conduct an independent investigation of the facts and circumstances necessary to submit a proposal. Proposer admits that, if it has relied on the information contained within the PIP, it has been specifically advised against doing so and relies upon the PIP at its own risk. The Proposer accepts that there is a substantial possibility that there are potential risks not discovered by the preparers of the PIP. Proposer specifically and intentionally waives reliance upon the thoroughness and comprehensiveness of the PIP, and shall hold harmless SCDOT, its officers, employees, consultants, agents, heirs, and assigns.

Proposer agrees this acknowledgment is an essential and material part of its Proposal and Contract with SCDOT. Proposer has had the advice of learned counsel or the opportunity to consult with said counsel prior to the execution of this acknowledgment.

I acknowledge that giving false, misleading or incomplete information on this certification may subject me to prosecution under the laws of the United States of America and/or the State of South Carolina.

PROPOSER

Name of Proposer: E.S. WAGNER COMPANY LLC

Authorized Representative

Its: Senior Vice President & General Manager

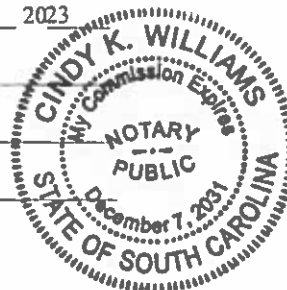
SWORN to before me this

24th day of April 2023

(S)

Notary Public for the State of South Carolina

My Commission Expires: 12.07.31





South Carolina
Department of Transportation

March 30, 2023

Mr. Tom Watson, PE
E. S. Wagner Company, LLC
1515 Shopton Road, Suite 103
Charlotte, North Carolina 28217

NOTIFICATION OF AWARD

Contract No.: 8862230
Project. No.: Multiple
Work Type: Closed and Load Restricted Bridge Replacement Package 2023-1 (Package 15)
Anderson, Chester, Chesterfield, and Lancaster Counties

Dear Mr. Watson:

This letter serves as the official notification of award for the above-referenced project based upon the cost proposal submitted on March 6, 2023, in the amount of **\$13,407,135.00** in response to the South Carolina Department of Transportation's (SCDOT) proposal request.

Subcontractor Request forms can be found on the SCDOT extranet website under the Miscellaneous Construction tab. If required, please submit Sub1, Sub2 and Subreq3 to the Construction Alternative Delivery Engineer.

Also, SCDOT will need the following items in order to fully execute the Design-Build Contract:

- Schedule of Values – Agreement 111.C.1
- Insurance Requirements – Agreement V1.A
- Bonding Requirements – Agreement V1.B

Ensure all of the required items are returned to my office within **twenty (20) days** from the date of this letter.

Post Office Box 191
955 Park Street
Columbia, SC 29202-0191



www.scdot.org
An Equal Opportunity
Affirmative Action Employer
855-GO-SCDOT (855-467-2368)

Mr. Tom Watson, PE
Notification of Award
March 30, 2023
Page 2

Please contact the District 4 Design Build Construction Engineer Shane Parris, at phone number (864) 490-0466, to schedule the preconstruction conference as set forth in Section 108.2 of the 2007 Standard Specifications for Highway Construction.

Yours very truly,



David Rister, P.E.
Construction Alternative Delivery Engineer

GDR:de

cc: Michael Pitts, Alternative Delivery Program Manager
Carmen Wright, CPO for Project Delivery
Wei Johnson, Construction Metrics Engineer
Maria Devito, Contract Coordinator
Jennifer Taylor, Contract Administrator
Gary Linn, Director DBE Mega Projects Support, Compliance & Technical Assistance
Shane Parris, District 4 Design Build Construction Engineer

File: AD/GDR



South Carolina Department of Transportation Form No. 672A	Rev. 03-01-2016 PERFORMANCE AND INDEMNITY BOND	Date Bond Executed: MAY 09 2023
Principal: E.S. WAGNER COMPANY LLC, PIEDMONT, SC		Bond Number: 45BCSHM5584
Surety: Hartford Fire Insurance Company		
Penal Sum of Bond: \$13,407,135.00		Date of Contract: MAY 09 2023
Project S.C. File No.: 8862230, Proj. No(s). P041153, P041154, P041156 & P04118		Contract Number: 18708

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL AND SURETY above named are held and firmly bound unto the South Carolina Department of Transportation, hereinafter called the Department, in the penal sum of the amount stated above which shall be equal to the full amount (100%) of the contract, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Department, numbered and dated as shown above and hereto attached:

NOW, THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Department, with or without notice to the surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Attest <u>Tracy Clark</u> Corporate Secretary In Presence of: Witness (2 required) 1. <u>[Signature]</u> 2. <u>[Signature]</u>	FOR CORPORATE PRINCIPAL <u>E.S. WAGNER COMPANY LLC</u> Corporation Name <u>PIEDMONT, SC</u> Business Address By: <u>[Signature]</u> Title: <u>Sr. Vice President - GM</u> <div style="border: 1px solid black; padding: 2px; display: inline-block;">Affix Corporate Seal</div>
--	--

In Presence of: Witness (2 required) 1. <u>[Signature]</u> 2. <u>[Signature]</u>	SURETY/INSURER Hartford Fire Insurance Company Surety/ Insurers Name <u>One Hartford Plaza, Hartford, CT 06155-0001</u> Business Address By: <u>[Signature]</u> Title: <u>Rebecca E. Cano, Attorney-in-Fact</u>
---	---

South Carolina Department of Transportation Form No. 673	Rev. 03-01-2016	Date Bond Executed: MAY 09 2023
PAYMENT BOND		
Principal: E.S. WAGNER COMPANY LLC, PIEDMONT, SC	Bond Number: 45BCSHM5584	
Surety: Hartford Fire Insurance Company		
Penal Sum of Bond: \$13,407,135.00	Date of Contract: MAY 09 2023	
Project S.C. File No.: 8862230, Proj. No(s). P041153, P041154, P041156 & P041181	Contract Number: 18708	

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL AND SURETY above named are held and firmly bound unto the South Carolina Department of Transportation, hereinafter called the Department, in the penal sum of the amount stated above which shall be equal to the full amount (100%) of the contract, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Department, numbered and dated as shown above and hereto attached:

NOW, THEREFORE, if the principal shall promptly make payment to all persons supplying labor and material, such being construed to include, but not limit to, that part of water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment directly applicable to the contract, in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice by which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Attest <u>Tracy Clark</u> Corporate Secretary	FOR CORPORATE PRINCIPAL E.S. WAGNER COMPANY LLC Corporation Name PIEDMONT, SC Business Address
In Presence of: Witness (2 required) 1. <u>[Signature]</u> 2. <u>Carli Gaston</u>	By: <u>[Signature]</u> Title: <u>Sr. Vice President i 6m</u>
	Affix Corporate Seal

In Presence of: Witness (2 required) 1. <u>Rebbie Anderson</u> 2. <u>Jeon Ezzell</u>	SURETY/INSURER Hartford Fire Insurance Company Surety/ Insurers Name Business Address By: <u>[Signature]</u> Title: Rebecca E. Cano, Attorney-in-Fact
	Affix Corporate Seal

POWER OF ATTORNEY

Direct Inquiries/Claims to:

THE HARTFORD

BOND, T-4

One Hartford Plaza
Hartford, Connecticut 06155

call: 888-266-3488 or fax: 860-757-5835

Agency Code: 22-290196

KNOW ALL PERSONS BY THESE PRESENTS THAT:

- ☒ Hartford Fire Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- ☒ Hartford Casualty Insurance Company, a corporation duly organized under the laws of the State of Indiana
- ☒ Hartford Accident and Indemnity Company, a corporation duly organized under the laws of the State of Connecticut
- ☐ Hartford Underwriters Insurance Company, a corporation duly organized under the laws of the State of Connecticut
- ☐ Twin City Fire Insurance Company, a corporation duly organized under the laws of the State of Indiana
- ☐ Hartford Insurance Company of Illinois, a corporation duly organized under the laws of the State of Illinois
- ☐ Hartford Insurance Company of the Midwest, a corporation duly organized under the laws of the State of Indiana
- ☐ Hartford Insurance Company of the Southeast, a corporation duly organized under the laws of the State of Florida

having their home office in Hartford, Connecticut, (hereinafter collectively referred to as the "Companies") do hereby make, constitute and appoint, up to the amount of unlimited:

Rebecca E. Cano of McLeansville, NC;

James M. Maloney, Cynthia M. Partin, Pamela Brandt, Brad Lorenzetti, Heidi K. Harrell Bennett of Columbia, SC

their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign its name as surety(ies) only as delineated above by ☒, and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

In Witness Whereof, and as authorized by a Resolution of the Board of Directors of the Companies on January 22, 2004 the Companies have caused these presents to be signed by its Assistant Vice President and its corporate seals to be hereto affixed, duly attested by its Assistant Secretary. Further, pursuant to Resolution of the Board of Directors of the Companies, the Companies hereby unambiguously affirm that they are and will be bound by any mechanically applied signatures applied to this Power of Attorney.



Wesley W. Cowling

Wesley W. Cowling, Assistant Secretary

M. Ross Fisher

M. Ross Fisher, Assistant Vice President

STATE OF CONNECTICUT

COUNTY OF HARTFORD

ss. Hartford

On this 3rd day of November, 2008, before me personally came M. Ross Fisher, to me known, who being by me duly sworn, did depose and say: that he resides in the County of Hartford, State of Connecticut; that he is the Assistant Vice President of the Companies, the corporations described in and which executed the above instrument; that he knows the seals of the said corporations; that the seals affixed to the said instrument are such corporate seals; that they were so affixed by authority of the Boards of Directors of said corporations and that he signed his name thereto by like authority.



CERTIFICATE

Scott E. Paseka

Scott E. Paseka
Notary Public

My Commission Expires October 31, 2012

I, the undersigned, Assistant Vice President of the Companies, DO HEREBY CERTIFY that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which is still in full force effective as of
Signed and sealed at the City of Hartford.



Gary W. Stumper

Gary W. Stumper, Assistant Vice President



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

4/27/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Hylant - Toledo 811 Madison Ave. Toledo OH 43604	CONTACT NAME: PHONE (A/C, No, Ext): 419-255-1020 FAX (A/C, No): 419-255-7557 E-MAIL ADDRESS: toledo_hmi@hylant.com																					
INSURED E.S. Wagner Company LLC 427 Oak Road Piedmont SC 29673	ESWAGNE-01 <table><tr><th colspan="2">INSURER(S) AFFORDING COVERAGE</th><th>NAIC #</th></tr><tr><td>INSURER A:</td><td>XL Specialty Insurance Company</td><td>37885</td></tr><tr><td>INSURER B:</td><td>Ace Property & Casualty Insurance Company</td><td>20699</td></tr><tr><td>INSURER C:</td><td>Hartford Fire Insurance Company</td><td>19682</td></tr><tr><td>INSURER D:</td><td>Twin City Fire Insurance Co</td><td>29459</td></tr><tr><td>INSURER E:</td><td>Great American E & S Ins Co</td><td>37532</td></tr><tr><td>INSURER F:</td><td></td><td></td></tr></table>	INSURER(S) AFFORDING COVERAGE		NAIC #	INSURER A:	XL Specialty Insurance Company	37885	INSURER B:	Ace Property & Casualty Insurance Company	20699	INSURER C:	Hartford Fire Insurance Company	19682	INSURER D:	Twin City Fire Insurance Co	29459	INSURER E:	Great American E & S Ins Co	37532	INSURER F:		
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INSURER F:																						

COVERAGES

CERTIFICATE NUMBER: 719438793

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
C	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> <input type="checkbox"/> GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC <input type="checkbox"/> OTHER:	Y Y	45UENQU2902	3/1/2023	3/1/2024	EACH OCCURRENCE \$ 2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 2,000,000 GENERAL AGGREGATE \$ 4,000,000 PRODUCTS - COMP/OP AGG \$ 4,000,000 \$
C	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY	Y Y	45UENQU2903	3/1/2023	3/1/2024	COMBINED SINGLE LIMIT (Ea accident) \$ 2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$	Y Y	US00083103LI23A XCQG72509675003	3/1/2023 3/1/2023	3/1/2024 3/1/2024	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000 Excess \$ 10,000,000
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N/A	45WEQU2900	3/1/2023	3/1/2024	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E L. EACH ACCIDENT \$ 1,000,000 E L. DISEASE - EA EMPLOYEE \$ 1,000,000 E L. DISEASE - POLICY LIMIT \$ 1,000,000
E E E	Professional Liability Pollution Liability Contractors Pollution Liability		PCME81260801 PCME81260801 PCME81260801	3/1/2023 3/1/2023 3/1/2023	3/1/2024 3/1/2024 3/1/2024	Aggregate Aggregate Aggregate 7,000,000 \$2,000,000 7,000,000

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

Umbrella Liability is NOT excess over the Professional or Pollution Liability coverage

Contract # 8862230

Project # Multiple - Closed and Load Restricted Bridge Replacement Package 2023-1 (Package 15) Anderson, Chester, Chesterfield, and Lancaster Counties

It is agreed that SCDOT and/or Owners ATIMA is/are named as Additional Insured(s) under General Liability, including Completed Operations as evidenced under Endorsement CG 20 10 and CG 20 37 or their equivalent. Auto Liability as required by the Contract as evidence under Endorsement CA 20 48 or its equivalent. Policies are Primary and Non-Contributory as respect to work performed on this project included Umbrella. A Waiver of Subrogation is applied in favor of SCDOT and Owner(s) ATIMA as respect to General Liability, Auto Liability, Umbrella and Workers' Compensation policies. Umbrella policy is "follow See Attached.."

CERTIFICATE HOLDER

CANCELLATION

South Carolina Department of Transportation
Director of Construction Room 330
955 Park Street
Columbia SC 29202

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Nicholas R. Hylant

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ADDITIONAL REMARKS SCHEDULE

AGENCY Hylant - Toledo		NAMED INSURED E.S. Wagner Company LLC 427 Oak Road Piedmont SC 29673
POLICY NUMBER		
CARRIER	NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,
 FORM NUMBER: 25 FORM TITLE: CERTIFICATE OF LIABILITY INSURANCE

form" with exclusion over General Liability, Auto Liability, and Workers' Compensation policies. A 30-Day Notice of Cancellation and 10-Day Notice for Non-Payment of Premiums endorsement is provided on all policies.

The insurance afforded herein for any subsidiary not named in this Coverage Part as a named insured does not apply to injury or damage with respect to which such insured is also a named insured under another policy or would be a named insured under such policy but for its termination or the exhaustion of its limits of insurance.

3. Newly Acquired Or Formed Organization

Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company, and over which you maintain financial interest of more than 50% of the voting stock, will qualify as a Named Insured if there is no other similar insurance available to that organization. However:

- a. Coverage under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier;
- b. Coverage A does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization; and
- c. Coverage B does not apply to "personal and advertising injury" arising out of an offense committed before you acquired or formed the organization.

4. Nonowned Watercraft

With respect to watercraft you do not own that is less than 51 feet long and is not being used to carry persons for a charge, any person is an insured while operating such watercraft with your permission. Any other person or organization responsible for the conduct of such person is also an insured, but only with respect to liability arising out of the operation of the watercraft, and only if no other insurance of any kind is available to that person or organization for this liability.

However, no person or organization is an insured with respect to:

- a. "Bodily injury" to a co-"employee" of the person operating the watercraft; or
- b. "Property damage" to property owned by, rented to, in the charge of or occupied by you or the employer of any person who is an insured under this provision.

5. Additional Insureds When Required By Written Contract, Written Agreement Or Permit

The following person(s) or organization(s) are an additional insured when you have agreed, in a written contract, written agreement or because of a permit issued by a state or political subdivision, that such person or organization be added as an additional insured on your policy, provided the injury or damage occurs subsequent to the execution of the contract or agreement.

A person or organization is an additional insured under this provision only for that period of time required by the contract or agreement.

However, no such person or organization is an insured under this provision if such person or organization is included as an insured by an endorsement issued by us and made a part of this Coverage Part.

a. Vendors

Any person(s) or organization(s) (referred to below as vendor), but only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business and only if this Coverage Part provides coverage for "bodily injury" or "property damage" included within the "products-completed operations hazard".

- (1) The insurance afforded the vendor is subject to the following additional exclusions:

This insurance does not apply to:

- (a) "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that the vendor would have in the absence of the contract or agreement;
- (b) Any express warranty unauthorized by you;
- (c) Any physical or chemical change in the product made intentionally by the vendor;
- (d) Repackaging, except when unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;
- (e) Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;
- (f) Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;
- (g) Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor; or

(h) "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:

(i) The exceptions contained in Sub-paragraphs (d) or (f); or

(ii) Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products.

(2) This insurance does not apply to any insured person or organization, from whom you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.

b. Lessors Of Equipment

(1) Any person(s) or organization(s) from whom you lease equipment; but only with respect to their liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your maintenance, operation or use of equipment leased to you by such person(s) or organization(s).

(2) With respect to the insurance afforded to these additional insureds this insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

c. Lessors Of Land Or Premises

Any person or organization from whom you lease land or premises, but only with respect to liability arising out of the ownership, maintenance or use of that part of the land or premises leased to you.

With respect to the insurance afforded these additional insureds the following additional exclusions apply:

This insurance does not apply to:

1. Any "occurrence" which takes place after you cease to lease that land; or

2. Structural alterations, new construction or demolition operations performed by or on behalf of such person or organization.

d. Architects, Engineers Or Surveyors

Any architect, engineer, or surveyor, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or

omissions of those acting on your behalf:

(1) In connection with your premises; or

(2) In the performance of your ongoing operations performed by you or on your behalf.

With respect to the insurance afforded these additional insureds, the following additional exclusion applies:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of or the failure to render any professional services by or for you, including:

1. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or

2. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional services by or for you.

e. Permits Issued By State Or Political Subdivisions

Any state or political subdivision, but only with respect to operations performed by you or on your behalf for which the state or political subdivision has issued a permit.

With respect to the insurance afforded these additional insureds, this insurance does not apply to:

(1) "Bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the state or municipality; or

(2) "Bodily injury" or "property damage" included within the "products-completed operations hazard".

f. Any Other Party

Any other person or organization who is not an additional insured under Paragraphs a. through e. above, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

(1) In the performance of your ongoing operations;

- (2) In connection with your premises owned by or rented to you; or
- (3) In connection with "your work" and included within the "products-completed operations hazard", but only if
 - (a) The written contract or agreement requires you to provide such coverage to such additional insured; and
 - (b) This Coverage Part provides coverage for "bodily injury" or "property damage" included within the "products-completed operations hazard".

However:

- (1) The insurance afforded to such additional insured only applies to the extent permitted by law; and
- (2) If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

With respect to the insurance afforded to these additional insureds, this insurance does not apply to:

"Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

- (1) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- (2) Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional services by or for you.

The limits of insurance that apply to additional insureds is described in Section III - Limits Of Insurance.

How this insurance applies when other insurance is available to the additional insured is described in the Other Insurance Condition in Section IV - Commercial General Liability Conditions.

No person or organization is an insured with respect to the conduct of any current or past partnership, joint venture or limited liability company that is not shown as a Named Insured in the Declarations.

SECTION III - LIMITS OF INSURANCE

1. The Most We Will Pay

The Limits of Insurance shown in the Declarations and the rules below fix the most we will pay regardless of the number of:

- a. Insureds;
- b. Claims made or "suits" brought; or
- c. Persons or organizations making claims or bringing "suits".

2. General Aggregate Limit

The General Aggregate Limit is the most we will pay for the sum of:

- a. Medical expenses under Coverage C;
- b. Damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard"; and
- c. Damages under Coverage B.

3. Products-Completed Operations Aggregate Limit

The Products-Completed Operations Aggregate Limit is the most we will pay under Coverage A for damages because of "bodily injury" and "property damage" included in the "products-completed operations hazard".

4. Personal And Advertising Injury Limit

Subject to 2. above, the Personal and Advertising Injury Limit is the most we will pay under Coverage B for the sum of all damages because of all "personal and advertising injury" sustained by any one person or organization.

5. Each Occurrence Limit

Subject to 2. or 3. above, whichever applies, the Each Occurrence Limit is the most we will pay for the sum of:

- a. Damages under Coverage A; and
- b. Medical expenses under Coverage C because of all "bodily injury" and "property damage" arising out of any one "occurrence".

6. Damage To Premises Rented To You Limit

Subject to 5. above, the Damage To Premises Rented To You Limit is the most we will pay under Coverage A for damages because of "property damage" to any one premises, while rented to you, or in the case of damage by fire, lightning or explosion, while rented to you or temporarily occupied by you with permission of the owner.

In the case of damage by fire, lightning or explosion, the Damage to Premises Rented To You Limit applies to all damage proximately caused by the same event, whether such damage results from fire, lightning or explosion or any combination of these.

7. Medical Expense Limit

Subject to 5. above, the Medical Expense Limit is the most we will pay under Coverage C for all medical expenses because of "bodily injury" sustained by any one person.

8. How Limits Apply To Additional Insureds

If you have agreed in a written contract or written agreement that another person or organization be added as an additional insured on your policy, the most we will pay on behalf of such additional insured is the lesser of:

- a. The limits of insurance specified in the written contract or written agreement; or
- b. The Limits of Insurance shown in the Declarations.

Such amount shall be a part of and not in addition to Limits of Insurance shown in the Declarations and described in this Section.

The Limits of Insurance of this Coverage Part apply separately to each consecutive annual period and to any remaining period of less than 12 months, starting with the beginning of the policy period shown in the Declarations, unless the policy period is extended after issuance for an additional period of less than 12 months. In that case, the additional period will be deemed part of the last preceding period for purposes of determining the Limits of Insurance.

SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS

1. Bankruptcy

Bankruptcy or insolvency of the insured or of the insured's estate will not relieve us of our obligations under this Coverage Part.

2. Duties In The Event Of Occurrence, Offense, Claim Or Suit

a. Notice Of Occurrence Or Offense

You or any additional insured must see to it that we are notified as soon as practicable of an "occurrence" or an offense which may result in a claim. To the extent possible, notice should include:

- (1) How, when and where the "occurrence" or offense took place;
- (2) The names and addresses of any injured persons and witnesses; and
- (3) The nature and location of any injury or damage arising out of the "occurrence" or offense.

b. Notice Of Claim

If a claim is made or "suit" is brought against any insured, you or any additional insured must:

- (1) Immediately record the specifics of the claim or "suit" and the date received; and
- (2) Notify us as soon as practicable.

You or any additional insured must see to it that we receive written notice of the claim or "suit" as soon as practicable.

c. Assistance And Cooperation Of The Insured

You and any other involved insured must:

- (1) Immediately send us copies of any demands, notices, summonses or legal papers received in connection with the claim or "suit";
- (2) Authorize us to obtain records and other information;
- (3) Cooperate with us in the investigation or settlement of the claim or defense against the "suit"; and
- (4) Assist us, upon our request, in the enforcement of any right against any person or organization which may be liable to the insured because of injury or damage to which this insurance may also apply.

d. Obligations At The Insureds Own Cost

No insured will, except at that insured's own cost, voluntarily make a payment, assume any obligation, or incur any expense, other than for first aid, without our consent.

e. Additional Insureds Other Insurance

If we cover a claim or "suit" under this Coverage Part that may also be covered by other insurance available to an additional insured, such additional insured must submit such claim or "suit" to the other insurer for defense and indemnity.

However, this provision does not apply to the extent that you have agreed in a written contract or written agreement that this insurance is primary and non-contributory with the additional insured's own insurance.

f. Knowledge Of An Occurrence, Offense, Claim Or Suit

Paragraphs a. and b. apply to you or to any additional insured only when such "occurrence", offense, claim or "suit" is known to:

- (1) You or any additional insured that is an individual;
- (2) Any partner, if you or the additional insured is a partnership;



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

CONTRACTORS BROAD FORM ENDORSEMENT

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

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1. ALIENATED PREMISES COVERAGE

Exclusion j. Damage To Property of Section I - Coverage A is amended as follows:

- a. The following exception to the exclusion is deleted:

Paragraph (2) of this exclusion does not apply if the premises are "your work" and were never occupied, rented or held for rental by you.

- b. This exception is replaced by the following:

Paragraph (2) of this exclusion does not apply if the premises are "your work".

2. DAMAGE TO YOUR WORK

A. Section I - Coverage A - Bodily Injury And Property Damage Liability, Paragraph 1.

Insuring Agreement is amended to add the following:

- f. Damages because of "property damage" include damages the insured becomes legally obligated to pay because of "property damage" to "your work" or caused by "your work", and such "property damage" shall be deemed to be caused by an "occurrence", if not intended or expected from the standpoint

of the insured, regardless of whether the "property damage" arises from breach of contract.

- B. Exclusion I. Damage To Your Work of Section I - Coverage A** is replaced by the following:

I. Damage to Your Work

"Property damage" to that particular part of "your work" that must be restored, repaired or replaced because "your work" was incorrectly performed and included in the "products-completed operations hazard".

This exclusion does not apply if the damaged work or the work performed incorrectly was performed on your behalf by a subcontractor.

This Paragraph 2.B. does not apply if **Exclusion I. Damage To Your Work** has been otherwise modified by endorsement.

3. THAT PARTICULAR PART

This Paragraph 3. applies to **Exclusion j. Damage to Property**, subparagraphs (5), and (6), **Exclusion k. Damage to Your Product**, and **Exclusion I. Damage to Your Work**.

When performing operations as a "general contractor", the term that particular part shall not mean the entire construction, improvement or renovation project. For purposes of this provision, the term "general contractor" means the contractor signing the prime construction contract for a construction, erection, improvement or renovation project and that has main responsibility for such project including hiring all of the subcontractors and suppliers.

4. CONTRACTORS LIMITED PROFESSIONAL LIABILITY

The following exclusion is added to Paragraph 2., Exclusions of Section I - Coverage A - Bodily Injury And Property Damage Liability, and to Paragraph 2., Exclusions of Section I - Coverage B - Personal And Advertising Injury Liability:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of or failure to render any professional services by you with respect to your providing engineering, architectural or surveying services in your capacity as an engineer, architect or surveyor.

Professional services include:

- (1) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders, or drawings and specifications; and
- (2) Supervisory or inspection activities performed as a part of any related architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or failure to render any professional services by you with respect to your providing engineering, architectural or surveying services in your capacity as an engineer, architect or surveyor.

This exclusion does not apply to your operations in connection with construction work performed by you or on your behalf.

However, this exception to the exclusion will not apply if you are in the business or profession of providing the professional services described above independent from the construction work performed by you or on your behalf.

In the event this insurance applies to any injury, damage, loss, cost or expense covered by Professional Liability insurance issued by a company unaffiliated with us, then the insurance

afforded under this Coverage Part is excess over such other valid and collectible Professional Liability insurance (including any deductible or self-insured retention portion thereof), and any other valid and collectible insurance available to the insured whether primary, excess, contingent or on any other basis.

5. PER PROJECT AND PER LOCATION GENERAL AGGREGATE LIMITS OF INSURANCE

A. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under Section I - Coverage A, and for all medical expenses caused by accidents under Section I - Coverage C, which can be attributed only to ongoing operations at a single "project" or a single "location";

1. A separate Per Project General Aggregate Limit or a separate Per Location General Aggregate Limit applies to each "project" or "location", whichever is applicable. The Per Project General Aggregate Limit and Per Location General Aggregate Limit is equal to the amount of the General Aggregate Limit shown in the Declarations.
2. The Per Project General Aggregate Limit or the Per Location General Aggregate Limit, whichever applies, is the most we will pay for the sum of all damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard", and for medical expenses under Coverage C regardless of the number of;
 - a. Insureds;
 - b. Claims made or "suits" brought; or
 - c. Persons or organizations making claims or bringing "suits".
3. Any payments made under Coverage A for damages or under Coverage C for medical expenses shall reduce the Per Project General Aggregate Limit for that "project" or the Per Location General Aggregate for that "location", whichever applies. Such payments shall not reduce the General Aggregate Limit shown in the Declarations, the Per Project General Aggregate Limit for any other "project", or the Per Location General Aggregate Limit for any other "location".
4. The limits shown in the Declarations for Each Occurrence, Damage To Premises Rented To You and Medical Expense continue to apply. However, instead of

being subject to the General Aggregate Limit shown in the Declarations, such limits will be subject to the applicable Per Project General Aggregate Limit if attributable only to ongoing operations at a single "project" or the Per Location General Aggregate if attributable only to ongoing operations at a single "location".

- B. For all sums which the insured becomes legally obligated to pay as damages caused by "occurrences" under **Section I - Coverage A** and for all medical expenses caused by accidents under **Section I - Coverage C**, which cannot be attributed only to ongoing operations at a single "project" or a single "location";

1. Any payments made under **Coverage A** for damages or under **Coverage C** for medical expenses shall reduce the amount available under the General Aggregate Limit or the Products-Completed Operations Aggregate Limit, whichever is applicable; and
2. Such payments shall not reduce any Per Project General Aggregate Limit or any Per Location General Aggregate Limit.

- C. When coverage for liability arising out of the "products-completed operations hazard" is provided, any payments for damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard" will reduce the Products-Completed Operations Aggregate Limit, and not reduce the General Aggregate Limit, or any Per Project General Aggregate Limit or any Per Location General Aggregate Limit.

- D. The provisions of **Section III - Limits Of Insurance** not otherwise modified by this endorsement shall continue to apply as stipulated.

- E. For the purposes of Paragraph 5., the following definitions apply:

"Project" means a premises an insured does not own or rent and where such insured performs construction-related operations. Each "project" involving the same or connecting lots, or premises whose connection is separated by a street, roadway, waterway, railroad or right-of-way shall be considered a single "project".

1. If a "project" has been abandoned and then restarted, or if the authorized contracting parties deviate from plans, blueprints, designs, specifications or timetables, the "project" shall be considered a single "project". "Project" does not include a premises that is a "location".

2. "Location" means a premises an insured owns or rents and where such insured performs business operations other than construction-related operations. Each "location" involving the same or connecting lots, or premises whose connection is separated by a street, roadway, waterway or right-of-way railroad shall be considered a single "location." "Location" does not include a premises that is a "project".

This provision does not apply if the Per Project and the Per Location General Aggregate Limit has been otherwise modified by endorsement.

6. MEDICAL PAYMENTS COVERAGE - INCLUDING PRODUCTS-COMPLETED OPERATIONS

Paragraph 1.a. of the **Insuring Agreement - Coverage C** is replaced by the following:

1. Insuring Agreement

- a. We will pay medical expenses as described below for "bodily injury" caused by an accident:

- (1) On premises you own or rent;
- (2) On ways next to premises you own or rent;
- (3) Because of your operations; or
- (4) Included within the definition of the "products-completed operations hazard;"

provided that:

- (1) The accident takes place in the "coverage territory" and during the policy period;
- (2) The expenses are incurred and reported to us within three years of the date of the accident; and
- (3) The injured person submits to examination, at our expense, by physicians of our choice as often as we reasonably require.

7. INJURY TO EMPLOYEE'S REPUTATION WITH RESPECT TO INCIDENTAL MEDICAL MALPRACTICE

- A. The following is added to Paragraph 1.e. of the **Insuring Agreement - Coverage A**:

- (3) With respect to incidental medical malpractice, "bodily injury" includes damages claimed for injury to emotions or reputation of an "employee" arising out of the rendering or failure to render professional health care services as a physician, dentist, nurse, emergency medical technician or paramedic services.

B. The following exclusion is added to Coverage B - Personal and Advertising Injury:

"Personal and advertising injury arising out of the rendering or failure to render professional health care services as a physician, dentist, nurse, emergency medical technician or paramedic.

8. BODILY INJURY EMPLOYEE SUITS

A. "Bodily injury" as listed in Paragraph 2.a.(1) of Section II - Who Is An Insured, does not apply to 2.a.(1)(a) through 2.a.(1)(c).

B. Part a. of Paragraph 4. Nonowned Watercraft in Section II - Who Is An Insured does not apply.

9. CONSOLIDATED INSURANCE (WRAP-UP) PROGRAMS

The following exclusion is added to Section I Coverage A:

This insurance does not apply to any "bodily injury" or "property damage" arising out of any "wrap project or premises" where an insured under this policy is or was also an insured under one or more commercial general liability (CGL) policies (including any umbrella or excess policies that include the commercial general liability policy(ies) as underlying insurance) included within a "consolidated insurance (wrap-up) program." This exclusion applies even if the limits of insurance for such "consolidated insurance (wrap-up) program" are exhausted or not collected for any reason, including bankruptcy or insolvency of the insurer providing coverage for the "consolidated insurance (wrap-up) program". This exclusion also applies if the CGL coverage afforded under the "consolidated insurance (wrap-up) program" is narrower in scope than the coverage provided by this policy.

This exclusion does not apply to:

A. Products-Completed Operations Hazard Exception

"Bodily injury" or "property damage" arising out of an "insured's operations" at or in connection with a "wrap project or premises" when such "bodily injury" or "property damage" commences after the "products-completed operations hazard" coverage or any completed operations extension coverage provided by the applicable "consolidated insurance (wrap-up) program" has ended or is no longer in effect.

B. Off-Site Location Exception

"Bodily injury" or "property damage" resulting from an "insured's operations" at or in connection with a "wrap project or premises" at a location to which the applicable "consolidated insurance (wrap-up) program" does not apply.

C. Repair Work And Punch List Work Exception

"Bodily injury" or "property damage" resulting from "repair work" or "punch list work" at a "wrap project or premises" but only when the applicable "consolidated insurance (wrap-up) program" does not apply or no longer applies to such "repair work" or "punch list work".

This exception does not apply to the cost of performing such "repair work" or "punch list work", or to the "repair work" or "punch list work" itself.

D. Additional Insured Extension

"Bodily injury" or "property damage" for which you are solely an additional insured under the "consolidated insurance (wrap-up) program".

The coverage provided under Paragraphs 9.A through 9.D. above is subject to all terms, conditions and exclusions of this policy.

For purposes of Paragraph 9, the following definitions apply:

"Consolidated insurance (wrap-up) program" means any agreement or arrangement, including any contractor-controlled, owner-controlled, project-specific or similar insurance program under which one or more contractor(s) working on a specified project are insured under one or more commercial general liability (CGL) policies (including any umbrella or excess policies that include the commercial general liability policy(ies) as underlying insurance) issued by a specified carrier for injury or damage arising out of operations conducted in connection with or necessary or incidental to the project.

"Insured's operations" means all operations performed by a named insured (and not sub-contracted or performed by others on the insured's behalf).

"Punch list work" means the "insured's operations" at or in connection with a "wrap project or premises" in order to complete the work called for in an insured's contract for the "wrap project or premises".

"Repair work" means the "insured's operations" that are service, maintenance, correction, repair, replacement work, or periodic inspection performed by an insured at or in connection with a "wrap project or premises", in order to replace or repair an insured's completed work.

"Wrap project or premises" means any premises or construction, erection, improvement or renovation project subject to a "consolidated insurance (wrap-up) program".

10. ACCESS OR DISCLOSURE OF CONFIDENTIAL OR PERSONAL INFORMATION AND DATA-RELATED LIABILITY

- A. Exclusion p. of Section 1 - Coverage A - Bodily Injury And Property Damage Liability** is replaced by the following:

p. Access Or Disclosure Of Confidential Or Personal Information And Data-Related Liability

Damages arising out of:

- (1) Any access to or disclosure of any person's or organization's confidential or personal information, including patents, trade secrets, processing methods, customer lists, financial information, credit card information, health information or any other type of nonpublic information; or
- (2) the loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate "electronic data" that does not result from physical injury to tangible property.

This exclusion applies even if damages are claimed for notification costs, credit monitoring expenses, forensic expenses, public relations expenses or any other loss, cost or expense incurred by you or others arising out of that which is described in Paragraph (1) or (2) above.

However, unless Paragraph (1) above applies, this exclusion does not apply to liability for damages because of "bodily injury".

- B. Exclusion w. of Section 1 - Coverage B - Personal and Advertising Injury** is replaced by the following:

w. Access Or Disclosure Of Confidential Or Personal Information

"Personal and advertising injury" arising out of any access to or disclosure of any person's or organization's confidential or personal information, including patents, trade secrets, processing methods, customer lists, financial information, credit card information, health information or any other type of nonpublic information.

This exclusion applies even if damages are claimed for notification costs, credit monitoring expenses, forensic expenses, public relations expenses or any other loss, cost or expense incurred by you or others arising out of any access to or disclosure of any person's or organization's confidential or personal information.

- C. The following Paragraph is added to Section III - Limits Of Insurance:**

Subject to Paragraph 5. Each Occurrence Limit, the most we will pay under Coverage A for "property damage" because of all loss of "electronic data" arising out of any one "occurrence" is \$100,000, unless modified by endorsement.

- D. The following definition is added to Section V - Definitions:**

"Electronic data" means information, facts or programs:

- a. Stored as or on;
- b. Created or used on; or
- c. Transmitted to or from;

computer software, (including systems and applications software) hard or floppy disks, CD-ROMS, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

- E. For the purposes of the coverage provided by this provision, the definition of "property damage" in Section V - Definitions is replaced by the following:**

"Property damage" means:

- a. Physical injury to tangible property, including all resulting loss of use of that property. All such loss of use shall be deemed to occur at the time of the physical injury that caused it;
- b. Loss of use of tangible property that is not physically injured. All such loss of use shall be deemed to occur at the time of the "occurrence" that caused it; or
- c. Loss of, loss of use of, damage to, corruption of, inability to access, or inability to properly manipulate "electronic data", resulting from physical injury to tangible property. All such loss of "electronic data" shall be deemed to occur at the time of the "occurrence" that caused it.

For the purposes of this insurance, "electronic data" is not tangible property.

11. SUPPLEMENTARY PAYMENTS

In the Supplementary Payments - Coverages A and B provision:

The limit for the cost of bail bonds is increased to \$2,500.

12. TWO OR MORE COVERAGE PARTS OR POLICIES ISSUED BY US

If this policy and any other policy issued to an insured by us or any affiliated company provides coverage that applies to the same claim or damages, the maximum applicable limit(s) of liability or limit of insurance under all the policies will not exceed the highest applicable limit of liability or limit of insurance under any one policy. This condition does not apply to any policy issued by us or an affiliated company specifically written to apply as excess insurance over this policy.

13. NOTICE OF CANCELLATION TO CERTIFICATE HOLDER(S)

This policy is subject to the following additional Conditions:

A. If this policy is cancelled by the Company, other than for nonpayment of premium, notice of such cancellation will be provided at least thirty (30) days in advance of the cancellation effective date to the certificate holder(s) with mailing addresses on file with the agent of record or the Company.

B. If this policy is cancelled by the Company for nonpayment of premium, or by the insured, notice of such cancellation will be provided within (10) days of the cancellation effective date to the certificate holder(s) with mailing addresses on file with the agent of record or the Company.

If notice is mailed, proof of mailing to the last known mailing address of the certificate holder(s) on file with the agent of record or the Company will be sufficient proof of notice.

Any notification rights provided by this endorsement apply only to active certificate holder(s) who were issued a certificate of insurance applicable to this policy's term.

Failure to provide such notice to the certificate holder(s) will not amend or extend the date the cancellation becomes effective, nor will it negate cancellation of the policy. Failure to send notice shall impose no liability of any kind upon the Company or its agents or representatives.

14. CONTRACTUAL LIABILITY COVERAGE FOR PERSONAL AND ADVERTISING INJURY

Exclusion e. of SECTION I - COVERAGE B PERSONAL AND ADVERTISING INJURY LIABILITY is replaced by the following:

This insurance does not apply to:

e. Contractual Liability

"Personal and advertising injury" for which the insured has assumed liability in a contract or agreement. This exclusion does not apply to liability for damages:

- (1) That the insured would have in the absence of the contract or agreement; or

- (2) Assumed in a contract or agreement that is an "insured contract", provided the "personal and advertising injury" occurs subsequent to the execution of the contract or agreement. Solely for the purposes of liability assumed in an "insured contract", reasonable attorney fees and necessary litigation expenses incurred by or for a party other than an insured are deemed to be damages because of "personal and advertising injury", provided:

- (a) Liability to such party for, or for the cost of, that party's defense has also been assumed in the same "insured contract"; and

- (b) Such attorney fees and litigation expenses are for defense of that party against a civil or alternative dispute resolution proceeding in which damages to which this insurance applies are alleged.

15. INSURED CONTRACT DEFINITION

a. INSURED CONTRACT-CONSTRUCTION OPERATIONS AND MUNICIPAL WORK

Paragraph d. of the definition of "insured contract" in Section V - Definitions is deleted and replaced by the following:

An obligation, as required by ordinance, to indemnify a municipality.

b. CONTRACTUAL LIABILITY

Paragraph f. of the definition of "insured contract" is deleted and replaced by the following:

That part of any other contract or agreement pertaining to your business (including an indemnification of a municipality in connection with work performed for a municipality) under which you assume the tort liability of another party to pay for "bodily injury", "property damage", or "personal and advertising injury" to a third person or organization. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

Paragraph f. includes that part of any contract or agreement that indemnifies a railroad for "bodily injury", "property damage", or "personal and advertising injury" arising out of construction or demolition operations, within 50 feet of any railroad property and affecting any railroad bridge or trestle, tracks, road-beds, tunnel, underpass or crossing.

However, Paragraph f. does not include that part of any contract or agreement:

- (1) That indemnifies an architect, engineer or surveyor for injury or damage arising out of:

- (a) Preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- (b) Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage; or

- (2) Under which the insured, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the insured's rendering or failure to render professional services, including those listed in (1) above and supervisory, inspection, architectural or engineering activities.

All other terms and conditions in the policy remain unchanged.



COMMERCIAL GENERAL LIABILITY COVERAGE FORM

Various provisions in this policy restrict coverage. Read the entire policy carefully to determine rights, duties and what is and is not covered.

Throughout this policy the words "you" and "your" refer to the Named Insured shown in the Declarations, and any other person or organization qualifying as a Named Insured under this policy. The words "we", "us" and "our" refer to the stock insurance company member of The Hartford providing this insurance.

The word "insured" means any person or organization qualifying as such under Section II - Who Is An Insured.

Other words and phrases that appear in quotation marks have special meaning. Refer to Section V - Definitions.

SECTION I - COVERAGES

COVERAGE A BODILY INJURY AND PROPERTY DAMAGE LIABILITY

1. Insuring Agreement

- a. We will pay those sums that the insured becomes legally obligated to pay as damages because of "bodily injury" or "property damage" to which this insurance applies. We will have the right and duty to defend the insured against any "suit" seeking those damages. However, we will have no duty to defend the insured against any "suit" seeking damages for "bodily injury" or "property damage" to which this insurance does not apply. We may, at our discretion, investigate any "occurrence" and settle any claim or "suit" that may result. But:

- (1) The amount we will pay for damages is limited as described in Section III - Limits Of Insurance; and
- (2) Our right and duty to defend ends when we have used up the applicable limit of insurance in the payment of judgments or settlements under Coverages A or B or medical expenses under Coverage C.

No other obligation or liability to pay sums or perform acts or services is covered unless explicitly provided for under Supplementary Payments - Coverages A and B.

- b. This insurance applies to "bodily injury" and "property damage" only if:

- (1) The "bodily injury" or "property damage" is caused by an "occurrence" that takes place in the "coverage territory";
- (2) The "bodily injury" or "property damage" occurs during the policy period; and
- (3) Prior to the policy period, no insured listed under Paragraph 1. of Section II - Who Is An Insured and no "employee" authorized by you to give or receive notice of an "occurrence" or claim, knew that the "bodily injury" or "property damage" had occurred, in whole or in part. If such a listed insured or authorized "employee" knew, prior to the policy period, that the "bodily injury" or "property damage" occurred, then any continuation, change or resumption of such "bodily injury" or "property damage" during or after the policy period will be deemed to have been known prior to the policy period.

- c. "Bodily injury" or "property damage" will be deemed to have been known to have occurred at the earliest time when any insured listed under Paragraph 1. of Section II - Who Is An Insured or any "employee" authorized by you to give or receive notice of an "occurrence" or claim:

- (1) Reports all, or any part, of the "bodily injury" or "property damage" to us or any other insurer;
- (2) Receives a written or verbal demand or claim for damages because of the "bodily injury" or "property damage"; or
- (3) Becomes aware by any other means that "bodily injury" or "property damage" has occurred or has begun to occur.

- d. Damages because of "bodily injury" include damages claimed by any person or organization for care, loss of services or death resulting at any time from the "bodily injury".

e. Incidental Medical Malpractice And Good Samaritan Coverage

"Bodily injury" arising out of the rendering of or failure to render the following health care services by any "employee" or "volunteer worker" shall be deemed to be caused by an "occurrence" for:

- (1) Professional health care services such as:
 - (a) Medical, surgical, dental, laboratory, x-ray or nursing services or treatment, advice or instruction, or the related furnishing of food or beverages;
 - (b) Any health or therapeutic service, treatment, advice or instruction; or
 - (c) The furnishing or dispensing of drugs or medical, dental, or surgical supplies or appliances; or
- (2) First aid services, which include:
 - (a) Cardiopulmonary resuscitation, whether performed manually or with a defibrillator; or
 - (b) Services performed as a Good Samaritan.

For the purpose of determining the limits of insurance, any act or omission together with all related acts or omissions in the furnishing of these services to any one person will be considered one "occurrence".

However, this Incidental Medical Malpractice And Good Samaritan Coverage provision applies only if you are not engaged in the business or occupation of providing any of the services described in this provision.

2. Exclusions

This insurance does not apply to:

a. Expected Or Intended Injury

"Bodily injury" or "property damage" expected or intended from the standpoint of the insured. This exclusion does not apply to "bodily injury" or "property damage" resulting from the use of reasonable force to protect persons or property.

b. Contractual Liability

"Bodily injury" or "property damage" for which the insured is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages:

- (1) That the insured would have in the absence of the contract or agreement; or
- (2) Assumed in a contract or agreement that is an "insured contract", provided the "bodily injury" or "property damage" occurs subsequent to the execution of the contract or agreement. Solely for the purposes of liability assumed in an "insured contract", reasonable attorney fees and necessary litigation expenses incurred by or for a party other than an insured are deemed to be damages because of "bodily injury" or "property damage", provided:

- (a) Liability to such party for, or for the cost of, that party's defense has also been assumed in the same "insured contract"; and
- (b) Such attorney fees and litigation expenses are for defense of that party against a civil or alternative dispute resolution proceeding in which damages to which this insurance applies are alleged.

c. Liquor Liability

"Bodily injury" or "property damage" for which any insured may be held liable by reason of:

- (1) Causing or contributing to the intoxication of any person;
- (2) The furnishing of alcoholic beverages to a person under the legal drinking age or under the influence of alcohol; or
- (3) Any statute, ordinance or regulation relating to the sale, gift, distribution or use of alcoholic beverages.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in:

- (a) The supervision, hiring, employment, training or monitoring of others by that insured; or
- (b) Providing or failing to provide transportation with respect to any person that may be under the influence of alcohol;

if the "occurrence" which caused the "bodily injury" or "property damage", involved that which is described in Paragraph (1), (2) or (3) above.

However, this exclusion applies only if you are in the business of manufacturing, distributing, selling, serving or furnishing alcoholic beverages. For the purposes of this exclusion, permitting a person to bring alcoholic beverages on your premises, for consumption on your premises, whether or not a fee is charged or a license is required for such activity, is not by itself considered the business of selling, serving or furnishing alcoholic beverages.

d. Workers' Compensation And Similar Laws

Any obligation of the insured under a workers' compensation, disability benefits or unemployment compensation law or any similar law.

e. Employer's Liability

"Bodily injury" to:

- (1) An "employee" of the insured arising out of and in the course of:

- (a) Employment by the insured; or
- (b) Performing duties related to the conduct of the insured's business; or
- (2) The spouse, child, parent, brother or sister of that "employee" as a consequence of Paragraph (1) above.

This exclusion applies:

- (1) Whether the insured may be liable as an employer or in any other capacity; and
- (2) To any obligation to share damages with or repay someone else who must pay damages because of the injury.

This exclusion does not apply to liability assumed by the insured under an "insured contract".

f. Pollution

- (1) "Bodily injury" or "property damage" arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of "pollutants":
 - (a) At or from any premises, site or location which is or was at any time owned or occupied by, or rented or loaned to, any insured. However, this subparagraph does not apply to:
 - (i) "Bodily injury" if sustained within a building and caused by smoke, fumes, vapor or soot produced by or originating from equipment that is used to heat, cool or dehumidify the building, or equipment that is used to heat water for personal use, by the building's occupants or their guests;
 - (ii) "Bodily injury" or "property damage" for which you may be held liable, if you are a contractor and the owner or lessee of such premises, site or location has been added to your policy as an additional insured with respect to your ongoing operations performed for that additional insured at that premises, site or location and such premises, site or location is not and never was owned or occupied by, or rented or loaned to, any insured, other than that additional insured; or
 - (iii) "Bodily injury" or "property damage" arising out of heat, smoke or fumes from a "hostile fire";
 - (b) At or from any premises, site or location which is or was at any time used by or for any insured or others for the handling, storage, disposal, processing or treatment of waste;

- (c) Which are or were at any time transported, handled, stored, treated, disposed of, or processed as waste by or for:
 - (i) Any insured; or
 - (ii) Any person or organization for whom you may be legally responsible;

- (d) At or from any premises, site or location on which any insured or any contractors or subcontractors working directly or indirectly on any insured's behalf are performing operations if the "pollutants" are brought on or to the premises, site or location in connection with such operations by such insured, contractor or subcontractor. However, this subparagraph does not apply to:

- (i) "Bodily injury" or "property damage" arising out of the escape of fuels, lubricants or other operating fluids which are needed to perform the normal electrical, hydraulic or mechanical functions necessary for the operation of "mobile equipment" or its parts, if such fuels, lubricants or other operating fluids escape from a vehicle part designed to hold, store or receive them. This exception does not apply if the "bodily injury" or "property damage" arises out of the intentional discharge, dispersal or release of the fuels, lubricants or other operating fluids, or if such fuels, lubricants or other operating fluids are brought on or to the premises, site or location with the intent that they be discharged, dispersed or released as part of the operations being performed by such insured, contractor or subcontractor;
- (ii) "Bodily injury" or "property damage" sustained within a building and caused by the release of gases, fumes or vapors from materials brought into that building in connection with operations being performed by you or on your behalf by a contractor or subcontractor; or
- (iii) "Bodily injury" or "property damage" arising out of heat, smoke or fumes from a "hostile fire"; or

- (e) At or from any premises, site or location on which any insured or any contractors or subcontractors working directly or indirectly on any insured's behalf are performing operations if the

operations are to test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants".

(2) Any loss, cost or expense arising out of any:

(a) Request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants"; or

(b) Claim or suit by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to, or assessing the effects of, "pollutants".

However, this paragraph does not apply to liability for damages because of "property damage" that the insured would have in the absence of such request, demand, order or statutory or regulatory requirement, or such claim or "suit" by or on behalf of a governmental authority.

g. Aircraft, Auto Or Watercraft

"Bodily injury" or "property damage" arising out of the ownership, maintenance, use or entrustment to others of any aircraft, "auto" or watercraft owned or operated by or rented or loaned to any insured. Use includes operation and "loading or unloading".

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage" involved the ownership, maintenance, use or entrustment to others of any aircraft, "auto" or watercraft that is owned or operated by or rented or loaned to any insured.

This exclusion does not apply to:

(1) A watercraft while ashore on premises you own or rent;

(2) A watercraft you do not own that is:

(a) Less than 51 feet long; and

(b) Not being used to carry persons for a charge;

(3) Parking an "auto" on, or on the ways next to, premises you own or rent, provided the "auto" is not owned by or rented or loaned to you or the insured;

(4) Liability assumed under any "insured contract" for the ownership, maintenance or use of aircraft or watercraft;

(5) "Bodily injury" or "property damage" arising out of:

(a) The operation of machinery or equipment that is attached to, or part of, a land vehicle that would qualify under the definition of "mobile equipment" if it were not subject to a compulsory or financial responsibility law or other motor vehicle insurance law where it is licensed or principally garaged; or

(b) The operation of any of the machinery or equipment listed in Paragraph f.(2) or f.(3) of the definition of "mobile equipment"; or

(6) An aircraft that is not owned by any insured and is hired, chartered or loaned with a paid crew. However, this exception does not apply if the insured has any other insurance for such "bodily injury" or "property damage", whether the other insurance is primary, excess, contingent or on any other basis.

h. Mobile Equipment

"Bodily injury" or "property damage" arising out of:

(1) The transportation of "mobile equipment" by an "auto" owned or operated by or rented or loaned to any insured; or

(2) The use of "mobile equipment" in, or while in practice for, or while being prepared for, any prearranged racing, speed, demolition, or stunting activity.

i. War

"Bodily injury" or "property damage", however caused, arising, directly or indirectly, out of:

(1) War, including undeclared or civil war;

(2) Warlike action by a military force, including action in hindering or defending against an actual or expected attack, by any government, sovereign or other authority using military personnel or other agents; or

(3) Insurrection, rebellion, revolution, usurped power, or action taken by governmental authority in hindering or defending against any of these.

j. Damage To Property

"Property damage" to:

(1) Property you own, rent, or occupy, including any costs or expenses incurred by you, or any other person, organization or entity, for repair, replacement,

enhancement, restoration or maintenance of such property for any reason, including prevention of injury to a person or damage to another's property;

- (2) Premises you sell, give away or abandon, if the "property damage" arises out of any part of those premises;
- (3) Property loaned to you;
- (4) Personal property in the care, custody or control of the insured;
- (5) That particular part of real property on which you or any contractors or subcontractors working directly or indirectly on your behalf are performing operations, if the "property damage" arises out of those operations; or
- (6) That particular part of any property that must be restored, repaired or replaced because "your work" was incorrectly performed on it.

Paragraphs (1), (3) and (4) of this exclusion do not apply to "property damage" (other than damage by fire) to premises, including the contents of such premises, rented to you for a period of seven or fewer consecutive days. A separate limit of insurance applies to Damage To Premises Rented To You as described in Section III - Limits Of Insurance.

Paragraph (2) of this exclusion does not apply if the premises are "your work" and were never occupied, rented or held for rental by you.

Paragraphs (3) and (4) of this exclusion do not apply to "property damage" arising from the use of elevators.

Paragraphs (3), (4), (5) and (6) of this exclusion do not apply to liability assumed under a sidetrack agreement.

Paragraphs (3) and (4) of this exclusion do not apply to "property damage" to borrowed equipment while not being used to perform operations at the job site.

Paragraph (6) of this exclusion does not apply to "property damage" included in the "products-completed operations hazard".

k. Damage To Your Product

"Property damage" to "your product" arising out of it or any part of it.

l. Damage To Your Work

"Property damage" to "your work" arising out of it or any part of it and included in the "products-completed operations hazard".

This exclusion does not apply if the damaged work or the work out of which the damage arises was performed on your behalf by a subcontractor.

m. Damage To Impaired Property Or Property Not Physically Injured

"Property damage" to "impaired property" or property that has not been physically injured, arising out of:

- (1) A defect, deficiency, inadequacy or dangerous condition in "your product" or "your work"; or
- (2) A delay or failure by you or anyone acting on your behalf to perform a contract or agreement in accordance with its terms.

This exclusion does not apply to the loss of use of other property arising out of sudden and accidental physical injury to "your product" or "your work" after it has been put to its intended use.

n. Recall Of Products, Work Or Impaired Property

Damages claimed for any loss, cost or expense incurred by you or others for the loss of use, withdrawal, recall, inspection, repair, replacement, adjustment, removal or disposal of:

- (1) "Your product";
- (2) "Your work"; or
- (3) "Impaired property";

if such product, work, or property is withdrawn or recalled from the market or from use by any person or organization because of a known or suspected defect, deficiency, inadequacy or dangerous condition in it.

o. Personal And Advertising Injury

"Bodily injury" arising out of "personal and advertising injury".

p. Access Or Disclosure Of Confidential Or Personal Information And Data-related Liability

Damages arising out of:

- (1) Any access to or disclosure of any person's or organization's confidential or personal information, including patents, trade secrets, processing methods, customer lists, financial information, credit card information, health information or any other type of nonpublic information; or
- (2) The loss of, loss of use of, damage to, corruption of, inability to access, or inability to manipulate electronic data.

This exclusion applies even if damages are claimed for notification costs, credit monitoring expenses, forensic expenses, public relations expenses or any other loss, cost or expense incurred by you or others arising out of that which is described in Paragraph (1) or (2) above.

However, unless Paragraph (1) above applies, this exclusion does not apply to damages because of "bodily injury".

As used in this exclusion, electronic data means information, facts or programs stored as or on, created or used on, or transmitted to or from computer software, including systems and applications software, hard or floppy disks, CD-ROMS, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

q. Employment-Related Practices

"Bodily injury" to:

- (1) A person arising out of any "employment-related practices"; or
- (2) The spouse, child, parent, brother or sister of that person as a consequence of "bodily injury" to that person at whom any "employment-related practices" are directed.

This exclusion applies:

- (1) Whether the injury-causing event described in the definition of "employment-related practices" occurs before employment, during employment or after employment of that person;
- (2) Whether the insured may be liable as an employer or in any other capacity; and
- (3) To any obligation to share damages with or repay someone else who must pay damages because of the injury.

r. Asbestos

- (1) "Bodily injury" or "property damage" arising out of the "asbestos hazard".
- (2) Any damages, judgments, settlements, loss, costs or expenses that:
 - (a) May be awarded or incurred by reason of any claim or suit alleging actual or threatened injury or damage of any nature or kind to persons or property which would not have occurred in whole or in part but for the "asbestos hazard";
 - (b) Arise out of any request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, encapsulate, contain, treat, detoxify or neutralize or in any way respond to or assess the effects of an "asbestos hazard"; or
 - (c) Arise out of any claim or suit for damages because of testing for, monitoring, cleaning up, removing, encapsulating, containing, treating,

detoxifying or neutralizing or in any way responding to or assessing the effects of an "asbestos hazard".

s. Recording And Distribution Of Material Or Information In Violation Of Law

"Bodily injury" or "property damage" arising directly or indirectly out of any action or omission that violates or is alleged to violate:

- (1) The Telephone Consumer Protection Act (TCPA), including any amendment of or addition to such law;
- (2) The CAN-SPAM Act of 2003, including any amendment of or addition to such law;
- (3) The Fair Credit Reporting Act (FCRA), and any amendment of or addition to such law, including the Fair and Accurate Credit Transaction Act (FACTA); or
- (4) Any federal, state or local statute, ordinance or regulation, other than the TCPA or CAN-SPAM Act of 2003 or FCRA and their amendments and additions, that addresses, prohibits or limits the printing, dissemination, disposal, collecting, recording, sending, transmitting, communicating or distribution of material or information.

Damage To Premises Rented To You - Exception For Damage By Fire, Lightning Or Explosion

Exclusions c. through h. and j. through n. do not apply to damage by fire, lightning or explosion to premises while rented to you or temporarily occupied by you with permission of the owner. A separate limit of insurance applies to this coverage as described in Section III - Limits Of Insurance.

COVERAGE B PERSONAL AND ADVERTISING INJURY LIABILITY

1. Insuring Agreement

a. We will pay those sums that the insured becomes legally obligated to pay as damages because of "personal and advertising injury" to which this insurance applies. We will have the right and duty to defend the insured against any "suit" seeking those damages. However, we will have no duty to defend the insured against any "suit" seeking damages for "personal and advertising injury" to which this insurance does not apply. We may, at our discretion, investigate any offense and settle any claim or "suit" that may result. But:

- (1) The amount we will pay for damages is limited as described in Section III - Limits Of Insurance; and
- (2) Our right and duty to defend end when we have used up the applicable limit of insurance in the payment of judgments or

settlements under Coverages A or B or medical expenses under Coverage C.

No other obligation or liability to pay sums or perform acts or services is covered unless explicitly provided for under Supplementary Payments - Coverages A and B.

- b. This insurance applies to "personal and advertising injury" caused by an offense arising out of your business but only if the offense was committed in the "coverage territory" during the policy period.

2. Exclusions

This insurance does not apply to:

a. Knowing Violation Of Rights Of Another

"Personal and advertising injury" arising out of an offense committed by, at the direction or with the consent or acquiescence of the insured with the expectation of inflicting "personal and advertising injury".

b. Material Published With Knowledge Of Falsity

"Personal and advertising injury" arising out of oral, written or electronic publication, in any manner, of material, if done by or at the direction of the insured with knowledge of its falsity.

c. Material Published Prior To Policy Period

"Personal and advertising injury" arising out of oral, written or electronic publication, in any manner, of material whose first publication took place before the beginning of the policy period.

d. Criminal Acts

"Personal and advertising injury" arising out of a criminal act committed by or at the direction of the insured.

e. Contractual Liability

"Personal and advertising injury" for which the insured has assumed liability in a contract or agreement. This exclusion does not apply to liability for damages that the insured would have in the absence of the contract or agreement.

f. Breach Of Contract

"Personal and advertising injury" arising out of a breach of contract, except an implied contract to use another's "advertising idea" in your "advertisement".

g. Quality Or Performance Of Goods - Failure To Conform To Statements

"Personal and advertising injury" arising out of the failure of goods, products or services to conform with any statement of quality or performance made in your "advertisement".

h. Wrong Description Of Prices

"Personal and advertising injury" arising out of the wrong description of the price of goods, products or services.

i. Infringement Of Intellectual Property Rights

(1) "Personal and advertising injury" arising out of any actual or alleged infringement or violation of any intellectual property rights such as copyright, patent, trademark, trade name, trade secret, trade dress, service mark or other designation of origin or authenticity; or

(2) Any injury or damage alleged in any claim or "suit" that also alleges an infringement or violation of any intellectual property right, whether such allegation of infringement or violation is made by you or by any other party involved in the claim or "suit", regardless of whether this insurance would otherwise apply.

However, this exclusion does not apply if the only allegation in the claim or "suit" involving any intellectual property right is limited to:

(1) Infringement, in your "advertisement", of:

(a) Copyright;

(b) Slogan; or

(c) Title of any literary or artistic work; or

(2) Copying, in your "advertisement", a person's or organization's "advertising idea" or style of "advertisement".

j. Insureds In Media And Internet Type Businesses

"Personal and advertising injury" committed by an insured whose business is:

(1) Advertising, broadcasting, publishing or telecasting;

(2) Designing or determining content of web sites for others; or

(3) An Internet search, access, content or service provider.

However, this exclusion does not apply to Paragraphs a., b. and c. of the definition of "personal and advertising injury" under the Definitions Section.

For the purposes of this exclusion, the placing of frames, borders or links, or advertising, for you or others anywhere on the Internet, is not by itself, considered the business of advertising, broadcasting, publishing or telecasting.

k. Electronic Chatrooms Or Bulletin Boards

"Personal and advertising injury" arising out of an electronic chatroom or bulletin board the

insured hosts, owns, or over which the insured exercises control.

l. Unauthorized Use Of Another's Name Or Product

"Personal and advertising injury" arising out of the unauthorized use of another's name or product in your e-mail address, domain name or metatags, or any other similar tactics to mislead another's potential customers.

m. Pollution

"Personal and advertising injury" arising out of the actual, alleged or threatened discharge, dispersal, seepage, migration, release or escape of "pollutants" at any time.

n. Pollution-Related

Any loss, cost or expense arising out of any:

- (1) Request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, contain, treat, detoxify or neutralize, or in any way respond to, or assess the effects of, "pollutants"; or
- (2) Claim or suit by or on behalf of a governmental authority for damages because of testing for, monitoring, cleaning up, removing, containing, treating, detoxifying or neutralizing, or in any way responding to, or assessing the effects of, "pollutants".

o. War

"Personal and advertising injury", however caused, arising, directly or indirectly, out of:

- (1) War, including undeclared or civil war;
- (2) Warlike action by a military force, including action in hindering or defending against an actual or expected attack, by any government, sovereign or other authority using military personnel or other agents; or
- (3) Insurrection, rebellion, revolution, usurped power, or action taken by governmental authority in hindering or defending against any of these.

p. Internet Advertisements And Content Of Others

"Personal and advertising injury" arising out of:

- (1) An "advertisement" for others on your web site;
- (2) Placing a link to a web site of others on your web site;
- (3) Content, including information, sounds, text, graphics, or images from a web site of others displayed within a frame or border on your web site; or

(4) Computer code, software or programming used to enable:

(a) Your web site; or

(b) The presentation or functionality of an "advertisement" or other content on your web site.

q. Right Of Privacy Created By Statute

"Personal and advertising injury" arising out of the violation of a person's right of privacy created by any state or federal act.

However, this exclusion does not apply to liability for damages that the insured would have in the absence of such state or federal act.

r. Violation Of Anti-Trust law

"Personal and advertising injury" arising out of a violation of any anti-trust law.

s. Securities

"Personal and advertising injury" arising out of the fluctuation in price or value of any stocks, bonds or other securities.

t. Recording And Distribution Of Material Or Information In Violation Of Law

"Personal and advertising injury" arising directly or indirectly out of any action or omission that violates or is alleged to violate:

- (1) The Telephone Consumer Protection Act (TCPA), including any amendment of or addition to such law;
- (2) The CAN-SPAM Act of 2003, including any amendment of or addition to such law;
- (3) The Fair Credit Reporting Act (FCRA), and any amendment of or addition to such law, including the Fair and Accurate Credit Transaction Act (FACTA); or
- (4) Any federal, state or local statute, ordinance or regulation, other than the TCPA or CAN-SPAM Act of 2003 or FCRA and their amendments and additions, that addresses, prohibits or limits the printing, dissemination, disposal, collecting, recording, sending, transmitting, communicating or distribution of material or information.

u. Employment-Related Practices

"Personal and advertising injury" to:

- (1) A person arising out of any "employment-related practices"; or
- (2) The spouse, child, parent, brother or sister of that person as a consequence of "personal and advertising injury" to that person at whom any "employment-related practices" are directed.

This exclusion applies:

- (1) Whether the injury-causing event described in the definition of "employment-related practices" occurs before employment, during employment or after employment of that person;
- (2) Whether the insured may be liable as an employer or in any other capacity; and
- (3) To any obligation to share damages with or repay someone else who must pay damages because of the injury.

v. Asbestos

- (1) "Personal and advertising injury" arising out of the "asbestos hazard".
- (2) Any damages, judgments, settlements, loss, costs or expenses that:
 - (a) May be awarded or incurred by reason of any claim or suit alleging actual or threatened injury or damage of any nature or kind to persons or property which would not have occurred in whole or in part but for the "asbestos hazard";
 - (b) Arise out of any request, demand, order or statutory or regulatory requirement that any insured or others test for, monitor, clean up, remove, encapsulate, contain, treat, detoxify or neutralize or in any way respond to or assess the effects of an "asbestos hazard"; or
 - (c) Arise out of any claim or suit for damages because of testing for, monitoring, cleaning up, removing, encapsulating, containing, treating, detoxifying or neutralizing or in any way responding to or assessing the effects of an "asbestos hazard".

w. Access Or Disclosure Of Confidential Or Personal Information

"Personal and advertising injury" arising out of any access to or disclosure of any person's or organization's confidential or personal information, including patents, trade secrets, processing methods, customer lists, financial information, credit card information, health information or any other type of nonpublic information.

This exclusion applies even if damages are claimed for notification costs, credit monitoring expenses, forensic expenses, public relations expenses or any other loss, cost or expense incurred by you or others arising out of any access to or disclosure of any person's or organization's confidential or personal information.

COVERAGE C MEDICAL PAYMENTS

1. Insuring Agreement

- a. We will pay medical expenses as described below for "bodily injury" caused by an accident:

- (1) On premises you own or rent;
 - (2) On ways next to premises you own or rent; or
 - (3) Because of your operations;
- provided that:

- (1) The accident takes place in the "coverage territory" and during the policy period;
- (2) The expenses are incurred and reported to us within three years of the date of the accident; and
- (3) The injured person submits to examination, at our expense, by physicians of our choice as often as we reasonably require.

- b. We will make these payments regardless of fault. These payments will not exceed the applicable limit of insurance. We will pay reasonable expenses for:

- (1) First aid administered at the time of an accident;
- (2) Necessary medical, surgical, X-ray and dental services, including prosthetic devices; and
- (3) Necessary ambulance, hospital, professional nursing and funeral services.

2. Exclusions

We will not pay expenses for "bodily injury":

a. Any Insured

To any insured, except "volunteer workers".

b. Hired Person

To a person hired to do work for or on behalf of any insured or a tenant of any insured.

c. Injury On Normally Occupied Premises

To a person injured on that part of premises you own or rent that the person normally occupies.

d. Workers Compensation And Similar Laws

To a person, whether or not an "employee" of any insured, if benefits for the "bodily injury" are payable or must be provided under a workers' compensation or disability benefits law or a similar law.

e. Athletics Activities

To a person injured while practicing, instructing or participating in any physical exercises or games, sports, or athletic contests.

- f. **Products-Completed Operations Hazard**
Included within the "products-completed operations hazard".

g. **Coverage A Exclusions**

Excluded under Coverage A.

SUPPLEMENTARY PAYMENTS - COVERAGES A AND B

1. We will pay, with respect to any claim we investigate or settle, or any "suit" against an insured we defend:
 - a. All expenses we incur.
 - b. Up to \$1,000 for cost of bail bonds required because of accidents or traffic law violations arising out of the use of any vehicle to which the Bodily Injury Liability Coverage applies. We do not have to furnish these bonds.
 - c. The cost of appeal bonds or bonds to release attachments, but only for bond amounts within the applicable limit of insurance. We do not have to furnish these bonds.
 - d. All reasonable expenses incurred by the insured at our request to assist us in the investigation or defense of the claim or "suit", including actual loss of earnings up to \$500 a day because of time off from work.
 - e. All court costs taxed against the insured in the "suit". However, such costs do not include attorneys' fees, attorneys' expenses, witness or expert fees, or any other expenses of a party taxed to the insured.
 - f. Prejudgment interest awarded against the insured on that part of the judgment we pay. If we make an offer to pay the applicable limit of insurance, we will not pay any prejudgment interest based on that period of time after the offer.
 - g. All interest on the full amount of any judgment that accrues after entry of the judgment and before we have paid, offered to pay, or deposited in court the part of the judgment that is within the applicable limit of insurance.These payments will not reduce the limits of insurance.
2. If we defend an insured against a "suit" and an indemnitee of the insured is also named as a party to the "suit", we will defend that indemnitee if all of the following conditions are met:
 - a. The "suit" against the indemnitee seeks damages for which the insured has assumed the liability of the indemnitee in a contract or agreement that is an "insured contract";
 - b. This insurance applies to such liability assumed by the insured;
 - c. The obligation to defend, or the cost of the defense of, that indemnitee, has also been

assumed by the insured in the same "insured contract";

- d. The allegations in the "suit" and the information we know about the "occurrence" are such that no conflict appears to exist between the interests of the insured and the interests of the indemnitee;
- e. The indemnitee and the insured ask us to conduct and control the defense of that indemnitee against such "suit" and agree that we can assign the same counsel to defend the insured and the indemnitee; and
- f. The indemnitee:
 - (1) Agrees in writing to:
 - (a) Cooperate with us in the investigation, settlement or defense of the "suit";
 - (b) Immediately send us copies of any demands, notices, summonses or legal papers received in connection with the "suit";
 - (c) Notify any other insurer whose coverage is available to the indemnitee; and
 - (d) Cooperate with us with respect to coordinating other applicable insurance available to the indemnitee; and
 - (2) Provides us with written authorization to:
 - (a) Obtain records and other information related to the "suit"; and
 - (b) Conduct and control the defense of the indemnitee in such "suit".

So long as the above conditions are met, attorneys' fees incurred by us in the defense of that indemnitee, necessary litigation expenses incurred by us and necessary litigation expenses incurred by the indemnitee at our request will be paid as Supplementary Payments. Notwithstanding the provisions of Paragraph 2.b.(2) of Section I - Coverage A - Bodily Injury And Property Damage Liability, such payments will not be deemed to be damages for "bodily injury" and "property damage" and will not reduce the limits of insurance.

Our obligation to defend an insured's indemnitee and to pay for attorneys' fees and necessary litigation expenses as Supplementary Payments ends when:

- a. We have used up the applicable limit of insurance in the payment of judgments or settlements; or
- b. The conditions set forth above, or the terms of the agreement described in Paragraph f. above, are no longer met.

SECTION II - WHO IS AN INSURED

1. If you are designated in the Declarations as:

- a. An individual, you and your spouse are insureds, but only with respect to the conduct of a business of which you are the sole owner.
- b. A partnership or joint venture, you are an insured. Your members, your partners, and their spouses are also insureds, but only with respect to the conduct of your business.
- c. A limited liability company, you are an insured. Your members are also insureds, but only with respect to the conduct of your business. Your managers are insureds, but only with respect to their duties as your managers.
- d. An organization other than a partnership, joint venture or limited liability company, you are an insured. Your "executive officers" and directors are insureds, but only with respect to their duties as your officers or directors. Your stockholders are also insureds, but only with respect to their liability as stockholders.
- e. A trust, you are an insured. Your trustees are also insureds, but only with respect to their duties as trustees.

2. Each of the following is also an insured:

a. Employees And Volunteer Workers

Your "volunteer workers" only while performing duties related to the conduct of your business, or your "employees", other than either your "executive officers" (if you are an organization other than a partnership, joint venture or limited liability company) or your managers (if you are a limited liability company), but only for acts within the scope of their employment by you or while performing duties related to the conduct of your business.

However, none of these "employees" or "volunteer workers" are insureds for:

(1) "Bodily injury" or "personal and advertising injury":

- (a) To you, to your partners or members (if you are a partnership or joint venture), to your members (if you are a limited liability company), to a co-"employee" while in the course of his or her employment or performing duties related to the conduct of your business, or to your other "volunteer workers" while performing duties related to the conduct of your business;

- (b) To the spouse, child, parent, brother or sister of that co-"employee" or that

"volunteer worker" as a consequence of Paragraph (1)(a) above;

- (c) For which there is any obligation to share damages with or repay someone else who must pay damages because of the injury described in Paragraphs (1)(a) or (1)(b) above; or

- (d) Arising out of his or her providing or failing to provide professional health care services.

If you are not in the business of providing professional health care services:

- (a) Subparagraphs (1)(a), (1)(b) and (1)(c) above do not apply to any "employee" or "volunteer worker" providing first aid services; and

- (b) Subparagraph (1)(d) above does not apply to any nurse, emergency medical technician or paramedic employed by you to provide such services.

(2) "Property damage" to property:

- (a) Owned, occupied or used by,

- (b) Rented to, in the care, custody or control of, or over which physical control is being exercised for any purpose by

you, any of your "employees", "volunteer workers", any partner or member (if you are a partnership or joint venture), or any member (if you are a limited liability company).

b. Real Estate Manager

Any person (other than your "employee" or "volunteer worker"), or any organization while acting as your real estate manager.

c. Temporary Custodians Of Your Property

Any person or organization having proper temporary custody of your property if you die, but only:

- (1) With respect to liability arising out of the maintenance or use of that property; and
- (2) Until your legal representative has been appointed.

d. Legal Representative If You Die

Your legal representative if you die, but only with respect to duties as such. That representative will have all your rights and duties under this Coverage Part.

e. Unnamed Subsidiary

Any subsidiary, and subsidiary thereof, of yours which is a legally incorporated entity of which you own a financial interest of more than 50% of the voting stock on the effective date of the Coverage Part.

The insurance afforded herein for any subsidiary not named in this Coverage Part as a named insured does not apply to injury or damage with respect to which such insured is also a named insured under another policy or would be a named insured under such policy but for its termination or the exhaustion of its limits of insurance.

3. Newly Acquired Or Formed Organization

Any organization you newly acquire or form, other than a partnership, joint venture or limited liability company, and over which you maintain financial interest of more than 50% of the voting stock, will qualify as a Named Insured if there is no other similar insurance available to that organization. However:

- a. Coverage under this provision is afforded only until the 180th day after you acquire or form the organization or the end of the policy period, whichever is earlier;
- b. Coverage A does not apply to "bodily injury" or "property damage" that occurred before you acquired or formed the organization; and
- c. Coverage B does not apply to "personal and advertising injury" arising out of an offense committed before you acquired or formed the organization.

4. Nonowned Watercraft

With respect to watercraft you do not own that is less than 51 feet long and is not being used to carry persons for a charge, any person is an insured while operating such watercraft with your permission. Any other person or organization responsible for the conduct of such person is also an insured, but only with respect to liability arising out of the operation of the watercraft, and only if no other insurance of any kind is available to that person or organization for this liability.

However, no person or organization is an insured with respect to:

- a. "Bodily injury" to a co-"employee" of the person operating the watercraft; or
- b. "Property damage" to property owned by, rented to, in the charge of or occupied by you or the employer of any person who is an insured under this provision.

5. Additional Insureds When Required By Written Contract, Written Agreement Or Permit

The following person(s) or organization(s) are an additional insured when you have agreed, in a written contract, written agreement or because of a permit issued by a state or political subdivision, that such person or organization be added as an additional insured on your policy, provided the injury or damage occurs subsequent to the execution of the contract or agreement.

A person or organization is an additional insured under this provision only for that period of time required by the contract or agreement.

However, no such person or organization is an insured under this provision if such person or organization is included as an insured by an endorsement issued by us and made a part of this Coverage Part.

a. Vendors

Any person(s) or organization(s) (referred to below as vendor), but only with respect to "bodily injury" or "property damage" arising out of "your products" which are distributed or sold in the regular course of the vendor's business and only if this Coverage Part provides coverage for "bodily injury" or "property damage" included within the "products-completed operations hazard".

- (1) The insurance afforded the vendor is subject to the following additional exclusions:

This insurance does not apply to:

- (a) "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that the vendor would have in the absence of the contract or agreement;
- (b) Any express warranty unauthorized by you;
- (c) Any physical or chemical change in the product made intentionally by the vendor;
- (d) Repackaging, except when unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;
- (e) Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;
- (f) Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;
- (g) Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor; or

(h) "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:

- (i) The exceptions contained in Sub-paragraphs (d) or (f); or
- (ii) Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products.

(2) This insurance does not apply to any insured person or organization, from whom you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.

b. Lessors Of Equipment

(1) Any person(s) or organization(s) from whom you lease equipment; but only with respect to their liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your maintenance, operation or use of equipment leased to you by such person(s) or organization(s).

(2) With respect to the insurance afforded to these additional insureds this insurance does not apply to any "occurrence" which takes place after the equipment lease expires.

c. Lessors Of Land Or Premises

Any person or organization from whom you lease land or premises, but only with respect to liability arising out of the ownership, maintenance or use of that part of the land or premises leased to you.

With respect to the insurance afforded these additional insureds the following additional exclusions apply:

This insurance does not apply to:

- 1. Any "occurrence" which takes place after you cease to lease that land; or
- 2. Structural alterations, new construction or demolition operations performed by or on behalf of such person or organization.

d. Architects, Engineers Or Surveyors

Any architect, engineer, or surveyor, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or

omissions of those acting on your behalf:

- (1) In connection with your premises; or
- (2) In the performance of your ongoing operations performed by you or on your behalf.

With respect to the insurance afforded these additional insureds, the following additional exclusion applies:

This insurance does not apply to "bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of or the failure to render any professional services by or for you, including:

- 1. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- 2. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional services by or for you.

e. Permits Issued By State Or Political Subdivisions

Any state or political subdivision, but only with respect to operations performed by you or on your behalf for which the state or political subdivision has issued a permit.

With respect to the insurance afforded these additional insureds, this insurance does not apply to:

- (1) "Bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the state or municipality; or
- (2) "Bodily injury" or "property damage" included within the "products-completed operations hazard".

f. Any Other Party

Any other person or organization who is not an additional insured under Paragraphs a. through e. above, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

- (1) In the performance of your ongoing operations;

- (2) In connection with your premises owned by or rented to you; or
- (3) In connection with "your work" and included within the "products-completed operations hazard", but only if
 - (a) The written contract or agreement requires you to provide such coverage to such additional insured; and
 - (b) This Coverage Part provides coverage for "bodily injury" or "property damage" included within the "products-completed operations hazard".

However:

- (1) The insurance afforded to such additional insured only applies to the extent permitted by law; and
- (2) If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

With respect to the insurance afforded to these additional insureds, this insurance does not apply to:

"Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:

- (1) The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
- (2) Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of or the failure to render any professional services by or for you.

The limits of insurance that apply to additional insureds is described in Section III - Limits Of Insurance.

How this insurance applies when other insurance is available to the additional insured is described in the Other Insurance Condition in Section IV - Commercial General Liability Conditions.

No person or organization is an insured with respect to the conduct of any current or past partnership, joint venture or limited liability company that is not shown as a Named Insured in the Declarations.

SECTION III - LIMITS OF INSURANCE

1. The Most We Will Pay

The Limits of Insurance shown in the Declarations and the rules below fix the most we will pay regardless of the number of:

- a. Insureds;
- b. Claims made or "suits" brought; or
- c. Persons or organizations making claims or bringing "suits".

2. General Aggregate Limit

The General Aggregate Limit is the most we will pay for the sum of:

- a. Medical expenses under Coverage C;
- b. Damages under Coverage A, except damages because of "bodily injury" or "property damage" included in the "products-completed operations hazard"; and
- c. Damages under Coverage B.

3. Products-Completed Operations Aggregate Limit

The Products-Completed Operations Aggregate Limit is the most we will pay under Coverage A for damages because of "bodily injury" and "property damage" included in the "products-completed operations hazard".

4. Personal And Advertising Injury Limit

Subject to 2. above, the Personal and Advertising Injury Limit is the most we will pay under Coverage B for the sum of all damages because of all "personal and advertising injury" sustained by any one person or organization.

5. Each Occurrence Limit

Subject to 2. or 3. above, whichever applies, the Each Occurrence Limit is the most we will pay for the sum of:

- a. Damages under Coverage A; and
- b. Medical expenses under Coverage C because of all "bodily injury" and "property damage" arising out of any one "occurrence".

6. Damage To Premises Rented To You Limit

Subject to 5. above, the Damage To Premises Rented To You Limit is the most we will pay under Coverage A for damages because of "property damage" to any one premises, while rented to you, or in the case of damage by fire, lightning or explosion, while rented to you or temporarily occupied by you with permission of the owner.

In the case of damage by fire, lightning or explosion, the Damage to Premises Rented To You Limit applies to all damage proximately caused by the same event, whether such damage results from fire, lightning or explosion or any combination of these.

7. Medical Expense Limit

Subject to 5. above, the Medical Expense Limit is the most we will pay under Coverage C for all medical expenses because of "bodily injury" sustained by any one person.

8. How Limits Apply To Additional Insureds

If you have agreed in a written contract or written agreement that another person or organization be added as an additional insured on your policy, the most we will pay on behalf of such additional insured is the lesser of:

- a. The limits of insurance specified in the written contract or written agreement; or
- b. The Limits of Insurance shown in the Declarations.

Such amount shall be a part of and not in addition to Limits of Insurance shown in the Declarations and described in this Section.

The Limits of Insurance of this Coverage Part apply separately to each consecutive annual period and to any remaining period of less than 12 months, starting with the beginning of the policy period shown in the Declarations, unless the policy period is extended after issuance for an additional period of less than 12 months. In that case, the additional period will be deemed part of the last preceding period for purposes of determining the Limits of Insurance.

SECTION IV - COMMERCIAL GENERAL LIABILITY CONDITIONS

1. Bankruptcy

Bankruptcy or insolvency of the insured or of the insured's estate will not relieve us of our obligations under this Coverage Part.

2. Duties In The Event Of Occurrence, Offense, Claim Or Suit

a. Notice Of Occurrence Or Offense

You or any additional insured must see to it that we are notified as soon as practicable of an "occurrence" or an offense which may result in a claim. To the extent possible, notice should include:

- (1) How, when and where the "occurrence" or offense took place;
- (2) The names and addresses of any injured persons and witnesses; and
- (3) The nature and location of any injury or damage arising out of the "occurrence" or offense.

b. Notice Of Claim

If a claim is made or "suit" is brought against any insured, you or any additional insured must:

- (1) Immediately record the specifics of the claim or "suit" and the date received; and
- (2) Notify us as soon as practicable.

You or any additional insured must see to it that we receive written notice of the claim or "suit" as soon as practicable.

c. Assistance And Cooperation Of The Insured

You and any other involved insured must:

- (1) Immediately send us copies of any demands, notices, summonses or legal papers received in connection with the claim or "suit";
- (2) Authorize us to obtain records and other information;
- (3) Cooperate with us in the investigation or settlement of the claim or defense against the "suit"; and
- (4) Assist us, upon our request, in the enforcement of any right against any person or organization which may be liable to the insured because of injury or damage to which this insurance may also apply.

d. Obligations At The Insureds Own Cost

No insured will, except at that insured's own cost, voluntarily make a payment, assume any obligation, or incur any expense, other than for first aid, without our consent.

e. Additional Insureds Other Insurance

If we cover a claim or "suit" under this Coverage Part that may also be covered by other insurance available to an additional insured, such additional insured must submit such claim or "suit" to the other insurer for defense and indemnity.

However, this provision does not apply to the extent that you have agreed in a written contract or written agreement that this insurance is primary and non-contributory with the additional insured's own insurance.

f. Knowledge Of An Occurrence, Offense, Claim Or Suit

Paragraphs a. and b. apply to you or to any additional insured only when such "occurrence", offense, claim or "suit" is known to:

- (1) You or any additional insured that is an individual;
- (2) Any partner, if you or the additional insured is a partnership;

- (3) Any manager, if you or the additional insured is a limited liability company;
- (4) Any "executive officer" or insurance manager, if you or the additional insured is a corporation;
- (5) Any trustee, if you or the additional insured is a trust; or
- (6) Any elected or appointed official, if you or the additional insured is a political subdivision or public entity.

This duty applies separately to you and any additional insured.

3. Legal Action Against Us

No person or organization has a right under this Coverage Part:

- a. To join us as a party or otherwise bring us into a "suit" asking for damages from an insured; or
- b. To sue us on this Coverage Part unless all of its terms have been fully complied with.

A person or organization may sue us to recover on an agreed settlement or on a final judgment against an insured; but we will not be liable for damages that are not payable under the terms of this Coverage Part or that are in excess of the applicable limit of insurance. An agreed settlement means a settlement and release of liability signed by us, the insured and the claimant or the claimant's legal representative.

4. Other Insurance

If other valid and collectible insurance is available to the insured for a loss we cover under Coverages A or B of this Coverage Part, our obligations are limited as follows:

a. Primary Insurance

This insurance is primary except when b. below applies. If other insurance is also primary, we will share with all that other insurance by the method described in c. below.

b. Excess Insurance

This insurance is excess over any of the other insurance, whether primary, excess, contingent or on any other basis:

(1) Your Work

That is Fire, Extended Coverage, Builder's Risk, Installation Risk or similar coverage for "your work";

(2) Premises Rented To You

That is fire, lightning or explosion insurance for premises rented to you or temporarily occupied by you with permission of the owner;

(3) Tenant Liability

That is insurance purchased by you to cover your liability as a tenant for "property damage" to premises rented to you or temporarily occupied by you with permission of the owner;

(4) Aircraft, Auto Or Watercraft

If the loss arises out of the maintenance or use of aircraft, "autos" or watercraft to the extent not subject to Exclusion g. of Section I - Coverage A - Bodily Injury And Property Damage Liability;

(5) Property Damage To Borrowed Equipment Or Use Of Elevators

If the loss arises out of "property damage" to borrowed equipment or the use of elevators to the extent not subject to Exclusion j. of Section I - Coverage A - Bodily Injury And Property Damage Liability;

(6) When You Are Added As An Additional Insured To Other Insurance

Any other insurance available to you covering liability for damages arising out of the premises or operations, or products and completed operations, for which you have been added as an additional insured by that insurance; or

(7) When You Add Others As An Additional Insured To This Insurance

Any other insurance available to an additional insured.

However, the following provisions apply to other insurance available to any person or organization who is an additional insured under this coverage part.

(a) Primary Insurance When Required By Contract

This insurance is primary if you have agreed in a written contract or written agreement that this insurance be primary. If other insurance is also primary, we will share with all that other insurance by the method described in c. below.

(b) Primary And Non-Contributory To Other Insurance When Required By Contract

If you have agreed in a written contract, written agreement, or permit that this insurance is primary and non-contributory with the additional insured's own insurance, this insurance is primary and we will not seek contribution from that other insurance.

Paragraphs (a) and (b) do not apply to other insurance to which the additional insured has been added as an additional insured.

When this insurance is excess, we will have no duty under Coverages A or B to defend the insured against any "suit" if any other insurer has a duty to defend the insured against that "suit". If no other insurer defends, we will undertake to do so, but we will be entitled to the insured's rights against all those other insurers.

When this insurance is excess over other insurance, we will pay only our share of the amount of the loss, if any, that exceeds the sum of:

- (1) The total amount that all such other insurance would pay for the loss in the absence of this insurance; and
- (2) The total of all deductible and self-insured amounts under all that other insurance.

We will share the remaining loss, if any, with any other insurance that is not described in this Excess Insurance provision and was not bought specifically to apply in excess of the Limits of Insurance shown in the Declarations of this Coverage Part.

c. Method Of Sharing

If all of the other insurance permits contribution by equal shares, we will follow this method also. Under this approach each insurer contributes equal amounts until it has paid its applicable limit of insurance or none of the loss remains, whichever comes first.

If any of the other insurance does not permit contribution by equal shares, we will contribute by limits. Under this method, each insurer's share is based on the ratio of its applicable limit of insurance to the total applicable limits of insurance of all insurers.

5. Premium Audit

- a. We will compute all premiums for this Coverage Part in accordance with our rules and rates.
- b. Premium shown in this Coverage Part as advance premium is a deposit premium only. At the close of each audit period we will compute the earned premium for that period and send notice to the first Named Insured. The due date for audit and retrospective premiums is the date shown as the due date on the bill. If the sum of the advance and audit premiums paid for the policy period is greater than the earned premium, we will return the excess to the first Named Insured.
- c. The first Named Insured must keep records of the information we need for premium

computation, and send us copies at such times as we may request.

6. Representations

a. When You Accept This Policy

By accepting this policy, you agree:

- (1) The statements in the Declarations are accurate and complete;
- (2) Those statements are based upon representations you made to us; and
- (3) We have issued this policy in reliance upon your representations.

b. Unintentional Failure To Disclose Hazards

If unintentionally you should fail to disclose all hazards relating to the conduct of your business that exist at the inception date of this Coverage Part, we shall not deny coverage under this Coverage Part because of such failure.

7. Separation Of Insureds

Except with respect to the Limits of Insurance, and any rights or duties specifically assigned in this Coverage Part to the first Named Insured, this insurance applies:

- a. As if each Named Insured were the only Named Insured; and
- b. Separately to each insured against whom claim is made or "suit" is brought.

8. Transfer Of Rights Of Recovery Against Others To Us

a. Transfer Of Rights Of Recovery

If the insured has rights to recover all or part of any payment, including Supplementary Payments, we have made under this Coverage Part, those rights are transferred to us. The insured must do nothing after loss to impair them. At our request, the insured will bring "suit" or transfer those rights to us and help us enforce them.

b. Waiver Of Rights Of Recovery (Waiver Of Subrogation)

If the insured has waived any rights of recovery against any person or organization for all or part of any payment, including Supplementary Payments, we have made under this Coverage Part, we also waive that right, provided the insured waived their rights of recovery against such person or organization in a contract, agreement or permit that was executed prior to the injury or damage.

9. When We Do Not Renew

If we decide not to renew this Coverage Part, we will mail or deliver to the first Named Insured shown in the Declarations written notice of the

nonrenewal not less than 30 days before the expiration date.

If notice is mailed, proof of mailing will be sufficient proof of notice.

SECTION V - DEFINITIONS

1. **"Advertisement"** means the widespread public dissemination of information or images that has the purpose of inducing the sale of goods, products or services through:

- a. (1) Radio;
- (2) Television;
- (3) Billboard;
- (4) Magazine;
- (5) Newspaper; or

b. Any other publication that is given widespread public distribution.

However, "advertisement" does not include:

- a. The design, printed material, information or images contained in, on or upon the packaging or labeling of any goods or products; or
- b. An interactive conversation between or among persons through a computer network.

2. **"Advertising idea"** means any idea for an "advertisement".

3. **"Asbestos hazard"** means an exposure or threat of exposure to the actual or alleged properties of asbestos and includes the mere presence of asbestos in any form.

4. **"Auto"** means:

- a. A land motor vehicle, trailer or semitrailer designed for travel on public roads, including any attached machinery or equipment; or
- b. Any other land vehicle that is subject to a compulsory or financial responsibility law or other motor vehicle insurance law where it is licensed or principally garaged.

However, "auto" does not include "mobile equipment".

5. **"Bodily injury"** means physical:

- a. Injury;
- b. Sickness; or
- c. Disease

sustained by a person and, if arising out of the above, mental anguish or death at any time.

6. **"Coverage territory"** means:

- a. The United States of America (including its territories and possessions), Puerto Rico and Canada;
- b. International waters or airspace, but only if the injury or damage occurs in the course of travel or transportation between any places included in a. above; or

c. All other parts of the world if the injury or damage arises out of:

- (1) Goods or products made or sold by you in the territory described in a. above;
- (2) The activities of a person whose home is in the territory described in a. above, but is away for a short time on your business; or
- (3) "Personal and advertising injury" offenses that take place through the Internet or similar electronic means of communication

provided the insured's responsibility to pay damages is determined in the United States of America (including its territories and possessions), Puerto Rico or Canada, in a "suit" on the merits according to the substantive law in such territory or in a settlement we agree to.

7. **"Employee"** includes a "leased worker". "Employee" does not include a "temporary worker".

8. **"Employment-Related Practices"** means:

- a. Refusal to employ that person;
- b. Termination of that person's employment; or
- c. Employment-related practices, policies, acts or omissions, such as coercion, demotion, evaluation, reassignment, discipline, defamation, harassment, humiliation, discrimination or malicious prosecution directed at that person.

9. **"Executive officer"** means a person holding any of the officer positions created by your charter, constitution, by-laws or any other similar governing document.

10. **"Hostile fire"** means one which becomes uncontrollable or breaks out from where it was intended to be.

11. **"Impaired property"** means tangible property, other than "your product" or "your work", that cannot be used or is less useful because:

- a. It incorporates "your product" or "your work" that is known or thought to be defective, deficient, inadequate or dangerous; or
- b. You have failed to fulfill the terms of a contract or agreement;

if such property can be restored to use by the repair, replacement, adjustment or removal of "your product" or "your work", or your fulfilling the terms of the contract or agreement.

12. **"Insured contract"** means:

- a. A contract for a lease of premises. However, that portion of the contract for a lease of premises that indemnifies any person or organization for damage by fire, lightning or explosion to premises while rented to you or temporarily occupied by you with permission of the owner is subject to the Damage to

Premises Rented To You Limit described in Section III - Limits of Insurance;

- b. A sidetrack agreement;
- c. Any easement or license agreement, including an easement or license agreement in connection with construction or demolition operations on or within 50 feet of a railroad;
- d. An obligation, as required by ordinance, to indemnify a municipality, except in connection with work for a municipality;
- e. An elevator maintenance agreement;
- f. That part of any other contract or agreement pertaining to your business (including an indemnification of a municipality in connection with work performed for a municipality) under which you assume the tort liability of another party to pay for "bodily injury" or "property damage" to a third person or organization, provided the "bodily injury" or "property damage" is caused, in whole or in part, by you or by those acting on your behalf. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

Paragraph f. includes that part of any contract or agreement that indemnifies a railroad for "bodily injury" or "property damage" arising out of construction or demolition operations, within 50 feet of any railroad property and affecting any railroad bridge or trestle, tracks, road-beds, tunnel, underpass or crossing.

However, Paragraph f. does not include that part of any contract or agreement:

- (1) That indemnifies an architect, engineer or surveyor for injury or damage arising out of:
 - (a) Preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
 - (b) Giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage; or
- (2) Under which the insured, if an architect, engineer or surveyor, assumes liability for an injury or damage arising out of the insured's rendering or failure to render professional services, including those listed in (1) above and supervisory, inspection, architectural or engineering activities.

13. "Leased worker" means a person leased to you by a labor leasing firm under an agreement between you and the labor leasing firm, to perform duties related to the conduct of your business. "Leased worker" does not include a "temporary worker".

14. "Loading or unloading" means the handling of property:

- a. After it is moved from the place where it is accepted for movement into or onto an aircraft, watercraft or "auto";
- b. While it is in or on an aircraft, watercraft or "auto"; or
- c. While it is being moved from an aircraft, watercraft or "auto" to the place where it is finally delivered;

but "loading or unloading" does not include the movement of property by means of a mechanical device, other than a hand truck, that is not attached to the aircraft, watercraft or "auto".

15. "Mobile equipment" means any of the following types of land vehicles, including any attached machinery or equipment:

- a. Bulldozers, farm machinery, forklifts and other vehicles designed for use principally off public roads;
- b. Vehicles maintained for use solely on or next to premises you own or rent;
- c. Vehicles that travel on crawler treads;
- d. Vehicles, whether self-propelled or not, maintained primarily to provide mobility to permanently mounted:
 - (1) Power cranes, shovels, loaders, diggers or drills; or
 - (2) Road construction or resurfacing equipment such as graders, scrapers or rollers;
- e. Vehicles not described in a., b., c. or d. above that are not self-propelled and are maintained primarily to provide mobility to permanently attached equipment of the following types:
 - (1) Air compressors, pumps and generators, including spraying, welding, building cleaning, geophysical exploration, lighting and well servicing equipment; or
 - (2) Cherry pickers and similar devices used to raise or lower workers;
- f. Vehicles not described in a., b., c. or d. above maintained primarily for purposes other than the transportation of persons or cargo.

However, self-propelled vehicles with the following types of permanently attached equipment are not "mobile equipment" but will be considered "autos":

- (1) Equipment designed primarily for:
 - (a) Snow removal;
 - (b) Road maintenance, but not construction or resurfacing; or
 - (c) Street cleaning;

- (2) Cherry pickers and similar devices mounted on automobile or truck chassis and used to raise or lower workers; and
- (3) Air compressors, pumps and generators, including spraying, welding, building cleaning, geophysical exploration, lighting and well servicing equipment.

However, "mobile equipment" does not include any land vehicle that is subject to a compulsory or financial responsibility law or other motor vehicle insurance law where it is licensed or principally garaged. Land vehicles subject to a compulsory or financial responsibility law or other motor vehicle insurance law are considered "autos".

16. "Occurrence" means an accident, including continuous or repeated exposure to substantially the same general harmful conditions.

17. "Personal and advertising injury" means injury, including consequential "bodily injury", arising out of one or more of the following offenses:

- a. False arrest, detention or imprisonment;
- b. Malicious prosecution;
- c. The wrongful eviction from, wrongful entry into, or invasion of the right of private occupancy of a room, dwelling or premises that a person or organization occupies, committed by or on behalf of its owner, landlord or lessor;
- d. Oral, written or electronic publication, in any manner, of material that slanders or libels a person or organization or disparages a person's or organization's goods, products or services;
- e. Oral, written or electronic publication, in any manner, of material that violates a person's right of privacy;
- f. Copying, in your "advertisement", a person's or organization's "advertising idea" or style of "advertisement"; or
- g. Infringement of copyright, slogan, or title of any literary or artistic work, in your "advertisement".

18. "Pollutants" mean any solid, liquid, gaseous or thermal irritant or contaminant, including smoke, vapor, soot, fumes, acids, alkalis, chemicals and waste. Waste includes materials to be recycled, reconditioned or reclaimed.

19. "Products-completed operations hazard":

- a. Includes all "bodily injury" and "property damage" occurring away from premises you own or rent and arising out of "your product" or "your work" except:
 - (1) Products that are still in your physical possession; or

(2) Work that has not yet been completed or abandoned. However, "your work" will be deemed completed at the earliest of the following times:

- (a) When all of the work called for in your contract has been completed.
- (b) When all of the work to be done at the job site has been completed if your contract calls for work at more than one job site.
- (c) When that part of the work done at a job site has been put to its intended use by any person or organization other than another contractor or subcontractor working on the same project.

Work that may need service, maintenance, correction, repair or replacement, but which is otherwise complete, will be treated as completed.

b. Does not include "bodily injury" or "property damage" arising out of:

- (1) The transportation of property, unless the injury or damage arises out of a condition in or on a vehicle not owned or operated by you, and that condition was created by the "loading or unloading" of that vehicle by any insured;
- (2) The existence of tools, uninstalled equipment or abandoned or unused materials; or
- (3) Products or operations for which the classification, listed in the Declarations or in a policy Schedule, states that products-completed operations are subject to the General Aggregate Limit.

20. "Property damage" means:

- a. Physical injury to tangible property, including all resulting loss of use of that property. All such loss of use shall be deemed to occur at the time of the physical injury that caused it; or
- b. Loss of use of tangible property that is not physically injured. All such loss of use shall be deemed to occur at the time of the "occurrence" that caused it.

As used in this definition, computerized or electronically stored data, programs or software are not tangible property. Electronic data means information, facts or programs:

- a. Stored as or on;
 - b. Created or used on; or
 - c. Transmitted to or from;
- computer software, including systems and applications software, hard or floppy disks, CD-

ROMS, tapes, drives, cells, data processing devices or any other media which are used with electronically controlled equipment.

21. "Suit" means a civil proceeding in which damages because of "bodily injury", "property damage" or "personal and advertising injury" to which this insurance applies are alleged. "Suit" includes:

- a. An arbitration proceeding in which such damages are claimed and to which the insured must submit or does submit with our consent; or
- b. Any other alternative dispute resolution proceeding in which such damages are claimed and to which the insured submits with our consent.

22. "Temporary worker" means a person who is furnished to you to substitute for a permanent "employee" on leave or to meet seasonal or short-term workload conditions.

23. "Volunteer worker" means a person who

- a. Is not your "employee";
- b. Donates his or her work;
- c. Acts at the direction of and within the scope of duties determined by you; and
- d. Is not paid a fee, salary or other compensation by you or anyone else for their work performed for you.

24. "Your product":

a. Means:

- (1) Any goods or products, other than real property, manufactured, sold, handled, distributed or disposed of by:

(a) You;

(b) Others trading under your name; or

(c) A person or organization whose business or assets you have acquired; and

- (2) Containers (other than vehicles), materials, parts or equipment furnished in connection with such goods or products.

b. Includes

- (1) Warranties or representations made at any time with respect to the fitness, quality, durability, performance or use of "your product"; and

- (2) The providing of or failure to provide warnings or instructions.

c. Does not include vending machines or other property rented to or located for the use of others but not sold.

25. "Your work":

a. Means:

- (1) Work or operations performed by you or on your behalf; and

- (2) Materials, parts or equipment furnished in connection with such work or operations.

b. Includes

- (1) Warranties or representations made at any time with respect to the fitness, quality, durability, performance or use of "your work", and

- (2) The providing of or failure to provide warnings or instructions.