



South Carolina
Department of Transportation

Request for Proposals

Final with Addendum 1



US 301 Over Four Hole Swamp

Design-Build Project

Project ID 0040308

Orangeburg County

May 24, 2022

Addendum 1 – June 7, 2022

US 301 Over Four Hole Swamp
Orangeburg County, South Carolina

A Design-Build Project

Project ID 0040308

REQUEST FOR PROPOSALS (RFP) INDEX

Request for Proposals Instructions

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**REQUEST FOR PROPOSALS
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1. PURPOSE OF REQUEST FOR PROPOSALS

The purpose of this Request for Proposals (RFP) is to select a Proposer to perform the Project services and to design and construct the Project, as further described in this RFP. SCDOT desires that this Project be designed and constructed in a very efficient and timely manner. The proposed Project services are hereinafter referred to as the “Project”. “Proposer,” as used here, includes a firm or firms, consortia, partnerships, limited liability company, sole proprietorship, joint ventures, and other legal entities that has been short-listed and provided the opportunity by South Carolina Department of Transportation (SCDOT) to submit a Proposal in response to this RFP. Partnerships, corporations, limited liability companies (LLC), joint ventures, or other joint entities are collectively referred to herein as joint ventures. The Proposer shall become the Contractor if awarded the Contract.

It is not the intention of SCDOT to receive complete detailed Project analysis and design prior to the selection of a Proposer and the later execution of the Contract. Rather, the response to this RFP shall provide sufficient information to be evaluated by SCDOT to determine if the Proposal is in accordance with the specified process and criteria. The Proposal shall be specific enough on assumptions used in its preparation so as to provide the basis for finalizing the Contract.

2. PROJECT OVERVIEW

2.1 Project Description

SCDOT proposes to replace the existing load restricted southbound bridge as well as the northbound bridge and related roadway approaches along US 301 over Four Hole Swamp in Orangeburg County. The project will also include additional traffic safety countermeasures including 4’ inside and 6’ outside paved shoulders and resurfacing from MM 27.8 to MP 29.2.

SCDOT intends to enter into a contract for services as detailed in the Contract and Contract’s Exhibits. The Proposer shall be responsible for meeting all Project requirements, specifications, and other applicable criteria as set forth in “Attachments A and B”. Attachment B - Supplemental Project Design Criteria is located on the SCDOT Design-Build website at <https://www.scdot.org/business/US301-FourHoleSwamp.aspx>.

2.2 Project Goals

It is the intent of SCDOT to achieve the following goals and objectives for this project.

- Complete the project on schedule to restore capacity of the roadway
- Minimize impacts to the environment
- Complete safety enhancements along the corridor
- No change orders
- Cost certainty

2.3 Project Information

Project Information, containing electronic files applicable to the Project, is posted on the SCDOT Design-Build website. The Project Information Package will include information describing the work performed or obtained by SCDOT prior to entering into the Contract. The Project Information Package may contain additional information not provided at the RFQ stage. The Project Information Package, which is posted on the SCDOT Design-Build website, is for information only and is not part of the Contract. SCDOT makes no representations or warranties regarding the reliability or accuracy of the information contained therein and Proposers assume the risk in using this information. Any available existing roadway plans can be obtained from the SCDOT Design-Build website at <https://www.scdot.org/business/design-build.aspx>. Any available existing bridge plans will be provided to the short-listed Proposers via upload to a secured ProjectWise folder.

Proposers are encouraged to review all available information in the Project Information Package, visit the Project site, and make any additional subsurface explorations or soil tests that the Proposer may desire for purposes of preparing the Proposal. Any information contained in Project Information Package is for information only, is not part of the contract and SCDOT makes no representation or warranties regarding such information. The Proposer shall obtain any permits or permissions required prior to any additional subsurface exploration. The Proposer shall obtain permission from any landowner prior to entering private property. The Proposer shall obtain encroachment permits for any investigations within the right of way.

2.4 SCDOT Point of Contact

Ms. Carmen Wright is the Primary point of contact (POC) and addressee for receiving all communications about the Project with copies to Mr. Brian Gambrell, Alternate #1 POC, and Mr. Brooks Bickley, Alternate #2 POC. The Alternate POCs have been identified in the event of the unavailability of the Primary POC but are not intended to be substitutes for the Primary POC. No contact is allowed with any SCDOT personnel concerning this Project except for questions of an administrative nature or as expressly permitted under this RFP, in either case that shall be submitted in writing to the attention of the Primary SCDOT POC (email is acceptable) with a copy to the Alternate POCs. This restriction is in effect until the earliest of Contract award, termination of this procurement, or such other time as identified by SCDOT to the short-listed Proposers in writing. Any Proposer engaging in prohibited communications may be disqualified at the sole discretion of SCDOT. Written inquiries from the Proposer's POC (as identified in the Proposer's SOQ) shall be sent to:

Mail Delivery: Ms. Carmen Wright
Mr. Brian Gambrell, Mr. Brooks Bickley
Office of Project Delivery
(Office of Chief Counsel, Office of Alternative Delivery)
South Carolina Department of Transportation

E-mail:

955 Park Street, Room Room 101 (Room 302, 421)
Columbia, South Carolina 29202-0191
WrightCL@scdot.org
(GambrellBC@scdot.org, BickleyBJ@scdot.org)

2.5 RFP Committal

The submittal of a Proposal in response to this RFP shall constitute the Proposer's agreement to enter into the Contract with SCDOT for the completion of the Project under the terms set forth in the Contract, Contract Exhibits, attached hereto as "Attachment A" and Supplemental Project Design Criteria, located on the SCDOT Design-Build website as Attachment B.

2.6 NEPA Document/Permit

SCDOT finalized a Programmatic Categorical Exclusion (PCE) for the project on March 18, 2022, that is included in Attachment B. The Proposer shall be responsible for complying with the NEPA determination and all environmental commitments.

The preparation of all necessary permit applications will be the responsibility of the Proposer. Permittee Responsible Mitigation (PRM) may be required for the Project.

2.7 Schedule

Contract time requirements are included in Agreement Article IV.

3. GENERAL INSTRUCTIONS

3.1 Design-Build Selection Method

For this Project, SCDOT chose the two-phased selection method. Phase 1, which identified a short-list of qualified Proposers, is complete.

In Phase 2, SCDOT invites each of the short-listed Proposers to submit their Proposals for completion of the Project. After evaluation of the Proposals, SCDOT plans to award and execute the Contract with a single Contractor. A general overview of Phase 2 includes, but is not limited to, the following steps:

1. SCDOT releases RFP for Industry Review
2. SCDOT holds Open-Forum Meeting with Proposers to clarify/revise RFP
3. SCDOT releases Final RFP
4. Proposers submit Formal ATCs and Confidential Questions
5. SCDOT conducts Confidential One-on-One Meetings with Proposers to discuss Formal ATCs and Confidential Questions, if necessary

6. SCDOT accepts Non-confidential Questions and conducts Open-Forum Meetings with all Proposers, if necessary
7. SCDOT approves/disapproves Formal ATCs
8. Proposers submit Proposals
9. SCDOT evaluates Proposals
10. SCDOT conducts Bid Opening, recommends , and selects a Contractor

These steps will follow the Milestone Schedule in Section 8. SCDOT reserves the right to make changes to the above steps and Milestone Schedule as appropriate to meet the needs of the procurement process. The following paragraphs provide information detailing various steps of the procurement.

3.2 RFP for Industry Review

The intent of distributing the RFP for Industry Review to the short-listed Proposers is to identify and resolve conflicts, errors, mistakes, and/or ambiguities in the RFP, as well as review risk and commercial terms to ensure maximum competition, competitive pricing, and ultimately Project completion.

3.3 Non-Confidential Questions, Clarifications, and Open-Forum Meeting

Once the RFP for Industry Review is issued, the Proposers may submit non-confidential questions and/or comments relating to the RFP. An Open-Forum Meeting with all Proposers present will be held on the date provided in the Milestone Schedule to discuss and edit the RFP for Industry Review. Non-confidential questions will be accepted via electronic upload to ProjectWise on the dates provided in the Milestone Schedule. Proposers shall submit their questions or comments using the Questions Submittal Form which can be downloaded from the SCDOT Design-Build website under the SCDOT Design-Build Standard Forms Section. Responses posed during the Open-Forum Meeting will not be attributed to the submitting Proposer.

All Question Submittal Forms shall be named in accordance with the Design-Build File Naming Conventions from the SCDOT Design-Build website under the Design-Build Resources Section.

<https://www.scdot.org/business/design-build.aspx>

SCDOT reserves the right to accept or reject non-confidential questions received after the milestone deadline. SCDOT will review all questions and/or requests for clarification and, in its sole discretion, may incorporate the responses in the Final RFP. Prior to the Open-Forum Meeting, SCDOT will post on the SCDOT Design-Build website written responses to the questions and request for clarifications received, without attribution to the submitting Proposer. Any new questions or requests for clarification asked during the Open-Forum Meeting shall be submitted to SCDOT in writing within 24 hours of the

meeting. SCDOT's written responses to Proposers' questions and request for clarifications are for general information only, are non-binding, do not constitute legal or other advice, are subject to change with succeeding questions, answers, or addendums, do not amend or form part of the Final RFP, and SCDOT is under no obligation to address responses in revisions to the Final RFP documents.

3.4 Final RFP

After completion of the Questions, Clarifications, and Open-Forum Meeting stage, SCDOT may incorporate the Proposers' comments into the RFP, and a Final RFP will be issued. Items that are revised, inserted, or deleted will be highlighted in the Final RFP. In addition to releasing a highlighted version of the Final RFP, SCDOT will also concurrently release a clean version of the Final RFP where all revisions, insertions, and deletions are not highlighted. It is this clean version of the Final RFP that will be utilized if any future Addendums are required.

3.5 Additional Non-confidential Questions, Clarifications and Open-Forum Meetings

Once the Final RFP is issued, SCDOT will allow Proposers to submit additional non-confidential questions or comments to point out mistakes or ambiguities in the RFP. SCDOT will review all non-confidential questions and/or requests for clarification and, in its sole discretion, may incorporate the responses in the RFP through an Addendum.

SCDOT will respond in writing to the non-confidential questions and requests for clarifications received. The written responses will be posted to the SCDOT Design-Build website within 10 business days of the deadline for submittal of non-confidential questions in the Milestone Schedule. If responses are provided, SCDOT may hold an Open-Forum Meeting where all Proposers will be invited to attend. This meeting may be conducted via conference call or other electronic means. A Proposers' failure to attend this meeting will not relieve the Proposer of the responsibility for estimating properly the difficulty and cost of successfully performing the work, or for proceeding to successfully perform the work without additional expense to SCDOT. SCDOT's written responses to Proposers' questions and requests for clarifications are for general information only, are non-binding, do not constitute legal or other advice, are subject to change with succeeding questions, answers, or addendums, do not amend or form part of the Final RFP, and SCDOT is under no obligation to address responses in revisions to the Final RFP documents.

Non-confidential questions will be accepted via electronic upload to ProjectWise on the dates provided in the Milestone Schedule. Written questions submitted outside of these dates may not be accepted. If deemed necessary by SCDOT, Open-Forum Meetings will be held within 10 business days of the non-confidential questions Milestone Schedule deadline. Any new questions or requests for clarification asked during the Open-Forum Meeting shall be submitted to SCDOT in writing within 24 hours of the meeting. Proposers must use the Question Submittal Form that is provided on the SCDOT Design-Build website under the SCDOT Design-Build Standard Forms Section.

<https://www.scdot.org/business/design-build.aspx>.

3.6 Confidential Questions

Once the Final RFP is issued, SCDOT will allow Proposers to submit confidential questions to provide the Proposer an opportunity to confidentially discuss the contents of its Proposal with SCDOT personnel. Confidential questions will be accepted via electronic upload to ProjectWise on the dates identified in the Milestone Schedule. Written questions submitted outside of these dates may not be accepted.

SCDOT will determine, in its sole discretion, if confidential questions submitted are considered confidential. If submitted confidential questions are determined to be of non-confidential nature or identify an error or omission in the RFP, SCDOT, if it deems appropriate, in its sole discretion, may incorporate them in the RFP through an Addendum. If submitted confidential questions are determined to be of non-confidential nature or if non-confidential questions are asked during any confidential meeting, SCDOT will not respond and the Proposer may resubmit in accordance with Section 3.5.

SCDOT will provide written responses to the submitted confidential questions prior to the Confidential Preliminary ATC Meeting and/or any Confidential One-on-One Formal ATC Meetings. SCDOT's written responses to Proposers' questions are for general information only, are non-binding, do not constitute legal or other advice, are subject to change with succeeding questions, answers, or addendums, do not amend or form part of the Final RFP, and SCDOT is under no obligation to address responses in revisions to the Final RFP documents. Written responses to confidential questions raised during the meeting may be provided if deemed necessary; however, such questions and responses will be identified and narrowly tailored. No oral discussions during the Confidential Preliminary ATC Meeting and/or any Confidential One-on-One Formal ATC Meetings shall be binding on SCDOT.

Confidential questions received on the dates prior to the Confidential Preliminary ATC Meetings with Proposers may be discussed at that meeting. For confidential questions received on the allowable date(s) after the Confidential Preliminary ATC Meeting, written responses will be provided prior to a Confidential One-on-One Questions Meeting/conference call which may be held within 10 business days following receipt of the confidential questions or as determined necessary by the SCDOT POC. Proposers must use the Question Submittal Form that is provided on the SCDOT Design-Build website under the SCDOT Design-Build Standard Forms page.

<https://www.scdot.org/business/design-build.aspx>.

The intent of SCDOT is to maintain confidentiality of the one-on-one meetings. However, SCDOT reserves the right to disclose to all Proposers any issues raised during the one-on-on meetings, except to the extent that SCDOT determines, in its sole discretion, such disclosure would reveal confidential or proprietary information.

3.7 Alternative Technical Concepts

An ATC is a confidential request by a Proposer to modify a contract requirement, specifically for that Proposer, prior to the Proposal due date. Requests for contract modifications that may qualify as ATC's may include, but not be limited to, changes in design criteria, changes in alignments or location of facilities, changes to review and submittal processes, change in material or structure types, change in interchange type, etc. The ATC process provides an opportunity for Proposals to promote innovation, reduce project costs, reduce project duration, find the best solutions, and to maintain flexibility in the procurement process. ATCs are evaluated by SCDOT within the deadline set forth in the Milestone Schedule. In order to be approved, an ATC must be deemed, in SCDOT's sole discretion, to provide a Project that is equal or better in quality or effect on an overall basis than the Project would be without the proposed ATC. Concepts that simply delete or reduce scope, require or are premised upon an addition of a separate SCDOT project (or expand the Project's scope), lower performance requirements, lower standards, or conflict with environmental commitments, are not eligible for consideration as ATCs. SCDOT reserves the right, in its sole discretion, to reject any ATC. No ATC shall be included in the Proposal unless approved by SCDOT in writing prior to the SCDOT's Final Determination for Formal ATCs date on the Milestone Schedule.

As the environmental determination has been made for this Project, the following shall be used during the development of proposals and ATCs:

- Concepts which violate environmental commitments require submittal and approval of an ATC to be eligible for implementation.
- If the environmental determination for the Project evaluated a study area without specifying a preferred alternative:
 - a. Designs which stay within the study area are permissible and do not require submission of an ATC, provided all other RFP requirements are met;
 - b. Any design which extends beyond the study area requires submittal and approval of an ATC to be eligible for implementation.
- If the environmental determination for the Project identified a preferred alternative:
 - a. Shifts in the preferred alternative alignment that stay within the proposed right of way limits presented in the document and do not increase the environmental impacts are permissible without the submission of an ATC, provided all other RFP requirements are met;
 - b. Shifts in the preferred alternative alignment that stay within the proposed right of way limits presented in the document but increase the environmental impacts require submittal and approval of an ATC to be eligible for implementation;
 - c. Any shift in the preferred alternative outside the proposed right of way limits presented in the document will require submittal and approval of an ATC to be eligible for implementation.

3.7.1 Submittal of Preliminary ATCs

SCDOT is not accepting Preliminary ATCs on this project.

3.8 Formal Alternative Technical Concepts

3.8.1 Submittal of Formal ATCs

Each Formal ATC submittal shall include the following.

- **Sequential number:** Each ATC shall be numbered sequentially identifying the submitting Proposer. No multi-option submissions are allowed. (i.e., each option is itself an ATC)
- **Description:** A detailed description and schematic drawings of the configuration of the ATC or other appropriate descriptive information (including, if appropriate, specifications, construction tolerances, special provisions, proposed bridge types, product details, and a traffic operational analysis). Drawings shall clearly indicate what is specifically proposed for this project. Samples/Examples from other projects may be used but specific commitments shall be identified for this project (i.e. member sizes, material requirements, etc. Specification and special provisions shall be supplied if the ATC covers materials, products, etc. not commonly used by SCDOT and not covered in the RFP package or references. Traffic analysis shall provide adequate information to clearly demonstrate the impacts of the Proposal on the Project and shall contain summaries where appropriate to aid in review.
- **Usage:** Locations where and an explanation of how the ATC would be used on the Project.
- **Deviations:** Clearly identify the sections and page numbers in the RFP which is deviated and requires submission of an ATC. Include an explanation of the nature of the proposed deviation and a request for approval of such deviations or a determination that the ATC is consistent with the requirements of the RFP. If consistent with the RFP, please provide the sections and page numbers in the RFP which address the concept.
- **Justification:** Justify use of the ATC and why the deviations from the requirements of the RFP should be allowed.
- **Schedule:** Proposed changes to the Project schedule if applicable. If early delivery is proposed, Proposer shall clearly define any proposed liquidated damages or effect to the Contract if the early date is not met.
- **Impacts:** Identify potential impacts on vehicular traffic, safety, community, utilities, right of way, and the environment.
- **History:** A detailed description of other projects where the ATC has been used under comparable circumstances, the success of such usage, and names and telephone numbers of project owners that can confirm such statements.

- **Risks:** A description of added risks to SCDOT and other persons/entity associated with implementing the ATC.
- **Costs:** An estimate of the impact of the ATC on the Proposal Price and the ATC implementation costs to SCDOT, FHWA, Contractor, or other person during construction, maintenance and operations.
- **Quality:** A description of how the ATC is equal or better in quality and performance than the requirements of the RFP.
- **Operations & Maintenance:** Any changes in operation or maintenance requirements associated with the ATC.

The technical response to each item outlined above shall be provided in the Formal ATC Submittal Form, which can be downloaded from the SCDOT Design-Build website under the SCDOT Design-Build Standard Forms section. Text submissions shall be limited to the form and shall not be provided as attachments. Only drawing details, plan sheets, charts, tables, graphs, specifications, special provisions, manufacturer data sheets, and supporting reports/analyses can be provided as an attachment to the Formal ATC Submittal Form.

A maximum number of five formal ATCs may be submitted to SCDOT by the Proposer for consideration.

All Formal ATCs shall be submitted electronically by uploading to the 01 ATC folder in ProjectWise. Each Formal ATC Submittal Form and supporting information shall be combined in one PDF file per ATC that will be uploaded to ProjectWise. When uploading to ProjectWise, the Proposer shall enter appropriate attributes for each document in the ProjectWise Client upload wizard. The Proposer shall not modify or populate the following fields within the wizard: Sub-stage, Authorization Year, Implemented in Technical Proposal, Implemented in Project, or Successful Proposer. The web version of ProjectWise does not support ATC attribute uploads. The document will not upload without entering the required attribute information.

<https://www.scdot.org/business/design-build.aspx>.

The Proposer shall submit Formal ATCs in accordance with the Milestone schedule. All information being exchanged between Proposers and SCDOT shall occur only on the specific dates shown, unless otherwise directed by the SCDOT POC.

3.8.2 Review of Formal ATCs

Review of formal ATCs shall be in accordance with the information and Milestone Schedule provided herein.

- a. Initial Review: Upon completion of the initial review, SCDOT will make a final determination in accordance with Section 3.8.3, request more information, or provide a conditional response.
- b. More Information Needed: SCDOT may submit written questions to the Proposer as outlined in the Milestone Schedule, and/or request a one-on-one meeting in order to better understand the details of the formal ATC. In addition, for questions related to minor clarifications, SCDOT may submit written questions to the Proposer anytime during the initial review or any subsequent review. Proposers will then have the opportunity to resubmit according to the Milestone Schedule.
- c. One-on-One Meetings: Confidential One-on-One Formal ATC meeting(s) may be scheduled to fully understand the details of any formal ATCs. These meetings will be restricted to those persons involved in the review of the formal ATC and limited to discussions of the Proposer's formal ATC approach and any outstanding confidential questions. The purpose of this meeting is to discuss proposed changes, answer questions, and other relevant issues. Oral responses are for information only and are not binding. Nothing stated at any formal ATC meeting(s) will modify the RFP or Contract Documents. SCDOT reserves the right to disclose to all Proposers any issues raised during the ATC meeting(s) in an addendum. However, SCDOT will not disclose any information pertaining to an individual Proposer's ATCs or other technical concepts to other Proposers.
- d. Conditional Response by SCDOT: If the SCDOT states a formal ATC is not approved in its present form, it may be reconsidered for approval upon satisfaction, in SCDOT's sole discretion, of certain identified conditions that must be met or certain clarifications or modifications that must be made by Proposer. The Proposer shall not have the right to incorporate this formal ATC into the Proposal unless and until the formal ATC has been resubmitted in accordance with the Milestone Schedule, with the conditions, clarification and modifications satisfied, and SCDOT has made a final determination.
- e. No Response from SCDOT: If the Proposer does not receive correspondence from SCDOT in accordance with the Milestone Schedule, the formal ATC is deemed rejected by SCDOT, unless written notification to extend this period is given by SCDOT.

3.8.3 Final Determination of SCDOT

SCDOT will make one of the following written determinations with respect to each properly submitted ATC:

- a. The ATC is approved.
- b. The ATC is not approved.

- c. The submittal does not qualify as an ATC but appears eligible to be included in the Proposal without an ATC (i.e., the concept appears to conform to the RFP and to be consistent with other contract requirements).
- d. The ATC is deemed to take advantage of an error or omission in the RFP, or other documents incorporated into the contract by reference, the ATC will not be considered, and the RFP will be revised to correct the error or omission.
- e. More than one formal ATC has been received on the same topic and SCDOT has elected to exercise its right to issue an addendum to the RFP to include that topic.

Once an ATC has been approved, only the entire ATC is eligible for inclusion into the Proposal. The inclusion of partial ATCs into a Proposal is not allowed, unless the individual ATCs have received separate approval by SCDOT.

Each Proposer, by submittal of its Proposal, acknowledges that the opportunity to submit ATCs was offered to all Proposers, and waives any right to object to SCDOT's determinations regarding acceptability of ATCs.

3.8.4 Incorporation into Proposal

A Proposer has the option to include any or all approved ATCs in its Proposal. If SCDOT responded to an ATC by identifying conditions for approval, Proposer may not incorporate such ATC into the Proposal unless all conditions have been met. Copies of SCDOT's ATC approvals, which shall include the ATC Summary Form for each incorporated ATC, shall be included in the Technical Proposal appendices. Proposals with or without ATCs will be evaluated against the same technical evaluation factors set forth in the Evaluation of Proposals section, and the inclusion of an ATC, including an ATC that provides added value or innovation, may or may not receive a higher technical rating. SCDOT approval of an ATC shall not be considered a guaranty that the Proposal incorporating the ATC will be selected. SCDOT's rejection of an ATC will not entitle the Proposer to an extension of the Proposal submission deadline on the Milestone Schedule or claim for additional costs or delays, including development costs, loss of anticipated profits, or increased material or labor costs. The Total Cost to Complete shown in the Cost Proposal shall reflect any incorporated approved ATCs. Except for incorporating approved ATCs, the Proposal may not otherwise contain exceptions to or deviations from the requirements of the RFP.

3.8.5 Value Engineering

Any ATC approved for incorporation, but that is not incorporated into the Proposal will not be considered a pre-approved value engineering change.

3.8.6 Abandonment of ATC by Proposer

If the approved ATC is abandoned by the Proposer, is unable to obtain required approvals, is otherwise proved to be infeasible, or fails to be constructed for any reason, the successful Proposer is obligated and required to complete the Project utilizing the original RFP requirements at the awarded cost, and shall be responsible for any redesign costs.

Furthermore, if implementation of an ATC will require approval by a third party (including any governmental entity or other permitting authority), and if any such required third-party approval is not subsequently granted, then the Proposer must comply with the requirements of the RFP.

3.8.7 SCDOT's use of Concepts Contained in an ATC

SCDOT expressly reserves the right to adopt and use any ATC, approved or disapproved, by the successful Proposer on this contract or other contracts administered by SCDOT. By submitting a Proposal, all unsuccessful Proposers acknowledge that upon acceptance of the designated stipend, all approved or disapproved ATCs may be included in this contract or other contracts administered by SCDOT and shall become the property of SCDOT without restriction on use. Prior to contract execution, limited negotiations may be conducted as necessary to incorporate the ideas and concepts from unsuccessful Proposers, provided a stipend is accepted by the unsuccessful Proposer. After execution of the Contract, all ATCs from Proposers who have accepted a stipend will be subject to FOIA.

3.8.8 Uniform Proposer Obligations Relating to ATCs

The successful Proposer, in addition to performing all other requirements of the Contract Documents, shall:

- a. Obtain and pay the cost of obtaining all required approvals including approvals required to implement any approved ATC(s) incorporated into the Contract Documents;
- b. Obtain and pay the cost of obtaining any third party approvals required to implement any approved ATC(s) incorporated into the Contract Documents;
- c. Unless otherwise noted in the Contract, be responsible for all costs and/or delays of any nature associated with the implementation of any approved ATC incorporated into the Contract Documents; and
- d. Be solely responsible for reviewing the RFP and determining if the ATC deviates from the revised requirements if SCDOT revises the RFP after a formal ATC has been approved. The Proposer must submit a request for approval of all additional variances required within five (5) business days of receipt of the RFP addendum.

3.9 Confidentiality

Subject to the provisions of these instructions and applicable public disclosure laws applicable to the SCDOT, all Preliminary ATCs and Formal ATC submittals, and related communications will remain confidential until the earlier of execution of the Contract or cancellation of this procurement, provided, however, that, prior to execution of the Contract, Preliminary ATCs and Formal ATC submittals of unsuccessful Proposers that have agreed to and executed a stipend agreement will be subject to disclosure to the selected Proposer in accordance with this Section.

3.10 Stipends

By submitting a Proposal in response to the RFP, the Proposer acknowledges the following:

1. It is the intent of SCDOT to award a stipend of \$50,000.00 to each responsible Proposer that submits a responsive Technical Proposal and Cost Proposal subject to the terms of the Stipend Agreement set forth in Section 13 of the RFP Instructions. Shortlisting of Proposers is evidence of Proposer's responsibility.
2. If Proposer elects to receive a stipend, the Stipend Acknowledgement form and Stipend Agreement shall be signed by Proposer and submitted as part of the unsealed Technical Proposal. The Stipend Agreement will not count against the specified page limit.

If Proposer accepts a stipend, all information obtained by SCDOT under this RFP from or on behalf of such Proposer will become the property of SCDOT without restriction or limitation on its use, including Alternative Technical Concepts (ATCs). If Proposer accepts a stipend, SCDOT shall have unrestricted authority to publish, disclose, distribute, or otherwise use in whole or in part any reports, data, or other materials prepared under this RFP. SCDOT shall retain ownership of all plans, specifications, and related documents. If a Proposer elects not to accept the stipend, SCDOT has no responsibility or obligation to return the materials to the Proposer.

3.11 Changes in Proposer's Organization; Key Individuals

In order for a Proposer to remain qualified to submit a Proposal, unless otherwise approved in writing by SCDOT, the Proposer's organization as identified in the SOQ must remain intact for the duration of the procurement (i.e., until execution of the Contract). If a Proposer wishes to make changes in the Key Individuals identified in its SOQ including, without limitation, additions, deletions, reorganizations, changes in equity ownership interests and/or role changes in or of any of the foregoing, the Proposer shall submit to SCDOT a written request for its approval of the change as soon as possible but in no event later than 10 days prior to submission of the Technical Proposal as set forth in the Milestone Schedule. Any such request shall be addressed to SCDOT POC, accompanied by the information specified for such individual persons in the RFQ.

If a request is made to allow deletion of any member of its team (person or entity) identified in its RFP, the Proposer shall submit such information as may be required by SCDOT to demonstrate that the changed team or key individual meets the RFQ and RFP criteria including being equal or better. The Proposer shall submit its request by uploading the completed submittal online through ProjectWise in .pdf format through the accounts created in connection with submission of the SOQ. SCDOT is under no obligation to approve such requests and may approve or disapprove in writing a portion of the request or the entire request at its sole discretion.

Except as provided herein and in the Contract, a Proposer may not make any changes to its team (including additions, deletions, reorganizations, changes in equity ownership interests and/or role changes) after the deadline noted above. Between such deadline and execution of the Contract, SCDOT, in its sole discretion, will consider requests by Proposers to make changes in the Proposers' organization based only on unusual circumstances beyond the Proposer's control.

In no event shall the Technical and Cost Proposal Due Dates be extended or shall SCDOT incur any liability for any disapproval of a change in Proposer's organization (including specifically any change with respect to Key Individuals).

The Key Individual positions with respect to which approval must be obtained, including the responsibilities, requirements and restrictions (including those relating to individuals filling of multiple Key Individual roles) of those individuals, are the Key Individual positions listed in the RFQ.

3.12 Organizational Conflicts of Interest; Prohibited Communications; Restricted Persons

The Proposer, and all members of Proposer's team (including all Key Individuals) are bound by the organizational conflict of interest, prohibited communications, restricted persons/entities, and related provisions under the RFQ. For any conflicts of interest identified since the submittal of the Proposer's SOQ, Proposers shall submit the required Disclosure of Potential Conflict of Interest Certification (found at <https://www.scdot.org/business/design-build.aspx>). For avoidance of doubt, any change in Proposer's organization requires submission of such certification and a determination by SCDOT

4. PROPOSAL DEVELOPMENT AND SUBMITTAL

Proposals must be submitted separately in two parts, a Technical Proposal and a Cost Proposal. Required forms, confidentiality list, conceptual plans, and approved Formal ATCs used in preparing the Proposer's Cost Proposal shall also be incorporated in the Technical Proposal as Appendices. If a Proposer does not, at a minimum, submit a Technical Proposal Narrative and Technical Proposal Conceptual Plans, the submittal will be considered non-responsive and will not be reviewed/evaluated. Any concepts that conflict with the RFP discovered during the evaluations or after award of the Project, and which are not approved as an ATC, shall not control over the RFP and shall be resolved at no expense to SCDOT (i.e. time or cost). The

determination of whether a concept conflicts with the RFP and the resolution of that conflict shall be at the sole discretion of the SCDOT.

4.1 Technical Proposal

The Technical Proposal Narrative shall contain no more than eight pages, excluding the required appendices. Charts, tables, and schedules used to explain or expand on the Technical Proposal are to be included within the page limit and shall not be inserted into the appendices. No additional information shall be accepted, including, but not limited to, links to external websites, video clips, or simulations/visualizations embedded within the Narrative.

The Technical Proposal Narrative shall be in English on single sided 8.5”x11” letter sized paper, with minimum twelve-point Times New Roman font and double line spacing for text. Any Conceptual Plans shall be provided in black and white on single sided 11”x17” paper unless otherwise noted herein.

The Technical Proposal Appendices shall only include:

Appendix A – Conceptual Plans

- A.1 – Roadway Plans
- A.2 – Maintenance of Traffic Plans and/or Documents
- A.3 – Bridge Plans
- A.4 – CPM Schedule

Appendix B – Required Forms, and Confidential and Proprietary Information Page List

Appendix C – Approved Formal ATCs being incorporated into the Proposer’s Cost Proposal

In the Technical Proposal Narrative, Proposers shall include a discussion on its Project Delivery and Approach or the proposal will be considered non-responsive. The Proposer may choose to include a discussion on Innovation and Added Value; however, the decision to not discuss Innovation and Added Value will not result in a non-responsive proposal. The Technical Proposal Narrative shall be developed in the following sequence:

1. Describe the Project Delivery & Approach by discussing/providing the following. (40 points).
 - a. Identify the proposed schedule for implementing the Project. Include the sequence of construction. Describe methods that will allow a reduction in the overall construction scheduled for the Project. As part of the Technical Proposal Appendices, provide Critical Path Method (CPM) Schedule, graphically, that shows the expected plan, include the following items at a minimum:
 - Design phases/breakdown

- Start and finish milestones for all segments, sections, or phases
 - Details of traffic control plans
 - Traffic shifts
 - Special contract requirements
 - Known or expected risks
 - Other activities or relationships that are critical to the Proposer's Project design or construction.
- b. Describe Team's approach for maintaining traffic while avoiding and minimizing impacts to the traveling public.
 - c. Describe the proposed design submittal process and include a chart showing anticipated deliverables in sequence that will allow SCDOT to conduct efficient and complete reviews. Include discussion of how any proposed Project phasing/segmentation will be addressed in the design submittal and review process. Dates do not need to be included in the chart showing anticipated deliverables.
 - d. Describe the proposed approach to Quality Control and understanding of the Quality Assurance Program. Discuss the roles of the Proposer and SCDOT for all aspects of construction of the Project. Discuss compliance with required standards, testing laboratories, mix designs and material certifications processes.
 - e. Discuss the proposed approach to addressing any unique characteristics of the Project and mitigating any risk items identified by the Proposer.
2. There are 100 Quality Credit points available. In order to receive **qualitative Quality Credit Points**, the Proposer may respond to the items below within the **Quality Credit Commitment Matrix**. The quality credit points assigned will be based on commitments beyond the minimum requirements of the RFP which are **included summarized** in the **Quality Credit Commitment Matrix**. In the matrix, describe the Proposer's Innovation and Added Value to the Project that clearly provides additional benefit to SCDOT or the public. An innovative feature of a Proposal means proposing practices that are not standard or customary to the industry, nonetheless safely, efficiently, and effectively accomplish the same goal. Innovation may include the Proposer's means and methods, roadway alignments, approach to Project, etc. If the Proposer wishes SCDOT to consider items, including Formal ATCs previously authorized for inclusion in the Proposal, to be innovative or to provide additional quality, these items **must shall** be included in the **Quality Credit Commitment Matrix to be eligible for any of these points**. However, SCDOT reserves the right to assign points for all items deemed innovative and favorable to SCDOT or the public that **have not been identified in this section. In addition,** the Proposer should consider, but not be limited to, the following items.

a. Minimizing impacts to traffic including:

- Traffic shifts
- Temporary lane closures
- Construction Stages

- b. Reducing construction duration through the use of:
 - Materials
 - Designs
 - Construction methods
- c. Minimizing future maintenance costs/impacts to traffic including:
 - Materials
 - Designs
 - Construction methods
- d. Minimizing environmental impacts

All Project commitments above and beyond the requirements of the RFP shall be summarized in the Quality Credit **Commitment** Matrix, provided at the end of this document in a clear and concise manner, and shall become part of the contract. The completed Quality Credit **Commitment** Matrix shall be included as an Appendix of the Proposers Technical Proposal

In the Technical Proposal Appendices, Proposers shall provide the following items.

- 3. Appendix A.1: Provide Conceptual Roadway Plans (10 points). The intent of scoring Proposer's conceptual roadway plans is for SCDOT to understand that the proposer clearly demonstrates its understanding of requirements of the RFP and the Team's approach to meet those requirements. The quality of the plans will be reviewed and scored for compliance with RFP requirements, including Formal ATC's authorized for inclusion in the proposal, if any, rather than plan development/preparation conformance. The following shall be provided.
 - a. Typical sections for all roadways shall include as a minimum (11"x17" plan sheets):
 - Design speed
 - Functional classification
 - Lane configuration and widths
 - Shoulder and median widths
 - Cross slopes
 - Point of grade
 - Notes and details as necessary
 - b. Plan and profile for the entire project limits including interchange layout (11"x17" plan sheets).

Plan view shall include as a minimum:

- Geometric layout with reference data

- Superelevation data
- Taper lengths
- Deceleration/acceleration lengths
- Construction limits
- Existing and proposed Right of Way
- Lane alignment
- Clear zone limits
- Horizontal clearance at obstructions (any critical locations)
- Roadside barriers (location and type)
- Bridge and box culverts
- Limits of retaining walls
- Indicate any design exceptions approved in the RFP
- Material Staging and Laydown Areas

Profile view shall indicate:

- Grades & elevations
 - Vertical curvature (PI station & elevation, length & K value, stopping site distance design speed met)
 - Bridge clearance envelopes
- c. Cross sections only where necessary to indicate a significant difference from the conceptual plans in the Project Information Package. These should be limited to only those showing a significant change and may be segmented for only the areas where changes occur (11"x17" plan sheets).
 - d. Special emphasis details (where needed to clearly demonstrate understanding and approach - isolated locations such as ramp ties, wall types, etc.) (11"x17" plan sheets).
4. Appendix A.2: Provide Conceptual Maintenance of Traffic Plans (20 points). The plans shall depict the number of construction stages and a staging narrative within those plans to include duration of each stage. The plans may be color coded and can be provided on roll plots at 1" = 200' on 36" width x 8' length sheets for the entire projects limits including interchanges, as applicable. Plan scale and detail for critical areas shall be appropriate for demonstrating transitions, directional flow, and all items below.
- a. Plan for areas deemed critical by the design team for staging concerns. These areas may require cross sections for more detail.
 - b. Plan for access to the median work zone (ingress and egress).
 - c. Plan for maintaining positive temporary drainage during stages.
 - d. Plan for notifying the traveling public of upcoming stages.
5. Appendix A.3: Provide Conceptual Bridge Plans which shall consist of the following (30 points).

- a. Plan and profile of bridge showing horizontal and vertical clearances and expansion joint locations and types of joint materials.
 - b. Superstructure cross sections and substructure elevations showing pertinent structural elements, dimensions, and types of bearings.
 - c. Construction staging plan for bridge work including dimensions of temporary roadway widths both on the bridges and, where applicable, on the roadway beneath the bridges.
 - d. Bridge construction access plan showing areas used to access the bridge work and showing proposed equipment and material handling locations and staging.
 - e. Retaining wall envelopes at the bridge ends showing top of wall, ground lines, and bottom of wall (required only if retaining walls are proposed).
6. Appendix A.4: CPM Schedule, include the following items at a minimum:
- a. Design phases/breakdown
 - b. Start and finish milestones for all segments, sections, or phases
 - c. Details of traffic control plans
 - d. Traffic shifts
 - e. Utility windows
 - f. Right-of-Way acquisitions/right-of-entry
 - g. Special contract Requirements
 - h. Known or expected risks
 - i. Other activities or relationships that are critical to the Proposer's Project Design or construction
7. Appendix B: Required Forms, and Confidential and Proprietary Information include.
- a. Stipend Acknowledgement form
 - b. Stipend Agreement
 - c. EEO Certificate
 - d. Non-Collusion Certificate
 - e. Notice of Receipt of Addendum
 - f. Updated Organization Chart and Notarized Statement of Availability of Key Individuals
- If SCDOT has approved the replacement of Key Individuals since short-listing, provide an updated organizational chart from the Proposer's Statement of Qualifications incorporating the approved changes by the SCDOT.
 - The Proposer shall include a written statement from each direct employer, cosigned by Proposer's Project Manager, with respect to each Key Individual indicating that each such Key Individual identified on the original organizational chart submitted with the SOQ or the updated organizational chart reflecting SCDOT approvals will be available, barring any unforeseen circumstances, at the earliest of the times and durations identified in the RFQ and RFP, until expiration of the Warranty Period, or such earlier date as the

Contract is terminated or SCDOT releases, in writing, such Key Individual from this requirement.

- g. Confidential and Proprietary Information Page List (See Section 4.4)
 - h. Prequalification certificate for Proposer (lead contracting entity) identified in the organization chart. If the Proposer is a Joint Venture, prequalification certificates for each individual member and/or partner, as well as for the Joint Venture.
 - i. A copy of the joint venture organizational agreement, if not already submitted with the SOQ. Regardless if previously submitted, if a joint venture, consortium, limited liability company, or corporation, Proposer shall demonstrate clearly the joint and several liability to SCDOT of its joint venture, consortium, or limited liability company members or corporation's shareholders, which may be evidenced in organizational documents or by separate certificate signed by Proposer and Proposer's members or shareholders
 - j. Quality Credit **Commitment** Matrix.
8. Appendix C: Copies of approved Formal ATCs being incorporated into the Proposer's Cost Proposal.

The Technical Proposal Narrative and Conceptual Plans submitted as a part of the Technical Proposal will be considered a commitment and shall become part of the Contract. If awarded the Project, the Proposer commits to deliver this Project as set forth in their Technical Proposal and further agrees to correct all non-conforming aspects, omitted items, and deficiencies at no additional cost to SCDOT. After award, if subsequent revisions to the Technical Proposal are desired by the Proposer, even if within the parameters of the RFP requirements, SCDOT approval will be required. SCDOT reserves the right to utilize the Contract Change Request process to approve any desired revision.

4.2 Cost Proposal

The Cost Proposal shall include the completed Cost Proposal Bid Form and Bid Bond Form provided at the end of this document. The Cost Proposal Bid Form and Bid Bond shall be sealed in a separate envelope and delivered as part of the Cost Proposal per the Milestone Schedule.

4.2.1 Bid Bond

Bid Bonds must be issued by an Eligible Bid Bond Surety (as defined below) registered and authorized to do business in the State of South Carolina. Any person signing a bid bond as an attorney-in-fact shall include with the bid bond evidence of authority to bind the surety. An original, or a photocopy or facsimile of an original, power of attorney is sufficient evidence of such authority. Electronic, mechanically-applied and printed signatures, seals and dates on the power of attorney shall be considered original signatures, seals and dates, without regard to the order in which they were affixed. Proposers shall ensure that the bid bond/proposal is written by a corporate surety company licensed for surety

authority by the Chief Insurance Commissioner of the South Carolina Department of Insurance and has a rating of “A” or better assigned by A.M. Best Company on its most recent Best’s Key Rating Guide (collectively such qualifications constituting an “Eligible Bid Bond Surety”); otherwise, the bond will not be accepted. Proposers shall ensure that the bid bond/proposal guaranty is fully executed and indicates the name of the Proposer, the name of the surety, the project for which the bond is issued, the penal amount of the bond, and that the bond guaranties and names the South Carolina Department of Transportation as the obligee. Proposal guarantees must be included in the Proposer’s response to the RFP on the required form and submitted as part of the sealed Cost Proposal. Failure to furnish a bid bond in the proper form and amount with the response to the RFP may be cause for rejection of the Proposal. Bid bonds shall be payable to SCDOT, shall be for at least five percent (5%) of the total amount of the Cost Proposal, and shall serve as a guarantee deposit that the offer will be carried out to Contract execution.

Failure to execute the Contract, or failure to meet and submit insurance and bond requirements within 20 days of receipt of the Contract, shall result in its bid security being forfeited, and the Notice of Award and Contract will be rescinded and awarded to another Proposer. Withdrawal or attempted withdrawal of a Proposal after the receipt of the Cost Proposal may also result in forfeiture of bid security.

A Proposal submitted without the Bid Bond Form may be deemed non-responsive.

4.3 Proposal Submittal

Proposals must be submitted separately in two parts, a Technical Proposal and a Cost Proposal. Proposers are required to upload the Technical Proposal, signed forms, and appendices, online through ProjectWise in fully-searchable PDF format. Two completed submittals per team will be accepted, one original and one redacted (if the Proposer elects to waive payment of the Stipend), and shall be uploaded by either the lead contracting entity or lead design firm. The original proposal documents that are uploaded to ProjectWise shall be named in accordance with the Design-Build File Naming Conventions. If the Proposer elects to waive payment of the Stipend, redacted Proposal documents shall be uploaded to ProjectWise using the format outlined in the Design-Build File Naming Conventions. The naming conventions requirements can be found at <https://www.scdot.org/business/design-build.aspx>. Proposers are advised of the time required to set up new account. All requests for new accounts must be received 72 hours prior to the Proposal deadline indicated in the Milestone Schedule. More information is available at <https://www.scdot.org/business/design-build-projectwise.aspx>.

Proposers are to physically deliver one sealed, printed copy of the Cost Proposal. Deliver to:

Ms. Carmen Wright

Office of Project Delivery
South Carolina Department of Transportation
955 Park Street, Room 101
Columbia, South Carolina 29202-0191

Proposers are responsible for affecting delivery by the date in the Milestone Schedule. Late submissions will be rejected without opening. SCDOT accepts no responsibility for misdirected or lost Proposals.

4.4 Confidentiality of Proposals

Proposers shall specifically mark as “Confidential” any elements of their respective Technical Proposal and Cost Proposal, as well as any pre-proposal exchanges of information, that they consider to contain confidential or proprietary information, and the release of which would constitute an unreasonable invasion of privacy. All markings must be conspicuous; use color, bold, underlining, or some other method in order to conspicuously distinguish the mark from the other text. Do not mark the entire Proposal as confidential or proprietary. **In the Technical Proposal appendix, Proposer shall include a list of page numbers that contain confidential and/or proprietary information. Failure to include this list in the Technical Proposal appendix waives the confidentiality protection and subjects the information to disclosure in accordance with the law.** In determining whether to release documents, the SCDOT will rely on the Proposer’s marking of each page or portions of pages of documents, as required by these instructions, as being either “Confidential” or “Trade Secret”. Proposer shall be prepared upon request to provide justification of why such materials shall not be disclosed under the South Carolina Freedom of Information Act, Section 30-4-10, et seq., South Carolina Code of Laws (1976) as amended. Proposals will be kept confidential and will not be disclosed, except as may be required by law. Blanket designations of confidentiality (i.e. that do not identify the specific information believed to be confidential) may be disregarded.

The Proposer must submit one complete copy of its Proposal from which it concealed such “Confidential” information, i.e. the redacted copy. Even in the absence of “Confidential” information, the Proposer must submit a redacted copy of its Proposal. The redacted copy should (i) reflect the same pagination as the original, (ii) show the empty space from which information was redacted, and (iii) be submitted electronically. Except for the information concealed, the redacted copy must be identical to its original Proposal, and the SCDOT POC must be able to view, search, copy and print the redacted copy without a password.

4.5 Non-collusion and Equal Employment Opportunity Certification

Proposers shall certify that they have not participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with the submission of this Proposal on this Project. A Proposal submitted without the non-collusion certification may be deemed non-responsive. The non-collusion certification form provided as part of this document shall be submitted as part of the Technical Proposal

and will not count against the specified page limit. Each joint venture team member shall submit a separate non-collusion certification.

Proposers shall complete the Equal Employment Opportunity (EEO) Performance Certification form provided as part of this document. A Proposal submitted without the EEO certification may be deemed non-responsive. The EEO certification form shall be submitted as part of the Technical Proposal and will not count against the specified page limit. Each joint venture team member shall submit a separate EEO certification.

5. EVALUATION OF PROPOSALS

5.1 Evaluation Committee

An Evaluation Committee (“Committee”) will be appointed by SCDOT to review the Proposals. The voting committee members will be comprised of SCDOT employees. The committee may consult with SCDOT employees, Project stakeholders, and/or outside consultants having expertise in the various disciplines required by the Project, including FHWA.

5.2 Proposal Review

The Committee will review the Technical Proposals and determine responsiveness based on the Proposal Development criteria in Section 4. Cost Proposals will be accepted from those Proposers deemed to have responsive Technical Proposals. Proposers that submit a non-responsive Technical Proposal will be sent a letter with an explanation as to the reasons for determining non-responsiveness. All original copies of the non-responsive Technical Proposal(s) will be retained by SCDOT. Reasons for determining a Technical and/or Cost Proposal to be non-responsive may result from, but are not limited to, the following: failure to provide all information requested in the Proposal (including specifically correct completion of the Cost Proposal Bid Form), failure to conform to the material requirements of the RFP, conflict of interests, conditional Proposals. Technical and/or Cost Proposals which impose conditions that modify material requirements of the RFP may be rejected as non-responsive. Proposers will not be given an opportunity to correct any material finding of non-responsiveness. SCDOT reserves the right, in its sole discretion, to disregard, seek clarification on, or waive any minor informality, irregularity, nonconformity, discrepancy, omission, or apparent clerical mistake that, in each case, is unrelated to the substantive content of the Proposal.

5.3 Technical Proposal Evaluation

Technical Score

All Technical Proposals will be evaluated and scored on a scale of 0 to 100 points prior to opening the Cost Proposals. A Technical Proposal Narrative outlining the Proposer’s Project Approach and Delivery which meets the minimum expectations of SCDOT as described in the RFP will be scored at 40 points. Conceptual Plans providing a quality design through sound engineering principles and practices will be scored at 60 points.

Sound engineering principles and practices are those design concepts consistent with the RFP criteria and industry standards that are reliable, safe, and work efficiently as determined by SCDOT. Points will be deducted from the Project Approach and Delivery Technical Narrative and Conceptual Plans for aspects that do not conform to the RFP requirements, have omitted items, and contain deficiencies. At SCDOT’s discretion, points will also be deducted for aspects of a Proposal that lack sound engineering judgement, as determined by SCDOT, in accomplishing the scope of work, incorporate minimal design values in areas where higher values are more commensurate with the design context, or provide unsuitable quality. A Proposer will be deemed non-responsive if the evaluation of their Technical Proposal results in a score less than 70. The following criteria will be used in determining the Technical Score.

Project Delivery and Approach	40 points
Conceptual Roadway Plans	10 points
Conceptual MOT Plans	20 points
Conceptual Bridge Plans	30 points
Required Forms	<u>Pass/Fail</u>
Total Available	100 points

Each member of the Committee will examine each Proposal in detail to measure its contents against the evaluation factors and assign a score to each factor. The Committee will then meet and formulate its collective conclusions. The Committee must discuss significant variations in evaluator’s scores or assessments of technical merit and resolve discrepancies or fully explain them. The Committee will assign the final score for each Technical Proposal by consensus.

The Proposer may be deemed non-responsive if all fully-completed required forms are not included in the Technical Proposal Appendices. SCDOT may, but is not required, to seek omitted required forms prior to evaluation. If the Proposer does not provide the omitted forms in the time allotted by SCDOT, the Proposer shall be deemed non-responsive.

Quality Credit Score

The Technical Proposal Narrative outlining the Proposer’s Innovation and Added Value that, in the opinion of the SCDOT, provide additional benefits and added value to the Project beyond that specified in the RFP requirements will be awarded Quality Credits up to 100 points.

The Proposer’s Innovation and Added Value shown in the Technical Proposal that, in the opinion of SCDOT, provide additional benefits and added value to the Project beyond that specified in the RFP requirements will be awarded Quality Credits up to 100 points.

5.4 Presentations

Proposers who have submitted Technical Proposals in accordance with the requirements of the RFP will be invited by the Committee to make a presentation on the date identified

in the Milestone Schedule. The Committee may prepare Clarification and/or Communication questions and these questions may be sent to the Proposers by the SCDOT POC prior to the presentation. The purpose is to highlight the key elements of its Proposal and to provide an opportunity to orally answer questions through an open dialogue. Proposers will be permitted to ask questions during the presentation. The presentation will be scheduled for 1 hour 20 minutes. SCDOT will terminate the presentation promptly at the end of the allotted time. The format for the Proposer's presentations is:

- Introduction of Key Individuals (Proposer)
- Highlight of Key Elements (maximum of 20 minutes) (Proposer)
- Clarification and Communication Q&A, Open Dialogue (SCDOT and Proposer)
- Wrap-up (Proposer)

The Proposer's attendees may consist of the Proposer's POC, Key Individuals, and other personnel shown on the Proposer's organization chart. However, the number of attendees shall not exceed 12 individuals.

The presentation will not constitute Discussions or negotiations. The Technical Proposal submitted electronically to the SCDOT will be made available to the Proposer via a computer with large monitors suitable for display to the Committee and the Proposer's attendees. The Proposers will be able to navigate through their Proposal and plans via the SCDOT provided computer access.

The Proposers shall not bring additional information, including additional copies of the proposal, additional plan sheets, design calculations or handouts to the presentation and shall limit their presentation to the material provided as a part of their Technical Proposal, and any questions posed by SCDOT.

5.5 Clarifications

SCDOT, at its sole discretion, shall have the right to seek clarifications from any Proposer to fully understand information contained in its response to the RFP. Clarifications mean a written exchange of information which takes place after the receipt of Proposals when award without Discussions is contemplated. For this Project, proposals are intended to be evaluated and award made without Discussion unless Discussions are determined to be necessary by the SCDOT POC. Therefore, Proposer's initial offer should contain the Proposer's best terms from a cost and technical standpoint. At its discretion, SCDOT may elect to hold Discussions, despite conducting clarifications, when circumstances dictate. Clarifications do not have to be sought with any specific number of Proposers and do not have to address specific issues. The purpose of clarifications is to address minor or clerical revisions in a Proposal. Examples include, but are not limited to, transposing numbers, incomplete sentences, and contradictions. The SCDOT POC may submit written questions to any Proposer to clarify a specific section of the Proposal and the Proposer shall respond in writing. SCDOT will acknowledge in writing receipt of the response. Responses will be used by the Evaluation Committee in scoring the Proposal. Clarifications will be incorporated into the Contract and will not alter the

Contract requirements. The SCDOT POC shall have exclusive discretion regarding whether clarification is needed. Clarification can be used by the SCDOT POC at any point in the procurement process. Responses to any request for clarification that would serve to expand or modify the original Proposal, or to impermissibly add, detail, or additional content, will be disregarded.

5.6 Communications

SCDOT, at its sole discretion, shall have the right to seek communications from any Proposer to fully understand information contained in their responses to the RFP. Communications do not have to be held with any specific number of Proposers and do not have to address specific issues. Communications are written exchanges, between SCDOT and Proposers, after receipt of Proposals. The purpose of Communications is to

- enhance the Evaluation Committee’s understanding of Proposals; allow reasonable interpretation of the Proposal; or facilitate the evaluation process;
- address ambiguities in the Proposal or other concerns (e.g., perceived deficiencies, weaknesses, errors, omissions, or mistakes).

Communications shall not be used to cure Proposal deficiencies or material omissions, materially alter the technical or cost elements of the Proposal, and/or otherwise revise the Proposal. The SCDOT POC may submit written questions to any Proposer to seek Communication exchanges on perceived deficiencies, weaknesses, errors, omissions, mistakes, or lack of sound engineering judgement in the Proposal. The Communication process can include a oral exchange. However, the Proposer shall respond in writing to conclude the Communication process. The written responses shall become part of the Contract documents.

SCDOT reserves the right to conduct Discussions if clarifications, presentation or communication exchanges reveal the need to amend the RFP.

5.7 Technical and Cost Proposal Analysis

Upon delivery of the Proposer’s Cost Proposal at the time and date outlined in the Milestone Schedule, the Technical Score and the Quality Credit Score will be provided confidentially in a sealed envelope to each Proposer. After distribution of the scores, SCDOT will convene a closed session meeting; at which time, the Cost Proposals of Proposers with responsive Technical Proposals will be opened so that the analysis may be conducted.

The Total Cost to Complete and the other weighted criteria factors listed under the Technical Proposal Evaluation Section for each respective Proposer will be entered into the weighted criteria formula to determine a total weighed criteria score. Each Total Cost to Complete will be compared against the confidential SCDOT Engineer’s Estimate. SCDOT will analyze the Proposals to determine if an award is justified. Upon

completion of the analysis, the closed session will be adjourned and a public announcement will be made at the time and date outlined in the Milestone Schedule.

If upon analysis, there are no apparent concerns with the Proposals, the total weighted criteria score and the Cost Proposal information along with the Technical Score and Quality Credit Score for each Proposer will be read aloud during the public announcement. SCDOT intends to award the Contract to the Proposer with the highest Weighted Criteria Score. However, the Project may be cancelled after opening, but prior to the issuance of an award, when such action is determined in writing pursuant to the Design-Build Procurement Manual to be in the best interest of the SCDOT. If the RFP is cancelled, Cost Proposals may be returned to the Proposers and a new solicitation may be conducted for the Project.

If upon analysis, there are concerns with the Proposals, the Cost Proposal information, Technical Scores and Quality Credit Scores will not be read aloud and the Proposers will be advised whether SCDOT will hold discussions or cancel the procurement.

5.8 Weighted Criteria Determination

Award of the Contract, if made, will be made to the responsible and qualified Proposer whose submittals generate the highest Weighted Criteria Score. To determine the Weighted Criteria Score, the Proposer's Total Cost to Complete will have a weight of 55, the Proposer's Technical Score will have a weight of 25 and the Proposer's Quality Credit Score will have a weight of 20 for a Total Weight of 100.

The Proposer submitting the lowest Total Cost to Complete will be awarded the maximum number of points, 55. The next-lowest Total Cost to Complete will be awarded points based on the product of: (a) the ratio of the lowest Total Cost to Complete divided by the next-lowest Total Cost to Complete; and (b) 55 points (i.e., the points awarded for the lowest Total Cost to Complete), with such product rounded to the nearest one hundredth of a point. The process will continue for each of the remaining Proposer's Total Cost to Complete, with points being awarded based on the product of: (a) the ratio of the lowest Total Cost to Complete divided by the respective Proposer's Total Cost to Complete; and (b) 55 points (i.e., the points awarded for the lowest Total Cost to Complete), with such product rounded to the nearest one hundredth of a point.

The Technical Score and Quality Credit Score for each Proposer is converted to a percentage and multiplied by the point value assigned to each category, with such product rounded to the nearest one hundredth of a point.

The following formula will be used to determine the Weighted Criteria Scores.

$$\text{Weighted Criteria Score} = \left(\frac{A_{low}}{A_n} \times x_A \right) + \left(\frac{D}{100} \times x_D \right) + \left(\frac{E}{100} \times x_E \right)$$

low the lowest value from the Proposals being scored

n the Proposal that is being scored

- x weight expressed as point values define above in this section
- A Total Cost to Complete all work to be performed under the Contract
- D Technical Score
- E Quality Credit Score

Example for Determining the Weighted Criteria Score

Proposal	Total Cost to Complete (A)	Weighted Cost Score (x=55)	Technical Score (D)	Weighted Technical Score (x=25)	Quality Credit Score (E)	Weighted Quality Credit Score (x=20)	Total Weighted Criteria Score
A	\$30,000,000	55.00	90.2	22.55	56	11.20	88.75
B	N/A	N/A	69	N/A	N/A	N/A	N/A
C	\$38,000,000	43.42	92.2	23.05	64	12.80	79.27
D	\$31,000,000	53.23	93	23.25	72	14.40	90.88

Note: In this example, Proposal B was determined to be non-responsive and Proposal D was determined to be the highest Weighted Criteria Score.

In the event that two or more Proposers are determined to have the same Total Weighted Criteria Score, the award, if made, will be made to the Proposer with the highest weighted score for the criterion with the highest weight.

5.9 Discussions

If necessary, after the Technical and Cost Proposal analyses, SCDOT may hold confidential Discussions with each responsive Proposer relating to aspects of its respective Proposal. “Discussions” are written or oral exchanges with the intent of allowing the Proposers to revise their Proposals. However, after Discussions are concluded, SCDOT reserves the right to proceed with award without revisions to the Proposals.

Discussions are tailored to each Proposer’s Proposal. The Discussion process is intended to assure that Proposers fully understand the requirements of the RFP and that the evaluation team fully understands each qualified Proposer’s Technical Proposal and the Proposer’s ability to perform as needed. Discussions involve only a limited exchange of information. Discussions are not negotiations. The SCDOT POC may discuss with each Proposer deficiencies, significant weaknesses, and other aspects of a Proposal that could be altered or explained in its Proposal. However, the SCDOT POC is not required to discuss every area where the Proposal could be improved. The scope and extent of Discussions are a matter of the SCDOT POC’s judgment. If SCDOT determines that Discussions are necessary, SCDOT will forward a written invitation to the responsive Proposers.

SCDOT reserves the right to hold multiple Discussions at any length of time with all of Proposers. All Discussions shall be controlled by the SCDOT POC. Proposers shall not

communicate with any other SCDOT employees regarding these Discussions except at the appropriate Discussion meetings.

At the conclusion of Discussions, SCDOT may either, 1) issue a Request for Best and Final Offers or 2) cancel the procurement.

5.10 Best and Final Offer

At the conclusion of Discussions, if SCDOT determines that Proposal revisions are warranted, SCDOT may issue a Request for Best and Final Offer (BAFO). Regardless of the length or number of Discussions, there will be only one request for a BAFO. If necessary, SCDOT may also issue an addendum to revise the RFP to allow revisions to clarify and document understandings reached during Discussions. The Request for BAFO will include instructions for preparing and submitting the BAFO and will include a new Milestone Schedule. Proposers submitting a BAFO will not be requested to re-submit any documents which are unchanged from their initial Proposals. Proposers should provide necessary changes to individual paragraphs, as briefly as possible, together with a table of contents, which clarifies where within the initial Proposal the additional information or changed documents would be placed. Proposal revisions shall include a BAFO Acknowledgement Form that acknowledges receiving all RFP amendments, if applicable. If only Cost Proposal revisions are requested, Proposers will revise and resubmit the Cost Proposal, and SCDOT will analyze the Cost Proposals as outlined in Section 5.6. If Technical Proposal revisions are warranted, Proposers will revise and resubmit, and the procurement process will return to Section 5. A new bid bond shall be submitted only if the final Proposal revisions to the Proposer's Cost Proposal are greater than its initial Cost Proposal.

5.11 Protest

5.11.1 Grounds for Protest

Protest of Contents of Solicitation (Invitation For Bids or RFPs or other solicitation documents, whichever is applicable, or any amendment to it, if the amendment is at issue): Any Proposer who is aggrieved in connection with a solicitation document shall file a written protest to SCDOT's Chief Procurement Officer (CPO), PO Box 191, Columbia, SC 29202, within five business days of the date of posting of the solicitation, RFQ, RFP, or other solicitation document or any addendums to it on the SCDOT design-build website.

Protest of Short-listing: Any Protestant who is aggrieved in connection with the selection of short-listed Proposers shall file a written protest with the CPO within five business days of the date the short-list is posted on SCDOT design-build website. Any matter that could have been raised pursuant to the Protest of Contents of Solicitation, section above, may not be raised as a protest of the selection of the short-list. The number of Proposers short-listed is not grounds for a protest.

Protest of Award: Any Protestant who is aggrieved in connection with the award of the Contract shall file a written protest with the CPO within five business days of the date the Notice of Award is posted on SCDOT design-build website. Any matter that could have been raised pursuant to the protest of contents of solicitation or short-listing, section above, may not be raised as a protest of award.

Exclusive remedy: The rights and remedies granted in this section to Proposers, either actual or prospective, are to the exclusion of all other rights and remedies of Proposers against the SCDOT.

Failure to file a timely protest: If protestant fails to request a protest within the five business days, the short-list and award shall be final.

5.11.2 SCDOT Procedures for Protest

Protest: A protest must be in writing, filed with the CPO, and set forth the grounds of the protest and the relief requested with enough specificity to give notice of the issues to be decided. The protest must be received by the CPO within the time provided.

Burden of Proof: The protestant bears the burden of proving the validity of the protest or claim against the SCDOT.

Duty and Authority to Attempt to Settle Protests: Before commencement of an administrative review, the CPO, or a designee of the CPO, may attempt to settle by mutual agreement a protest of an aggrieved Protestant, actual or prospective, concerning the solicitation, short-listing, or award of the Contract. Any settlement reached by mutual agreement shall be approved by the CPO.

Administrative Review and Decision: If, after reasonable attempt, a protest cannot be settled by mutual agreement, the CPO, or a designee, shall promptly conduct an administrative review. The CPO shall commence the administrative review no later than five business days after a reasonable settlement attempt and shall issue a decision in writing within five business days of completion of the review. The decision must state the reasons for the action taken. The decision shall include findings of fact and conclusions of law, separately stated. A copy of the decision along with a statement of appeal rights set forth below must be mailed or otherwise furnished immediately to the protestant.

Finality of Decision and Appeal: The SCDOT's decision pursuant to the above paragraph is final and conclusive. A person adversely affected by the final decision can appeal to circuit court and hereby waives a trial by jury regarding any protest arising out of this procurement and any such trial will be a non-jury trial before the South Carolina Circuit Court in Richland County.

Stay of Award: The Contract award is stayed until issuance of a final decision by the SCDOT. Once a final decision is issued, the filing of a petition to appeal that decision does not stay enforcement of SCDOT's decision to award the Contract.

All Freedom of Information (FOIA) requests will be sent to the FOIA Officer in the SCDOT Office of Chief Counsel.

6. SELECTION OF CONTRACTOR

The Chair of the Committee will present a report regarding the review of the Proposals along with the Technical and Cost Proposal Analysis results to SCDOT Director of Construction's Office and recommend selection of the Proposer with the highest Weighted Criteria Score. Prior to Contract execution, the Director of Construction's Office may conduct limited negotiations on any issues regarding scope, schedule, financing, inclusion of ATCs, inclusion of any concepts submitted by another Proposer (provided a stipend is accepted by the unsuccessful Proposer), or any information provided by the selected Proposer. If, however, no limited negotiations are initiated, then in submitting its Proposal, the recommended Proposer agrees to execute and deliver the Contract in the form as existed, as in the Final RFP (or last addendum, if applicable). The Director of Construction's Office will prepare a Secretary of Transportation Record of Approval Form requesting authorization to award and execute a Contract. Upon approval by the SCDOT Secretary of Transportation, SCDOT will offer a Contract to the selected Proposer. However, if the selected Proposer refuses to execute and deliver the Contract (absent limited negotiations-driven revisions) or if the revised Contract terms are not accepted by the selected Proposer or if the selected Proposer is unable to fulfill the Contract requirements, then Proposer agrees that this constitutes a withdrawal and SCDOT may offer a contract to the Proposer with the next highest Weighted Criteria Score and SCDOT may elect to call upon Proposer's bid bond/proposal guaranty pursuant to the terms thereof.

7. GENERAL INFORMATION

7.1 Reserved Rights

SCDOT reserves the right to terminate the evaluation of one or more of the Proposals if it is determined to be in the best interest of the state to do so.

SCDOT reserves the right, at its sole discretion, to either cancel this solicitation or to re-advertise in another public solicitation when it is in the best interest of the state to do so.

SCDOT reserves the right to reject any and all Proposals, or parts thereof, and/or to discontinue Contract execution with any party at any time prior to final Contract execution.

Except as to stipends under, and subject to the terms and conditions of executed stipend agreement, SCDOT assumes no liability and will not reimburse costs incurred by firms, whether selected or not, in developing Proposals or in Contract execution.

SCDOT reserves the right to request or obtain additional information about any and all Proposals. SCDOT may also issue addendums to the RFP, which will be posted on the Design-Build website and emailed to all Proposers' Points of Contact.

SCDOT reserves the right to modify all dates indicated or projected in this RFP.

SCDOT reserves the right to appoint subcommittees, composed as it sees fit, and to engage outside experts and consultants, in each case to assist the Committee in evaluation of Proposals

SCDOT reserves the right to make independent calculations with respect to numbers and calculations submitted in a Proposal for purposes of evaluation.

SCDOT reserves the right to require confirmation of information furnished by a Proposer, and to require additional information from a Proposer.

SCDOT reserves the right to seek or obtain information from any source that, in SCDOT's view, has the potential to improve SCDOT's understanding and evaluation of Proposals.

SCDOT reserves the right to disqualify any Proposer from the solicitation for violating any rules or requirements hereof, specified in this RFP or under applicable law.

SCDOT reserves the right to add to the short-list any Proposer that submitted an SOQ, in order to replace a short-listed Proposer that withdraws or is disqualified from further participation in this solicitation.

SCDOT reserves the right to disclose information submitted or afforded to SCDOT under this RFP or pursuant to applicable law.

SCDOT reserves the right to exercise any other right reserved or afforded to SCDOT under this RFP and applicable law.

SCDOT reserves the right to exercise its discretion in relation to the matters that are the subject of this RFP as it considers necessary or expedient in light of all circumstances prevailing at the time that SCDOT considers to be relevant.

SCDOT reserves the right to revise or amend the RFP (or any processes hereunder), specifications and/or drawings, including changes to the date the Proposal is due. Such changes, if any, will be announced by an addendum(s) to this RFP. All information relating to this RFP, including pertinent changes/addendums and other applicable information will be posted on SCDOT's Design-Build website <https://www.scdot.org/business/design-build.aspx>. If changes are made to the RFP within 10 days of the due date, the dates identified in the Milestone Schedule may be adjusted accordingly. Proposers are advised to check this site frequently to ensure they have the latest information.

7.2 Other General Terms:

Receipt of an addendum by the Proposer must be acknowledged in the space provided on the Addendum Notice to Proposer Transmittal Form posted on the SCDOT Design-Build website for this Project. Proposers shall submit the signed Notice with its Technical Proposal response to this RFP. Failure to acknowledge an addendum may result in rejection of the Proposal. Explanations or instructions given in a form other than an addendum or ATC response letter shall not be binding.

After award, if an unsuccessful Proposer would like to schedule a debriefing, Proposer shall submit a request within three business days from the date the award notification is posted on the SCDOT Design-Build website for this Project. Only written requests (emails are acceptable) for a debriefing will be scheduled. Failure to request a debriefing within the three business day period waives the opportunity for a debriefing.

Proposer shall be held responsible for the validity of all information supplied in its Proposal, including that provided by potential subcontractors. Should SCDOT subsequently learn that the facts and conditions were not as stated, the Proposal may be rejected or contract terminated for default if after award, in addition to any other remedy available under the contract or by law.

Proposer, by submitting a Proposal, represents that it has read and understands the RFP, its exhibits, attachments and addendums, and that its Proposal is made in compliance with the criteria of the RFP. Proposers are expected to examine the RFP, its exhibits, attachments and addendums thoroughly and should request an explanation of any ambiguities, discrepancies, errors, omissions, or conflicting statements therein. Failure to do so will be at the Proposer's risk. Proposer is responsible for any patent ambiguity in the RFP, its exhibits, attachments and addendums that Proposer does not bring to SCDOT's attention.

Proposal Acceptance Period - By submitting a Proposal, Proposer agrees to hold the Proposal offer available for acceptance a minimum of 90 calendar days after the submission of its Cost Proposal. If a BAFO is requested, Proposer agrees to hold the BAFO available for acceptance a minimum of 90 calendar days after the submission of its BAFO Cost Proposal.

Submission of a Proposer's bid is not considered complete until both the Technical and Cost Proposals are received by SCDOT.

If a Proposer withdraws any time during the procurement, the stipend shall be forfeited and, if the Proposer is the selected Proposer, following evaluation, SCDOT may call upon the bid bond/proposal security pursuant to the terms thereof.

This RFP does not commit SCDOT to enter into the Contract, or proceed with the solicitation. SCDOT and the State of South Carolina assume no obligations, responsibilities or liabilities, fiscal or otherwise, to reimburse all or part of the costs incurred or alleged to have been incurred by parties considering a response to or

responding to this RFP. All such costs shall be borne solely by each responding Proposers.

In no event will SCDOT be bound by, or liable for, any obligations with respect to the Project until such time (if at all) as the Contract has been executed by SCDOT and, then, only to the extent provided in the Contract.

A business day is hereby defined as a day in which SCDOT Headquarters is open for business.

ET is the current Eastern Time as observed in the Eastern Time Zone for this Project.

8. MILESTONE SCHEDULE

Milestone Schedule	Date/Time
Provide RFP for Industry Review to Short-list Proposers	Wednesday, May 04, 2022
Deadline for Proposers to submit Non-Confidential Questions on the RFP for Industry Review	Monday, May 09, 2022 by 7:30am ET
Open-Forum Meeting with Proposers for RFP for Industry Review Non-Confidential Questions/Clarifications	Friday, May 13, 2022 at 10:00am ET
Deadline for Proposers to submit Confidential Questions on the RFP for Industry Review	Monday, May 23, 2022 at 7:30am ET
Issue Final RFP	Tuesday, May 24, 2022
SCDOT Responds Confidential Questions	Wednesday, June 01, 2022
Confidential Questions One-on-One Meetings	Thursday, June 02, 2022
Submittal of Formal ATCs for Initial Review and Submittal of Confidential Questions	Monday, June 13, 2022 by 7:30am ET
SCDOT Responds to Formal ATCs with final determination, asks questions/requests information, or provides conditional responses	Thursday, June 23, 2022
Confidential Formal ATC One-on-One Meetings	Tuesday, June 28, 2022
Submittal of Non-Confidential and Confidential Questions	Wednesday, June 29, 2022 by 2:00pm ET
Resubmittal of Formal ATCs in its final form (no revisions allowed after this submittal, unless requested by SCDOT)	Friday, July 08, 2022 by 2:00pm ET
SCDOT's Final Determination for Formal ATCs	Monday, July 25, 2022
Submittal of Technical Proposals	Monday, August 15, 2022 by 2:00pm ET
Technical Proposal Presentations	August 30, 2022
Submittal of Cost Proposals	Wednesday, September 14, 2022 from 9:00am to 10:00am ET
Public Announcement of the Technical and Cost Proposal Analysis (with team representatives present)	Thursday, September 15, 2022 at 2:00pm ET

9. COST PROPOSAL BID FORM

**US 301 Over Four Hole Swamp
Orangeburg County**

CONTRACTOR: _____

ADDRESS: _____

Provide full Project scope as described in Attachment A.

TOTAL COST TO COMPLETE (A) = _____

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

Date

Printed Name

10. NON-COLLUSION CERTIFICATION

NON-COLLUSION CERTIFICATION

Project ID: 0040308

IN ACCORDANCE WITH THE PROVISIONS OF S.C. CODE ANN. §§ 39-3-10 ET.SEQ., 39-5-10 ET. SEQ., 15 U.S.C. §45; 23 C.F.R. §635.112(F); AND 28 U.S.C. §1746, I HEREBY ACKNOWLEDGE THAT I AM AN OFFICER OF THE PROPOSER FIRM AND, UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE UNITED STATES AND SOUTH CAROLINA, DECLARE, BY MY CERTIFICATION BELOW, THAT THE FOLLOWING IS TRUE AND CORRECT, AND FURTHER, THAT THIS JOINT-VENTURE, FIRM, PARTNERSHIP, ASSOCIATION OR CORPORATION, OR ANY OTHER LEGAL ENTITY HAS NOT, 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 SUBMISSION OF A BID PROPOSAL ON THE ABOVE REFERENCED PROJECT.

BY CHECKING THIS BOX , I CERTIFY THAT I HAVE READ, UNDERSTAND, ACCEPT, AND ACKNOWLEDGE ALL OF THE ABOVE STATEMENTS.

Executed on _____
(Date)

Signed: _____
(Officer/Proposer)

(Title)

(Address)

11. EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

(COMPLETE THIS SECTION FOR FEDERAL PROJECTS ONLY) EQUAL EMPLOYMENT OPPORTUNITY PERFORMANCE

Select the Certification that applies to the PROPOSER:

Certification (1) or Certification (2)

Select the appropriate responses in the applicable Certification:

Certification (1): Pursuant to 41 C.F.R. §60-1.7(b)(1), Previous Equal Employment Opportunity Performance Certification, as the Prospective Prime Contractor, I HEREBY CERTIFY THAT I:

(a) **(HAVE / HAVE NOT)** developed and filed an Affirmative Action Program pursuant to 41C.F.R. §60-2 and/or 60-4;

(b) **(HAVE / HAVE NOT)** participated in a previous contract or subcontract subject to the equal opportunity clause;

(c) **(HAVE / HAVE NOT)** filed with the Joint Reporting Committee, the Director of Office of Federal Contract Compliance, or the Equal Employment Opportunity Commission, all reports due under the applicable filing requirements,

OR

Certification (2): I, HEREBY CERTIFY that as the Prospective Prime Contractor submitting this Proposal, **(CLAIM / DO NOT CLAIM)** exemption from the submission of the Standard Form 100 (EEO-1) due to the fact that it employs a total of less than fifty (50) employees under C.F.R. §60-1.7, or qualifies for an exempted status under 41 C.F.R. §60-1.5.

I FURTHER CERTIFY that the above Certification will be made part of any Subcontract Agreement, or other agreement involved with this project.

Executed on _____, 20 ____ .

Signed: _____
(Officer/PROPOSER)

Title: _____

Company: _____

Address: _____

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by PROPOSERS only in connection with contracts which are subject to the equal opportunity clause. Contracts that are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally, only contracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by Executive Orders or their implementing regulations.

Proposers, Primary Members, or proposed Subcontractors (any tier) and Consultants who have participated in a previous contract subject to the Executive Orders and have not filed the required reports shall note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

12. STIPEND ACKNOWLEDGEMENT FORM

Stipend Acknowledgement Form

**US 301 Over Four Hole Swamp
Orangeburg County**

Proposer: _____

ADDRESS: _____

The undersigned Proposer, hereby:

Waives the stipend for this Project.

Accepts the stipend for this Project.

By accepting the stipend for this Project, Proposer agrees:

- 1) to execute and include the Stipend Agreement in Article XIII of the RFP with its RFP response;
- 2) to submit an invoice with FEIN number for the stipend amount to the SCDOT POC after SCDOT's posting of the Notice of Award on SCDOT's Design-Build Website.;
- 3) to transfer all rights to its Work Product used to develop the Proposal as of the date of this acknowledgement. "Work Product" means all submittals, including ATCs, ideas, innovations, solutions, methods, processes, design concepts, materials, electronic files, marked up drawings, cross sections, quantity lists and intellectual property, made by Proposer during the RFP process, including the Proposal, exchange of information during the pre-Proposal and post-Proposal period.

SCDOT will pay the stipend to each eligible unsuccessful Proposer, who has signed a Stipend Agreement, within ninety (90) days after execution of the Contract or the decision to not award a contract.

Date

Proposer

Print Name

13. STIPEND AGREEMENT

STIPEND AGREEMENT
Project ID: 0040308
US 301 Over Four Hole Swamp
Orangeburg County

THIS STIPEND AGREEMENT (the “Agreement”) is made and entered into as of the ___ day of _____, 20_, by and between the SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION (hereinafter “SCDOT”), and _____ (“Proposer”), with reference to the following facts:

SCDOT issued a Request for Proposal (“RFP”) for design and construction of the above-referenced Design-Build Project (“Project”), pursuant to procurement authority granted in Section 57-5-1625 of the S.C. Code of Laws, 1976, as amended. The RFP provided for payment of stipends as provided herein. Capitalized terms used, but not defined, have the meanings ascribed in the RFP.

NOW, THEREFORE, Proposer hereby agrees as follows:

1. Work Product.

1.1 Proposer shall prepare and submit a responsible and responsive Technical Proposal and Cost Proposal that conforms in all material respects to the requirements and provisions of the RFP, as determined by SCDOT, and are timely received by SCDOT in accordance with the RFP Milestone Schedule.

1.2 By signing this Stipend Agreement, Proposer agrees to transfer full and complete ownership to SCDOT of all Work Product. The Work Product (as defined below) shall become the property of SCDOT without restriction or limitation on its use, without further compensation or consideration, and can be used in connection with this Project or any future projects by SCDOT. Neither Proposer nor any of its team members shall copyright any of the material developed under this Agreement.

1.3 The term “Work Product” shall mean the Proposal and all material, electronic files, marked up drawings, cross sections, quantity lists, submittals, alternative technical concepts (ATC), ideas, innovations, solutions, methods, processes, design concepts, Trade Secrets or confidential information, and intellectual property, made by or produced for Proposer in the development and submission of the Technical and Cost Proposal, including exchanges of information during the pre-Proposal and post-Proposal period.

2. Compensation and Payment.

2.1 A stipend to Proposer for the Work Product described herein shall be \$50,000.00 and is payable to Proposer that was determined to be responsible and (1) submitted a responsive Technical Proposal and responsive Cost Proposal to the RFP which is not selected for award of this Project, or (2) was awarded the Contract but the Contract was terminated by SCDOT for convenience after the Submittal of Proposal Due Date (See Final RFP Milestone schedule) but prior to the Notice to Proceed #1. Responsibility of Proposers and responsiveness of the Technical Proposal and Cost Proposal will be determined by SCDOT as a condition of payment.

2.2 SCDOT will pay the stipend to Proposer as follows, subject (as applicable) to the following conditions:

- (a) Proposer has submitted this signed Stipend Agreement, unchanged with its response to the RFP.
- (b) After posting of the Notice of Award on SCDOT’s Design-Build Website, Proposer has submitted to SCDOT an invoice, with FEIN Number, for the Stipend amount.
- (c) After execution of the Contract or the decision not to award a contract, SCDOT will pay the invoice for the stipend amount to the unsuccessful Proposer meeting the criteria of Section 2.1 within 90 calendar days of receipt of the invoice from Proposer.
- (d) If the procurement is suspended or cancelled prior to the Proposal Due Date (see FINAL RFP Milestone schedule), no stipend will be paid to Proposer.
- (e) After the submittal of Proposals, but prior to award, if the procurement is cancelled, all Proposers that provide a responsive Technical Proposal and Cost Proposal to the final RFP and submitted a signed Stipend Agreement with their RFP shall receive the stipend
- (f) In the event of a Best and Final Offer, only one stipend will be paid to each Proposer that executed a Stipend Agreement and met the other criteria and conditions herein.
- (g) No stipends will be paid for submitting RFQ responses.
- (h) No stipends will be paid to a Proposer who withdraws at any time from this procurement.

2.3 Acceptance by the Proposer of payment of the stipend amount from SCDOT shall constitute a waiver by Proposer of any and all right, equitable or otherwise, to bring any claim in connection with this procurement, procurement process, award of the Contract, or cancellation of this procurement.

2.4 The Proposer awarded the contract shall be not eligible to receive a stipend.

2.5 If Proposer elects to waive payment of the stipend, SCDOT will not use the ideas or information contained in that Proposer's Proposal for this Project. However, the Proposer's Proposal will be subject to the South Carolina Freedom of Information Act.

3. Indemnities.

3.1 Subject to the limitations contained in Section 3.2, Proposer shall indemnify, protect and hold harmless SCDOT and its directors, officers, employees and contractors from, and Proposer shall defend at its own expense, all claims, costs, expenses, liabilities, demands, or suits at law or equity arising, in whole or in part, from the negligence or willful misconduct of Proposer or any of its agents, officers, employees, representatives or subcontractors or breach of any of Proposer's obligations under this Agreement.

3.2 This indemnity shall not apply with respect to any claims, demands or suits arising from use of the Work Product by SCDOT.

4. Compliance With Laws.

4.1 Proposer shall comply with all federal, state, and local laws, ordinances, rules, and regulations applicable to the work performed or paid for under this Agreement and covenants and agrees that it and its employees shall be bound by the standards of conduct provided in applicable laws, ordinances, rules, and regulations as they relate to work performed under this Agreement. Proposer agrees to incorporate the provisions of this paragraph in any subcontract into which it might enter with reference to the work performed pursuant to this Agreement.

4.2 The Proposer agrees (a) not to discriminate in any manner against an employee or applicant for employment because of race, color, religion, creed, age, sex, marital status, national origin, ancestry or disability of a qualified individual with a disability; (b) to include a provision similar to that contained in subsection (a) in any subcontract; and (c) to post and to cause subcontractors to post in conspicuous places available to employees and applicants for employment, notices setting forth the substance of this clause.

5. Assignment.

Proposer shall not assign this Agreement without SCDOT's prior written consent. Any assignment of this Agreement without such consent shall be null and void.

6. Miscellaneous.

6.1 Proposer and SCDOT agree that Proposer, its team members, and their respective employees are not agents of SCDOT as a result of this Agreement.

6.2 This Agreement, together with the RFP, as amended from time to time, the provisions of which are incorporated herein by reference, embodies the entire agreement of the parties. There are no promises, terms, conditions, or obligations other than those contained herein or in the RFP, and this Agreement shall supersede all previous communications, representation, or agreements, either oral or written, between the parties hereto.

6.3 It is understood and agreed by the parties hereto that if any part, term, or provision of this Agreement 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.

6.4 This Agreement shall be governed by and construed in accordance with the laws of the State of South Carolina.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date first written above.

Witness:

Recommended:

Brooks Bickley
Design-Build Program Manager

Witness:

SOUTH CAROLINA DEPARTMENT
OF TRANSPORTATION

By: _____
Jae Mattox
Design-Build Engineer

Proposer

Name of Proposer

By: _____

Its: _____

14. BID BOND FORM

Note: This Bid Bond form is the only means of bid security that will be accepted by the S. C. Department of Transportation.

South Carolina Department of Transportation	Date Bond Executed
BID BOND	
Principal	
Surety	
Amount of Bond 5% OF Total Cost to Complete as shown on the Cost Proposal Bid form	Date of Bid
Project	
<p>KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL, hereinafter "PROPOSER" and SURETY above named are held and firmly bound unto the South Carolina Department of Transportation, hereinafter called the Department, in the sum of the amount stated above, 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.</p> <p>The condition of this obligation is such as to operate as a guarantee that the PROPOSER will fully and promptly execute a contract and cause to be executed bonds acceptable to the Department, all as set forth in Request for Proposal (RFP) for the Project identified above and PROPOSER'S Response to RFP, should the same be accepted, and that not longer than twenty (20) days after the receipt by the PROPOSER of Contract forms from the Department, Proposer will execute the form of Contract included in the RFP on the basis of the terms and conditions set forth in the RFP and PROPOSER'S Response to RFP together with and accompanied by a Performance and Indemnity bond conforming to bond forms located on the Design-Build website under "Standard Forms", in the total amount of said Contract's Contract Price (as defined therein),, and a Payment bond conforming to the bond forms located on the Design-Build website under "Standard Forms", in the amount of 100% of such Contract Price, , and that failure to perform shall be just and adequate cause for the annulment of the awards; and it is fully understood that in the event of the annulment of the award, the amount of this guarantee shall immediately be at the disposal of the Department, not as penalty, but as an agreed liquidated damage and as difficult to determine, agreed between the parties are reasonable under the circumstances existing as of the Proposal Due Date (as defined in the RFP) to compensate the Department for losses its will incur as a result of Proposer's failure to enter into the Contract. Should each and all of the foregoing conditions be fulfilled and Performance and Indemnity and Payment bonds, as set forth in the Proposal, be executed, bonds being satisfactory to the Department, this obligation shall be null and void; otherwise to remain in full force and effect.</p> <p>IN WITNESS THEREOF, the above-burden 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.</p>	
In Presence of: Witness (2 Required) 1. _____ 2. _____	INDIVIDUAL OR PARTNERSHIP PROPOSER _____ (Seal) _____ (Seal)
Attest _____ Secretary Witness (2 Required) 1. _____ 2. _____	Corporate Principal _____ Business Address _____ By _____ Affix Title _____ Corporate Seal
Witness (2 Required) 1. _____ 2. _____	Corporate Surety _____ Business Address _____ By _____ Affix Corporate Title _____ Seal

Note: All signatures and other information must be furnished.

15. QUALITY CREDIT COMMITMENT MATRIX

As described in Article 4.1, Section 2, complete a Quality Credit Commitment Matrix matching the format and column headings shown below.

Commitment Number	Proposal Page Number	Commitment Description

15. QUALITY CREDIT MATRIX

As described in Article 4.1, Section 2, complete a Quality Credit Matrix matching the format and column headings shown below.

Number	Description	Added Value/Benefits	Cost/Schedule Impacts	Self-imposed Assurance

Cost/Schedule Impacts – Describe the Cost and/or Schedule impacts associated with the feature (positive or negative).

Self-imposed Assurance – Discuss any penalties or liquidated damages that will apply in the event the CONTRACTOR cannot implement the feature as described.

AGREEMENT

**AGREEMENT
FOR THE DESIGN & CONSTRUCTION
of**

US 301 OVER FOUR HOLE SWAMP

Orangeburg, South Carolina

A DESIGN-BUILD PROJECT

**BETWEEN
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
AND
NAME OF CONTRACTOR**

_____ day of _____, INSERT YEAR

Project ID 0040308

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US 301 Over Four Hole Swamp
Orangeburg County

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 two bridges on US 301 in Orangeburg County (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 _____ (“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. 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.
5. 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.
6. 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.
7. 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.
8. 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.

9. 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.
10. 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. Exhibit 6 – Environmental Criteria
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 \$ _____. 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 4 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 600 calendar days from Notice to Proceed. The Notice to Proceed shall be no later than 45 days from the effective date of the Agreement. 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 is defined as calendar days from Notice to Proceed to Substantial Work Completion on the Project.
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 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 \$3,400.00 for each day for which the project is not substantially complete, as defined in Article IV.
2. CONTRACTOR shall pay liquidated damages to SCDOT in the amount of \$1,700.00 for each day that Final Completion, as defined in Article IV, is not achieved.
3. 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

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 \$250,000.00 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 \$250,000.00 per occurrence and \$500,000.00 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 \$500,000.00 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. 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.
4. 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. For in-contract utility relocations, the CONTRACTOR shall be responsible for including the impacts in the Project's environmental permit and providing necessary mitigation as required.

5. 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.
6. 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.
7. 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.
8. 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.

9. 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 4, 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 4, 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, elect 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 II.C 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 II.C. 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 II.C.1 or II.C.2 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 II.C.3, 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 II.C.1 and II.C.2, the Indemnified Party may revocably 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 C.1 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 II.C.2, 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 II.C.3, 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 II.G, 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 completed 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 12.2 percent. In meeting the overall goal, .2 percent (a portion of the overall DBE goal) must be met at the time of bid opening and with firms certified as a DBE in the Professional Services industry or demonstrate good faith efforts in meeting the goal. The remaining 12% must be met in any trade in support of Professional Services and/or constructing the project. Information regarding DBE requirements and goals will be included in the RFP. DBE committals for the .8 percent must be submitted no later than 30 calendar 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>

~~The DBE goal on this Project is 12.2 percent of the Contract Price. CONTRACTOR is required to meet the Project DBE goal or submit evidence of Good Faith Efforts in accordance with the SCDOT DBE Supplemental Specifications. As a portion of the overall DBE goal, the DBE goal for Professional Services on this Project is 0.2 percent. The remaining 12.0 percent must be met in any trade in support of Professional Services and/or constructing the Project for other DBE requirements, follow the procedures set forth in the Disadvantaged Business Enterprise (DBE) Supplemental Specification, with particular attention to Part B(2) for design-build.~~

~~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 and can be found at <http://iwww.dot.state.sc.us/Professional-Services/pdf/PSCO-Manual.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

There is an On-The-Job Training requirement for this Project. The CONTRACTOR shall comply with the requirements, including the number of persons to be trained, provided in the Specific Equal Employment Opportunity Responsibilities Training Special Provisions within the Federal Aid Supplemental Specifications found in Exhibit 5. The CONTRACTOR shall submit its plan for On-the-Job Training to SCDOT for written approval prior to commencing construction activities.

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:

(Insert CONTRACTOR'S address here)

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.

US 301 Over Four Hole Swamp
Orangeburg County

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 Construction on behalf of South Carolina Department of Transportation.

Witnesses:

SOUTH CAROLINA DEPARTMENT
OF TRANSPORTATION

By: _____
Robbie Isgett, P.E.
Director of Construction

Date: _____

Recommended:

Jennifer Taylor
Contract Administrator

Witnesses:

CONTRACTOR

Name of Contractor

By: _____

Its: _____

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:

- A. 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;
- B. 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
- C. 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);
- D. 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

Name of Contractor

By: _____

US 301 Over Four Hole Swamp
Orangeburg County

Date: _____

Its: _____

CERTIFICATION OF DEPARTMENT

I hereby certify that I am the Director of Construction 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:

- A. employ or retain, or agree to employ or retain, any firm or person, or
- B. 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 CONSTRUCTION

Date: _____

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: _____

Date: _____

Its: _____

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: _____

Authorized Representative _____

Its: _____

SWORN to before me this

_____ day of _____ 20____

(S) _____

Notary Public for the State of _____

My Commission Expires: _____

EXHIBIT 3

SCOPE OF WORK

EXHIBIT 3 – SCOPE OF WORK

The South Carolina Department of Transportation proposes to replace the existing northbound and southbound bridges along US301 over the Four Holes Swamp (Orangeburg County) with new fixed-span bridges. This design-build project consists of all work necessary to remove the existing bridges and to design and construct new bridges along the existing roadway alignment. Work includes reconstruction of bridge approach roadways and embankments and associated transportation features. Work also includes performing safety modifications including roadway resurfacing, safety shoulder paving, installation of beveled pipe ends on driveway pipes, installation of reflective delineators on all new and existing guardrail, and installation of rumble stripes for approximately 1.4 miles (MM 27.8 to 29.2) along US301 in both northbound and southbound directions as specified in the criteria. The safety modifications will run continuously through the limits described and shall include the area of bridge replacement and roadway approach reconstruction.

SCDOT intends for the route to accommodate one lane of traffic in each direction during construction so that the replacement bridges may be constructed on the existing roadway alignment. Refer to the RFP Instructions and Agreement regarding allowable lane closure duration.

SCDOT values:

- Reduction of impacts to the traveling public - Accelerated bridge construction to reopen roadway to full 4-lane capacity
- Quality plans production and efficient and effective submittal schedules
- Quality construction to produce a durable and easily maintainable facility
- Quality maintenance of traffic scheme, plans and construction to provide effective and safe movement of traffic

For a full understanding of the project scope and the criteria of 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. It is the responsibility of the Engineer to get clarification from the Department if a question arises from the use of the below exhibits. 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 Marking

Part 2. Work Zone Traffic Control

Exhibit 4e – Hydraulic Design Criteria

Exhibit 4f – Geotechnical Design Criteria

Exhibit 4z – Project 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 4z 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, 2016
- AASHTO An Informational Guide On Fencing Controlled Access Highways, 1990
- AASHTO Drainage Manual, 2014 first edition
- AASHTO Drainage Manual, Appendix 17A
- AASHTO Guide for the Development of Bicycle Facilities, 2012
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities, 2nd Edition
- AASHTO Highway Drainage Guidelines, 2007
- AASHTO LRFD Bridge Design Specifications, 2017, 8th Edition
- AASHTO LRFD Bridge Construction Specifications, 2017, Fourth Edition
- AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges, 2015 Interim
- AASHTO LRFD Bridge Design Guide Specifications for GFRP-Reinforced Concrete, 2018, 2nd Edition
- AASHTO Guide Specifications for Analysis and Identification of Fracture Critical Members and System Redundant Members, 1st Edition with 2022 Interim
- AASHTO Guide Specifications for Bridges Vulnerable to Coastal Storms, 2008 Edition
- AASHTO Guide Specification for Service Life Design of Highway Bridges, 2020, 1st Edition
- AASHTO Manual for Assessing Safety Hardware (MASH)
- AASHTO Manual for Bridge Evaluation, latest edition
- AASHTO Roadside Design Guide, 2011, 4th Edition
- AASHTO Roadway Lighting Design Guide, latest edition
- AASHTO Standard Specifications for Highway Bridges, 17th Edition
- AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals, latest edition
- AASHTO Highway Safety Manual
- AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, latest edition (Only for Standard 35' Luminaire Poles and High Mast Luminaire Poles)
- AASHTO/AWS D1.5/D1.5M: 2020 Bridge Welding Code, 8th Edition
- AASHTO/AWS D1.1/D1.1M: 2020 Structural Welding Code – Steel, 24th Edition
- AASHTO/AWS D1.4/D1.4M: 2018 Structural Welding Code – Reinforcing Steel, 8th Edition
- AASHTO “Standard Specifications for Transportation Materials and Methods of Sampling and Testing” 2013 Thirty-Third Edition
- ACI 318 Building Code and Commentary
- ASCE’s “Minimum Design Loads for Buildings and Other Structures”, latest edition

EXHIBIT 4 – PROJECT DESIGN CRITERIA

- ANSI C2 National Electrical Safety Code, latest edition
- FEMA Regulations, 44CFR Chapter 1
- FHWA Manual on Uniform Traffic Control Devices, Latest edition
- FHWA Report No. FHWA-SA-14-067 Diverging Diamond Interchange Informational Guide
- NCHRP Report 672, Roundabouts: An Informational Guide – Second Edition
- NFAP-70 National Electrical Code, latest edition
- International Building Code, latest edition
- PCI CB-02-16: Recommended Practice for Lateral Stability of Precast, Prestressed Concrete Bridge Girders
- PCI CB-04-20: User Manual for Calculating Lateral Stability of Precast, Prestressed Concrete Bridge Girders
- 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, December 2014 with updates
- 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 Bridge Inspection Guidance Document, 2020
- SCDOT Engineering Directives, effective as of the Final RFP release date
- SCDOT Environmental Reference Document, 2008
- SCDOT Geotechnical Design Manual, 2022 Edition
- SCDOT Geotechnical Design Bulletins, effective as of the Final RFP release date
- SCDOT Geotechnical Drawings and Details, effective as of the Final RFP release date
- SCDOT Hydraulic Design Bulletins
- SCDOT Load Rating Guidance Document, 2019, including latest Technical Notes
- SCDOT Pavement Design Guidelines, July 2008 Edition
- 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 Roadway Design Manual, 2021, with updates effective as of the Final RFP release date and supplemented with AASHTO A Policy on Geometric Design of Highways and Streets, 2018
- SCDOT Roadside Plants to Avoid/Trees with Limitations on R/W, October 2014
- SCDOT Roadway CADD Manual, effective as of the Final RFP release date
- 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

EXHIBIT 4 – PROJECT DESIGN CRITERIA

- 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 Supplemental Specifications for Roadway Lighting dated December 6, 2018
- SCDOT Traffic Signal Design Guidelines, 2021 Edition
- 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, 6th Edition
- TRB Highway Capacity Manual, 2010
- United States Access Board’s Revised Draft Guidelines for Accessible Public Rights-of-Way (PROWAG), November 23, 2005

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, clear zone, cross slopes, and side slopes.

2. CRITERIA

Classify the terrain as rolling on all routes within the scope of work.

2.1 Functional Classification

- US 301 Rural Principal Arterial

2.2 Design Speed

- US 301 60 mph

2.3 Traffic Volume (AADT)

- US 301 10,200 (2022)
15,200 (2042)

2.4 Traffic Lane & Shoulder Criteria

Develop traffic lane, shoulder, and median widths in compliance with SCDOT Roadway Design Manual. Four foot inside and six foot outside paved shoulders shall be provided.

US 301

- Through Lanes 12 ft.
- Shoulder (Inside) 10 ft. total (4 ft. paved, 6 ft. earth)
- Shoulder (Outside) 10 ft. total (6 ft. paved, 4 ft. earth)
- Median Match existing

Tie to existing traffic lane and shoulder widths at the structures over Indian Camp Branch. Maintain existing traffic lane and shoulder widths over the Indian Camp Branch structures.

2.5 Horizontal Alignment

Develop horizontal curves and superelevation in compliance with SCDOT Roadway Design Manual. Develop horizontal alignment to match the existing alignment for both northbound and southbound directions.

2.6 Vertical Curves, Grades, and Clearances

Develop vertical curves, grades, and clearances in compliance with SCDOT Roadway Design Manual.

US 301

- Maximum 4%
- Minimum 0.5%*

*Minimum grade of 0% may be acceptable on some pavements that have cross slopes that have adequate drainage.

Do not use spline grades.

The vertical grade shall be tied down to the existing vertical alignment prior to reaching the Indian Camp Branch structures.

2.7 Side Slopes

Develop side slopes in compliance with SCDOT Roadway Design Manual.

Fill slopes or ditch slopes steeper than 2H:1V are not allowed. Tie proposed side slopes to existing ground along the existing slope.

2.8 Cross Slopes

Develop cross slopes in compliance with SCDOT Roadway Design Manual. All shoulders shall be sloped to drain away from the traveled way.

2.9 Clear zones

Use the SCDOT Roadway Design Manual and the AASHTO *Roadside Design Guide*, 2011, 4th Edition. When a range of clearzone values is shown, select higher value. SCDOT does not typically use a 3H:1V fill slope. Use 3H:1V fill slopes only where required to match existing conditions and clear zone can be obtained within the Project limits. See the AASHTO *Roadside Design Guide*, 2011, 4th Edition for clear zone calculations where a 3H:1V fill slope is used.

For those areas where no guardrail currently exists and no additional lanes are proposed, design fill and cut slopes to obtain clear zones and to avoid the need for protection. Where achieving the clear zone requirements results in new right-of-way, wetland impacts, or impacts to immovable obstructions, protect substandard areas.

Where existing fill and cut slopes are presently protected by guardrail and no rigid barrier is proposed, replace damaged and/or substandard guardrail and extend/install new guardrail at locations that do not meet current standard in accordance with SCDOT's MASH

Transition Plan. Also, clear and grind in accordance with SCDOT Engineering Directive (ED) 29.

Provide beveled end pipe sections for all drive pipes within clearzone. When determining clearzone for drive pipes, use 30 feet.

2.10 Sight Distance

Develop sight distance in compliance with SCDOT Roadway Design Manual.

2.11 Roadside Barriers

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

Guardrail: Ensure that all new 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. The non-mow strip shall be asphalt or concrete. Proprietary non-mow strip material is not allowed.

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.

Existing and new guardrail shall utilize retroreflector tabs as shown in Attachment B.

2.12 Right-Of-Way

Secure a minimum right-of-way width of 75 feet for both the northbound and southbound centerlines and minimum 75 feet from each end of the bridge; refer to SCDOT Roadway Design Manual Chapter 12 Section 12.1.14.

Provide sufficient right-of-way to cover all permanent facilities.

Clear the entirety of the ROW at the bridges over Four Hole Swamp and extend clearing a distance of 75' from the end of each bridge. Perform grubbing operations to the construction limits extending 75' from the end of each bridge. When the NPDES line is outside of the construction limits, extend grubbing operations within the limits of the BMPs.

2.13 Bicycle/Pedestrian Facilities

This project location is not part of any South Carolina bicycle tour routes or pedestrian plans and bicycle/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 (Permanent) 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.

2.1.2 Seismic Design and Detailing

In accordance with the SCDOT Seismic Design Specifications (SDS) for Highway Bridges, the Bridge Operational Classification (OC) for each bridge is “II”. Submit Seismic Design Summary Reports according to the requirements shown in Exhibit 4z along with bridge structure plan submittals.

For this project, Table 6.1 of the SDS is amended as follows: Below ground plastic hinges are allowed for interior pile bents that support flat-slab superstructure.

2.1.3 Corrosion Protection

Galvanized rebar is not required for this project.

Provide corrosion protection in accordance with the BDM.

2.1.4 Dimensions

Construct the new bridges with bridge roadway widths that are equal to or greater than the approach roadway widths (traveled way plus shoulders) that are specified in Exhibit 4a.

2.1.5 Removal and Disposal of Existing Bridges

Remove and dispose of the existing bridges being replaced in accordance with the Standard Specifications for Highway Construction, Exhibit 6, and all applicable laws and regulations. Include, in this work, the removal and disposal

of remnants of substructure components from previous bridges that fall within the footprint of the proposed bridges.

2.1.6 Span Arrangement and Superstructure Type

For this project, provide cast-in-place reinforced concrete Flat Slab superstructure, in accordance with Section 12.3.2.2 of the SCDOT Bridge Design Manual, with continuous span arrangements and bent locations shown on the Conceptual Bridge Plans, located in Project Information Package.

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.

2.1.7 Concrete Strengths

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

For flat slab superstructure 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.

2.1.8 Final Finish of Exposed Concrete Surfaces

Final surface finish is not required on this project.

2.1.9 Lightweight Concrete

Lightweight Concrete is only permitted in cast-in-place decks/slabs 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.

2.1.10 Post-Tensioning

Post-tensioning is not permitted for this project.

2.1.11 Barriers, Railing Walls, and Sidewalks

Provide bridge barrier 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.

2.1.12 Bridge Drainage

BDM Subsection 18.2.2 does not apply to this project.

Provide a minimum of one drain per span, located at mid-span, along each gutter-line. Provide additional drains if necessary to meet the allowable water spread requirements in BDM Figure 18.2-1.

For bridge end drainage on this project, provide a single standard concrete flume at each bridge corner. Limit bypass flow onto an erodible surface to 0.20 cubic feet per second. Include calculations showing discharge at each bridge inlet, each flume, and bypass flow at each flume in the Hydraulic Report(s).

At bridge corners with flumes, provide shoulder paving triangles with 4:1 taper as shown on Standard Drawing 805-325-75.

Provide deck drainage as required in conformance with SCDOT Bridge Drawings and Details for Flat Slab superstructures. Use a minimum drain diameter of six inches.

Closed drainage systems are not permitted on this project.

2.1.13 Pile Sizes and Types

Minimum pile sizes and acceptable pile types are listed below. 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. 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

2.1.14 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 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.

2.1.15 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 outer 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 specifications regarding mass concrete placement procedures for large diameter drilled shafts and when they apply.

2.1.16 Crosshole Sonic Logging (CSL) Testing

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

2.1.17 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.

Pile footings and Spread footings at interior bents are not permitted for this project.

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 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 a 2:1 maximum slope. Use a 2-foot berm length from face of bent cap. Berm elevation and 2:1 slope shall be common to both the Northbound and Southbound bridges.

The following applies to bent cap cantilevers for 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.
- 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.

2.1.18 Wing Walls

For parallel wing walls (wing walls that are parallel to the centerline of bridge), detail the bottom of the wing wall level and at the same elevation as the bottom of the bent cap. Detail the top of parallel wing walls sloped and at the same elevation as the top of the outside edge of the approach slab.

2.1.19 Slope Protection

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

2.1.20 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 rating 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 09e. 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

1.0 GENERAL

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

2.0 CRITERIA

2.1 New Pavement (Limits of new roadway bridge approaches)

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

Option 1	Option 2
200 psy HMA Surface Type B 200 psy HMA Intermediate Type B 900 psy HMA Base Type A	200 psy HMA Surface Type B 200 psy HMA Intermediate Type B 300 psy HMA Base Type A 10 inches GABC

2.2 Existing Pavement (Limits of safety modifications)

- Perform 8 inches full depth patch as directed by the RCE
- Mill uniform 2 inches
- Perform milling at southbound culvert over Indian Camp Branch in accordance with milling detail provided in Attachment B.
- Add 600 psy of Shoulder widening mix in areas to be widened
- Overlay
 - 200 psy Intermediate Type B
 - 200 psy Surface Type B
 - If needed to tie into bridge then variable mill 0-2 inches over 150 feet at 1 inch per 75 feet and terminate the Intermediate B with a butt joint to allow a continuous lift of 200 psy of surface B as the final riding surface.

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 100 feet.

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.

2.3 Temporary Pavement

<Existing Location>

- Perform 8 inches full depth patch as directed by the RCE

- Mill 2 inches and tie in with 200 psy Surface Type B

<New Location>

For new pavement for cross overs, use the following structure:

- 200 psy HMA Surface Type B
- 200 psy HMA Intermediate Type B
- 450 psy HMA Base Type A

2.4 **Additional HMA Paving Notes**

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. 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 US-301 shall be of the width and patterns detailed in the Standard Drawings. Route lane lines and edge lines shall be 6 inches in width as detailed in the Rural Road Safety Criteria (see Special Provisions Division 600), with the exception of 8 inch channelization markings. 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 SCDOT 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 in the construction area for the bridge replacement. New signs shall be erected within the bridge replacement construction zone. 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.

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.

Install and utilize changeable message signs in all lane closures installed on high volume high-speed multilane roadways. Use of changeable message signs in lane closures installed on low volume low speed multilane roadways is optional unless otherwise directed by the plans and the Engineer. Install and use a changeable message sign within a lane closure set-up as directed by the *Standard Drawings For Road Construction*. When a lane closure is not present for any time to exceed 24 hours, remove the changeable message sign from the roadway. Place the sign in a predetermined area on the project site, as approved by the Engineer, where the sign is not visible to passing motorists. Utilize preprogrammed messages in accordance with the *Standard Drawings For Road Construction* when using the changeable message sign as part of the traffic control set-up for lane closures. Only those messages pertinent to the requirements of the traffic control situation and the traffic conditions are permitted for display on a changeable message sign at all times. At no time will the messages displayed on a changeable message sign duplicate the legends on the permanent construction signs.

During operation of changeable message signs, place the changeable message sign on the shoulder of the roadway no closer than 6 feet between the sign and the near edge of the adjacent travel lane. When the sign location is within 30' of the near edge of a travel lane open to traffic, supplement the sign location with no less than 5 portable plastic drums placed between the sign and the adjacent travel lane for delineation of the sign location. Install and maintain the drums no closer than 3 feet from the near edge of the adjacent travel lane. This requirement for delineation of the sign location shall apply during all times the sign location is within 30' of the near edge of a travel lane open to

traffic, including times of operation and non-operation. Oversized cones are prohibited as a substitute for the portable plastic drums during this application.

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.

On multilane primary routes, avoid placement of signs on portable signs supports within paved median areas utilized for two-way left turns unless otherwise directed by the RCE.

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. Steel plates are not allowed on interstates without approval from the Resident Construction Engineer.

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 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. However, during surface planing and milling operations for removal of Open-Graded Friction courses ONLY, a grade elevation difference of 1½ inches between adjacent travel lanes opened to traffic may exist unless otherwise directed by SCDOT.

During the paving operations, the length of roadway with an acceptable grade elevation difference less than or equal to 2" shall be restricted to 2 miles.

During the milling and surface planing operations, the length of roadway with an acceptable grade elevation difference less than or equal to 1" shall be restricted to 2 miles.

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 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.

2.5 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.

2.6 Staging

Traffic Control Restrictions (Project Specific General)

The CONTRACTOR shall maintain one travel lane in each direction of US301 at all times. No closure or restriction in movement or detour is allowed unless otherwise approved by SCDOT.

The design speed used for all components of the Transportation Management Plan shall be 60 mph.

Tapers used to shift traffic onto a temporary alignment are called shifting tapers and shall have a MINIMUM distance of $0.5 L$ where $L=WS$, see below. This distance may be longer.

L = taper length in feet

W = width of offset in feet

S = posted regulatory speed limit prior to beginning work

Design reverse curves used to shift traffic onto a temporary alignment in accordance with AASHTO Method 2 as described in AASHTO's *A Policy on Geometric Design of Highway and Streets*.

EXHIBIT 4e

HYDRAULIC DESIGN CRITERIA

1.0 GENERAL

Perform all hydrologic and hydraulic drainage designs in accordance with the SCDOT's "Requirements for Hydraulic Design Studies", May 2009, Stormwater Quality Design Manual, and Project Design Criteria as listed in Exhibit 4. Designs, at a minimum, to address include:

Designs, at a minimum, to address include:

- Best Management Practices
- Bridge Hydraulics and Scour
- Cross-line Pipes
- Ditch Capacity and Stability Analyses
- Sediment and Erosion Control
- Stormwater Quality, Quantity and Post Construction Designs
- Storm Sewer Systems and Deck Drainage

2.0 CRITERIA

2.1 Roadway Drainage

Evaluate the pre- and post- developed hydrologic and hydraulic conditions for roadway drainage. Perform all aspects of roadway drainage, to include approach runoff, cross-line pipe, storm sewer systems, ditches, and outfalls.

Design new and analyze existing closed-drainage systems with GEOPAK drainage software.

Replace 15-inch piping with minimum 18-inch piping at all locations where design warrants retaining pipes except for driveways and yard drain connections that meet design standards.

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 sideline ditch or swale. See detail included in Attachment B.

Provide drainage conveyance structures to intercept offsite runoff prior to reaching the toe behind constructed walls. Design the structures to contain the 10-year storm event.

Design temporary drainage systems in accordance with AASHTO Drainage Manual Appendix 17A.

2.2 Bridge Hydraulics

Model natural, existing, and proposed conditions for this bridge using the modeling

software HEC-RAS. Include backwater effects from any downstream controls.

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(s). In addition to the four cross sections described within the Manual, include additional cross sections, a minimum 500 feet upstream and downstream, 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 caused by the bridge. The hydraulic model can be executed starting at normal depth then subsequent runs can be started three feet below and above normal depth to see if the model converges before the location of the proposed bridge. The bridge skew shall be determined from the hydraulic design. A level two analysis is required but a level three analysis may be warranted. These levels of analysis are defined in the latest edition of SCDOT's Requirement for Hydraulic Design Studies.

It is the intent for this bridge replacement project to achieve a "No Impact" certification from FEMA.

Extend the riprap on all bridge end fills a minimum of 2.0 feet above the design high-water level.

The proposed bridge low chord elevation shall not be less than the existing bridge low chord elevation of 119.11 feet.

Construct abutment toes in accordance with Exhibit 4b. New abutment toes shall not exceed the limits of the existing toes and the projection of the new abutment slope shall not intersect any point on the existing channel bank or bottom. Abutment setbacks are not required as stated in HDB 2019-4. There are no clearly defined channels at the bridge crossing. Provide beginning and end bridge stations along with bent locations in accordance with conceptual plans and Exhibit 4b.

Summarize the inputs and results, to include backwater, freeboard and FEMA requirements.

The Contractor shall perform the scour analysis for the 100-yr and 500-yr storms in accordance with the Department's Requirements, USGS, and the latest FHWA's HEC-18 and HEC-20 editions. Plot the 100-yr and 500-yr total scour lines on the bridge plan and profile sheet. Abutment Scour should be calculated by using the HEC-18 NCHRP 24-20 approach when using the HEC-18 scour method to compare with USGS Envelope Curves. It is not recommended to use the Froehlich or HIRE methods when calculating abutment scour when using HEC-18 methodology.

2.3 Floodplains and Floodways

This project falls within FEMA Flood Insurance Rate Map (FIRM) 45075C0410C, Orangeburg County, dated January 16, 2014. The bridge is located in a Special Flood Hazard Area (SFHA) Zone AE. Coordinate with the

appropriate agencies for floodplain compliance. Provide copies of the documentation to the SCDOT Office of Alternative Delivery and the Hydraulic Support Office for review.

2.4 Sediment and Erosion Control and Water Quality

Determine the classification of the receiving waterbodies and note downstream impairments.

Develop a plan to meet the requirements of SCDOT's Construction Permit SCR160000 for erosion and sedimentation control during construction for the entire project length.

Provide additional water quality treatment when outfalls discharge to 303(d) listed, TMDL, and other sensitive waters. Exhaust all options prior to implementing structural controls.

Note inlet filter and outlet protection locations on the drainage sheets. Label new and retained drainage facilities.

2.5 NPDES Permitting

Prepare the NPDES permit package(s), to include the Stormwater Prevention Plan (SWPPP) checklist found under Attachment B. The Contractor shall perform all agency coordination to obtain the permit. 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, Geotechnical Design Bulletins, the Special Provisions listed in Exhibit 5, and the design criteria herein.

2.0 CRITERIA

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

Geotechnical information provided in Attachment B as part of this RFP may be used in the design of the 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.

Where required by design and construction, 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 if 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 EOR and GEOR shall review and approve, in writing, all load test reports prior to submitting the reports to SCDOT's RCE or Construction Engineering and Inspection (CE&I) team as designated for review and acceptance or comment. Comments made by SCDOT shall be reviewed and rectified by the Contractor's EOR and GEOR 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.

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 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.

Following installation of the drilled shafts, the GEOR shall perform a QC review of all production drilled shaft logs, CSL and TIP test 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 Drilled Shaft Foundation Package for each structural element supported on drilled shaft foundations that includes all testing 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

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.

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	0.21	0.38	0.15
SEE	0.47	0.90	0.48

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

EXHIBIT 4f – GEOTECHNICAL DESIGN CRITERIA

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 - 01/05/2021

Project ID: 40308	Latitude: 33.4570	
Route: US 301	County: 38 - Orangeburg	Longitude: 80.6470
Project: US 301 over Four Hole Swamp		

Designer: N. Harman - Support
Date: 3/10/2022

Design EQ	PGA	S _{DS}	S _{D1}	M _W	R	PGV	D _{a5-95}	T'₀
	g	g	g	-	km	inches/sec	sec	sec
FEE	0.21	0.38	0.15	7.30	63.97	5.56	28.79	0.07
SEE	0.47	0.90	0.48	7.30	62.40	18.31	28.56	0.21

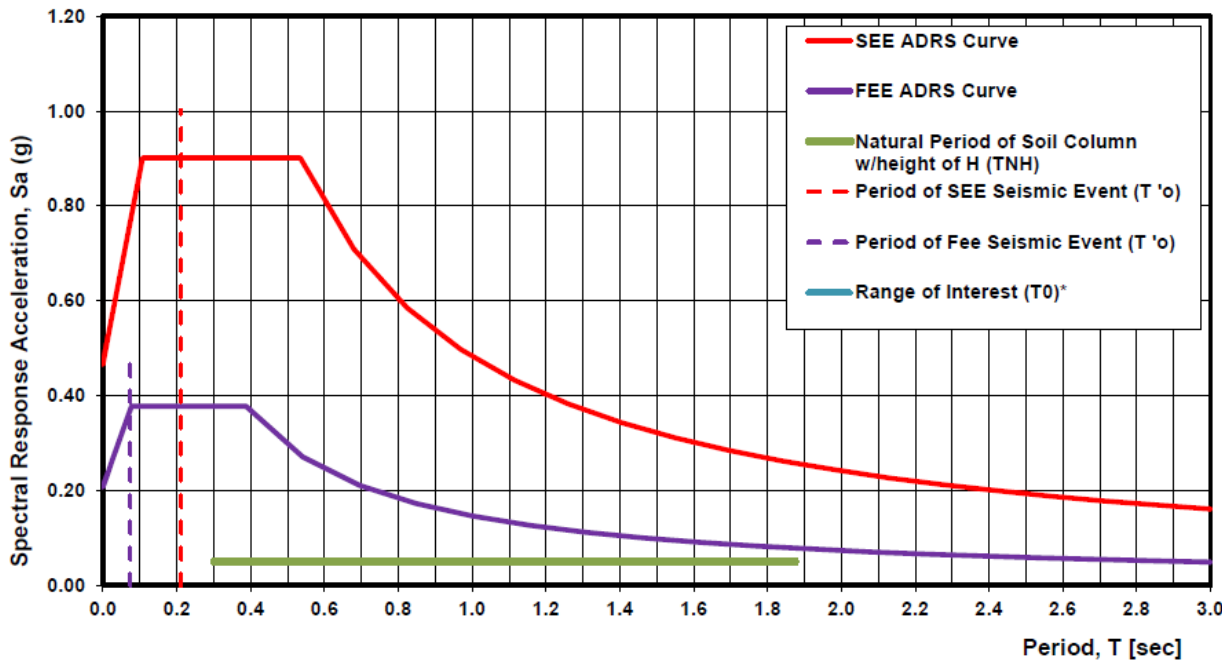
Damping: 5%	Geologic Condition: Geologically Realistic (Q = 100)*
SCCP	
ADRS Location within Soil Column: At Ground Surface	

Fundamental Period of Structure, T₀*	Range of Interest		V _{s,H}	H	T _{NH}	
	sec				sec	
sec	0.5*T₀	2.0*T₀	ft/sec	ft	(4*H)/V _{s,H}	(6*H)/V _{s,H}
0.00	0.00	0.00	1600.15	500.00	0.30	1.87
0.00	0.00	0.00				

H = B-C Boundary

South Carolina Coastal Plain
*Same Geologic Condition as used in SCENARIO_PC (2006)

SC Seismic ADRS Curve



FEE Data		SEE Data	
T	S _a	T	S _a
0.00	0.208	0.00	0.466
0.01	0.236	0.02	0.539
0.03	0.264	0.04	0.611
0.04	0.293	0.05	0.684
0.05	0.321	0.07	0.756
0.06	0.349	0.09	0.829
0.08	0.378	0.11	0.901
0.10	0.378	0.14	0.901
0.13	0.378	0.18	0.901
0.16	0.378	0.21	0.901
0.18	0.378	0.25	0.901
0.21	0.378	0.29	0.901
0.23	0.378	0.32	0.901
0.26	0.378	0.36	0.901
0.28	0.378	0.39	0.901
0.31	0.378	0.43	0.901
0.34	0.378	0.46	0.901
0.36	0.378	0.50	0.901
0.39	0.378	0.53	0.901
0.54	0.270	0.68	0.709
0.69	0.211	0.82	0.584
0.85	0.172	0.97	0.497
1.00	0.146	1.11	0.432
1.16	0.127	1.26	0.383
1.31	0.112	1.40	0.343
1.46	0.100	1.55	0.311
1.62	0.091	1.69	0.284
1.77	0.083	1.84	0.262
1.92	0.076	1.98	0.243
2.08	0.070	2.13	0.226
2.23	0.066	2.27	0.212
2.39	0.061	2.42	0.199
2.54	0.058	2.56	0.188
2.69	0.054	2.71	0.178
2.85	0.051	2.85	0.169
3.00	0.049	3.00	0.161

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>

1.2 Plan Development

The scope of the project includes bridge replacement and roadway approach work as well as roadway resurfacing and safety improvements outside the limits of the bridge replacement and roadway approach work. Fully developed roadway and bridge plans shall be required for the limits of bridge replacement and roadway approach work.

In locations where only pavement resurfacing and safety improvements are required and geometric design changes are not necessary, the work may be captured in the final plans through the use of typical sections and general construction notes sheets. Full plan development is not required to capture the resurfacing and safety improvement work.

2.0 SUBMITTAL PACKAGES

SUBMITTAL PACKAGE CONTENTS	HARD COPIES
Preliminary Submittal Packages	
Preliminary Road Submittal Packages shall include:	
<ul style="list-style-type: none"> • Preliminary Road Plans 	1HS
<ul style="list-style-type: none"> • Survey Control Data Sheet 	
<ul style="list-style-type: none"> • Conceptual Work Zone Traffic Control Plans* 	

EXHIBIT 4z – PROJECT DESIGN DELIVERABLES

<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 Road Geotech Report 	
Preliminary Bridge Submittal Packages shall include:	
<ul style="list-style-type: none"> • Preliminary Bridge Plans 	1 HS
<ul style="list-style-type: none"> • Preliminary Bridge Hydraulic Design Report 	
<ul style="list-style-type: none"> • Preliminary Bridge Geotech Report 	
<ul style="list-style-type: none"> • Preliminary Seismic Design Summary Report 	
Right-of-Way Submittal Packages	
Right of Way Submittal Packages shall include:	
<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:	
<ul style="list-style-type: none"> • Final Roadway Plans 	1 HS
<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 Road Geotech Reports 	

EXHIBIT 4z – PROJECT DESIGN DELIVERABLES

Final Bridge Submittal Packages shall include:	
<ul style="list-style-type: none"> • Final Bridge Plans 	1HS
<ul style="list-style-type: none"> • Final Bridge Hydraulic Design Report 	
<ul style="list-style-type: none"> • Final Bridge Geotech Report 	
<ul style="list-style-type: none"> • Final Seismic Design Summary Report 	
<ul style="list-style-type: none"> • Bridge Load Rating Documentation 	
RFC Submittal Packages	
RFC Road Submittal Packages shall include:	
<ul style="list-style-type: none"> • RFC Roadway Plans 	1 FS
<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 Road Geotech Reports 	
<ul style="list-style-type: none"> • RFC Design Calculations 	
RFC Bridge Submittal Packages shall include:	
<ul style="list-style-type: none"> • RFC Bridge Plans 	1 FS
<ul style="list-style-type: none"> • RFC Bridge Hydraulic Design Report 	
<ul style="list-style-type: none"> • RFC Bridge Geotech Report 	
<ul style="list-style-type: none"> • RFC Seismic Design Summary 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 	

• Paving Plan	
• Foundation Installation Plan Submittals	
• Foundation Testing Submittals	
• Hazardous Materials Testing Submittals	
• Shop Plans	
• Working Drawings	
• NPDES Submittals	
• Revised Permit Drawings	
• As-Built Plans	
• 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.

3.0 SUBMITTAL PACKAGE CONTENTS

3.1 All Submittals 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 may be submitted as two separate submittals: final superstructure plans and final 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. 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.
- 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
 - roadway plan and profile
 - cross sections
 - clearing limits on plan view and cross sections
 - drainage features
 - existing right-of-way
 - proposed right-of-way

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, at a minimum, 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 Road & Bridge Geotechnical Reports

- The geotechnical reports shall include, but not be limited to, the following:
 - all items described in Chapter 21 of the SCDOT Geotechnical Design Manual and the latest design memorandums

3.2.7 Preliminary Seismic Design Summary Report

- Provide the information outlined in SCDOT Bridge Design Memorandum DM0122.

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
 - right-of-way data sheet
 - property strip map, including property closures
 - survey control data
 - 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

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

- summary of estimated quantities
- roadway typical sections
- right-of-way data sheet
- property strip map, including property closures
- general construction notes (resurfacing and safety improvements)
- survey control data
- roadway plan and profile
- cross sections
- clearing limits on plan view and cross sections
- drainage design (include drainage tables behind each drainage sheet)
- existing right-of-way
- proposed right-of-way
- sediment and erosion control design
- proposed barrier locations
- permanent signing plans
- permanent pavement markings plans
- traffic signal 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, at a minimum, all items described in Chapters 3 and 6 of the SCDOT Bridge Design Manual.
- In lieu of a full-size hard copy of the signed plans, electronic plans may be submitted with digital signatures in accordance with SCDOT Preconstruction Design Memorandum PCDM-04. Individual digitally-signed plan sheets are required to be submitted in addition to a flattened, multipage PDF copy of the entire plan set for easier viewing.
- Additional electronic file (PDF) 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 design calculations or notes (non-CADD) that will facilitate verification and review of the plans
 - Any special provisions or specifications not already included in the RFP or plans

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 Road & Bridge Geotechnical Reports

- The geotechnical reports shall include, but not be limited to, the following:
 - all items described in 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

3.4.7 Final Seismic Design Summary Report

- Provide the information outlined in SCDOT Bridge Design Memorandum DM0122.

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).

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 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

(5) 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.

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.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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

(6) 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

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).

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- 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. Supporting the form should be all revised documents that clearly identify all proposed changes. 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.
- 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

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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.

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- 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.

(7) 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

(8) 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).

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

Delete Paragraph 1 of Subsection 106.11 of the Standard Specifications and replace it with the following:

"On this project where steel or iron materials are used, all manufacturing processes for iron and steel material, including tie wire for reinforcing steel, must occur in the United States in accordance with 23 CFR Section 635.410(b)(1)(ii). This requirement includes the application of coating for these materials. Coating includes all processes that protect or enhance the value of the material to which the coating is applied."

(10) 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).

(11) 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.”

(12) SECTION 106: PLANT/FABRICATOR INSPECTION:

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

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.”

(13) 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.

(14) 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.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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.

(15) 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.

(16) 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.

(17) 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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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."

(18) 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).

(19) 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:

- 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. ~~Currently, the list is available at the following URL:~~ <http://procurement.sc.gov/PS/PS-iran-divestment.phtm>. 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.

(20) 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.

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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.

(21) 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.

(22) 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.

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.

(23) 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.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Road – 0 (at 520 hours each).
Bridge – 1 (at 1040 hours each).

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 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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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 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.

(24) SECTION 107: DISADVANTAGE BUSINESS ENTERPRISE (DBE)

In addition to the DBE requirements shown in the contract documents, the Contractor shall implement the items listed below.

- A. Contractor is required to establish two one-week sessions for firms certified as DBEs to meet one-on-one in-person with the Contractor beginning 30 days after project award. These sessions will afford DBE firms the ability to meet and offer their services for sub-contracting opportunities. This will be in lieu of the Department's DBE outreach sessions usually held within 30 days of when the

short-listed firms are identified. It is recommended the Contractor hold additional in-person sessions within 90 days prior to the beginning of construction.

- B. Contractor is required to identify an experienced point-of-contact responsible for administrative matters related to the DBE program. The Project Manager will be the point of contact to address issues related to DBE program compliance.
- C. Contractor will make key managers and field supervisors available for a one-time SCDOT provided training sessions concerning DBE program compliance. Newly hired managers and field supervisors shall attend a training session within 90 days of hire for this project.
- D. The SCDOT Minority & Small Business Affairs DBE Mega Project Support, Technical Assistance and Compliance team is available to assist with the successful implementation and understanding DBE program requirements and meeting the project's DBE goal.

(25) 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 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.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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

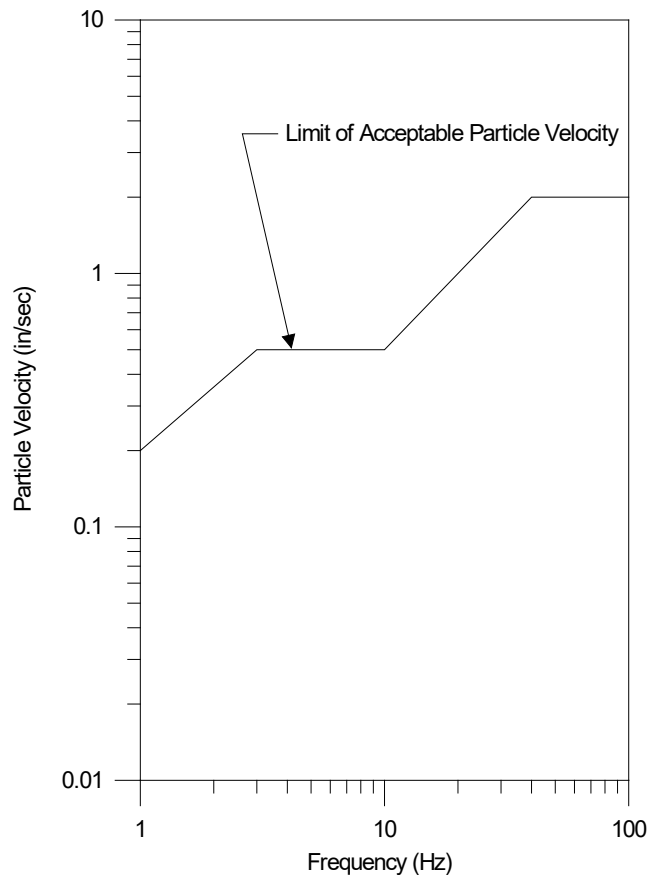


Figure 1 - Vibration Criteria (adapted from AASHTO R8-96)

(26) 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. Hand delivery of time sensitive informational materials
- D. Preparing advertisements and media announcements
- E. Preparing and submitting to RCE a Quarterly Status Report/Newsletter for the SCDOT website, including but not limited to, traffic control phasing, graphic illustrations, project pictures, schedule, etc
- F. Preparing responses to comments/questions received from the public and other stakeholders.

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 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.

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.

(27) 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**

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."

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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.

(28) 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.

(29) 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.
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:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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.

(30) 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 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.

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
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EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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.

(31) 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

(32) SECTION 202: REMOVAL OF EXISTING GUARDRAIL:

Section 202.4.4.3 applies on this project.

(33) 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.

(34) 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.

(35) 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.

(36) 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 disked 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.

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

(38) 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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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,

$$F^* = \text{Minimum pullout friction factor} = C_i \tan \Phi,$$

$$C_i = \text{Soil interaction coefficient} \geq 0.6$$

$$\Phi = \text{Soil Angle of Internal Friction}$$

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.

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.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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

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

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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

(39) 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.

(40) 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.

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.

(41) 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.

(42) 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 \$65 per ton.

(43) 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.

(44) 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 an eight (8) inch 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 eight (8) 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 1500 square yards of eight (8) inch full depth asphalt pavement patching. If more than the estimated square yards of patching are required by SCDOT, the

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Contractor will be paid a unit price of \$56.00 per square yard. If less than the estimated square yards of patching are required by SCDOT, the Contractor shall reimburse SCDOT for the quantity of full depth patching that was not needed. Reimbursement will be paid to SCDOT at a unit price of \$56.00 per square yard.

(45) 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

(46) DIVISION 600: SPECIAL INSTRUCTIONS TO THE CONTRACTOR

A. INSTALLATION OF MILLED-IN RUMBLE STRIPES:

Rumble stripes are installed along the edge lines and centerlines of the roadway. When applying to 4 lane roads with a divided median, install rumble stripes along both inside shoulders (yellow) and outside shoulders (white). All rumble stripes shall conform to Standard Drawing 633-105-00, with the following exceptions:

- All edge line rumble stripes shall be 12" in width unless otherwise noted on the plans.
- All centerline rumble stripes shall be 16" wide and marked with 6" yellow markings. 6" double yellow markings shall be separated by 4"(6"/4"/6").

Quantities are included for the installation of temporary paint (white and yellow) where edge-lines are to be rumbled.

When rumble stripes are installed over temporary paint, the remaining 6-inch wide "dotted" temporary paint line can serve as an acceptable edge line presence for a maximum period of 30 days, provided the paint is adequately visible per the RCE's discretion.

The Contractor shall closely adhere to the specified depth, width, and pattern of rumbles stripes, as the design details and location criteria were developed to not only focus on reducing road departure crashes, but also in consideration of SC's bicycling community.

Terminate installation of the milled-in rumble stripes prior to intersections as illustrated in Standard Drawing 633-105-00. Do not install milled-in rumble stripes on or across concrete bridge decks or approach slabs.

Provide a positive means to control dust and prevent an accumulation of debris resulting from the milling operation. Capture and remove the milled asphalt material utilizing a separate vacuum equipped vehicle or other system approved by the RCE to prevent dispersal along the roadway.

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Dispose of debris material at a site approved by the Engineer. Do not dispose of debris within the highway right-of-way. Accomplish milling and debris removal in a single mobile operation.

B. REMOVAL OF EXISTING MARKINGS & MARKERS:

In most cases, removal of existing markings will not be necessary on new pavement installations. However, if no new pavement or treatment is being installed and old markings are present, remove any existing edge line thermoplastic or profile markings prior to edge line rumble stripe installation. Accomplish removal of existing thermoplastic markings in accordance with Section 631 of the Standard Specifications. Removal of existing raised pavement markers will be considered incidental to the contract.

C. APPLICATION OF PERMANENT THERMOPLASTIC PAVEMENT MARKINGS:

Apply the permanent thermoplastic pavement markings in accordance with the requirements of the Sections 627 of the Standard Specifications and as specified herein.

In addition, apply the new markings at a speed which minimizes the variation in line width that may occur due to the differences of the pavement surface height within the milled-in rumble stripes.

Immediately before the application of the new pavement marking material, clean the rumble stripes with brooms and air blast equipment required to satisfactorily remove all foreign matter from the surfaces to be painted. Ensure that the pavement surface is free of all dust, dirt and any other loose material immediately prior to marking application.

AASHTO Type I & Type IV glass beads are to be applied to the surface of all pavement marking materials using the double-drop method. If highly reflective elements are utilized to achieve retro-reflectivity values, use the manufacturer’s suggested drop rate.

D. RETRO-REFLECTIVITY REQUIREMENTS AND TESTING:

The Contractor shall note that the minimum retro-reflectivity values required for this contract are greater than the values indicated in Section 627.4.7 of the Standard Specifications. Retro-reflectivity values of installed markings shall be evaluated and verified as part of this contract.

E. MINIMUM RETRO-REFLECTIVITY VALUES:

At the time of installation, markings shall have minimum initial retro-reflectivity values as shown in the following table:

INITIAL RETRO-REFLECTIVITY REQUIREMENT (mcd/lux/m ²) for Double Drop Application	
White	Yellow
550	450

After an initial observation period of 180 days, installed markings shall maintain the minimum retro-reflectivity values as shown in the following table:

POST 180 DAY RETRO-REFLECTIVITY REQUIREMENT (mcd/lux/m ²) for Double Drop Application	
White	Yellow
500	400

F. TESTING:

The Contractor shall arrange for an independent party, to evaluate the initial and post-180 day retro-reflectivity of the installed pavement markings. This shall be done in coordination with the RCE and as specified herein, using a mobile reflectometer utilizing 30 meter CEN geometry.

The independent party conducting the measurements shall furnish the reports directly to both the RCE and the SCDOT Safety Office (email pdf copy to: stuckma@scdot.org) within 10 business

days. Reports shall be submitted in a format acceptable to the Department and shall detail the average readings over one mile segments for each measured longitudinal pavement marking (center lines, edge lines, lane lines, and channelizing lines).

The Contractor shall ensure the independent party has successfully performed retro-reflectivity testing for SCDOT in the past and shall use one of the following companies, or an approved equal:

1. Precision Scan LLC,
2. Beck & Company Engineering Inc .

G. INITIAL EVALUATION:

The first evaluation shall be performed at completion of all final pavement markings. Any marking failing to meet the initial retro-reflectivity requirements by 20% or more for the 1 mile average shall be replaced immediately at the Contractor's expense and tested in accordance with the specifications. Any marking failing to meet the initial retro-reflectivity requirements by 1% to less than 20% for the 1 mile average, may be reevaluated at the time of the 180 day evaluation unless the defect causing the lower readings is obvious to the Engineer. Any one-mile averages failing to meet the retro requirements shall apply for the entire roadway line. Only the failing line will need to be replaced.

H. SECOND EVALUATION:

A second evaluation of retro-reflectivity shall be completed within 20 days of the initial 180 day observation period (between 180 days to 200 days after installation). Any marking failing to meet the post 180 day retro-reflectivity requirements by 20% or more for the 1 mile average shall be replaced immediately at the Contractor's expense and tested in accordance with the specifications. Any marking failing to meet the final retro-reflectivity requirements by 1% to less than 20% for the 1 mile average, shall be penalized at a unit price reduction of \$0.40/LF. Any one-mile averages failing to meet the retro requirements shall apply for the entire roadway line. Only the failing line will need to be replaced.

I. EQUIPMENT:

Use equipment for the installation of milled-in rumble stripes that meets the minimum requirements of Sections 401.3.1 and 401.3.13 of the Standard Specifications. The rotary cutting head shall be capable of producing a width of 12 inches for edge line rumble stripes.

Prior to the installation of the milled-in rumble stripes, demonstrate to the Engineer that the equipment to be used is self-propelled and is capable of producing a depression having well defined edges and a smooth interior finish, adequate to permit uniform application of the permanent marking material.

Use equipment to apply the permanent pavement markings that meet the requirements of Section 627.3, SCDOT Standard Specifications.

(47) 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.

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.

(48) 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.

(49) 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-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

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- 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

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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). Reflectorize 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.

(50) 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 **\$750.00 (Seven Hundred Fifty 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 **\$1500.00 (Fifteen Hundred 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.

(51) 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.

(52) 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.”

(53) 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

(54) DIVISION 700: ANTI-GRAFFITI COATING:

October 4, 2019

A. GENERAL

The anti-graffiti coating system shall be applied to locations as described in Exhibit 4 and in accordance with this Specification. Anti-graffiti coatings intended for use under this Specification shall be of a composition capable of preventing the adhesion of and facilitating the removal of acrylic, polyurethane, and alkyd spray paint. Use a clear, non-sacrificial anti-graffiti coating for all applications.

B. MATERIALS

All anti-graffiti coatings must possess the physical and handling characteristics that are compatible with the requirements of this Specification. Anti-graffiti coating shall be manufactured by one of the approved manufacturers listed on the most recent Qualified Product List 7, titled “Qualified Spray-On/Brush-On Surface Coatings for Concrete Finish”. Contractor shall ensure that the anti-graffiti coating is compatible with the selected applied Finish Coating, if applicable.

Anti-graffiti coatings shall contain less than 5.0 lb/gal volatile organic compounds (VOC) as defined by 40 CFR Part 59, Subpart D. The manufacturer shall supply the following additional information:

1. Technical data sheet that includes installation instructions and graffiti removal instructions by pressure washing with water.
2. Certification that non-sacrificial anti-graffiti coating shall not blister, crack, check, chalk, delaminate, or exhibit a color change of more than 8 dE94 (or dE76) CIELAB units for a period of one year after installation.

Additionally, submit a certification that the coating meets the following laboratory performance requirements:

Additional Laboratory Performance and Tests		
Test	Method	Limits
Graffiti Resistance	ASTM D 6578; Use identified marking materials; initial and re-cleanability; and after exposure initial and re-cleanability	Cleanability Level 8, 9, or 10.
Fluid Resistance	ASTM D 1308; Paint thinner, gasoline	No blistering, discoloration, softening, or adhesion loss

C. APPLICATION

Apply an anti-graffiti coating or coating system in accordance with manufacturer’s product data sheet and as specified herein, when the ambient temperature is between 40° and 90°F, and the surface temperature is between 50° and 85°F and rising.

Ensure all concrete has cured a minimum of 30 days before applying anti-graffiti coating. Do not apply coating when precipitation is expected within 12 hours of the completion of application or the relative humidity exceeds that specified by the manufacturer.

D. PROTECTION OF ADJACENT SURFACES

Consider wind direction, velocity and geographic location as having a major impact on all cleaning and anti-graffiti coating operations. Use all necessary precautions to prevent cleaning and anti-

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

graffiti coating materials from being dispersed outside the work site. If conditions are such that material is dispersed to areas where vehicles or other property may be damaged, suspend operations until conditions improve and work can continue without affecting adjacent property.

Protect all surfaces not intended to be coated, which are adjacent to, or in close proximity to the surfaces to be coated, during the application of anti-graffiti coating. Clean surfaces that are to be coated, as per the manufacturer's product data sheet.

E. SURFACE PREPERATION

Prior to applying any anti-graffiti coatings, prepare all surfaces to be coated in accordance with ASTM D 4261 or ASTM D 4258 and the manufacturer's product data sheet. When the anti-graffiti coating or coating system is to be applied over an existing coating, apply a test patch (minimum area of 4 square feet) in accordance with this Specification. Allow the test patch to cure a minimum of 7 days without any defects. No time extension will be granted as a result of this test requirement.

F. BASE COAT

Apply the base coat, if part of the system, as specified by the manufacturer. Unless otherwise specified by the manufacturer, ensure the cured base coat has a minimum dry film thickness of 4.0-8.0 mils.

G. FINISH COAT

When applicable, ensure the base coat surface is clean and cured to a dry hard state according to the manufacturer's instructions before applying the finish coat. Mix finish coat and apply in accordance with the manufacturer's instructions. Ensure the cured finish coat of the two coat system has a minimum dry film thickness of 2.5-5.0 mils. Apply as many coats as necessary to provide a finish coat which is a uniform continuous film over the entire surface, free of pinholes, runs, sags, or any other deficiencies. Finish coat shall be considered "non-sacrificial".

H. CORRECTION OF DEFICIENCIES

Remove all applied anti-graffiti coatings identified by the Engineer as damaged, defective, or otherwise not meeting these Specifications, in accordance with the manufacturer's recommendations. Prepare the surface and reapply the coating in accordance with the manufacturer's recommendations and as specified herein, at no additional cost to the Department.

I. REMOVAL OF GRAFFITI BEFORE ACCEPTANCE

Remove all graffiti from areas receiving anti-graffiti coating, at no additional cost to the Department. Ensure all federal, state, and local environmental regulations are met when removing graffiti. Removal shall be in accordance with manufacturer's recommendations.

(55) 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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Min. Relative Dynamic Modulus, (percent)	AASHTO T 161 Procedure A	80
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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.

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 3/4 inch or smaller.

(56) 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.

(57) 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:

- 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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Field repair damaged areas of the rebar coating and replace bars exhibiting severely damaged coatings. Severe damage is defined as more than five (5) ¼ x ¼ 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.

(58) 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 1¼ -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."

(59) 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>.

(60) SECTION 712: DRILLED SHAFT FORMS:

Drilled Shaft Forms are included on the Construction Extranet.

(61) 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 sheepsfoot 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.

(62) 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:

$$\text{Fill Height} = \text{Elevation (top of curb or max grade above pipe)} - \text{Elevation (pipe crown)}$$

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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

- (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:
 - 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.

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*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
714XXX	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

(63) SECTION 714: PIPE END TREATMENTS (2/5/2010):

A. REFERENCE

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.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS



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.

(64) 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.

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:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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

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.

E. METHOD OF MEASUREMENT

Make measurement on the basis of linear feet of carrier pipe supplied and installed, complete and accepted. Do not make any measurements for damaged or non-conforming sections that were removed and replaced

F. BASIS OF PAYMENT

The bid schedule provides a unit price for supply and installation of pipe. This price includes full compensation for designing, furnishing and installing the casing pipe, carrier pipe, pipe alignment guides, and for providing all materials, equipment, and labor for excavation, dewatering, jacking, tunneling, grouting, and shoring as required for the complete installation.

No payment will be made until the carrier pipe is installed and all annular space grouted as specified above.

For completing the work specified under this section, and as shown on the Drawings, the Engineer will pay the Contractor the Unit Price Bid for the Pay Item stipulated below:

Pay Item	Description	Pay Unit
71418XX	X" REINFORCED CONCRETE PIPE CLASS V (TRENCHLESS)	LF

(65) 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

(66) 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.

(67) SECTION 727: CROSSHOLE SONIC LOGGING OF DRILLED SHAFT FOUNDATIONS:

Crosshole Sonic Logging (CSL) Testing is required for all drilled shafts. SCDOT shall be responsible for all CSL Testing.

(68) 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.

(69) 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.

(70) 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.

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.

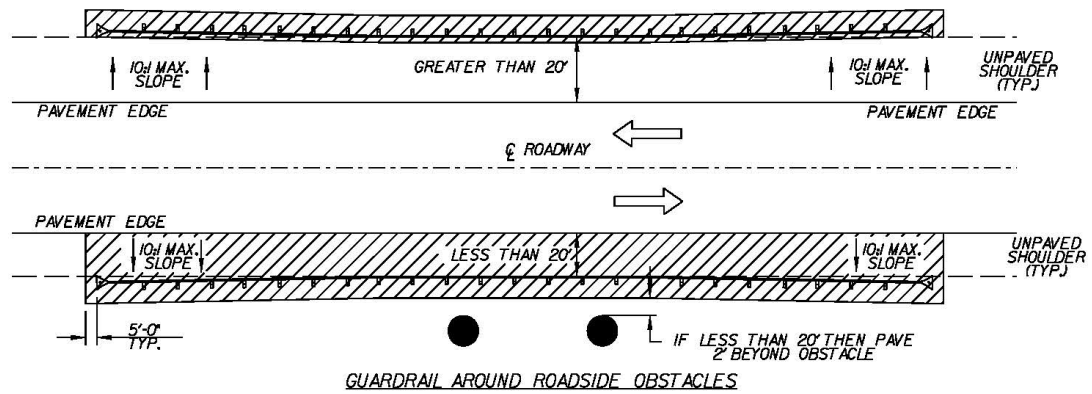
EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS
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When areas around obstructions have non-mow strips, no area should remain uncovered that will sustain plant life.

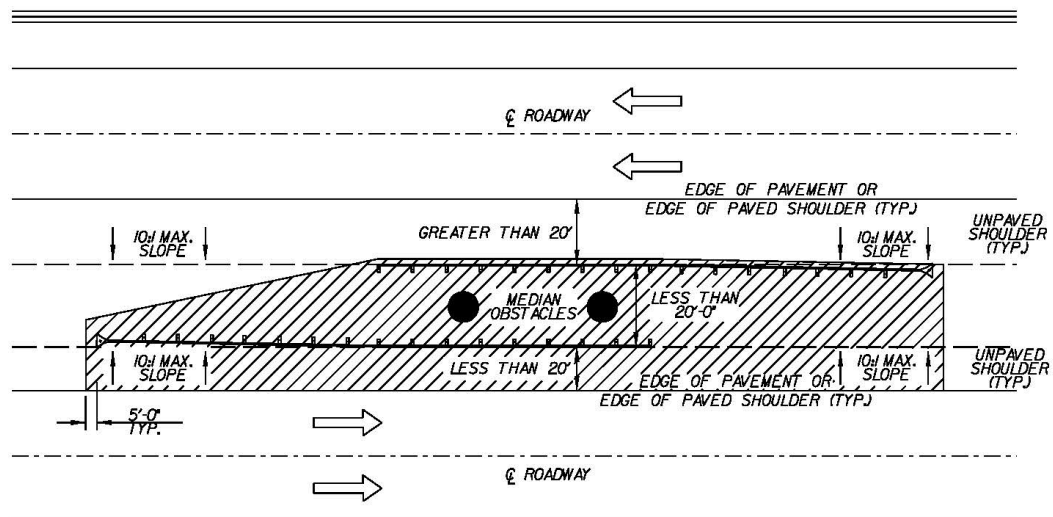
The top of non-mow strips shall be constructed to be flush with surrounding earth shoulders, slopes and finished pavement grade.

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.

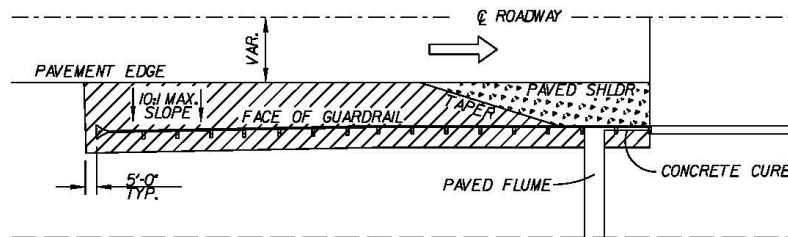
EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS



GUARDRAIL AROUND ROADSIDE OBSTACLES



GUARDRAIL AROUND MEDIAN OBSTACLES



GUARDRAIL AT BRIDGE APPROACHES



EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

(71) SECTION 806: TEMPORARY BARRIER FENCE FOR ENVIRONMENTAL BOUNDARY:

See attached Supplemental Specification dated **May 1, 2013**.

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.

(72) 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

(73) 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-

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

specific soil characteristics, topography, hydrology, and the type of erosion targeted. A copy of the test results is to be provided to the Engineer.

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:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Bid Item Number	Description	Unit
8152020	ANIONIC POLYACRYLAMIDE FOR EROSION CONTROL	MSY
8152025	SOLID FORM ANIONIC POLYACRYLAMIDE	LBS

(74) 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 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 contactors 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.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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.

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.

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated 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. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

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 (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).

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.

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). 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 bid proposal or request for proposal 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).

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.

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. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 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 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, 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 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, 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 230, 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 (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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 35 and 29 CFR 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.

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, 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 who 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.

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 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, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure 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.

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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. 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, 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, 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.

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 there under. 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, 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 and 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. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor 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 contracting agency deems appropriate.

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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

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, 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). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

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

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, Employment Standards Administration, 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 Wage and Hour Administrator for determination. The Wage and Hour 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.

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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

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

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 at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor 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 §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, 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 Regulations, 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 section 1001 of title 18 and section 231 of title 31 of the United States Code.

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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

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. 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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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.

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.

9. Disputes concerning labor standards. 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.

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

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.

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 of \$10 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.

3. Withholding for unpaid wages and liquidated damages. The FHWA or 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 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.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (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.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

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).

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

a. The term "perform work with its own organization" 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:

(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.

2. 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. 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.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

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 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.

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 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).

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.

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 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

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statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 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

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

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.

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.

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.

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.

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 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee 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 grantee or subgrantee 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.

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.

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. 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 Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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) 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;

(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; 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.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. 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)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

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.

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 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 grantee or subgrantee of Federal funds and a participant (such as the prime or general contractor). "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 grantee or subgrantee 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.

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.

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 Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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.

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 is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

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This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

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.

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ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

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, 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.

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

GOALS AND TIMETABLES

<i>Timetable</i>	<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.

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).

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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.
 - 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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

- 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).

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

GENERAL DECISION NUMBER SC42

"General Decision Number: SC20220040 02/25/2022

Superseded General Decision Number: SC20210040

State: South Carolina

Construction Type: Highway

Counties: Allendale, Bamberg, Barnwell, Beaufort, Colleton, Georgetown, Hampton, Jasper, Newberry, Orangeburg and Williamsburg Counties in South Carolina.

DOES NOT INCLUDE SAVANNAH RIVER SITE IN ALLENDALE AND BARNWELL COUNTIES

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 into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: 	. Executive Order 14026 generally applies to the contract. . 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.
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: 	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

	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 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

* SUSC2011-038 09/15/2011

	Rates	Fringes
CARPENTER (Form Work Only).....	\$ 14.47	**
CEMENT MASON/CONCRETE FINISHER....	\$ 14.11	**
IRONWORKER, REINFORCING.....	\$ 15.64	
LABORER		
Asphalt, Includes Asphalt Distributor, Raker, Shoverler, and Spreader.....		
	\$ 10.96	**
Colleton.....	\$ 10.16	**
Common or General		
Beaufort.....	\$ 10.15	**
Colleton.....	\$ 10.16	**
Georgetown, Hampton, Jasper.....	\$ 10.07	**
Newberry, Allendale, Bamberg, Barnwell.....	\$ 11.82	**
Orangeburg.....	\$ 12.63	**
Williamsburg.....	\$ 10.01	**
Luteman.....	\$ 11.71	**
Pipelayer.....	\$ 13.87	**
Traffic Control-Cone Setter		
Allendale, Bamber, Barnwell, Newberry, Orangeburg.....	\$ 12.98	**
Beaufort, Colleton, Georgetown, Hampton, Jasper, Williamsburg.....	\$ 12.84	**
Traffic Control-Flagger.....	\$ 11.68	**

POWER EQUIPMENT OPERATOR:
Backhoe/Excavator/Trackhoe

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

Allendale, Bamberg, Barnwell, Newberry, Orangeburg.....	\$ 17.56	
Beaufort.....	\$ 15.20	
Colleton.....	\$ 17.78	
Georgetown, Hampton, Jasper, Williamsburg.....	\$ 17.23	
Bulldozer.....	\$ 20.12	
Crane.....	\$ 16.62	
Grader/Blade.....	\$ 16.62	
Loader (Front End).....	\$ 15.51	
Mechanic.....	\$ 18.22	
Milling Machine.....	\$ 18.83	
Paver		
Allendale, Bamberg, Barnwell, Newberry, Orangeburg, Williamsburg...	\$ 15.01	
Beaufort.....	\$ 14.96	**
Colleton, Georgetown, Hampton, Jasper.....	\$ 13.67	**
Roller.....	\$ 12.76	**
Screed.....	\$ 13.01	**
Tractor.....	\$ 13.26	**

TRUCK DRIVER

Dump Truck.....	\$ 12.00	**
Lowboy Truck.....	\$ 14.43	**
Single Axle, Includes		
Pilot Car.....	\$ 12.04	**
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 violence, sexual assault, or stalking. Additional information

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

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:

- * 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
- * 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

EXHIBIT 5 – SPECIAL PROVISIONS AND CONTRACT REQUIREMENTS

(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:

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"

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 provide an Environmental Compliance Plan for the Project. The plan shall be submitted to and approved by SCDOT prior to beginning any construction activity. The plan shall identify specific measures that the CONTRACTOR will implement to ensure compliance with all environmental documents, permits, and other environmental commitments. The plan shall also designate specific personnel that are charged with carrying out monitoring and compliance activities included in the Environmental Compliance Plan. A template is provided in Attachment B under Environmental.
- The CONTRACTOR shall stake out and delineate the jurisdictional area using temporary barrier fence as set forth in Supplemental Specification and in accordance with the preliminary jurisdictional determination issued by USACE.
- The CONTRACTOR shall install a double row of silt fence along construction limits adjacent to jurisdictional features not authorized for impacts in accordance with approved USACE permit.
- 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 through SCDOT's Environmental Services Office (ESO).
- CONTRACTOR shall provide a summary report documenting how all assigned commitments have been satisfied.

2. ENVIRONMENTAL DOCUMENT COMMITMENTS

The CONTRACTOR shall comply with all Environmental Commitments set forth in the Programmatic Categorical Exclusion (PCE) dated March 18, 2022 and other environmental information that is provided in Attachment B.

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.

1. 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 SCDOT'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.

2. 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 will 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 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.

3. 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.

4. Impacts to jurisdictional waters will be permitted under a Department of the Army Section 404 permit from the U.S. Army Corps of Engineers. Based on preliminary design, it is anticipated that the proposed project would be permitted under SCDOT's General Permit (GP). The required mitigation for this project will be determined through consultation with the USACE and other resource agencies.

The SCDOT will provide a copy of the approved PJD and .dgn files for CONTRACTOR use. The CONTRACTOR will be responsible for preparing and providing the necessary information to obtain the GP and any future modifications. The permit and any modifications shall be acquired in the name of SCDOT and all coordination shall be

conducted through SCDOT. The CONTRACTOR shall determine if wetland mitigation credits are available from an USACE approved commercial mitigation bank and if so purchase credits from that bank. If none are available at the time of permit submission, the SCDOT Black River Mitigation Bank will be available to assist in mitigation for wetland impacts. Stream mitigation will have to be provided by the CONTRACTOR. SCDOT will coordinate with the CONTRACTOR and resource agencies regarding mitigation.

5. 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 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.

6. The project will be designed in an effort to meet "No Impact" requirements. Final design efforts to minimize floodplain impacts will be coordinated with the local county NFIP representative and appropriate regulatory agencies as necessary. The Engineer of Record will send a set of final plans and request for floodplain management compliance to the local County Floodplain Administrator for approval.

The CONTRACTOR shall comply with this commitment.

7. The existing structures shall be removed and disposed of by the CONTRACTOR in accordance with Subsection 202.4.2 of the Standard Specifications. The CONTRACTOR'S attention is called to the fact that this project may require removal and disposal of structural components containing lead-based paints. Removal and disposal of structural components containing lead-based paints shall comply with all applicable Federal, State, and Local requirements for lead as waste, lead in air, lead in water, lead in soil, and worker health and safety.

The CONTRACTOR shall comply with this commitment.