

# FLORENCE COUNTY SOUTH CAROLINA

#### **INVITATION-TO-BID NO. 25-21/22**

#### **2022 CPST III DIRT TO PAVE PROJECT: DISTRICT 5**

BID OPENING: March 28, 2022 at 10:30 a.m. (EST)

#### **TABLE OF CONTENTS**

DESCRIPTION	<u>PAGE NUMBER</u>
INVITATION-TO-BID	3
SCOPE OF WORK	4
SPECIAL PROVISIONS/SUPPLEMENTAL SPECIFICATIONS	4-47
MINIMUM MANDATORY REQUIREMENTS	48
INSTRUCTIONS TO BIDDERS	49
VENDOR AGREEMENTS	53
BID FORMS/UNIT BID SPREADSHEET	57-59
BID SURETY REQUIREMENTS	60
SAMPLE BID BOND	61
PAYMENT BOND REQUIREMENT	62
PERFORMANCE BOND REQUIREMENT	63
INSURANCE REQUIREMENTS	64
CONTRACT (SAMPLE)	65-75
BID PLANS & DETAILS	ATTACHMENT 1
OUANTITIES PER RD	ATTACHMENT 2

#### **INVITATION TO BID**

Florence County, South Carolina (Owner) is accepting bids from licensed and qualified Contractors for the 2022 CPST III Dirt to Pave Project – District 5.

Each of the bidders shall fully familiarize itself with the conditions relating to the bid to ensure complete understanding of all the details involved. The bidder shall satisfy itself as to the actual requirements of the bid by personal examination of its location or other means, to enable the bidder to make an informed bid. Failure to do so shall not relieve the successful bidder of its obligation to furnish all materials, products, and/or labor necessary to complete the provision of the awarded contract, and failure to do so may result in the claims against bonds. No allowance will be made for any claims that a bid and/or response were based on incomplete information as to the nature and character of the sites and of the work involved. Plan holders desiring further information or interpretation of the Proposal or Plans shall make a written request for such information to Florence County procurement by 4:00 pm on March 22, 2022.

Bids are to be submitted electronically via Vendor Registry (PREFERRED). Hardcopy sealed bids will also be accepted. In order to be considered, sealed bids must be received by the Florence County Procurement Office, Florence County Complex, 180 N. Irby Street – MSC-R, Rm. B-5, Florence, SC 29501-3431 later than **March 28, 2022 at 10:00 a.m.** (EST). Bids received after the published time and date shall not be opened and shall be disqualified and returned unopened to sender.

The sealed bids will then be opened and read aloud in room B-5 of the County Complex at 10:30 a.m. (ET) on March 28, 2022. The bid opening will be streamed live on ZOOM.

Join Zoom Meeting

https://us04web.zoom.us/j/5444511250?pwd=MGhPRmtKcmFDM2thVVQwMWNMUVJQQT09

Meeting ID: 544 451 1250

Passcode: 997329

Bids must be clearly marked, "Bid No. 25-21/22". Contractors mailing bids should allow delivery time to ensure timely receipt of their bid. The responsibility for getting the bid to Florence County on or before the specified time and date is solely and strictly the responsibility of the proposing firm. Any bids received later than the submission deadline will not be accepted/considered. Electronic bids will not be accepted. Directions may be obtained by calling (843) 665-3018. Florence County will in no way be responsible for delays caused by any occurrence.

Minority Business Owners (minority or woman owned businesses) will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, creed, sex or national origin in consideration for an award. It is the policy of the County that minority business and women owned business enterprises (MBE/WBE) have an opportunity to participate at all levels of contracting in the performance of County projects to the extent practical and consistent with the efficient performance of the contract.

This request for bids does not commit Florence County to award a contract; to pay any cost incurred in the preparation of a bid; or, to procure or contract for the services. Florence County reserves the right to accept or reject any or all bids received as a result of this request; to negotiate with any or all

qualified proposers; or, to cancel in part or in its entirety this bid invitation, if it is in the best interest of the County to do so.

#### **SCOPE OF WORK**

Construction of existing dirt/rock roads (approximately 1.5 miles) located within Florence County District 5, improving roadway drainage ditches, replacement of existing driveway pipes and cross lines, preparation of cement stabilized earth base course (6"), and placement of Hot Mix Asphalt Surface Course Type C (200 #/SY) as a final riding surface:

Java Rd Wiley Rd

#### **SPECIAL PROVISIONS**

FLORENCE COUNTY PROJECT NUMBER Bid 25-21/22

This project will be constructed under the direct supervision of the Florence County Public Works and/or designated representative.

#### (1) STANDARDS AND REFERENCES:

This project is to be constructed under the SCDOT 2007 Standard Specifications for Highway Construction, the 2009 SCDOT Standard Drawings, the SCDOT 2004 Construction Manual, the SCDOT Supplemental Technical Specifications in effect at the time of the letting, and the following Special Provisions:

The above noted publications are available on the internet as follows, or may be obtained from the SCDOT Engineering Publications office at (803) 737-4533 or via e-mail at <a href="mailto:engrpubsales@dot.state.sc.us">engrpubsales@dot.state.sc.us</a>

### (2) <u>ERRATA TO 2007 STANDARD SPECIFICATIONS FOR HIGHWAY</u> CONSTRUCTION:

See attached Supplemental Specification dated January 1, 2017.

#### (3) DIVISION 100: 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 the letting. The Standard Drawings are available for download at <a href="https://www.scdot.org/business/standard-drawings.aspx">https://www.scdot.org/business/standard-drawings.aspx</a>. All drawings that are updated are labeled with their effective letting date in red.

#### (4) DIVISION 100: 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  $2\frac{1}{2}$ " x  $2\frac{1}{2}$ " 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 definiton 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.

#### 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.

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, 4<sup>th</sup> 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 2<sup>nd</sup> 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 805-220-00 (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.)

#### (5) SECTION 101: SUBSTANTIAL COMPLETION OF WORK

**Section 101.3.76** is hereby replaced with the following:

#### 101.3.76 Substantial Completion of Work

Substantial Completion of Work is the point in the project when work has been constructed to the typical section in the Plans over the entire length of the project including tie-ins, all pay items have been installed in reasonable conformance with the plans and specifications over the entire length of the project and all lanes of traffic are open to the public in their final configuration with the final applications of thermoplastic and raised pavement markers with the only remaining work to be performed being punch list items.

### (6) <u>SECTION 106: CONSTRUCTION QUALITY CONTROL AND ASSURANCE</u> TESTING

The Contractor shall be responsible for retaining an independent firm for all required sampling and testing. All sample and test results shall be submitted to and approved by the Engineer prior to continuation of work. The owner shall provide construction quality assurance testing required for this project, except for MANUFACTURERS MATERIALS CERTIFICATIONS AND CERTIFIED TEST REPORTS as required.

#### (7) 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.

#### (8) 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.

### (9) <u>SECTION 107: COORDINATION OF UTILITY RELOCATION WORK WITHIN</u> HIGHWAY CONSTRUCTION

As it is not economically feasible to complete the rearrangement of all utility conflicts in advance of the roadway construction, such rearrangements may be underway concurrently with construction.

It shall be the responsibility of the contractor to inspect the site for potential utility conflicts.

It is the responsibility of the Contractor to call Palmetto Utility Protection Service at 811 or 1-888-721-7877 three (3) days prior to work so that existing utilities can be properly marked.

### (1) <u>SECTION 107: CONTRACT PROVISION TO REQUIRE CERTIFICATION AND</u> 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 subsubcontractors 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).

#### (2) <u>SECTION 108: PROSECUTION OF THE RESURFACING WORK:</u>

It is the County's intentions that work on the roads in this contract be performed in a sequential manner. Once a construction activity (paving, shoulder work) has started on a road, the Contractor will continue this activity until it is complete before moving to another road. In the event the Contractor elects to use multiple crews on this project, work may proceed on more than one road, however in no case will construction activities be initiated on more roads than the number of work crews engaged in the work without the approval of the Project Engineer.

#### (3) SECTION 108: PAVING OPERATIONS:

The asphalt overlay shall be applied in two separate and distinct operations, each operation representing about one-half of the roadway width and traffic shall be maintained continuously. Unless otherwise directed by the Engineer, paving operations shall be scheduled such that the longitudinal joint exposed to traffic shall not extend beyond the length of pavement placed in one normal days operation (or 3 miles, whichever is greater) before dropping back to bring the adjacent lane forward.

#### (4) SECTION 108: FAILURE TO COMPLETE THE WORK ON TIME:

Paragraph 1 of Section 108.9 is hereby replaced with the following: If the Contractor fails to substantially complete the work by the contract completion date, the Contractor is liable for liquidated damages. Liquidated damages will be \$500.00 for each day beyond the contract completion date that work items are not completed. This includes the application of pavement markings and grassing. Days to be charged for liquidated damages will not stop due to seasonal restrictions.

#### (5) SECTION 109: RETAINAGE:

The County will require a 10% retainage for each pay application. Retainage will be released with the Final pay application after effective completion of the project has been evaluated by County or its representatives.

#### (6) SECTION 203: BORROW EXCAVATION:

Borrow material used along roadway shoulders in this project shall be classified as "topsoil". In the absence of topsoil, the borrow material used shall be amended with compost to produce a material with "topsoil like" characteristics capable of producing a stand of grass. If compost is used, the Contractor shall furnish, place, and mix certified weed free compost to a minimum depth of 3" into the existing disturbed shoulder. Costs for topsoil and/or compost shall be included in the pay items for borrow excavation and permanent grassing, and no additional compensation will be made.

#### (7) SECTION 306: CEMENT MODIFIED RECYCLED BASE

Section 306.4.5 of the SCDOT Standard Specifications for Cement Modified Recycled Base Course compaction testing details are amended as follows: Proof-roll compaction testing shall be the only necessary compaction test for the cement modified recycled base course. Such testing shall be completed with a loaded tandem axle truck with at least 15 tons of material. A Florence County official or designee must be present to approve the material and witness testing. Any failures in the base shall be excavated and replaced with suitable material. Testing the cement application rate and depth of base course will still be necessary. The 45 pounds per square yard of cement specified are set up as an average rate of application. The Engineer may direct variations wherever conditions warrant.

#### (8) SECTION 400: HOT MIX ASPHALT QUALITY ASSURANCE:

Section 3.9 of SC-M-400 will not apply.

#### (9) SECTION 400: ROADWAY PAVING:

The existing pavement or surface shall be swept and scraped clean and free of dirt, dust, and vegetation and maintained until the beginning for resurfacing operations.

The road base for CMRB is to consist of six (6) inches of cement modified recycled base course within the roadway width and built to SCDOT standard specifications Section 306. Contractor, however, shall make the following adjustments to those specifications:

A proof-roll compaction test will be required. The proof-roll shall be completed with a loaded tandem axle truck with at least 15 tons of material. A Florence County official or designee must be present to witness and approve the test. Any failures in the base course are to be excavated and replaced with suitable material.

Roadway paving for the CMRB projects is to consist of a maximum width possible within the right of way (16' Minimum).

Hot Mix Asphalt Surface Course Type C (200 #/SY) will be placed after the cement modified recycled base course as a final riding surface. The hot mix asphalt surface course will be placed in accordance with Section 403 of the SCDOT Standard Specifications (including tack coat).

Section 406.4.1 restriction of surface treatment between the dates of October 15 and March 15 will be amended to only require the ambient temperature of 60 degrees or higher to be applied. The application of the asphalt surface treatment will be at the discretion of the Florence County Engineer.

#### (10) SECTION 401: LIQUID ASPHALT BINDER AND ADDITIVES:

See attached Supplemental Specification dated January 1, 2019.

#### (11) SECTION 401: TRANSPORTATION AND DELIVERY OF MIXES:

See attached Supplemental Specification dated July 1, 2010.

#### (12) SECTION 401: SLOPED EDGE LONGITUDINAL SHOULDER JOINTS:

See attached Supplemental Specification Dated July 1, 2019.

#### (13) SECTION 401: MATERIAL FOR FULL DEPTH PATCHING:

See attached Supplemental Specification Dated January 1, 2018.

### (14) <u>SECTION 401: REMOVAL OF EXISTING ASPHALT PAVEMENT BEFORE</u> PATCHING:

See attached Supplemental Specification Dated January 1, 2018.

#### (15) SECTION 401: RATE OF APPLICATION:

The 200 pounds per square yard specified are set up as an average rate of application. The Engineer may direct variations wherever conditions warrant.

#### (16) 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.

#### (17) **SECTION 401: MILLING:**

Mill roadway and bridges as directed by the Engineer.

Resurfacing operations shall begin with 3 calendar days following the start of milling operations. Any deviation shall be approved by the Engineer. Penalties equal to the liquidated damages shall be assessed for each day resurfacing does not begin after 3 calendar days.

All asphalt use to safe up milled joints, milled intersections, driveways, around manholes or other utilities shall be considered incidental and no additional compensation will be made.

All asphalt used to fill in potholes and /or raveled areas caused by milling operations or by traffic on a milled surface shall be considered incidental and no additional compensation will be made.

The milling of intersecting roads shall continue to the back of the radii unless otherwise directed by the Engineer.

The butt joint for intersecting roads shall be a minimum of 25 feet long at all times when variable milled. The variable milled butt joint on the mainline shall be a minimum of 25 feet long for every inch of depth milled.

All milling debris, including debris resulting from milled-in rumble strips shall be cleaned up at the end of each day's milling. Milling debris left in gutter lines or on sidewalks and

driveways will not be permitted. Costs associated with removing each day's milling debris shall be considered incidental and no additional compensation will be made.

Milling depths greater than 2 inches shall be performed as a mill and fill operation unless otherwise directed by the Engineer. Milling length should not exceed the length that can be paved back the same day.

#### (18) SECTION 403: PAVING OF DRIVEWAYS:

All hard-surfaced driveways that have been previously paved or surface treated and all earthen driveways that have been previously reworked by the County or SC Department of Transportation's Maintenance Forces shall be resurfaced or surfaced as part of this contract. Quantities for the resurfacing or surfacing of driveways are those necessary to pave to the ROW line. RCE may adjust these limits as necessary.

#### (19) <u>DIVISION 600: MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES:</u>

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.

#### (20) DIVISION 600: TRAFFIC CONTROL:

See attached Supplemental Specification dated July 1, 2019.

### (21) <u>DIVISION 600: TRAILER MOUNTED AUTOMATED FLAGGER ASSISTANCE</u> <u>DEVICE SYSTEM</u>

#### (AFAD):

See attached Supplemental Specification dated September 1, 2012.

#### (22) <u>DIVISION 600: WORK ZONE TRAFFIC CONTROL TRAINING REQUIREMENTS</u> FOR CONTRACTORS / SUBCONTRACTORS:

See attached Supplemental Specification dated September 1, 2013.

#### (23) 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 Prime contractor

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.

#### (24) SECTION 609: PAVEMENT MARKINGS:

The Contractor is responsible for surveying and inventorying all traffic markings on the roadway prior to the removal or covering up of existing markings. This will include position, lengths, widths, color, and types of markings.

#### (25) <u>SECTION 610: WORK ZONE TRAFFIC CONTROL PROCEDURES:</u>

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."

#### (26) <u>SECTION 627: THERMOPLASTIC PAVEMENT MARKINGS:</u>

See specification dated July 1, 2020.

#### (27) SECTION 702: CONCRETE STRUCTURES – PREFORMED JOINT FILLER:

See attached Supplemental Specification dated April 1, 2013.

#### (28) **SECTION 714: PIPE END TREATMENTS (2/5/2010)**

**REFERENCE: SCDOT Supplemental Technical Specification SC-M-714** 

#### **DESCRIPTION:**

For exposed pipe culvert ends, provide an end treatment in accordance with this special provision.

#### **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.

#### **CONSTRUCTION REQUIREMENTS:**

Use one of the following end treatments as specified in the plans or special provisions:



For all exposed crossline pipe ends, when an end treatment is not specified in the plans, use **Pipe Riprap Protection** (804-3xx-xx). For flexible pipe larger than 24" diameter, install pipe straight headwall, pipe end structure, flared end section, or wingwall section in addition to riprap. For all exposed driveway pipe ends where no end treatment is specified in the plans, use **Pipe Riprap Protection** (804-3xx-xx) unless directed otherwise by the engineer.



Use **Beveling of Pipe End** (719-610-00) when specified in the plans or special provisions. Beveled ends may only be used on flexible pipe up to 24" diameter and on rigid pipe up to 60" diameter. When beveling of pipe ends is specified on flexible pipe larger than 24" diameter, install pipe straight headwall, pipe end structure, flared end section, or wingwall

section. Use factory fabricated beveled ends for all pipe types unless approved by the Engineer.



Use **Pipe Straight Headwall** (719-605-00) when specified in the plans or special provisions. Use straight headwall only in locations where pipe exposed end does not face the direction of traffic.



Use **Pipe End Structure** (719-615-00) when specified in the plans or special provisions. Use pipe end structure in locations where pipe exposed end faces the direction of traffic. Pipe end structures may be used in other locations if approved by the RCE.



Use Pipe Flared End Section when specified in the plans or special provisions.





Use **Pipe Wingwall Section** when specified in the plans or special provisions.

Completely seal interface between pipe and end treatment with grout. If bricks or shims are used to place pipe, take care to remove all air pockets and voids when grouting.

For systems not designed in the SCDOT Standard Drawings, provide shop drawings, installation procedure and design calculations for review by RCE. Design must include provision to control erosion around the structure and prevent the separation of the end treatment from the pipe system. Design must provide for a proper seal at all construction joints including the interface between the pipe and the structure. Design must be self supporting and not induce any additional loads on the pipe. Submit designs for consideration as new standard drawings to the Design Standards Engineer at the address listed in the SCDOT Standard Drawings book.

#### **MEASUREMENT:**

Measure pipe in accordance with SC-M-714

Measure end treatments in accordance with Standard Specifications, Standard Drawings, or Special Provisions.

#### **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.

#### (29) SECTION 720: CONCRETE ITEMS:

Curb/Gutter, Sidewalk and pedestrian ramps must be completed within 7 calendar days of the initial disturbance of the area. Penalties equal to the liquidated damages shall be assessed for each day work is not completed after 7 calendar days. Any deviation for this requirement will be considered on a case-by-case basis.

#### (30) SECTION 810: PERMANENT GRASSING:

The Contractor will be required to obtain a uniform perennial vegetative cover with a density of 70% of each square yard of seeded area before acceptance by the Engineer.

#### (31) EXISTING STRUCTURES/MATERIALS:

The Contractor shall be solely responsible for the removal and disposal of any and all excess material while completing the work on this contract. Such materials include, but are not limited to clearing old debris, pipe, trees, vegetation, and excess soil material (shoulder grading). Contractor shall contact property owners and relocate any items within the maintenance easement (fencing, landscaping, etc.) to the edge of the easement. All existing mailboxes shall be relocated by the Contractor and installed in accordance with United States Postal Service specifications.

#### (32) EXISTING UTILITIES:

The Contractor shall be responsible for inventorying all utilities in the roadway. It is also the Contractor's responsibility to provide proper risers prior to the first day of resurfacing operations. No additional compensation will be due to the Contractor for this work, or for any delays due to acquisition of the risers.

#### (33) PERMITS AND LICENSES:

It is the responsibility of the Contractor to obtain any licenses and/or permits required to complete the work in this contract. No additional compensation will be due to the Contractor for this work, or for any delays due to acquisition of the permits and/or licenses.

#### (34) EMERGENCY CONTACT:

The Contractor shall furnish the County with the name and phone number of a person who can be contacted 24 hours a day in case of an emergency. This person may be called to go to the job site to reestablish erosion control measures, clean sediment basins, catch basins or dry wells if necessary.

January 1, 2018

#### ERRATA TO 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

Make the changes listed below to correct errata in the SDCOT 2007 Standard Specifications for Highway Construction:

#### **DIVISION 100 GENERAL PROVISIONS**

#### **SECTION 101 DEFINITIONS AND TERMS**

#### **Subsection 101.2 Abbreviations and Acronyms**

Amend the table of **SCDOT OFFICIALS AND OFFICES** as follows:

	DELETIONS		REPLACEMENTS
BDE*	Bridge Design	PSE*	Preconstruction Support
	Engineer		Engineer
BDG	Bridge Design	GDSE*	Geotechnical Design Support
<u>E*</u>	Geotechnical Engineer		Engineer
SHE*	State Highway	DSE*	Deputy Secretary for
	Engineer		Engineering

<sup>\*</sup>Wherever it appears in the text, replace the deleted abbreviation with the new abbreviation.

#### **SECTION 102 BIDDING REQUIREMENTS AND CONDITIONS**

#### **Subsection 102.8 Irregular Bids**

Paragraph 2, item E, first sentence; delete the word "the" after the word "When".

#### **SECTION 105 CONTROL OF WORK**

#### **Subsection 105.6 Cooperation with Utilities**

Paragraph 1, last sentence; change the word "THE" to "the".

#### **DIVISION 200 EARTHWORK**

#### SECTION 202 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

#### **Subsection 202.5 Measurement**

Paragraph 5, second bullet; change the words "Brick sidewalk" to "Concrete, brick or stone sidewalks".

#### **SECTION 204 STRUCTURE EXCAVATION**

#### **Subsection 204.2.1.2 Structure Excavation for Culverts**

Paragraph 1, at the end of the first sentence; change "Subsection 204.4" to "Subsection 204.5".

#### **DIVISION 400 ASPHALT PAVEMENTS**

#### SECTION 401 HOT MIXED ASPHALT (HMA) PAVEMENT

#### **Subsection 401.2.1.2 Liquid Anti-Stripping Agent**

Paragraph 1, first sentence; delete the period at the end of the sentence and add "and SC-M-406.".

#### **Subsection 401.2.5 Material for Full Depth Patching**

Paragraph 1, delete and replace with the following:

"Use an approved SCDOT Intermediate Type C mix for all Full Depth Patching."

#### **Subsection 401.5 Measurement**

After paragraph 10, add the following paragraph:

The measurement of Prime Coat is the number of gallons of asphalt material applied to the completed and accepted base course.

#### **Subsection 401.6 Payment**

After paragraph 12, add the following paragraph:

13 "The payment for Prime Coat is at the contract unit price for Prime Coat and includes compensation for all labor, equipment, tools, maintenance, and incidentals necessary to complete that work."

#### **Subsection 401.6 Payment**

#### Paragraph 13, Table of Pay Items

Change paragraph reference number "13" to "14" and add the following Pay Item:

Item No.	Pay Item	Unit
4010005	Prime Coat	GAL

#### SECTION 403 HMA SURFACE COURSE

#### **Subsection 403.5 Measurement**

Paragraph 1, first sentence; change "HMA Intermediate Course" to "HMA Surface Course".

#### **Subsection 403.6 Payment**

Paragraph 1, first sentence; change "HMA Intermediate Course" to "HMA Surface Course".

#### SECTION 407 ASPHALT SURFACE TREATMENT - DOUBLE TREATMENT

#### **Subsection 407.5 Measurement**

Paragraph 1, first sentence; add the word "is" after "(Double Treatment Type (1, 2, 3, 4, or 5))".

#### SECTION 408 ASPHALT SURFACE TREATMENT - TRIPLE TREATMENT

#### **Subsection 408.5 Measurement**

Paragraph 1, first sentence; add the word "is" after "(Triple Treatment Type (1 or 2))".

#### DIVISION 600 MAINTENANCE AND TRAFFIC CONTROL

#### SECTION 625 PERMANENT PAVEMENT MARKINGS FAST DRY WATERBOURNE PAINT

#### Subsection 625.2.2.4.11 Lead Content

Paragraph 1, first sentence; change 6% to 0.06%.

#### SECTION 627 THERMOPLASTIC PAVEMENT MARKINGS

#### **Subsection 627.4.10 Inspection and Acceptance of Work**

Paragraph 2, first sentence; change "period of 90 days" to "period of 180 days".

#### **Subsection 627.4.10 Inspection and Acceptance of Work**

Paragraph 2, second sentence; change "90-day observation period" to "180-day observation period".

#### Subsection 627.4.10 Inspection and Acceptance of Work

Paragraph 3, first sentence; change "90-day period" to "180-day period".

#### **DIVISION 700 STRUCTURES**

#### **SECTION 709 STRUCTURAL STEEL**

#### Subsection 709.4.3.5.2 Submittals and Notification

Paragraph 1, delete the last two sentences and replace them with, "The Department's review and acceptance are required before any field welding will be permitted."

#### Subsection 709.6.3 Pay Items (page 650)

Subsection heading number; change subsection heading number from "709.6.3" to "709.6.4".

#### SECTION 712 DRILLED SHAFTS AND DRILLED PILE FOUNDATIONS

#### **Subsection 712.4.4 Dry Construction Method**

Paragraph 2, last sentence in A; change "Drilled Shaft Report" to "Drilled Shaft Log".

#### **Subsection 712.4.10.4 Excavation Cleanliness**

Paragraph 1, last sentence; change "Drilled Shaft Report" to "Drilled Shaft Log".

#### **Subsection 712.4.10.6 Shaft Load Test**

Change first paragraph reference number from "2" to "1".

#### Subsection 712.6.10 Drilled Pile Set-Up

Insert paragraph reference number "1" to the left of the first paragraph.

#### SECTION 723 DECK JOINT STRIP SEAL

#### **Subsection 723.1 Description**

Insert paragraph reference number "3" to the left of the third paragraph.

#### SECTION 726 BRIDGE DECK REHABILITATION

#### **Subsection 726.4.1 General**

Insert paragraph reference number "1" to the left of the first paragraph.

#### **Subsection 723.4.6 Full Depth Patching (page 790)**

Subsection heading number; change subsection heading number from "723.4.6" to "726.4.6"

#### Subsection 726.6.8 Concrete Overlay (Latex) or (Portland Cement) (page 802)

Paragraph 2, the equation is changed to AP=CP X (ACS/RCS) ^ 2

#### SECTION 727 CROSSHOLE SONIC LOGGING OF DRILLED SHAFT FOUNDATIONS

#### **Subsection 726.6 Payment** (page 807)

Subsection heading number; change subsection heading number from "726.6" to "727.6"

#### **DIVISION 800 INCIDENTAL CONSTRUCTION**

#### **SECTION 805 GUARDRAIL**

#### **Subsection 805.5 Measurement**

Paragraph 4; amend as follows:

"The quantity for the pay item 8053000 Additional Length Guardrail Post is the length of required post installed in excess of the standard length post based on the system being installed, measured by the linear foot (LF), complete, and accepted."

#### **SECTION 815 EROSION CONTROL**

#### **Subsection 815.1 Description**

Paragraph 1, first sentence; change "temporary flexible pipe" to "temporary pipe".

#### **Subsection 815.5 Measurement**

Paragraph 13; delete the first sentence and replace it with the following sentence:

"The quantity for Temporary Pipe Slope Drains is measured and paid for in accordance with **Subsections 803.5** and **803.6** respectively."

#### **Subsection 815.5 Measurement**

Delete paragraph 19.

#### **Subsection 815.6 Payment**

After paragraph 15, add the following paragraph:

Payment for Removal of Silt Retained by Silt Fence is full compensation for removing and disposing of sediment deposits accumulated by silt fences as specified or directed and includes all 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.

#### **Subsection 815.6 Payment**

Change original paragraph number "16" to "17".

#### **Subsection 815.6 Payment**

Pay Item table; change the Unit for Item No. 8156214 to "EA".

#### **INDEX:**

Amend as follows:

Page I-3, after "Bridge Deck Rehabilitation, measurement and payment:" Delete page 807.

Page I-12, after "Letting:"
Replace page 19 with page 9.

Page I-13, after "Overhead Sign Structure:" Replace page 488 with page 495.

Page I-15, after "Proof Rolling:" Delete page 98.

Page I-18, after "Structural Steel, turned and ribbed bolts:" Replace page 624 with page 625.

Page I-19, after "Waterproofing, bridge deck:" Delete page 907.

Page I-20, after "Working Drawings:" Replace page 543 with page 779.

January 1, 2019

#### **Asphalt Binder and Additives**

Delete Subsection 401.2.1.1, Binder and Additives, General of the Standard Specification in its entirety and replace it with the following:

#### 401.2.1.1 Performance Graded (PG) Binder

Use PG 64-22 or PG 76-22 binder as required by the contract that conforms to all of the requirements of AASHTO M 320. Do not use any combination of "air blown" asphalt binders. Ensure that the asphalt binder supplier lists all types of modifiers and additives used in the production of their PG binders including source of Re-Refined Engine Oil Bottoms (REOB), polymers, ground tire rubber (GTR), polyphosphoric acid (PPA), silicone, and liquid antistripping agent (LASA) in their Quality Control Plans. Ensure that additives used for compaction aides or anti-strips such as silicones, WMA additives, and LASA products are listed on the Bill of Lading (BOL). Use PG asphalt binders and modifiers that are heat and storage stable. Thoroughly blend the composite materials at the asphalt terminal before being loaded into the transport vehicle. Asphalt terminals that either supply or produce PG binders must be able to store multiple tanker loads of PG and certify that their products meet AASHTO M 320 prior to transferring or shipping on the BOL and that all modifiers and additives are compatible. Ensure that all PG binders adhere to SCDOT Qualified Products Policy No. 37-38. Only use PG 64-22 and PG 76-22 binder from sources listed on the most recent edition of SCDOT Qualified Product List 37.

#### 401.2.1.1.1 Modified Performance Graded Binder

When specified, use modified binder consisting of a neat binder modified with a polymer or other modifier producing a binder complying with the requirements of a PG 76-22 as specified in AASHTO M 320 with the addition of the Multiple Stress Creep Recovery (MSCR) test using AASHTO T 350. Ensure acceptable elastomeric polymer is used by using Non-recoverable Creep Compliance values plotted against Percent Recovery based on figure 1 found in AASHTO R92 using RTFO aged material. Ensure that the MSCR test is performed at 64°C using the Very Heavy Traffic "V" Grade requirement in AASHTO M 332. Use elastomer polymer or modifier consisting of a styrene-butadiene (SB), styrene-butadiene-styrene (SBS), styrene-butadiene-rubber (SBR), or ground tire rubber (GTR). Polyphosphoric Acid (PPA) may also be added to the binder, but must not exceed 0.5% by weight of the asphalt binder. Varying blends of SB, SBS, SBR, GTR (7% min.), and PPA (0.5% max.) may be used, at the discretion of the AME, provided the end product meets all specified requirements for the PG 76-22. Perform the storage stability separation test ASTM D7173 to ensure the asphalt binder is homogenous. Ensure that all storage tanks on the asphalt plant site are clearly marked to prevent cross contamination of different PG binders.

#### 401.2.1.1.1 Ground Tire Rubber (GTR) in Performance Graded Binder

Ensure that the Ground Tire Rubber (GTR) is <u>terminally</u> (no exceptions) blended with the neat asphalt to create a homogenous and storage stable PG 76-22 that meets all criteria as stated in 401.2.1.1.1, with the exception of Solubility requirement (AASHTO T 44). Blending the GTR modified binder at the asphalt plant during asphalt mixture production will not be permitted. Use

a 2.0mm gap setting when using the DSR in accordance to AASHTO T 315 and AASHTO T 350. GTR materials must be free from excessive moisture when received from the tire recycling facility and stored in a dry location at the terminal to prevent blending issues with the binder modification process. A letter of compliance from the tire recycling facility will be required by the AME and the asphalt terminal stating that the GTR blend will meet this specification. The GTR must be free of loose metal particles, other foreign contaminating materials, with exception of embedded metal particles in the rubber. Mineral powder may be added to reduce sticking and caking of the GTR particles. Stabilizing or compatibility additive(s) can be used to achieve better particle distribution. Any additives used for this purpose must not be detrimental to the performance of the asphalt binder or mixture performance and must be accepted by the AME in the supplier's QC plan. Ensure that the GTR supplier provides certificates of compliance with each shipment certifying that all requirements of this specification are complied with for each production lot number and the end product is homogenous and shows no signs of separation or coagulation. In the event that the terminal changes supply sources of GTR type of grind (ambient or cryogenic), or particle size, the asphalt terminal must perform a complete binder analysis on their revised product, and also provide a split sample to the SCDOT to ensure specification compliance.

Provide all sources of GTR and grind type in the asphalt terminal's QC plan. SCDOT may obtain samples of the GTR particles, base binder, or the finished GTR modified asphalt binder to ensure specification compliance at any time.

Physical Test	Test Procedure	Specification	
Samuling of the CTD	ASTM E105	In accordance to random	
Sampling of the GTR	ASTM E122	sampling procedures	
GTR Supply	ASTM D5603	Ambient or Cryogenic Grind	
Dosage of GTR	Per COA	Minimum of 7.0% by weight	
Dosage of GTK	& Supplier's QC Plan	of the PG 64-22 base asphalt binder	
GTR Specific Gravity	ASTM D5603	1.06 - 1.20	
CTD D (1 1 D) (11 t)	A CTM DECAA	30 Mesh Maximum of 2.0% Retained	
GTR Particle Distribution	ASTM D5644		
GTR Metal Content	ASTM D5603	Maximum 0.01%	
GTR Fiber Content	ASTM D5603	Maximum 0.50%	
GTR Moisture Content	ASTM D1509	Maximum 0.75%	
Mineral Filler –Talcum			
Powder	ASTM M17	Maximum of 4.0%	
(Optional)			
Stabilizing Additives		Maximum of 4.50/ by yet of CTD	
(Optional)	-	Maximum of 4.5% by wt. of GTR	

<b>Chemical Test</b>	Test Procedure	Specification
Acetone Extract		Maximum 25.0%
Rubber Hydrocarbon Content	ASTM D297	40.0 – 60.0 %
Ash Content		Maximum 8.0 %
Carbon Black Content		20.0 – 40.0 %
Natural Rubber		16.0 – 45.0 %

#### 401.2.1.1.1.2 Ground Tire Rubber in Open Graded Friction Course or SMA Mixtures

Stabilizing fibers and fiber supply systems at the asphalt plant may not be necessary when the GTR binder is used as required by section 409.2.3 and 409.4.3 of the Standard Specifications or any other Supplemental Specification for OGFC or SMA. Perform the SC-T-90 drain-down procedure at 350°F when conducting the asphalt mix design, or otherwise directed by the AME. In the event that drain-down values are found to be excessive, then stabilizing fibers may be necessary as directed by the AME. No additional compensation will be paid for the fibers in the OGFC or SMA mixture.

#### 401.2.1.1.1.3 Asphalt Plant Storage Requirements When Using Ground Tire Rubber

Use a dedicated storage tank for "terminal blended GTR asphalt binder" at the asphalt plant. This tank must be capable of providing continuous mixing, as well as recirculation of the GTR asphalt binder as needed. Ensure that this tank is heated and capable of maintaining the temperature of the homogeneous blend of asphalt binder and GTR at 300°F to 350°F. Ensure that GTR modified binders are not mixed with other modified PG 76-22 binder without permission of the AME.

July 1, 2010

#### TRANSPORTATION AND DELIVERY OF MIXES

Subsection 401.4.17, Transportation and Delivery of Mixes, of the Standard Specification will be deleted in its entirety and replaced with the following:

Transport the HMA from the plant to the point of use in vehicles meeting the requirements of Subsection 401.3.7. Do not permit any load of HMA to leave the plant so late in the day that it cannot be spread, finished, and compacted during daylight of that same day unless an approved artificial lighting system is provided. Ensure that HMA mixtures containing the asphalt binder grades below are produced and delivered to the jobsite within the acceptance range listed in the table below with exception that Base C and D mixtures will be produced and delivered at a temperature range of 240°-275° F. The mix temperatures will be checked using SC-T-84. Ensure the HMA mixtures are held within the acceptance range based on Binder Performance Grade in the Job Mix Formula. Deliver mixture within the acceptance range for temperature to assist in obtaining density requirements which provide smooth riding pavements with uniform texture.

Binder Performance Grade	Acceptance Range (°F)
PG 64-22	265°-325°
PG 70-22	285°-335°
PG 76-22	300°-350°

Note: This temperature specification does not apply to WMA (SC-M-408). Refer to the HMA Contractor's QC Plan for mix acceptance range based on selected asphalt plant WMA technologies.

July 01, 2019

#### **Sloped Edge Longitudinal Shoulder Joints**

#### Add the following to Subsection 401.4.23 of the Standard Specifications:

All surface mixtures placed at 150 lbs. per square yard or greater will require the sloped edge joint device. The device contacts the surface of the shoulder of the road and creates an improved transition to cross roads, driveways and obstructions. The device may be removed if deemed necessary for projects that do not require or need a sloped edge profile.

Use a sloped edge longitudinal shoulder joint attachment for the asphalt paver in order to create a sloped edge profile onto an existing roadway shoulder. Construct a sloped edge onto the longitudinal shoulder joint to promote a safe transition between the newly placed asphalt mixture and the existing shoulder (without curb or other confined edges) using an approved device.

Approved devices are listed on Qualified Product Listing No. 75. These devices must meet the requirements of this specification and Qualified Product Policy No 75 to be included on QPL 75. The sloped edge device will be designed to be attached to the paver that confines the material at the end gate and extrudes the asphalt material in such a way that results in a consolidated wedge shape pavement edge of between 25-35 degrees. The device must be designed to constrain the asphalt material by reducing the area by 10 to 15% thereby increasing the consolidation of the extruded profile. The use of a conventional single plate strike off is not permitted.

January 1, 2018

#### MATERIAL FOR FULL DEPTH PATCHING

Delete the following sentence located in subsection 401.2.5 – Material for Full Depth Patching

"Use an approved SCDOT Intermediate Type C mix for all Full Depth Patching."

Insert the following sentence:

"Use an approved SCDOT mix as described in the Supplemental Specification "Removal of Existing Asphalt Pavement before Patching" dated January 1, 2018."

January 1, 2018

#### Removal of Existing Asphalt Pavement before Patching

Delete Subsection 401.4.14 Removal of Existing Asphalt Pavement before Patching, of the Standard Specifications in its entirety and replace with the following:

The RCE will determine the limits of distressed pavement and will mark width and length of patches. RCE / RME will inspect the road and ensures that drainage is adequate and no additional work needs to be done to the ditches and shoulders to promote proper drainage. The RCE may elect to obtain random cores if needed to determine proper depth of distressed area to be patched. Construct patches with a minimum size of 6.5 feet x 6.5 feet with at least 25 feet between patches. Care should be taken to ensure that longitudinal joints do not end up in the wheel paths. In the event that considerable quantities of full depth patching (FDP) are encountered, the RCE will consult with the State Pavement Design Engineer to consider other rehabilitation methods.

Remove the pavement to the depth indicated in the Plans, ensuring that the face of the cut is straight and vertical, with the exception of tapers needed to get equipment in and out of the patched area. If unstable material is encountered, remove additional material as directed by the RCE. Backfill the volume of the material removed below the patch with material meeting the requirements of Section 305, Graded Aggregate Base, and thoroughly compact in layers not exceeding 4 inches with a vibratory compactor. Thoroughly tack the sides of the existing pavement before placing the asphalt patch material in the hole.

Place the patch material in relatively uniform layers not to exceed the number of lifts in the table below. Ensure that the patch material is selected from the table below. Compact each layer with a vibratory compactor and a pneumatic roller. Whenever practical, allow lifts to cool down prior to placing the next lift, especially when doing multiple patches in the same area. The 175° F requirement between lifts does not apply to FDP. Conduct the work so that patches are opened and filled each day, with the roadway being opened to traffic by the end of each days operation. Ensure that the finished patch is smooth riding by using a straight edge. Temperature and calendar restrictions found in **Section 401.4.4** do not apply, however no FDP will be permitted if the area is wet or frozen prior to removing the old pavement.

Full Depth Patching Materials			
	Select mixture type below ba	Select mixture type below based on Depth of FDP	
Depth of FDP	Alternate Mixture Options	Typical Mixture	
4" or Less	Surface Type B / C	Intermediate C	
	2 Lifts	2 Lifts	
6"	Surface Type B / C	Intermediate C	
	2 Lifts	2 Lifts	
8"	Intermediate B Special	Intermediate C	
	2 lifts	3 lifts	
10"	Intermediate B Special	Intermediate C	
	2 lifts	3 lifts	
12" or More	Consult with the State Pavement Design Engineer		

July 1, 2019

#### **Traffic Control**

Delete Subsection 601.1.3 of the Standard Specifications in their entirety and replace them with the following:

#### **601.1.3 Closure Restrictions**

#### 601.1.3.1 General Restrictions

The Department reserves the right to restrict the installation of lane closures, road closures, shoulder closures, ramp closures, pacing operations or any other operations that will impact the efficient flow of traffic or hinder normal traffic operations on the roads of the South Carolina state highway system during peak travel hours and/or days, holidays, holiday weekends, extended holiday periods, weekends, special events or any time traffic volumes are high. Lane closures on high volume highways during peak traffic periods or at any time traffic volumes exceed the numerical values determined to be acceptable by the Department are PROHIBITED. Lane closures on routes with high volume commuter traffic during peak traffic periods are PROHIBITED.

Special events are events generating excessive traffic as determined by the Department. Lane closures, road closures, shoulder closures, pacing operations or any other operations that would impact the efficient flow of traffic or hinder normal traffic operations during special events are PROHIBITED unless otherwise directed by the Engineer.

The Department reserves the right to suspend a lane closure, road closure, shoulder closure, pacing operation or any other operation if the RCE determines a delay or a resulting traffic backup is excessive. Observe and maintain all project specific time restrictions as specified by the Plans, the Specifications and the RCE. Install and remove lane closures, road closures, shoulder closures, pacing operations, or any other operation that would impact the efficient flow of traffic or hinder normal traffic operations within the time restrictions including all relative traffic control devices and signs. Coordinate work activities requiring lane closures, road closures, shoulder closures, pacing operations or any other operation in accordance with all restrictions.

Installation and maintenance of a lane closure is PROHIBITED when not actively engaged in work activities specific to the location of the lane closure unless otherwise specified and approved by the RCE. 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 within the contract unless otherwise specified and approved by the RCE. Also, a maximum lane closure length specified within a contract 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 contract specified parameters, shall require approval by the RCE prior to installation. The length and duration of each lane closure may be reduced by the RCE if the work zone impacts generated by a lane closure are deemed excessive or unnecessary.

31

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3

The presence of temporary signs, portable sign supports, traffic control devices, trailer mounted equipment, truck mounted equipment, personnel, and vehicles relative to the installation or removal of a closure is PROHIBITED within the temporary clear zone during the prohibited hours.

#### **601.1.3.2 Holiday Restrictions**

3

The Department prohibits lane closures on interstate highways during holiday weekends and extended holiday periods as defined below unless otherwise directed by the Engineer. The Department's holiday lane closure restrictions for holidays that are observed on a Monday will include the weekend and are considered a holiday weekend unless otherwise established by these specifications. The Department defines the typical Monday holiday weekend as from 6:00 am of the Friday before the weekend until 6:00 a.m. of the Tuesday after the holiday. Lane closures, road closures, shoulder closures, pacing operations or any other operations that will impact the efficient flow of traffic or hinder normal traffic operations during these Monday holiday weekends as defined above are PROHIBITED unless otherwise directed by the Engineer.

Easter and Thanksgiving holidays are varied and extended holiday periods of a holiday weekend. Easter holidays are defined as from 12:00 noon of the Thursday before Easter until 6:00 p.m. of the Monday after Easter. Thanksgiving holidays are defined as from 12:00 noon of the Wednesday before Thanksgiving Day until 6:00 a.m. of the Monday after Thanksgiving Day. Lane closures, road closures, shoulder closures, pacing operations, or any other operations that will impact the efficient flow of traffic or hinder normal traffic operations during the Easter and Thanksgiving holidays as defined above are PROHIBITED unless otherwise directed by the Engineer.

Consider Independence Day (4<sup>th</sup> of July) an extended holiday period. This extended holiday period will vary from year to year depending upon the day of the week the 4<sup>th</sup> of July occurs. See the table below. Lane closures, road closures, shoulder closures, pacing operations or any other operations that will impact the efficient flow of traffic or hinder normal traffic operations during the Independence Day holiday as defined below are PROHIBITED unless otherwise directed by the Engineer.

INDEPENDENCE	INDEPENDENCE DAY (4th OF JULY) HOLIDAY		
DAY OF WEEK	DURATION		
MONDAY	6:00 AM FRIDAY, JULY 1 <sup>ST</sup> through 10:00 PM TUESDAY, JULY 5 <sup>TH</sup>		
TUESDAY	6:00 AM MONDAY, JULY 3 <sup>RD</sup> through 10:00 PM WEDNESDAY JULY 5 <sup>TH</sup>		
WEDNESDAY	6:00 AM TUESDAY, JULY 3 <sup>RD</sup> through 10:00 PM THURSDAY JULY 5 <sup>TH</sup>		

32

THURSDAY	6:00 AM WEDNESDAY, JULY 3 <sup>RD</sup> through 10:00 PM FRIDAY JULY 5 <sup>TH</sup>
FRIDAY	6:00 AM THURSDAY, JULY 3 <sup>RD</sup> through 10:00 PM MONDAY JULY 7 <sup>TH</sup>
SATURDAY	6:00 AM THURSDAY, JULY 2 <sup>ND</sup> through 10:00 PM MONDAY JULY 6 <sup>TH</sup>
SUNDAY	6:00 AM FRIDAY, JULY 2 <sup>ND</sup> through 10:00 PM TUESDAY JULY 6 <sup>TH</sup>

Consider Christmas an extended holiday period. This extended holiday period will vary from year to year depending upon the day of the week Christmas Day occurs. See the table below. Lane closures, road closures, shoulder closures, pacing operations or any other operations that will impact the efficient flow of traffic or hinder normal traffic operations during the Christmas holiday as defined below are PROHIBITED unless otherwise directed by the Engineer.

CHRI	CHRISTMAS HOLIDAY		
DAY OF WEEK	DURATION		
MONDAY	6:00 AM FRIDAY, DECEMBER 22 <sup>ND</sup> through 10:00 PM WEDNESDAY JANUARY 3 <sup>RD</sup>		
TUESDAY	6:00 AM FRIDAY, DECEMBER 21 <sup>ST</sup> through 10:00 PM THURSDAY JANUARY 3 <sup>RD</sup>		
WEDNESDAY	6:00 AM FRIDAY, DECEMBER 20 <sup>TH</sup> through 10:00 PM FRIDAY JANUARY 3 <sup>RD</sup>		
THURSDAY	6:00 AM TUESDAY, DECEMBER 23 <sup>RD</sup> through 10:00 PM SUNDAY JANUARY 4 <sup>TH</sup>		
FRIDAY	6:00 AM WEDNESDAY, DECEMBER 23 <sup>RD</sup> through 10:00 PM SUNDAY JANUARY 3 <sup>RD</sup>		
SATURDAY	6:00 AM THURSDAY, DECEMBER 23 <sup>RD</sup> through 10:00 PM MONDAY JANUARY 3 <sup>RD</sup>		
SUNDAY	6:00 AM FRIDAY, DECEMBER 23 <sup>RD</sup> through 10:00 PM TUESDAY JANUARY 3 <sup>RD</sup>		

#### 601.1.3.3 Waiver of Restrictions

1

Waiver or modification of these restrictions or the established hourly lane closure prohibition hours shall require approval from either the Deputy Secretary of Engineering, the Chief Engineer for Operations, or the Chief Engineer for Project Delivery. When requesting such a waiver or modification of these restrictions, submit the request to the RCE no less than 30 calendar days prior to the day in question. The Department reserves the right to approve, deny, and/or rescind waivers at its discretion. The Department reserves the right to suspend a lane closure, road closure, shoulder closure, pacing operation or any other operation if the RCE determines a delay or a resulting traffic backup is excessive.

September 1, 2012

# TRAILER MOUNTED AUTOMATED FLAGGER ASSISTANCE DEVICE SYSTEM (AFAD)

#### 1. Description:

This specification details the minimum requirements of all Automated Flagger Assistance Device Systems (AFAD) utilized and placed into operation on the roadways of the state of South Carolina.

An automated flagger assistance device system is a temporary traffic control device system for controlling the flow of traffic through temporary traffic control areas, typically work zones, that generate the requirement for two-way traffic to share a single travel lane. An automated flagger assistance device system shall consist of no less than 2 individual AFAD units linked and remotely controlled by wireless communications. A flagger(s), who has successfully completed a flagger training course sponsored by a South Carolina Department of Transportation approved work zone traffic control training provider, shall operate the system. Install, operate and maintain each AFAD unit as designated by these Supplemental Specifications, the manufacturer's specifications, the Standard Drawings for Road Construction, the Plans and the Engineer.

An automated flagger assistance device system acceptable for use on the roadways of the state of South Carolina shall be either a Type I "RED / YELLOW" Lens system or a Type II "STOP / SLOW" Sign system.

The automated flagger assistance device system shall comply with all requirements for Automated Flagger Assistance Devices as specified and directed by the MUTCD, latest edition, and this supplemental specification. An automated flagger assistance device system shall operate and comply with all requirements for flagging operations as specified and directed by the latest editions of the MUTCD, the South Carolina Flagger's Handbook and the Standard Specifications for Highway Construction. Also, an automated flagger assistance device system shall operate and comply with all requirements for flagging operations as specified and directed by the Standard Drawings for Road Construction, the special provisions, the plans and the Engineer.

#### 2. Operations Requirements:

**A.** General: Automated flagger assistance device systems are only permitted for use on two-lane two-way roadways where each single travel lane of opposing traffic is required to utilize and share one travel lane. An AFAD system is PROHIBITED for use on multilane roadways with reduced numbers of travel lanes. An AFAD is not a traffic control signal and shall not be used as a temporary traffic control signal or to control traffic at any location with more than 2 opposing single travel lanes seeking to share one travel lane.

- **B. Documentation:** Provide documentation to the SCDOT to verify that each operator of an automated flagger assistance device system has successfully completed instruction in the operation of a system by the manufacturer of that system. Also, provide documentation to verify that each operator has successfully completed a flagger training course sponsored by a South Carolina Department of Transportation approved work zone traffic control training provider.
  - 1. Work Conducted under Contract to SCDOT Provide documentation of proof of successful completion of training in the proper operation of the AFAD system by the manufacturer of the system and successful completion of training as a flagger by a South Carolina Department of Transportation approved work zone traffic control training provider to the Resident Engineer no less than 7 days prior to placing an automated flagger assistance device into operation.
  - 2. Work Conducted under Encroachment Permit Provide documentation of proof of successful completion of training in the proper operation of the AFAD system by the manufacturer of the system and successful completion of training as a flagger by a South Carolina Department of Transportation approved work zone traffic control training provider along with submittal of the encroachment permit to the SCDOT.
- **C. Operator:** The operator of the an automated flagger assistance device system shall be a recipient of and have successfully completed instruction in the operation of the system by the manufacturer of that system. The operator shall have successfully completed a flagger training course sponsored by a South Carolina Department of Transportation approved work zone traffic control training provider.

The South Carolina Department of Transportation only recognizes the following entities as acceptable providers of work zone traffic control training for organizations outside of the SCDOT who perform work activities within the highway rights-of-way in South Carolina under either contract to SCDOT or encroachment permit:

American Traffic Safety Services Association (ATSSA)

Institute for Transportation Research and Education at North Carolina State University (ITRE)

Carolinas Association of General Contractors (AGC)

National Safety Council South Carolina Chapter

The operator shall control the automated flagger assistance device system from a location with an unobstructed view of the AFAD unit as well as an unobstructed view of the approaching traffic. If a single operator is controlling more than one unit, the operator shall have an unobstructed view of traffic from both directions. At no time is the operator permitted to leave the AFAD unattended when the AFAD is operating.

**D. Site Location:** When sufficient shoulder space is available, place and position the AFAD unit on the shoulder of the roadway no closer than 1 foot from either the near edge line or the near edge of pavement when an edge line is absent to the near edge of the trailer when the gate arm is in the upright position. When sufficient shoulder space to attain the minimum 1 foot requirement is unavailable, minimal encroachment of the unit upon the adjacent travel lane is permitted.

Place and position the AFAD unit to allow the end of the gate arm, when in the down position, to reach the center of the adjacent travel lane being controlled by the unit. Encroachment by the gate arm when in the down position to a point less than to the center of the adjacent travel lane or into the opposing travel lane beyond the center of the roadway is PROHIBITED.

Install the advance warning signs required for typical flagging operations on each approach. In addition to the typical flagging operations sign array, also include and install a "Be Prepared To Stop" sign (W3-4-48) between the "Flagger" symbol sign (W20-7-48) and the AFAD unit on each approach. Therefore, the required advance warning signs for each approach are, "Be Prepared To Stop" (W3-4-48), "Flagger" symbol (W20-7-48), "One Lane Road Ahead" (W20-4-48-A) and "Road Work Ahead" (W20-1-48-A).

**E. Nighttime AFAD Flagging Operations:** During nighttime operations, illuminate each AFAD unit 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 operations, operators 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.

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

#### 3. System Requirements:

- **A.** General: An automated flagger assistance device system shall consist of a Main AFAD unit and a Remote AFAD unit, linked and remotely controlled by wireless communications. The individual trailer-mounted units shall have nesting capabilities to permit towing of both units in a single trailer configuration. When nested, all lights including stop, tail and turn signal lights of both units shall operate uniformly.
- **B. Power Source:** The electrical power for operation of the sign shall be supplied by a 12 VDC power source or a 110 VAC or a 120 VAC power source. Provide and mount a D/C power source for the unit on the trailer. An adaptable 110 VAC or 120 VAC power source may be used when available and selected for use.
  - 1. **D/C Powered:** Power the unit by means of a battery bank charged by photovoltaic solar panels and/or a built-in 110 VAC 10 amp battery charger. House the battery bank in a lockable heavy duty weatherproof box or cabinet. The battery bank shall have the capability to provide sufficient operating power to the unit for no less than 7 continuous days.

- 2. **A/C Powered:** Power the unit by means of a 110 VAC or 120 VAC power source. Equip the unit with ground fault circuit interrupter circuit breakers. Conduct all A/C power adaptations with UL approved equipment and methods.
- C. Remote Control: Equip each AFAD unit with a controller capable of receiving and implementing instructions through wireless communications from a handheld transceiver. Also, equip each AFAD unit with a handheld transceiver that provides wireless communication with the unit controller to permit operation of the individual unit or the system by an operator or operators from remote locations. The system shall provide the capability for total system operation and control of both units by one operator from a primary handheld transceiver as well as allow independent unit operation by one operator per unit from unit specific handheld transceivers.

Monitor and verify data transmissions utilized to control the AFAD units. Digitally encode signal transmissions to minimize interference. Comply with all applicable requirements of the Federal Communications Commission. In the event communications are disrupted or lost, the system shall go into a "fail safe" mode and display the "Circular Red" / "STOP" indications and lower the gate arms.

**D.** Gate Arm: Equip each AFAD unit with an automated gate arm that descends to a down position across the travel lane that approaching traffic is operating in when the AFAD unit displays the condition for approaching traffic to stop. The automated gate arm shall ascend to an upright position when the AFAD unit displays the condition to allow stopped traffic to proceed past the location of the AFAD unit.

Acceptable operation of the gate arm shall require the gate arm to begin descent to the down position no less than 2 seconds or more than 4 seconds after the AFAD unit displays the condition for approaching traffic to stop. The gate arm shall begin ascent to the upright position not less than 1 second or more than 2 seconds prior to display of the condition to allow stopped traffic to proceed.

The gate arm shall measure no less than 8 feet in length and shall have a minimum vertical height of 4 inches when placed in the down position. Reflectorize both sides of the gate arm with a Type III Microprismatic retroreflective sheeting with vertical alternating red and white stripes at 16 inch intervals.

The gate arm shall deflect in the event an errant vehicle drives through and strikes the gate arm and then return to a functional position after the errant vehicle clears the gate arm.

E. Trailer: Fabricate and equip each trailer with a single axle, springs, support assembly and four (4) leveling or stabilizer jacks. Properly equip the trailer to comply with South Carolina Law governing motor vehicles. The minimum requirement for lights and reflectors shall include turn signals, dual tail lights, and brake lights. Equip each trailer with Safety chains meeting SAE J-697 standards and paint each trailer with Federal Standard No. 595, Orange No. 12246. Each trailer mounted AFAD unit shall have the capability to withstand winds up to 80 MPH without overturning when in the operating configuration or position.

#### 4. Type I "RED / YELLOW" Lens System:

A Type I "RED / YELLOW" Lens AFAD system shall alternately display a steadily illuminated Circular RED lens and a flashing Circular YELLOW lens to control traffic without the need for a "human flagger" in the immediate vicinity of the AFAD unit. The steadily illuminated Circular RED lens shall illuminate when approaching traffic is required to stop and the flashing Circular YELLOW lens shall illuminate when stopped or approaching traffic is permitted to proceed pass the location of the AFAD unit.

A RED / YELLOW Lens AFAD unit shall have no less than one set of Circular RED and Circular YELLOW lenses in a vertical configuration that have diameters of no less than 12 inches. Arrange the lenses to place the Circular RED above the Circular YELLOW and provide a minimum height of no less than 7 feet from the bottom of the apparatus housing the Circular YELLOW lens to the grade elevation of the travel lane under control of the AFAD unit. However, if the lenses are located over any portion of a travel lane in which traffic is operating and may pass underneath the lenses, the minimum mounting height shall be no less than 15 feet from the bottom of the apparatus housing the YELLOW lens to the grade elevation of the travel lane under control of the AFAD unit in which traffic is operating.

The gate arm shall begin its descent to the down position not less than 2 seconds or more than 4 seconds after the Circular RED lens is illuminated. The automated gate arm shall begin its ascent to the upright position not less than 1 second or more than 2 seconds prior to illumination of the flashing Circular YELLOW lens.

Install a "Stop Here On Red" sign (R10-6-36) or (R10-6a-30) on the right side of the approach at the point at which motorists are expected to stop when the Circular RED lens is illuminated.

#### Transition Between RED and YELLOW Conditions -

**Transition to Circular RED condition** - The flashing Circular YELLOW lens shall enter into a minimum 5 second steady illumination phase prior to transitioning to the steadily illuminated Circular RED condition. The gate arm shall begin its descent not less than 2 seconds or more than 4 seconds after the Circular RED lens is illuminated.

**Transition to Circular YELLOW condition** - The gate arm shall complete its ascent to the upright position not less than 1 second or more than 2 seconds prior to illumination of the flashing Circular YELLOW lens. The steadily illuminated Circular RED lens shall transition to the flashing Circular YELLOW lens.

The Type I "RED / YELLOW" Lens AFAD system shall include a fail-safe system with a conflict monitor or similar device to prevent display of conflicting indications between units. Also, the system shall provide indicators to notify the operators of power loss that may impede proper operation of the system.

#### 5. Type II "STOP / SLOW" Sign System:

A Type II "STOP / SLOW" Sign AFAD system shall have a STOP / SLOW sign that alternately displays the STOP (R1-1-36) face and the SLOW (W20-8-36) face of a STOP /

SLOW paddle to control traffic without the need for a "human flagger" in the immediate vicinity of the AFAD unit. The STOP sign face shall display when approaching traffic is required to stop and the SLOW sign face shall display when stopped or approaching traffic is permitted to proceed pass the location of the AFAD unit.

The STOP / SLOW sign, fabricated from a rigid material, shall have an octagonal shape with a minimum face size of 36 inches by 36 inches. Reflectorize each face of the sign with a Type VII, Type VIII or Type IX Prismatic Retroreflective sheeting included on the latest edition of the SCDOT Qualified Products List 20. The STOP sign face shall have a red background with white letters and border and the SLOW sign face shall have a diamond shaped orange background with black letters and border. The letters shall have a minimum height of 8 inches. The sign faces shall have a minimum mounting height of 7 feet from the bottom of the sign to the grade elevation of the travel lane under control of the AFAD unit.

Supplement the Type II "STOP / SLOW" Sign AFAD unit with active conspicuity devices. Include a steadily illuminated RED lens beacon to illuminate when the STOP sign face is displayed and a flashing YELLOW lens beacon to illuminate when the SLOW sign face is displayed. Each beacon shall have a 12 inch signal lens. Mount the RED lens beacon no more than 24 inches above the top of the STOP sign face and YELLOW lens beacon no more than 24 inches above the top or to the side of the SLOW sign face.

Type B warning lights are PROHIBITED as alternatives to the 12 inch signal lens beacons.

The gate arm shall begin its descent to the down position 2 seconds or more than 4 seconds after the transition to a complete display of the STOP sign face is accomplished and the illumination of the steadily illuminated RED lens beacon. The automated gate arm shall begin its ascent to the upright position not less than 1 second or more than 2 seconds prior to the initiation of the transition from the STOP sign face to the SLOW sign face.

Install a "Wait On Stop" sign (R1-7-30) and a "Go On Slow" sign (R1-8-30) either on the same support structure as the AFAD unit or immediately adjacent to the AFAD unit.

#### **Transition Between STOP and SLOW Conditions -**

**Transition to STOP condition** - The RED lens beacon shall enter into a "flashing mode" no less than 5 seconds prior to transitioning from the SLOW sign face to the STOP sign face. Immediately upon completion of the transition to complete display of the STOP sign face, the "flashing mode" of the RED lens beacon shall transition to a steadily illuminated condition. The gate arm shall begin its descent in not less than 2 seconds or more than 4 seconds after completion of the transition to a complete display of the STOP sign face and illumination of the steadily illuminated RED lens beacon.

**Transition to SLOW condition** - The STOP sign face shall begin the transition to the SLOW sign face. The gate arm shall begin its ascent to the upright position not less than 1 second prior to the initiation of the transition from the STOP sign face to the SLOW sign face. The RED lens beacon shall cease to illuminate and the flashing YELLOW lens beacon shall begin to illuminate immediately upon completion of the transition of the

STOP sign face to the SLOW sign face and the ascent of the gate arm to its completed upright position.

The Type II "STOP / SLOW" Sign AFAD system shall include a fail-safe system with a conflict monitor or similar device to prevent display of conflicting indications between units. Also, the system shall provide indicators to notify the operators of power loss that may impede proper operation of the system.

- **3. Method of Measurement:** Unless otherwise specified, Automated Flagger Assistance Device Systems (AFAD's) are not measured for separate payment but are included in the contract lump sum bid price item Traffic Control as specified in Subsections 107.12 and 601.5 of the 2007 Standard Specifications for Highway Construction.
- **4. Basis of Payment:** Unless otherwise specified, payment for an Automated Flagger Assistance Device System (AFAD) is included in the contract lump sum bid price item Traffic Control as specified in Subsections 107.12 and 601.5 of the 2007 Standard Specifications for Highway Construction. The payment shall be full compensation for providing, installing, removing, and relocating as necessary, operating, and maintaining an Automated Flagger Assistance Device System (AFAD). Payment shall include furnishing all labor, hardware, equipment, tools, incidentals, and any miscellaneous items necessary for installing, operating, and maintaining the system.

September 1, 2013

# WORK ZONE TRAFFIC CONTROL TRAINING REQUIREMENTS FOR CONTRACTORS / SUBCONTRACTORS

#### 1. Description:

This specification details the work zone traffic control training requirements for employees and representatives of a contractor or subcontractor under contract to the South Carolina Department of Transportation (SCDOT) whose job duties include responsibilities relative to implementation and maintenance of the Transportation Management Plan (TMP). "Employees and representatives of a contractor or subcontractor" will henceforth be referred to as "employee" or "employees" and "contractor or subcontractor" will henceforth be referred to as "contractor".

The SCDOT requires the contractor to provide documentation to substantiate successful completion and attainment of a passing score of a prescribed training course conducted by an SCDOT approved provider by those employees whose job duties categorize them as "designated trainees" as defined hereinafter.

#### 2. Implementation:

These requirements for work zone traffic control training for employees of those entities under contract to the SCDOT whose job duties include responsibilities relative to implementation and maintenance of a TMP shall become effective on all projects let to contract after September 1, 2013.

#### 3. Designated Trainees:

An employee whose job duty responsibilities, as designated hereto, impact or involve any of or all of the components of a TMP must successfully complete an advanced work zone traffic control training program. These components include the primary component, the "Temporary Traffic Control" plan, and the secondary components, the "Transportation Operations" plan and the "Public Information" plan.

An employee whose job duties include any of the following responsibilities regarding the TMP shall successfully complete an advanced work zone traffic control training program conducted by an SCDOT approved work zone traffic control training provider:

Supervision of the field installation of any or all components of the TMP Supervision of the maintenance of any or all components of the TMP Supervision of the removal of any or all components of the TMP Design and development of revisions to an existing TMP Design and development of a new or alternate TMP Any decision-making responsibilities regarding the TMP

Those employees whose job duties do not include responsibilities relative to the TMP as stated above are not required to attend an advanced work zone traffic control training program. However, it is recommended that all employees whose job duties place them on the job site within the highway rights-of-way within 30 feet or less of a travel lane open to traffic should attend a basic work zone traffic control training course.

Also, an employee whose job duties include "flagger" shall successfully complete a "Flagger Training" course. However, regarding an employee whose job duties include "flagger" but does not involve any of the responsibilities listed above, successful completion of a "Flagger Training" course is the only mandatory work zone traffic control training course required for this employee; other work zone traffic control training courses are elective.

#### 4. Approved Work Zone Traffic Control Training Providers:

The SCDOT recognizes the following organizations as acceptable providers of an advanced work zone traffic control training program, a "Flagger Training" course or the optional basic work zone traffic control training course:

American Traffic Safety Services Association (ATSSA)

Institute for Transportation Research and Education at North Carolina State University (ITRE)

Carolinas Association of General Contractors (AGC)

National Safety Council South Carolina Chapter

These organizations provide work zone traffic control training in compliance with the MUTCD and reference requirements specific to SCDOT. Therefore, work zone traffic control training provided by entities other than those listed above are not considered comparable and shall be unacceptable.

Specific course material for work zone traffic control training courses designated as "Basic", "Advanced", "Supervisor" or "Flagger" and any additional training courses not specified here is determined by the work zone traffic control training course provider and has undergone review and received acceptance by SCDOT. Also, the passing score for each training course is determined by the work zone traffic control provider.

#### 5. Training Requirements / Qualifications:

Successful completion of an advanced work zone traffic control training program is defined as achieving a passing score in all courses, including any prerequisite courses, to attain a level considered "advanced", "supervisor" or any other relative term as designated by the provider to imply the trainee has an understanding of the course material inclusive of design, implementation and maintenance of work zone traffic control scenarios. Upon successful completion of the program, the trainee should also possess an understanding for determining the need for and developing and implementing adjustments as necessary when applying typical work zone traffic control applications to non-typical work site conditions and scenarios.

The employee whose job duty responsibilities mandate successful completion of an advanced work zone traffic control training program shall do so prior to performing any job

duties with responsibilities relative to design and development of a TMP or revisions of an existing TMP or any decision-making responsibilities regarding the TMP or supervision of the field installation and maintenance of any and all components of the TMP.

Also, an employee whose job duties mandate successful completion of a "Flagger" training course shall do so prior to performing any job duties relative to flagging traffic.

Each employee who has successfully completed an approved advanced work zone traffic control training program or a "Flagger" training course shall attend and complete a refresher course relative to the employee's job duties on a 5-year incremental time frame.

#### 6. Documentation:

The contractor shall provide proof of successful completion of an acceptable advanced work zone traffic control training class by those employees whose job duty responsibilities mandate successful completion of approved work zone traffic control training to the Resident Engineer prior to the employee performing the job duties that incorporate responsibilities which necessitate approved work zone traffic control training. For proof of successful completion of an approved work zone traffic control training class, provide a copy of the certificate of training from the organization who conducted the training to the Resident Engineer. Failure to provide the required documentation as specified shall prevent SCDOT acceptance of the employee as properly trained and acceptable for conducting those job duties that necessitate the prescribed work zone traffic control training.

The contractor shall provide proof of successful completion of an acceptable "Flagger Training" course by all employees whose job duties require them to be the "Flagger" within a flagging operation to the Resident Engineer prior to the employee performing any "Flagger" job duties.

The contractor shall provide proof of successful completion of an acceptable advanced work zone traffic control refresher course for those employees no later than 60 days beyond the 5 year anniversary date of the employee's certificate date of completion of a previous advanced work zone traffic control training program.

Documentation of proof of completion of a basic work zone traffic control training course by employees whose job duties require their presence on the job site within the highway rights-of-way but exclude any responsibilities relative to the TMP is not required.

July 1, 2020

#### SECTION 627 THERMOPLASTIC PAVEMENT MARKINGS

#### General

Delete section 627.4.4 entirely and replace with the following:

#### 627.4.4 Application of the Thermoplastic Pavement Marking Material

- 1. Except when directed or approved by the RCE, place all longitudinal markings with a truck-mounted applicator in conformance with the requirements of Subsection 627.3. Such an exception may occur where the length of a particular marking is too short or the curvature too great to permit efficient use of the truck-mounted liner. Transverse markings may be applied with a portable unit.
- 2. Ensure that the markings are straight or uniform in curvature and conform uniformly to tangents, curves, and transitions. Make certain that symbols are of the dimensions shown in the SCDOT Standard Drawings. Ensure that markings are of the dimensions and are placed as shown on the Pavement Marking Plans or as directed by the RCE. Provide sufficient control points to serve as guides for the application of markings at no additional expense to the Department.
- 3. Ensure that the finished line pavement markings are free from waviness and lateral deviation does not exceed 2 inches in 15 feet. Any greater deviation is sufficient cause for removal and correction of such markings at no additional expense to the Department. Remove and correct symbol pavement markings not meeting the dimensional requirements shown in the *SCDOT Standard Drawings*. Protect the pavement markings until dry by placing guarding or warning devices as necessary. If a vehicle crosses the wet marking, remove the pavement marking and any tracking lines made by the moving vehicle and apply new markings at no additional expense to the Department.
- 4. Place pavement markings only when the pavement is dry as determined by visual inspection or other approved method and the pavement temperature is 50°F or greater. No work is allowed when any moisture is visible on the pavement surface or pavement is wet. Provide each work crew with a hand-held infrared non-contact thermometer with a temperature range of 0°F to 1000°F to verify the minimum surface temperature. Measure pavement temperature away from heat generating equipment.
- 5. In Districts 2, 3, and 4, do not apply thermoplastic pavement markings between December 15 and March 15 unless approved by the RCE. Additionally, the RCE may disallow application on any day when the weather is cold and/or rainy and there is some question as to whether the surface temperature will be above 50°F for a period adequate to obtain quality pavement markings. Application may also be disallowed on any day when, in the opinion of the RCE, moisture conditions are not satisfactory for obtaining quality pavement markings.
- 6. Ensure that new asphalt concrete surfaces are in place a minimum of 7 days before application of thermoplastic pavement markings. Remove the curing compound on new Portland cement concrete surfaces before application of pavement markings.

- 7. Have on hand an adequate number of personnel experienced in the handling and application of this type of material to ensure that the work is done properly. Run the marking machine only in the direction of normal traffic flow during marking operations.
- 8. Perform work only during daylight hours unless specified otherwise. Ensure that all markings are sufficiently dry before sunset to permit crossing by traffic. Remove all protective devices before sunset to allow free movement of traffic at night.
- 9. Apply the thermoplastic pavement marking material at a temperature between 390°F and 420°F that provides the best adhesion to the pavement as recommended by the manufacturer. Heat the material uniformly throughout and ensure that it has a uniform disbursement of binder, pigment, and glass beads when applied to the surface of the pavement.
- 10. Apply extruded lines 12 inches or less in width with a die that equals the width of the line. Extruded lines greater than 12 inches may be applied with two dies whose combined width is equal to the width of the line.

April 1, 2013

# Concrete Structures – Preformed Joint Filler

Delete Subsection 702.2.2.1 of the Standard Specifications in its entirety and replace it with the following:

#### 702.2.2.1 Preformed Joint Filler

Use preformed joint material that meets AASHTO M 153 or AASHTO M 213 with the following exceptions:

- 1. Use only materials manufactured from rubber.
- 2. Use materials that require a load of not less than 340 kPa or greater than 5200 kPa to compress to 50% of its thickness when tested in accordance with AASHTO T 42.
- 3. Use materials that have a recovery of at least 70% when tested in accordance with AASHTO T 42.

Use preformed joint material that is listed on QPL 81.

Provide a manufacturer's certification that states that the material conforms to SCDOT specifications.

#### **MINIMUM MANDATORY REQUIREMENTS**

The following minimum mandatory requirements shall be met and documented:

- 1. In business for at least the past five (5) years under the current business name without declaring bankruptcy. A letter on company letterhead declaring that the company has been in business for five (5) years + and has not declared bankruptcy shall be included with the bid form.
- 2. A minimum of three (3) similar project references with contact names and contact information (including a current e-mail address) that are past customers within the last two (2) years. Provide a brief project description, project budget, start and completion dates, and contact information. (Include with bid).
- 3. Copy of Worker's Compensation and General Liability Insurance with Florence listed as additional insured supplied to the Procurement Office prior to contract execution or commencement of any work. (Must be provided prior to execution of a contract).
- 4. The successful vendor must be able to meet all Federal, State, and local regulations required for this project. To be acceptable to the Owner, bidders must be skilled and/or licensed, if applicable, in the class of work on which they respond, and no bid will be considered from any bidder who is unable to show that he has actually performed considerable work of similar character to that on which he is bidding.

#### INSTRUCTIONS TO BIDDERS

#### 1) TAXES:

- a) Florence County pays SC Sales Taxes in the amount of 8%. **INCLUDE SC SALES TAX WITH YOUR BID.**
- 2) NON-RESIDENT TAXPAYER REGISTRATION AFFIDAVIT Nonresident proposers receiving income from business conducted in South Carolina are required to pay taxes to the state on that income. To facilitate this requirement, a nonresident proposer must register with the South Carolina Secretary of State or the South Carolina Department of Revenue. In compliance with South Carolina Code Section 12-8-540 and 12-8-550, a proposer located outside of South Carolina that receives a contract from the County, must furnish Form 1-312 (Rev.10/5/07), Nonresident Taxpayer Registration Affidavit Income Tax Withholding, properly executed and signed.
  - a) If your firm is not presently registered with the appropriate state office, you may indicate the intent to do so should your firm be awarded a contract. Questions concerning this form may be directed to the South Carolina Department of Revenue.
- 3) EMPLOYEE VERIFICATION PER THE SOUTH CAROLINA ILLEGAL IMMIGRATION REFORM ACT By entering into this Agreement, the Design Team hereby certifies to County that it will verify the employment status of any new employees, and require any consultants or sub-consultants performing services hereunder to verify any new employees status, per the terms of the South Carolina Illegal Immigration Reform Act, and as set out in Title 41, Chapter 8 of the Code of Laws of South Carolina, 1976.

#### 4) RECEIPT AND OPENING OF SEALED BIDS:

- a) Sealed bids will be received and opened as specified in this Invitation-To-Bid document.
- b) The Owner will consider as non-responsive any bid not prepared and submitted in accordance with the provisions hereof and may waive any informality or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 120 days after the actual date of the opening thereof or as provided for the in the bid documents whichever is later.

#### 5) PREPARATION OF BID:

- a) All bids will be evaluated in accordance with procedures and specifications contained herein and Florence County Code. The responsiveness to same determined in accordance to the instructions and criteria in this document. Any bid not providing sufficient information and documentation to comply with the Invitation-To-Bid Evaluation requirements will be considered non-responsive and removed from further consideration.
- b) A bid shall be made in the official name of the firm or individual under which business is conducted (showing the official business address) and must be signed in ink by a person duly authorized to legally bind the person, partnership, company, or corporation submitting the bid.

- c) All information requested of the bidder shall be entered in the appropriate spaces on the provided forms. If additional space is required, attach additional pages as needed within the sealed bid response.
- d) Bidders mailing their bid must allow a sufficient mail delivery period to insure timely receipt of their bid. Florence County is not responsible for bids delayed by mail and/or delivery services of any nature. It is the bidder's sole responsibility to insure that all documents are received by person (or office) at the time indicated in the bid document. No facsimile or email submissions.
- e) Bidders must clearly mark as "Confidential" each part of their offer which they consider to be proprietary information that could be exempt from disclosure under Section 30-4-40, Code of Laws of South Carolina, 1976 as amended (Freedom of Information Act). If any part is designated as "confidential", there must be attached to that part an explanation of how this information fits within one or more categories listed in Section 30-4-40. Florence County reserves the right to determine whether this information should be exempt from disclosure and no legal action may be brought against Florence County or his agents for its determination in this regard.
- f) All information shall be entered in ink or typewritten.
- g) All proposed costs shall be for all licenses, permits, taxes, labor, material, transportation, equipment and any other components/services that are required to complete the work embraced herein this Invitation-To-Bid document.
- h) If applicable, each bidder shall show the names, address and license number of any subcontractors and the scope of their work, which he may employ on the Project. Subcontractors will be required to comply with all applicable requirements of the Specifications. If applicable, each bid shall include the bidder's name, address and South Carolina Contractor's License Number. In South Carolina, where a contract amounts to \$17,500 or more, the name and license number of the subcontractor, where bid is issued, shall also be shown. The license numbers shall be shown on the bid form bid which will be enclosed in the sealed bid.
- i) Each bid must be submitted in a sealed envelope, addressed to the Owner along with the name of the project for which the bid is submitted. The bidder shall also show his name and address, on the outside of the envelope. Failure to show the required information may result in rejection of the response and removal from further consideration. If forwarded by mail or carrier, the sealed envelope containing the bid must be enclosed in another outer envelope. Florence County shall not be responsible for unidentified bids.
- j) Each bidder registered with Vendor Registry shall receive all addendums in conjunction with this project via e-mail. It shall be each bidder's responsibility to assure that all addenda have been received. No claim for failure to receive addenda will be considered. All addendums issued in accordance with this bid request can also be obtained from the Florence County Procurement Office located at the County Complex, 180 N. Irby Street; Room B-5, Florence, SC 29501, by e-mailing pfletcher@florenceco.org.

#### 6) BID BOND (SURETY) REQUIRMENTS:

a) As discussed in the Bid Surety Requirement document contained herein, Bid Surety must accompany any and all responses submitted that contain estimated project costs exceeding thirty

thousand dollars (\$30,000.00) Failure to satisfy this Bid Surety requirement will result in your bid being considered non-responsive and removed from further consideration for award of the subject contract. Bid Surety can be provided as discussed below.

- b) Bid Surety will not be required from Contractors that have been in business for five (5) consecutive years without filing for bankruptcy. A statement on the company's letterhead from the firm stating this qualification will replace the bid bond and must accompany the bid.
- c) For all bidders not meeting the criteria of "b" above, a deposit in the amount of five percent (5%) of the proposed total contract price shall accompany the bid. These deposits shall take the form of certified check, cashier's check or bond executed by a corporate surety licensed under the laws of this state. The cashier's check or certified check shall be deposited to the County's account if the successful bidder fails to enter into the proposed contract within ten (10) days after the award. Bid deposits of unsuccessful bidders will be returned as soon as the contract is awarded.
- d) One of the above requirements must be met for your response to be considered.

#### 7) EXECUTION OF CONTRACT:

a) The bidder to whom an award is made shall deliver to the County a certificate of insurance as discussed in Item 10 below. The County's issuance of a purchase order and/or verbal notification of such execution may serve as the official "Notice to Proceed". Bidders failing to enter the proposed contract may be subject to Debarment and Suspension, as prescribed under Section 11-102 of the Florence County Code, from future consideration for award of contracts.

#### 8) LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT:

a) The successful bidder, upon his failure or refusal to execute and deliver the contract required within twenty one (21) calendar days after he has received "Notice of Award", shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid. Forfeiture of guaranty under this section may result in the bidder being subjected to Debarment or Suspension, as prescribed under Section 11-102 of the Florence County Code, from future consideration for award of contracts.

#### 9) TERM OF CONTRACT AND CONTRACT DOCUMENTS:

a) The contract documents that will form the contract shall include:

The Complete Bid Document
All Addenda
The Successful Bidder's Submitted Bid Document
Notice of Award (Verbal or Written)
Purchase Order/Agreement/Contract
Insurance Certification

#### 10) ORDER OF PRECEDENCE

a) In the event of inconsistent or conflicting provision of this contract and referenced documents, the following descending order of precedence shall prevail: (1) Florence County Procurement Ordinance, as amended (2) Bid Announcement/Advertisement (3) Special Terms and Conditions, (4) Instructions to Responders and Vendor Agreements (5) Other provisions of the contract whether incorporated by reference or otherwise, and (6) the Specifications.

#### 11) INSURANCE:

a) Upon award of the contract or Purchase Order, the bidder shall maintain, throughout the performance of its obligations a policy of Worker's Compensation insurance with such limits as may be required by SC law, and a policy or policies of general liability insurance insuring against

liability for injury to, and death of, persons and damage to, destruction of, property arising out of, or based upon, any act or omission of the bidder or any of its subcontractors of their respective officers, directors employees or agents. Such liability insurance shall have limits sufficient to cover any loss or potential loss resulting from this contract. Florence County must be listed as additional insured. The certificate must allow a minimum of a 30 day written notice of cancellation. Bidder shall provide a Certificate of Insurance to the Florence County Procurement offices prior to start of work.

#### 12) EXAMINATION OF PROJECT'S WORK SITES:

a) Each of the bidders shall fully familiarize itself with the conditions relating to the bid to insure complete understanding of all the details involved. The bidder shall satisfy itself as to the actual requirements of the bid by personal examination of its location or other means, so as to enable the bidder to make an informed bid. Failure to do so shall not relieve the successful bidder of its obligation to furnish all materials, products, and/or labor necessary to complete the provision of the awarded contract. No allowance will be made for any claims that a bid and/or response was based on incomplete information as to the nature and character of the sites and of the work involved.

#### 13) INTERPRETATIONS OF PLANS AND SPECIFICATIONS:

a) No binding interpretation of the meaning of the documents or any questions relating to the bid will be made to any bidder orally prior to the receipt of bids. Any request for such interpretation or questions shall be made in writing via e-mail to the Florence County Procurement Director (pfletcher@florenceco.org) or his designee. To be given consideration, such requests must be received by date indicated in the invitation. Any such interpretations or supplemental instructions will be issued in the form of addendum(s) to the Contract Documents which will be mailed or emailed to persons receiving a set of documents, not later than three days prior to the date for opening of bids. Failure of any bidder to receive such addendum(s) shall not relieve the successful bidder of any obligation under the awarded contract and this Document.

#### 14) RIGHT TO INCREASE OR DECREASE THE AMOUNT OF WORK:

a) The Owner reserves the right to increase or decrease the amount of work under the Contract at the unit prices quoted in the bid received from the successful bidder.

#### 15) POWER OF ATTORNEY:

Attorneys-in-fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power-of-attorney

#### 16) LAW AND REGULATIONS:

- a) The bidder's attention is directed to the fact that all applicable Federal, State (including SCDHEC), and Local laws, statutes, ordinances, and the rules and regulations of all authorities having jurisdiction over the project shall apply to the contract and the project throughout, and they will be deemed to be included in the contract the same as though herein written out in full.
- b) The bidder's attention is directed to the fact that all bids will comply as prescribed under the most current Florence County Code.

#### 17) METHOD OF AWARD:

- a) Contracts will be awarded to the bidder whose bid appears to serve the best interest of the owner. The successful bidder will be determined as prescribed herein this Document.
- b) Florence County reserves the right to accept or reject, in whole, in part, together or separately, any and all responses as appears in its judgment to be in the best interests of the County, or to waive any and all technicalities and informalities in determining the action of each bid.

#### 18) OBLIGATION OF BIDDER:

a) At the time of the opening of bids, each bidder will be presumed to have inspected the site, if applicable, and to have read and to be thoroughly familiar with the Documents (including all addenda). The failure or omission of any bidder to examine any form, instruction or document shall in no way relieve any bidder from any obligation in respect to this Invitation-To-Bid.

#### 19) LOCAL PREFERENCE

- a) During the bid evaluation process, any vendor who meets the criteria for Local Preference will have their bid price reduced by Five percent (5%), not to exceed a maximum consideration of \$10,000 total. If after application of the Local Vendor Preference, the vendor is determined to be the low responsive/responsible bidder, they will receive the award. The local vendor will be required to match the bid submitted by the non-local low responsive/responsible bidder.
- b) A vendor shall be deemed to be a resident of this County if such vendor is an individual, partnership, association or corporation that is authorized to transact business within the State, maintains an office in Florence County, and maintains within the County a representative inventory or commodities on which the bid is submitted and has paid all taxes duly assessed.

#### **VENDOR AGREEMENTS**

#### 1) IRAN DIVESTMENT ACT- CERTIFICATION (JAN 2015)

- a) The Iran Divestment Act List is a list published by the Board pursuant to Section 11-57-310 that identifies persons engaged in investment activities in Iran. Currently, the list is available at the following URL: <a href="http://procurement.sc.gov/PS-iran-divestment.phtm">http://procurement.sc.gov/PS-iran-divestment.phtm</a> Section 11-57-310 requires the government to provide a person ninety days 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 State 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 Procurement Officer immediately if, at any time before posting of a final statement of award, you are added to the Iran Divestment Act List. [02-2A077-1]

#### 2) STATEMENT OF RIGHTS

a) Florence County reserves the right to obtain clarification or additional information necessary to properly evaluate a bid. Vendors may be asked to give a verbal presentation of their bid after submission. Failure of vendor to respond to a request for additional information or clarification could result in rejection of that vendor's bid. Florence County reserves the right to accept or reject any and all bids, in whole or in part, separately or together, with or without cause; to waive technicalities in submissions, to secure a project that is deemed to be in the best interest of the County. Florence County also reserves the right to make purchases outside of the awarded contracts where it is deemed in the best interest of the County.

#### 3) GENERAL TERMS:

a) Each bidder by submitting a response to Florence County as a result of this Invitation-To-Bid, agrees to and acknowledges its acceptance of and agreement with the procedures outlined below and the terms, conditions and requirements of the applicable Florence County Invitation-To-Bid document. Agreement is evident by the submission of a response to Florence County. If a vendor cannot agree to these terms, or violates these procedures, the response will be judged non-responsive and not considered. If the procedures are violated during the evaluation process or prior

to the issuance of a contract by Florence County, the offer of the firm in question will be void and Florence County will procure the goods/services in question from other eligible vendors.

#### 4) SPECIFIC TERMS:

- a) Products offered shall meet all requirements of the Uniform Commercial Code, if applicable.
- b) Responses submitted are final and complete offers by the vendor. No additions, corrections, modifications, changes or interpretations will be allowed. In the event questions arise on what is meant by an offer, the Procurement Officer will make a determination as to the county interpretation of the vendor's offer. If, after informing the vendor of the county's opinion, disagreement as to scope of the offer is present, the offer will be declared VOID.
- c) Florence County reserves the right to award bids received on the basis of individual items, groups of items, or the entire list of items; to reject any and all bids; and to waive any technicalities. In every case, Florence County reserves the right to make awards deemed to be in the best interest of the County and to negotiate further the offer determined by the County to be in the best interest of the County.
- d) Unit prices will govern over extended prices. Prices must be stated per unit and extended for the total quantity.
- e) Florence County is not exempt from sales tax, if applicable. Sales, use, or excise tax, as well as any handling and shipping charges, must be shown as separate items.
- f) Florence County has a local preference of 5%, which may be applied in bid award determination.
- g) Any deviation from specifications in the bid must be clearly pointed out; otherwise, it will be considered that the items offered are in strict compliance with these specifications, and the successful bidder will be held responsible therefore. Unless otherwise stated, it is understood and agreed that any item offered or shipped on this bid shall be new and suitable for storage or shipment, and that prices include standard commercial packaging and handling.
- h) Any attempt by a vendor to influence the opinion of the county staff, or County Council, by discussion, promotion, advertising or any procedure to promote their offer, will constitute grounds to judge such an offer non-responsive. All offers presented to Florence County will be evaluated based on the current County Code and the offer as presented to the county on the date/time specified in the given bid.
- i) In the event of inconsistent or conflicting provision of this contract and referenced documents, the following descending order of precedence shall prevail: (1) Florence County Procurement Ordinance, as amended (2) Bid Announcement/Advertisement (3) Special Terms and Conditions, (4) Instructions to Responders and Vendor Agreements (5) Other provisions of the contract whether incorporated by reference or otherwise, and (6) the Specifications.
- j) Florence County reserves the right to make periodic inspections of the manner and means the service is performed or the goods are supplied.
- k) All vendors are informed that the Procurement Officer may exercise the County's option to extend the contract, (purchase order) under the provisions of County Code should such extension be mutually agreeable between the County and the selected vendor.

- The Bidder agrees to secure at Bidder's own expense all personnel necessary to carry out Bidder's obligations under this Bid. Such personnel shall not be deemed to be employees of the County nor shall they or any of them have or is deemed to have any direct contractual relationship with the County. The County shall not be responsible for withholding taxes with respect to the Bidder's compensation hereunder. Bidder shall not hold himself out as an employee of the County, and shall have no power or authority to bind or obligate the County in any manner, except County shall make payment to Bidder for services as herein provided. Bidder shall obtain and maintain all licenses and permits required by law for performance of this contract by him. The Bidder shall have no claim against the County hereunder or otherwise for vacation pay, sick leave, retirement benefits, social security, worker's compensation, health or disability benefits, unemployment insurance benefits, or employee benefits of any kind. State or Federal governments, including but not limited to Social Security, workmen's compensation, Employment Security, sales or use tax and any other taxes and licenses or insurance premiums required by law. The County shall pay no employee benefits or insurance premiums of any kind to or for the benefit of Bidder or his employees, agents, and servants by reason of this contract. The Bidder will carry liability insurance relative to any service that he performs for the County. A certificate of insurance must be submitted to the procurement office prior to services performed, with the requested coverage and limits per the County, with Florence County listed as additional insured.
- m) The vendor will act in an independent capacity and not as officers or employees of the County. The vendor shall indemnify, defend and hold harmless Florence County, its officers, agents and employees from liability and any claims, suits, judgments, and damages of any nature brought because of, arising out of, or due to breach of the agreement by Vendor, its subcontractors, suppliers, agents, or employees or due to any negligent act or occurrence or any omission or commission of Vendor, its subcontractors, suppliers, agents, or employees.
- n) The successful vendor shall indemnify and hold harmless the Florence County, its officers, agents and employees from all suits or claims of any character resulting from patent, trademark or copyright infringement or accidents/injury at any point in the delivery of goods/services.
- o) It is the responsibility of the prospective bidder to review the entire invitation for bids packet and to notify the Procurement Department if the specifications are formulated in a manner that would unnecessarily restrict competition. Any such protest or question regarding the specifications or bidding procedures must be received by the Procurement Department not less than five (5) days prior to the time set for bid opening. These requirements also apply to specifications or instructions that are ambiguous.
- p) Should any vendor fail to perform or comply with any provision or terms and conditions of any documents referenced and made part hereof, Florence County may terminate this contract, in whole or in part, and may consider such failure or non-compliance a breach/default of contract. The County, the County reserves the right to purchase any/all items or service in default on the open market. By submittal of a response all vendors agree to this provision. No additional responses will be considered from a firm in default until the default expenses are paid. No principals of a defaulting firm may submit a response under another organization or individual name until their previous default is settled.
- q) Florence County may terminate this agreement with or without cause at any time. In the event of termination by either party, fees due for services satisfactorily performed or goods accepted prior to the termination shall be paid.
- r) Unless specifically requested, submit one (1) copy of your response.

- s) In the event no funds are appropriated by Florence County for the goods or services in any fiscal year or insufficient funds exist to purchase goods or services, then the Contract shall expire upon the expenditure of previously appropriated funds or the end of the current fiscal year, whichever occurs first, with no further obligations owed to or by either party.
- t) All submittals become the property of Florence County.
- u) All bids (and supporting documents) will be retained by Florence County for a period of one hundred twenty (120) days from the date the bids are opened, and no bid shall be received, nor shall any bidder be allowed to withdraw a bid after the opening hour commences.
- v) Brand names and numbers, when used, are for reference only to indicate character or quality desired and do not indicate a preference. Equal items will be considered; equal items shall state the brand name or quality; and Florence County's determination of what shall constitute equality shall be final and conclusive.
- w) S.C. LAW CLAUSE: Upon award of a contract or Purchase Order under this bid, the person, partnership, association, or corporation to whom the award is made must comply with the laws of South Carolina, which require such person or entity to be authorized and/or licensed to do business in this state. Notwithstanding the fact that applicable statutes may exempt or exclude the successful bidder from requirements that it be authorized and/or licensed to do business in this state, by submission of this signed bid, the bidder agrees to subject itself to the jurisdiction and process of the courts of the State of South Carolina, to all matters and disputes arising or to arise under the contract and performance thereof, including any questions as to the liability for taxes, licenses, or fees levied by the State.
- 5) LIQUIDATED DAMAGES: The time limit that is set for this project is **JULY 31, 2022**. In order to ensure a sincere and reasonable effort on the Contractor's part to accomplish the work in a timely fashion, delay damages due to inconveniences to the owner for work not being accomplished on time will be at the rate of five hundred dollars (\$500.00) per day. The Contractor should realize that delays due to bad weather, materials, and such, not under the control of the Contractor will be considered by the Engineer for time extension.

FLORENCE COUNTY, SOUTH CAROLINA, a Body Politic and Corporate and a Political Subdivision of the State of SC	MAIL TO: Florence County Procurement 180 N. Irby Street County Complex MSC-R Florence, SC 29501			
SEALED BID #25-21/22	HAND CARRY TO: Procurement Office, Room B-5			
2022 CPST III DIRT TO PAVE PROJECT: DISTRICT 5	County Complex, 180 N. Irby Street Florence, South Carolina 29501			
Bids will be received at the Procurement Office at 180 N. Irby Street, Rm. B-5 until March 28, 2022 at 10:00 a.m. (EST).	TELEPHONE NO. (843) 665-3018			
Then Publicly Opened in the Florence County Complex, 180 N. Irby Street, Rm. B-5 at 10:30 a.m. (EST) viz Zoom Video Conferencing.	NOTE: BID FORM MUST BE SUBMITTED WITH THE UNIT PRICE BID SHEET			
LEGAL COMPANY NAME:				
D/B/A IF APPLICABLE:				
MAILING ADDRESS:				
TELEPHONE NO:	FAX NO:			
FEDERAL ID (TAX ID) NO:	FEDERAL ID (TAX ID) NO: E-MAIL:			
AUTHORIZED SIGNATURE :				
PRINTED NAME:				
Total cost, including all taxes and expenses r Project: District 5 listed in specifications.	needed to provide services for the 2022 CPST III Dirt to Pave			
TOTAL BID PRICE:	<b>\$</b>			
Total Bid Amount in Words				

The contractor has until JULY 31, 2022 to complete the project.

The Bidder declares their Bid Response is made without any connection with any other individual that may be submitting a Bid Response to this IFB and their Bid Response, in all respects, is fair and in good faith, without collusion or fraud, with another Bidder, representative or agent.

By submission of a response to this Invitation for Bid, the bidder agrees and certifies, to deliver all required services and perform all required work with the strictest conformance to meet or exceed the scope of services, specifications and minimum requirements contained within this Invitation to Bid.

All pricing is firm and will remain firm for at least ninety (90) calendar days from the time and date of the IFB submittal and opening. During this period, the Bidder may only withdraw their Bid Response by submitting a written request to Florence County and Florence County approving said written request.

The bidder agrees to abide by all conditions of this bid and verifies that he is authorized to sign this bid for the offerer. The bidder further states that the company affiliated with this bid currently complies with all applicable federal and state laws and directives relative to non-discriminatory practices in employment.

The Bidder, in compliance with the Invitation-To-Bid, and having examined the Project Documents, and being familiar with all of the conditions surrounding the proposed project, including the availability of materials, labor, and work site environmental conditions, hereby proposes to furnish all permits, labor, materials, supplies, and equipment and to perform the duties in accordance with the contract documents of which this Bid Form is a part.

The Bidder declares that he has read, understands, and accepts the Vendor Agreements and Instructions to Responders which are part of the bid documents.

The Bidder further proposes and agrees, if this Bid is accepted, to contract with Florence County, to furnish all permits, materials, equipment, tools, apparatus, means of transportation, and labor necessary hereto, and to complete the proposed project in full and complete accordance with the Project Documents, to the full and entire satisfaction of the Owner, at the prices listed in the Bid Schedule. The amounts listed on the Bid Schedule section of this Bid Form also include all costs associated with the compliance of all applicable State laws, local ordinances, and the rules and regulations of all authorities and professional association standards having jurisdiction over the project or the materials used throughout, and they will be deemed to be included in the contract the same as though herein written out in full. Unit prices and/or lump sums are shown in the Bid Schedule section below. In case of error in extension, the Unit Price shall govern rather than the Amount. Where Lump Sum Amounts are bid, the amount for each bid item shall govern rather than the total of any several items.

# **UNIT PRICE BID SHEET**

# 2022 Florence County Dirt Road Paving Project District 5 - BID 25 - 21/22

LENGTH (MI.)

BAMS#	DESCRIPTION	UNITS	JAVA ROAD & WYLIE RD. TOTAL PROJECT QUANTITY	UNIT PRICE	TOTAL PRICE
1031000	MOBILIZATION	ST	1.00		
1071000	TRAFFIC CONTROL	ST	1.00		
2016000	SELECTED REMOVAL OF MARKED TREES	ST	1.00		
3071060	CEMENT STABILIZED EARTH BASE COURSE (6" UNIFORM)	SY	18266.00		
3072000	PORTLAND CEMENT FOR CEMENT STAB. EARTH BASE COURSE	NOT	412.00		
4011004	LIQUID ASPHALT BINDER PG64-22	TON	108.00		
4030340	H/M ASPH. SURF. CR. TYPE C	NOT	1688.00		
6051120	PERM.CONST.SIGNS(GRND.MNTD)	SF	192.00		
7141113	18" RC PIPE CULCLASS III	ΤF	640.00		
7141114	24" RC PIPE CULCLASS III	FJ	96.00		
8041020	RIP-RAP (CLASS B)	NOT	486.00		
8048200	GEOTEX/EROS.CONT(CLASS2)TYPE A	SY	594.00		
8100101	PERMANENT GRASSING FOR SMALL PROJECTS	ACRE	4.00		
8152007	SEDIMENT TUBES	J7	110.00		
8153000	SILT FENCE	LF	4117.00		
	PROJECT CONTINGENCY***	ST	1.000		\$40,000.00
				TOTAL	
	*** CONTINGENCY INCLUSION HAS BEEN ADDED TO ADDRESS PROJECT UNKNOWNS AT TIME OF BIDDING (ALL BIDDERS MUST INCLUDE THIS CONTINGENCY AMOUNT WITH THE TOTAL BID)	ADDRESS Y AMOUN	S PROJECT UN IT WITH THE T	IKNOWNS AT TIME OTAL BID)	OF BIDDING

#### **BID BOND (SURETY) REQUIREMENT**

Bid Surety acts to protect the County from delays and expenses incurred in the lengthy competitive sealed bidding and competitive sealed bid processes, and provides the County with some financial assurance that should the bidder be awarded the project, the successful bidder will enter into the contract with the County. The successful bidder forfeits its Bid Surety in the event it cannot perform the work required by the invitations-for-bid or request-for-bids.

For all responses submitted with estimated project costs exceeding twenty-five thousand dollars (\$25,000.00), Bid Surety in the amount of at least five percent (5%) of the proposed project costs must be submitted with the response. Failure to satisfy this Bid Surety requirement will result in your bid being considered non-responsive and removed from further consideration for award of the subject contract. Bid Surety can be provided as discussed below.

#### **BID SURETY OPTIONS:**

#### **Option A:**

Bid Surety will not be required from Contractors that have been in business for five (5) consecutive years without filing for bankruptcy. A certificate or statement on business letterhead from the firm stating it meets this qualification will replace the bid surety and must accompany the bid. Bidders not meeting this requirement must furnish Bid Surety as discussed in Option B below.

#### **Option B:**

For all bidders not meeting the criteria of "Option A" above, a deposit in the amount of five percent (5%) of the proposed contract price must accompany the bid. These deposits shall take the form of a certified check, cashier's check or a surety bond executed by a corporate surety licensed under the laws of this state. **PERSONAL OR COMPANY CHECKS DO NOT MEET THIS REQUIRMENT**. The cashier's check or certified check shall be deposited to the County's account if the successful bidder fails to enter into the proposed contract. Bid deposits of unsuccessful bidders will be returned as soon as the contract is awarded.

One of the above requirements must be met and submitted with for your response. Failure to satisfy this Bid Surety requirement will result in your response being considered non-responsive and removed from further consideration for award of the subject project's contract.

#### SAMPLE BID BOND

KNOW ALL MEN BY TH	ESE PRESENTS, THAT	WE, the undersigned,, as
unto As Owner in the	nenal sum of	, as Surety, are hereby held and firmly bound
(\$	), for the payment of w	hich, well and truly to be made, we hereby jointly
and severally bind ourselves,	our heirs, executors, admir	nistrators, successors and assigns.
•		
Signed, this	day of	, 20
		that whereas the Principal has submitted to ached hereto and hereby made a part hereof into a
contract in writing, for the		ached hereto and hereby made a part hereof into a
NOW THEREFORE		
NOW, THEREFORE,		
(b) If said Bid shall be an Contract attached her respects perform the void, otherwise the sa that the liability of th amount of this obligate. The Surety, for value received shall be in no way impaired on such Bid; and said Surety does	reto (properly completed is agreement caused by the assume shall remain in force as e surety for any and all classicion as herein stated.  If hereby stipulates and agree of affected by any extensions hereby waive notice of a surety of a surety waive notice of a surety wa	•
	ave caused their corporate	have hereunto set their hands and seals, and such seals to be hereto affixed and these presents to be forth above.
	(L. S.)	
PRINCIPAL		
SURETY		
SORETT		
By:		
(SEAL)		

#### PAYMENT BOND REQUIREMENT

A Payment Bond must be submitted to the County by the successful responder ("Contractor") once it has been awarded the contract. Payment Bonds encompass the prime Contractor's obligation to pay subcontractor and others for material and labor used in the project. A Payment Bond guarantees that the Contractor will pay certain bills for labor and materials (including those from subcontractors and suppliers), which are associated with the subject contract. The Payment Bond requirement helps assure that the Contractor provides suitable evidence of its financial condition and ability to complete the project without financial difficulty.

For all contracts submitted with costs exceeding twenty-five thousand dollars (\$25,000.00), a Payment Bond in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. Failure to satisfy this Payment Bond requirement will result in the Contractor being considered non-responsive and possibly removed from consideration for award of future County contracts. Payment Bond guaranty options are discussed below.

#### **PAYMENT BOND GUARANTY OPTIONS:**

For all contracts submitted with costs exceeding twenty-five thousand dollars (\$25,000.00), a Payment Bond guaranty in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. This Payment Bond requirement can be satisfied utilizing one of the two options below:

#### (1) Option A:

The Contractor with the executed contract must submit a Payment Bond in the required amount discussed above and executed by a corporate surety licensed under the laws of this state. Contractors not meeting this requirement must furnish an alternative Payment Bond Guaranty as discussed in Option B below.

#### (2) Option B:

For all Contractors not meeting the criteria of "Option A" above, a deposit in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. This deposit shall take the form of a certified check or a cashier's check deposited with the County. An irrevocable standby letter of credit issued by the bank is an acceptable alternate. **PERSONAL OR COMPANY CHECKS DO NOT MEET THIS REQUIRMENT**. Failure of the Contractor to satisfactorily fulfill its obligations under the subject contract shall result in the forfeiture of this deposit.

One of the above requirements must be met and submitted by the successful Contractor with its proposed contract to the County. Failure to satisfactorily fulfill its obligations under the subject contract shall result in the forfeiture of the Payment Bond guaranty.

Responders failing to enter the proposed contract and also post the required Payment Bond may be subject to Debarment or Suspension, as prescribed under Section 11-102 of the Florence County Code, from future consideration for award of contracts.

#### PERFORMANCE BOND REQUIREMENT

A Performance Bond must be submitted to the County by the successful responder ("Contractor") once it has been awarded the contract. The Performance Bond insures that the project will be completed even if the prime Contractor defaults or abandons the project. A Performance Bond guarantees contract performance by the Contractor, according to the contract specifications, terms and conditions. The Performance Bond requirement helps assure that the Contractor provides suitable evidence of its financial condition and ability to complete the project without financial difficulty.

For all contracts submitted with costs exceeding twenty-five thousand dollars (\$25,000.00), a Performance Bond in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. Failure to satisfy this Performance Bond requirement will result in the Contractor being considered non-responsive and possibly removed from consideration for award of future County contracts. Performance Bond guaranty options are discussed below.

#### PERFORMANCE BOND GUARANTY OPTIONS:

For all contracts submitted with costs exceeding twenty-five thousand dollars (\$25,000.00), a Performance Bond Guaranty in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. This Performance Bond guaranty requirement can be satisfied utilizing one of the two options below:

#### (3) Option A:

The Contractor with the executed contract must submit a Performance Bond in the required amount discussed above and executed by a corporate surety licensed under the laws of this state. Contractors not meeting this requirement must furnish an alternative Performance Bond Guaranty as discussed in Option B below.

#### (4) Option B:

For all Contractors not meeting the criteria of "Option A" above, a deposit in the amount of one hundred percent (100%) of the contract price must be submitted by the Contractor with the proposed contract to the County. This deposit shall take the form of a certified check or a cashier's check deposited with the County. An irrevocable standby letter of credit issued by the bank is an acceptable alternate. **PERSONAL OR COMPANY CHECKS DO NOT MEET THIS REQUIRMENT**. Failure of the Contractor to satisfactorily fulfill its obligations under the subject contract shall result in the forfeiture of this deposit.

One of the above requirements must be met and submitted by the successful Contractor with its proposed contract to the County. Failure to satisfactorily fulfill its obligations under the subject contract shall result in the forfeiture of the Performance Bond Guaranty.

Responders failing to enter the proposed contract and also post the required Performance Bond may be subject to Debarment or Suspension, as prescribed under Section 11-102 of the Florence County Code, from future consideration for award of contracts.

#### **INSURANCE REQUIREMENTS**

The contractor shall agree to hold harmless, indemnify and defend Florence County, its agents and employees from any claims for property damage or personal injury (including death resulting therefrom). Such claims include, but are not limited to, actual, consequential, incidental or punitive damages. The contractor shall agree to maintain sufficient comprehensive general liability insurance, naming Florence County as additional insured in the amounts of \$1,000,000.00 per occurrence and \$1,000,000.00 per person. Proof of such insurance shall be given to the Florence County Procurement Office by an appropriate certificate-of-insurance issued by the contractor's insurance agent.

Further, the contractor shall agree to insure prior to commencement of work on the project (job), all subcontractors, agents, assigns or employees of prime contractor and subcontractor shall agree to hold harmless, indemnify and defend the Florence County, South Carolina, its agents and employees from any claims for property damage or personal injury (including death resulting therefrom). Such claims include but are not limited to, actual, consequential, incidental or punitive damages. Further, prior to commencement of work on the project (job), the contractor shall insure that all subcontractors, agents or assigns of the contractor, maintain sufficient comprehensive general liability insurance, naming the Florence County, South Carolina, as additional insured, in the amounts of \$1,000,000.00 per occurrence and \$1,000,000.00 per person. Proof of such insurance shall be given to the Procurement Officer by an appropriate certificate-of-insurance issued by applicable entity's insurance agent.

With regards to comprehensive general liability insurance, claims may be made during or after the term or terms of the contract agreement.

Vehicle liability insurance with minimum combined single limits of \$1,000,000.00 per occurrence shall be maintained by the contractor.

The contractor shall obtain and maintain, during the life of the contract agreement, workers' compensation and employer's liability insurance for all employees to be engaged in services on this project under this agreement in an amount not less than the minimum allowed by South Carolina law, and in case any such services are sublet, the contractor shall require the subcontractor(s) similarly to provide workers' compensation and employer's liability insurance for all of the subcontractor's employees to be engaged in such services.

SAMPLE CONTRACT NO. 13-20/21

STATE OF SOUTH CAROLINA )

COUNTY OF FLORENCE	)
`	cinafter the "Agreement" or "Contract") entered into this XX
day of $XXXXXXX$ , 2021 by and	between the COUNTY OF FLORENCE, South Carolina, a
body politic and corporate under	the State of South Carolina (hereinafter the "County") and
XXXXXXXXX, a Corporation, tl	he address of which is: XXXXXXXXXXXX, XXXXXXXXX,
XX. XXXXX	(hereinafter the "Contractor"), for and in consideration

of the mutual covenants herein set forth, and for other good and valuable consideration, the sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

# ARTICLE 1 DOCUMENTS INCORPORATED BY REFERENCE

- 1.1 This Contract includes the specifications and plans for the project identified thereon as such, the County's invitation to Bid. No. 13-20/21, and any addendums thereto, as well as the Contractor's bid submission, including all forms required in the bid documents. All these documents specified in this Article 1 are hereby incorporated herein by reference and made a part hereof (hereinafter collectively referred to as the "Contract" or "Contract Documents"). Change orders issued hereafter and any other amendments properly executed by the County and the Contractor shall become and be a part of this Contract. Documents not included or expressly contemplated in this Article 1 do not, and shall not, form any part of this Contract. The Contract Documents are intended to be complementary, and a requirement in one document shall be deemed to be required in all documents.
- 1.2 Contractor shall comply with all applicable Federal, State, and Local laws which may be applicable to any aspect of the activities under this Contract. By entering into this Contract, Contractor affirmatively warrants that the Contractor, to the best of its knowledge, information, and belief, is currently in compliance with all applicable Federal, State, and Local laws and further warrants that during the term of this Contract, Contractor shall remain in compliance therewith.

# ARTICLE 2 REPRESENTATIONS OF THE CONTRACTOR

In order to induce the County to execute this Contract and recognizing that the County is relying thereon, the Contractor, by executing this Contract, makes the following express representations to the County:

2.1 The Contractor is fully qualified to act as the general contractor for the project and has, and shall maintain throughout the effective term of this Contract, any and all licenses, permits, and other authorizations necessary to act as the general contractor for, and to construct, the project.

- 2.2 The Contractor has become familiar with the project site and the local conditions under which the project is to be constructed and operated.
- 2.3 The Contractor has received, reviewed and examined all the documents which make up the Contract, including, but not limited to, all plans and specifications, and has found them, to the best of its knowledge, to be complete, accurate, adequate, consistent, coordinated and sufficient to complete the Project.

#### ARTICLE 3 SCOPE OF WORK

The Contractor shall perform the work as outlined in the 23-17/18 invitation to bid document, bid plans, and all addendums thereto (if any). All work required, implied, or reasonably inferable from this Contract includes, but is not limited to, the following:

- 3.1 The Contractor will complete the complete work as described in the contract documents, in accordance with the terms herein, and the specifications/scope of work, all as may be amended from time to time.
- 3.2 Contractor shall furnish any and all required insurance certificate(s) and endorsement(s) as requested by the County.
- 3.3 Contractor agrees to perform and furnish all labor, supervision, materials, equipment, transportation and supplies necessary for the <u>XX Project</u> as stated in the specifications/scope of work of bid no. 23-17/18 and the Contractor's response to bid no. 23-17/18.

# ARTICLE 4 INTENT AND INTERPRETATION

With respect to the intent and interpretation of this Contract, the County and the Contractor agree as follows:

4.1 This Contract (along with its exhibits and all documents incorporated herein by reference), together with the Contractor's bid response shall constitute the entire and exclusive agreements between the parties with reference to the project, and said Contract supersedes any and all prior discussions, communications, representations, understanding, negotiations, or agreement.

- 4.2 Anything that may be required or reasonably inferred by the documents which make up this Contract, or any one or more of them, shall be provided by the Contractor for the Contract Price.
- 4.3 Nothing contained in this Contract shall create, nor be interpreted to create, privity or any other relationship whatsoever between the County and any person except the Contractor.
- 4.4 When a word, term or phrase is used in this Contract, it shall be interpreted or construed first, as defined herein; second, if not defined, according to it's generally accepted industry meaning; and third if there is no generally accepted industry meaning, according to its common and customary usage.
- 4.5 The words "include," "includes," and "including," as used in this Contract, shall be deemed to be followed by the phrase, "without limitation".
- 4.6 The listing herein of any items as constituting a material breach of this Contract shall not imply that any other, non-listed item will not constitute a material breach of this Contract.
- 4.7 In the event of any conflict, discrepancy, or inconsistency among any of the documents which make up this Contract, the following shall control:
  - 4.7.1 As between this document and the plans or specifications, this document shall govern.
  - 4.7.2 In the case of any conflict, discrepancy or inconsistency among any of the other Contract documents, the Contractor shall notify the County immediately upon discovery of the same.

# ARTICLE 5 CONTRACTOR'S PERFORMANCE

The Contractor shall perform all of the work required, implied or reasonably inferable from this Contract including, but not limited to, the following:

5.1 The Contractor will complete the entire Work described in the Contract Documents, in accordance with the terms herein, and the scope of work, and all addenda thereto, all as may be amended from time to time only by means of a change order agreed upon by both parties.

# ARTICLE 6 TIME FOR CONTRACTOR'S PERFORMANCE

- 6.1 The Contractor shall commence the performance of this Contract on the date of execution of this Contract and shall diligently continue its performance to and until Completion of the Project. The contractor shall accomplish Substantial Completion (as defined below) in no more than XXX (XX) days following the execution of the notice to proceed letter from the County. By signing this contract, the contractor agrees that the contract time is a reasonable time for accomplishing the completion of the project.
- 6.2 The term "Substantial Completion," as used herein, shall mean that point at which, as certified in writing by the County, the Project is sufficiently complete in accordance with the Contract Documents so that the County can utilize the work for its intended use.
- 6.3 The County has the right to impose liquidated damages in the amount of \$500 per calendar day for any days after the required date of completion noted above that the project is not substantially complete.

# ARTICLE 7 FIXED PRICE AND CONTRACT PAYMENTS

- 7.2 Progress billings shall be submitted to the County for payment by the Contractor on a monthly basis (less 10% retainage) no later than the 25<sup>th</sup> of each month based on the percentage of work completed. The County (or County's representative) shall verify work completed and billed before payment shall occur. When the project is complete and the Contractor is ready for a final review, the Contractor shall notify the County. Thereupon, the County will perform a final site review of the project. If the County concurs that the project is complete and in full accordance with this Contract and that the Contractor has performed all of its obligations to the County thereunder, the County will make final payment of the Contract price to the Contractor.
- 7.3 Guarantees and equipment warranties required by this Contract shall commence on the date of substantial completion.

#### **ARTICLE 8**

#### DUTIES, OBLIGATIONS, AND RESPONSIBLITIES OF THE CONTRACTOR

In addition to any and all other duties, obligations and responsibilities of the Contractor set forth in the Contract Documents, the Contractor shall have and perform the following duties, obligations and responsibilities to the County:

- 8.1 The Contractor shall not perform work without adequate plans and specifications. If the Contractor performs work knowing or believing, or if through exercise of reasonable diligence it should have known, that such work involves an error, inconsistency or omission in the Contract without first providing written notice to the County, the Contractor shall be responsible for such work and shall correct same bearing the costs therefore.
- 8.2 All work shall strictly conform to the requirements of this Contract. To that end the Contractor shall be solely responsible for and have control over the performance of all portions of the Work, unless otherwise specified in the Contract Documents.
- 8.3 The work shall be strictly supervised the permit the County and its designated representative(s). The Contractor shall bear full responsibility for any and all acts, errors or omissions of those engaged in the work on behalf of the Contractor, including, but not limited to all subcontractors or employees. The Contractor shall provide on-site supervision while any portion of the work is being performed.
- 8.4 The Contractor hereby warrants that all laborers furnished under this Contract shall be qualified and competent to perform the tasks undertaken, that the product of such labor shall yield only first-class results, that all materials and equipment provided shall be new (unless otherwise specified) and of high quality, that the completed work will be complete, of high quality, without defects, and that all work strictly complies with the requirements of this Contract. Any work not strictly complying with the requirements of this section shall constitute a breach of the Contractor's warranty.
- 8.5 The Contractor shall maintain the project site and adjacent areas affected by its work and/or acts of its employees and subcontractors in a reasonably clean condition during the performance of the work. Upon substantial completion, the Contractor shall clean the Project site of all debris, trash and excess materials and equipment. If the Contractor fails to do so, the County may complete the cleanup, by its own forces or by separate contract, and shall be entitled to charge the Contractor for the same through the collection or withholding of funds through the mechanisms provided elsewhere herein.
- 8.6 At all times relevant to this Contract, the Contractor shall permit the County and its designated representative(s) to enter upon the Project site to review or inspect the work and any materials on the site without formality or other procedure.

8.7 PROTECTION OF PERSONS AND PROPERTY. It shall be the responsibility of the Contractor to initiate, continue and supervise all safety programs and precautions in performance of the terms of this Contract. The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury or loss to its employees, subcontractors, employees of the County and members of the public, the Work itself and unassembled components thereof, and other property at the site or adjacent thereto. As part of the Contractor's obligations hereunder, the Contractor shall erect and maintain safeguards, barriers, signs, warnings, etc.

#### ARTICLE 9 INDEMNITY

The Contractor hereby expressly agrees to indemnify and hold the County harmless against any and all expenses and liabilities arising out of the performance or default of this Contract or arising from or related to the Work as follows:

- 9.1 Contractor expressly agrees to the extent that there is a causal relationship between its negligent, reckless or intentionally wrongful action or inaction, or the negligent, reckless or intentionally wrongful action or inaction of any of its employees or any person, firm or corporation directly or indirectly employed or retained by the Contractor, and any damage, liability, injury, loss or expense (whether in connection with bodily injury or death or property damage or loss) that is suffered by the County or its employees or by any member of the public, to indemnify and save the County and its employees harmless against any and all liabilities, penalties, demands, claims, lawsuits, losses, damages, costs, and expenses arising out of the performance or default of this Contract or arising from or related to the Work, regardless of whether such liabilities, penalties, demands, claims, lawsuits, losses, damages, costs, and expenses are caused in part by the County. Such costs are to include, without limitation, defense, settlement and reasonable attorneys' fees incurred by the County and its employees. This promise to indemnify shall include without limitation, bodily injuries, death occurring to Contractor's employees and any person, directly or indirectly employed or retained by the Contractor (including without limitation any employee of any subcontractor), the County's employees, the employees of any other independent contractors, or occurring to any member of the public. When the County submits notice, Contractor shall promptly defend any aforementioned action.
- 9.2 The limits of insurance required herein shall not limit the Contractor's obligations under this Article. The terms and conditions contained in this Article shall survive the termination of this Agreement or the suspension of the Work hereunder. The recovery of fees and costs specified herein will also apply to any actions to enforce this Article.

#### **ARTICLE 10**

#### DISCOVERING AND CORRECTING DEFECTIVE OR INCOMPLETE WORK

- 10.1 In the event that the Contractor covers, conceals or obscures its work in violation of this Contract or in violation of an instruction from the County, such work shall be uncovered and displayed for review by the County upon request, and shall be reworked at no cost in time or money to the County.
- 10.2 The Contractor shall, at no cost in time or money to the County, correct work rejected by the County as defective or failing to conform to this Contract. Additionally, the Contractor shall reimburse the County for all review, inspections and other expenses incurred as a result thereof.
- 10.3 In addition to its warranty obligations set forth elsewhere herein and any manufacturer's warranties provided on the project, and in addition to other remedies provide herein or by law to the County, the Contractor shall be specifically obligated to promptly correct any and all defective or nonconforming work, whether obvious or after-discovered, for a period of twelve (12) months following substantial completion upon written direction from the County.

#### ARTICLE 11 TERMINATION BY THE COUNTY

The County may terminate the Contract in accordance with the following terms and conditions:

- 11.1 The County may, by written notice, terminate this Contract in whole or in part at any time, for the failure to fulfill the Contract obligations. Upon receipt of such notice, services shall be immediately discontinued unless the notice directs otherwise, and all materials as may have been accumulated in performing this Contract, whether completed or in progress delivered to the County.
- 11.2 Termination due to the failure to fulfill the Contractor's obligations may cause the County to take over the work and prosecute the same to completion by Contract or otherwise. In such case, the contractor shall be liable to the County for any additional cost occasioned to the County thereby.
- 11.3 The rights and remedies of the County provided in this Article are in addition to any other rights and remedies provided by law or under this Contract.
- 11.4 Notwithstanding any other provision contained herein, any violation or breach of terms of this Contract on the part of the Contractor or their subcontractors may result in the suspension or termination of this Contract or such other action that may be necessary to enforce the rights of the parties of this Contract. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition

to and not a limitation of any duties, obligations, rights, and remedies otherwise impose or available by law.

# ARTICLE 12 INSURANCE

- 12.1 The successful firm(s) shall procure and maintain insurance for protection from claims under workers' compensations acts; claims for damages because of bodily injury including personal injury, sickness or disease, or death of any and all employees or of any person other than such employees; claims for damages because of injury to or destruction of property, including loss of use resulting therefrom; claims caused by professional errors, acts, or omission; and any other insurance prescribed by law. The successful firm shall name Florence County, South Carolina, its elected and appointed officials, officers, and employees "Additional Insured" as their interests may appear but only with respect to services performed or provided by successful firm on behalf of the County under Consultant's commercial general liability insurance policy.
- 12.2 The successful firm shall, within 10 calendar days of the full execution of any contract, provide the County's Procurement Officer with a certificate(s) of insurance evidencing the coverage required above and containing an endorsement to the effect that any cancellation or non-renewal shall not be until 10 calendar days after the insurer or the selected firm gives written notice to the County.
- 12.3 Without limiting the provisions of paragraph above, the selected firm shall during the term of any contract resulting from this purchase and maintain insurance with limits not less than those set forth below: The successful firm(s) shall take out and maintain, during the life of the contract agreement, workers' compensation and employer's liability insurance for all employees to be engaged in services on this project under this agreement in an amount not less than \$1,000,000.00, and in case any such services are sublet, the firm(s) shall require all subcontractor(s) also to provide workers' compensation and employer's liability insurance in an amount not less than \$1,000,000.00 for all of the subcontractor's employees to be engaged in such.
  - 12.3.1 Employer's Liability Insurance \$1,000,000 each accident, \$1,000,000 disease policy limit, \$1,000,000 disease each employee.
  - 12.3.2 Commercial General Liability Insurance \$1,000,000 per occurrence (bodily injury and property damage) / \$1,000,000 general aggregate.
  - 12.3.3 Automobile Liability Insurance \$1,000,000 combined single limit (bodily injury and property damage), each accident.
  - 12.3.4 Professional Liability Insurance \$1,000,000 per claim / \$1,000,000 general aggregate The selected firm shall require any subconsultants (if any) to purchase and maintain insurance with limits not less than those required above to be purchased and maintained by the selected firm. In addition, the selected firm shall require any subconsultants (if any) to assume the selected firm's indemnification obligations under any contract resulting from this RFP to the extent they relate to the subconsultant's obligations under any contract with the selected firm.

# INVITATION TO BID FOR 2022 CPST III Dirt to Pave PROJECT: DISTRICT 5 (BID NO. 25-21/22)

### **ENTIRE AGREEMENT**

Any modification to this Contract must be supported by an additional, articulated consideration, and must either be in writing, executed by the parties hereto, or, if made orally, should be confirmed in writing, which writing should state the consideration which supports the modification. Failure to confirm an oral modification in writing shall constitute a waiver of any claim for additional compensation with regard to the oral modification. Nothing in this Article shall be construed to limit the County's authority to issue changes.

### ARTICLE 14 SEVERABILITY

If any term or condition of this Contract or application thereof to any person(s) or circumstances is held invalid, this invalidity shall not affect other terms, conditions or applications which can be give effect without the invalid term, condition, or application. To this end, the terms and conditions of this Contract are agreed to be severable

### ARTICLE 15 WAIVER

Waiver of any breach of any term or condition of this Contract shall not be deemed a waiver of any prior or subsequent breach, and shall not entitle any party hereto to any subsequent waiver of any terms hereunder. No term or condition of this Contract shall be held to be waived, modified or deleted except by an instrument, in writing, signed by the parties hereto.

### ARTICLE 16 NOTICES

All notices to each party to this Contract shall be in writing, and sent as follows:

### **To County:**

Patrick D. Fletcher, Procurement Director Florence County 180 North Irby Street, MSC-R Florence, SC 29501

Telephone: (843) 665-3019 E-mail: pfletcher@florenceco.org

Fax: (843) 664-9668

### **To Contractor:**

# INVITATION TO BID FOR 2022 CPST III Dirt to Pave PROJECT: DISTRICT 5 (BID NO. 25-21/22)

All notices, demands, requests, consents or approvals that may or are required to be given by any party to another shall be in writing and shall be deemed given if: (i) served personally by hand delivery; (ii) sent by nationally-recognized overnight courier with return receipt; or (iii) sent by Unites States registered or certified mail, by depositing the same in the United States Mail in the continental United States, postage prepaid, return receipt requested and addressed to such other party at the address specified above or at such other place as such other party may from time to time designate by notice in writing to the other parties hereto. Rejection or other refusal to accept a notice, demand, request or consent, or the inability to deliver because of a changed address, of which no notice was given, shall be deemed to be actual receipt thereof. In the event given by registered or certified mail, such notice, demand, request, or consent so mailed shall be effectively conveyed upon receipt or shall be presumed to have been effectively conveyed and received by the addressee 72 hours after deposit of same in the mail, whichever first occurs.

### ARTICLE 17 APPLICABLE LAW

The laws of South Carolina shall govern this Contract. In any litigation arising under this Contract, all such litigation shall be litigated in the Circuit Court within the Twelfth Judicial Circuit Court of Florence County, South Carolina. Without limitation upon the prevailing party's rights to recovery such fees and costs, the relevant provisions of Section 15-37-10 et seq. of the Code of Laws of South Carolina (1976, as amended) shall apply to this Article, as the case may warrant. This Contract is **not** subject to arbitration.

### ARTICLE 18 SUCCESSOR AND ASSIGNS

Each party binds itself, it successor, assigns, executors, administrators or other representative to the other party hereto and to successors, assign, executors, administrators or other representatives of such other party in connection with all terms and conditions of this Contract. The Contractor shall not assign this Contract without prior written consent of the County

# INVITATION TO BID FOR 2022 CPST III Dirt to Pave PROJECT: DISTRICT 5 (BID NO. 25-21/22)

**IN WITNESS WHEREOF**, the parties have executed this Agreement in three originals under their several seals the day and year first written above.

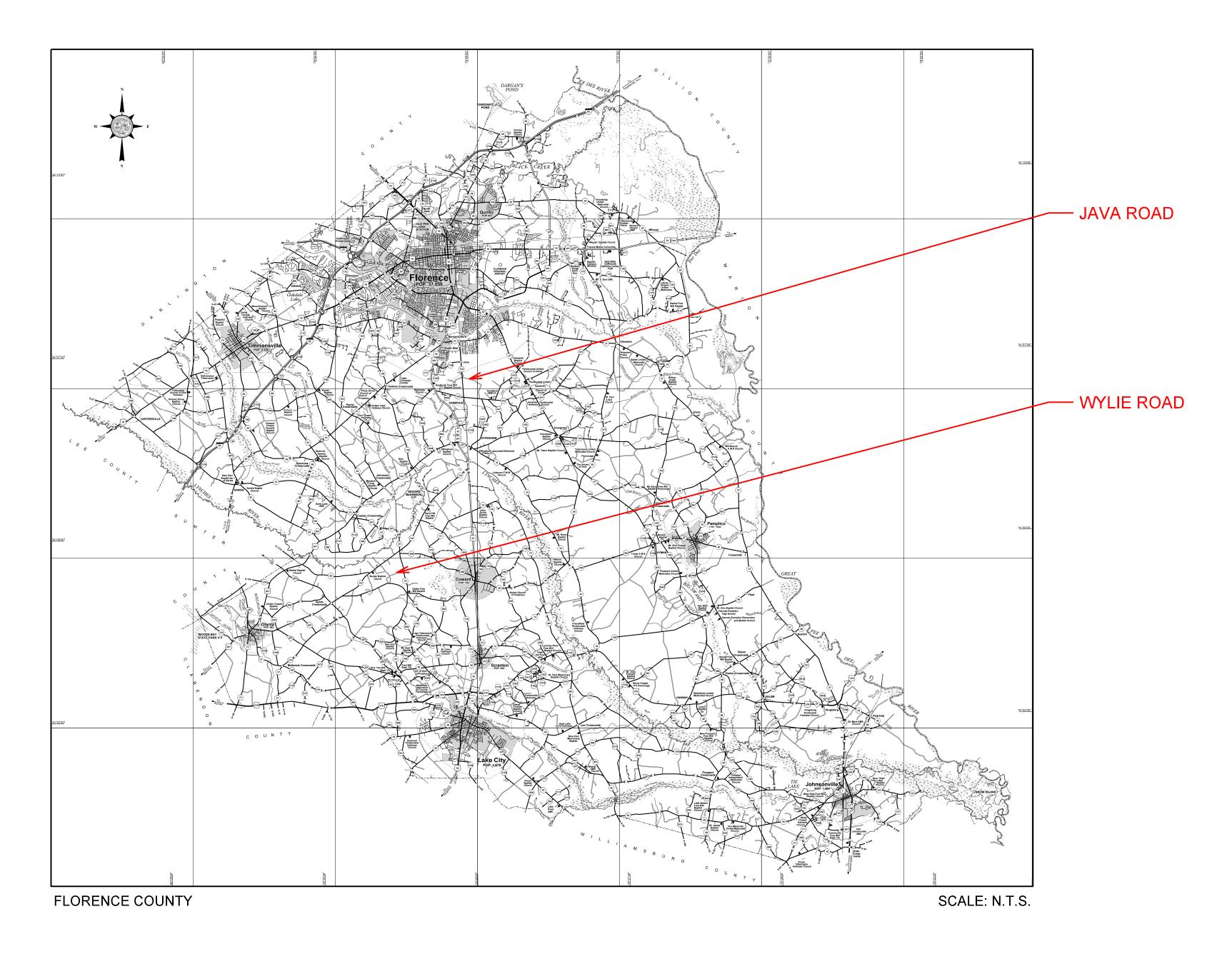
WITNESS:	FOR CONTRACTOR:
Printed Name:	Printed Name:
Title:	Title:
	al Tax I.D. No.:eneral Contractor's License Number:
	FOR FLORENCE COUNTY:
Patrick D. Fletcher, CPPB Procurement Director	K. G. (Rusty) Smith Florence County Administrator

ED. ROAD DIV.NO. STATE COUNTY SHEET NO. SHORENCE 1

## INDEX OF SHEETS

NO.	DESCRIPTION	SHEET TOTALS
1	TITLE SHEET	1
2	TYPICAL SECTION	1
3 - 5	JAVA ROAD	3
6 - 8	WYLIE ROAD	3
		TOTAL 8

# PROPOSED PLANS FOR FLORENCE COUNTY 2022 DIRT ROAD PAVING PROJECT DISTRICT 5



3 DAYS BEFORE DIGGING IN SOUTH CAROLINA

**CALL 811** 

SOUTH CAROLINA 811 (SC811)

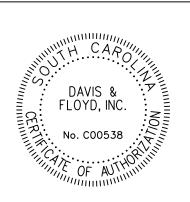
WWW.SC811.COM

ALL UTILITIES MAY NOT BE A MEMBER OF SC811

RAILROAD INVOLVEMENT? YES /NO

NOTE: ALL WORK PERFORMED ON THIS PROJECT WAS CONSTRUCTED WITHIN THE EXISTING DITCH-TO-DITCH COUNTY MAINTENANCE RIGHT OF WAY (APPROXIMATED GIS LOCATIONS SHOWN). CONSTRUCTION PROCEDURES AND MATERIALS USED UNDER THIS CONTRACT CONFORMED TO THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION (SCDOT) 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. REPLACEMENT OF EXISTING CROSSLINE PIPES TO MATCH EXISTING GRADE.





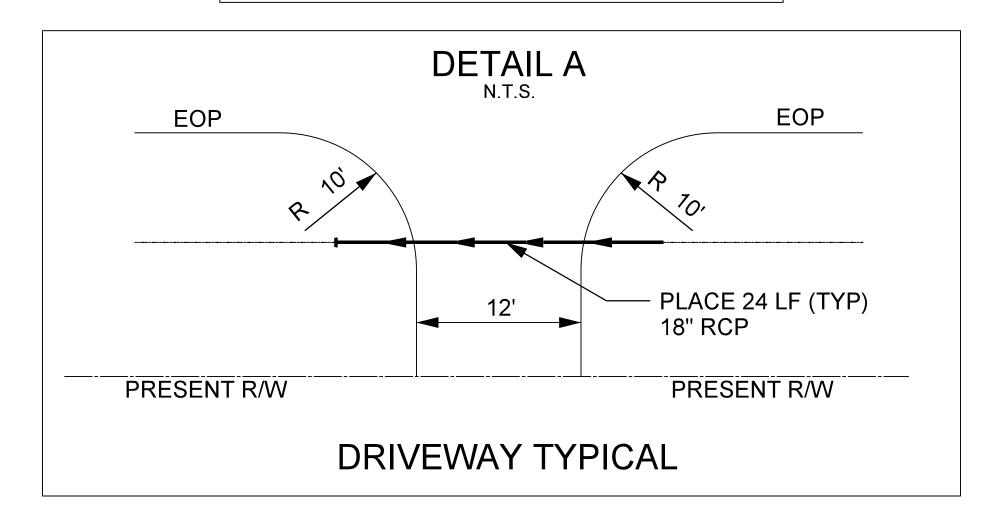
DAVIS & FLOYD

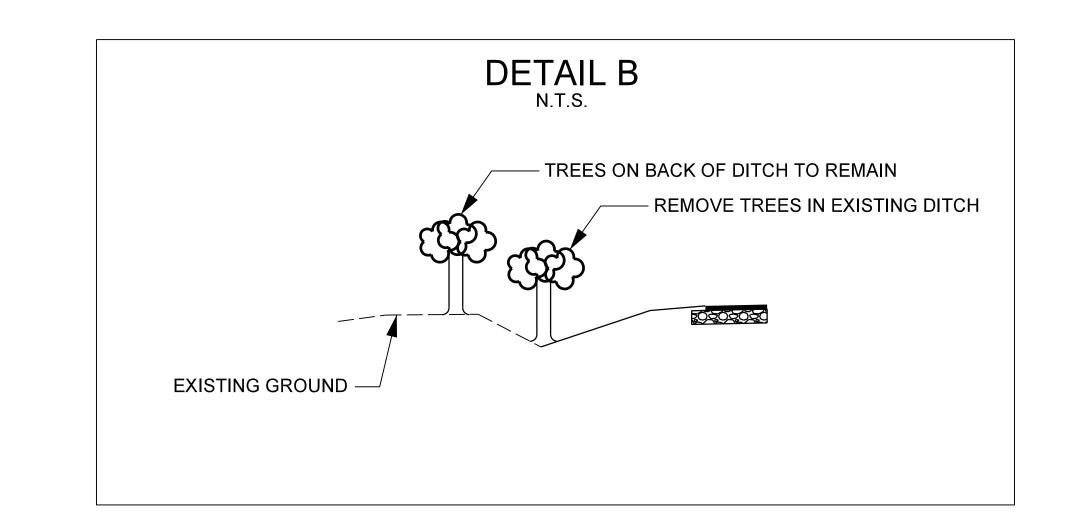
**SINCE 1954** 

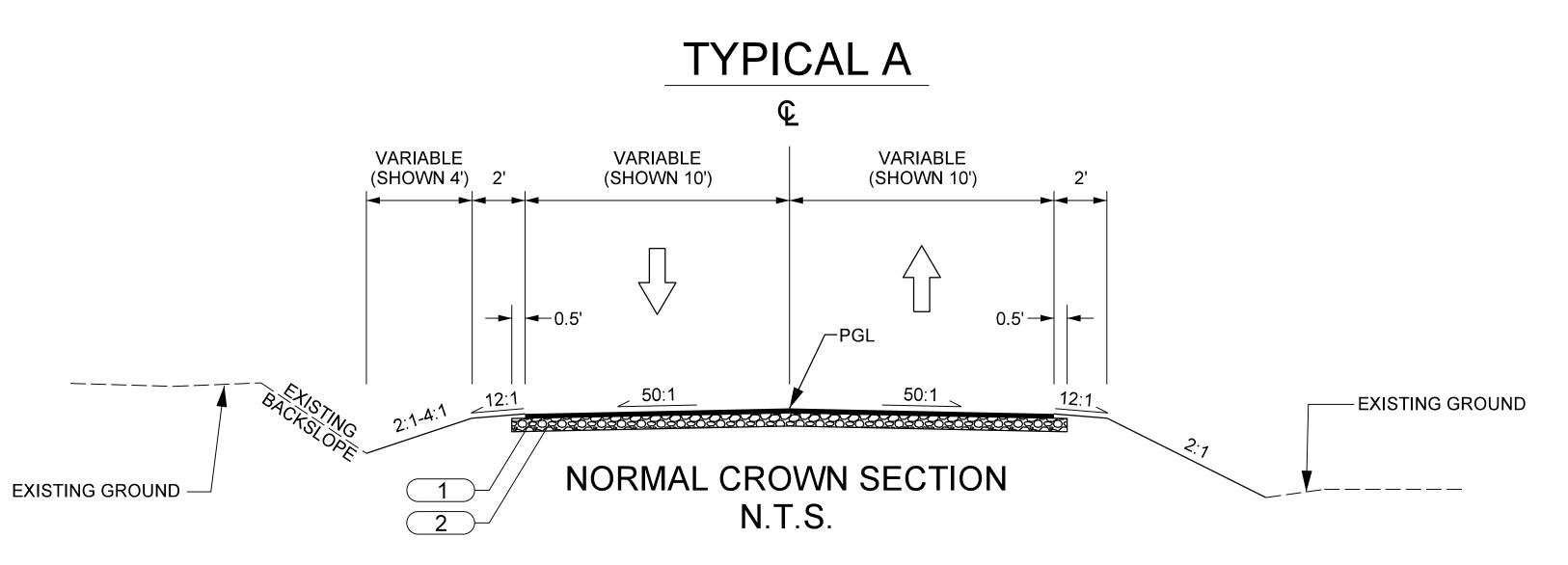
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	2				
	1				
	REV. NO.	BY	DATE	DESCRIPTION OF REVISION	
	DGN.	DATE			
	R/W	DATE			
	CHK.	DATE			

FLORENCE COUNTY

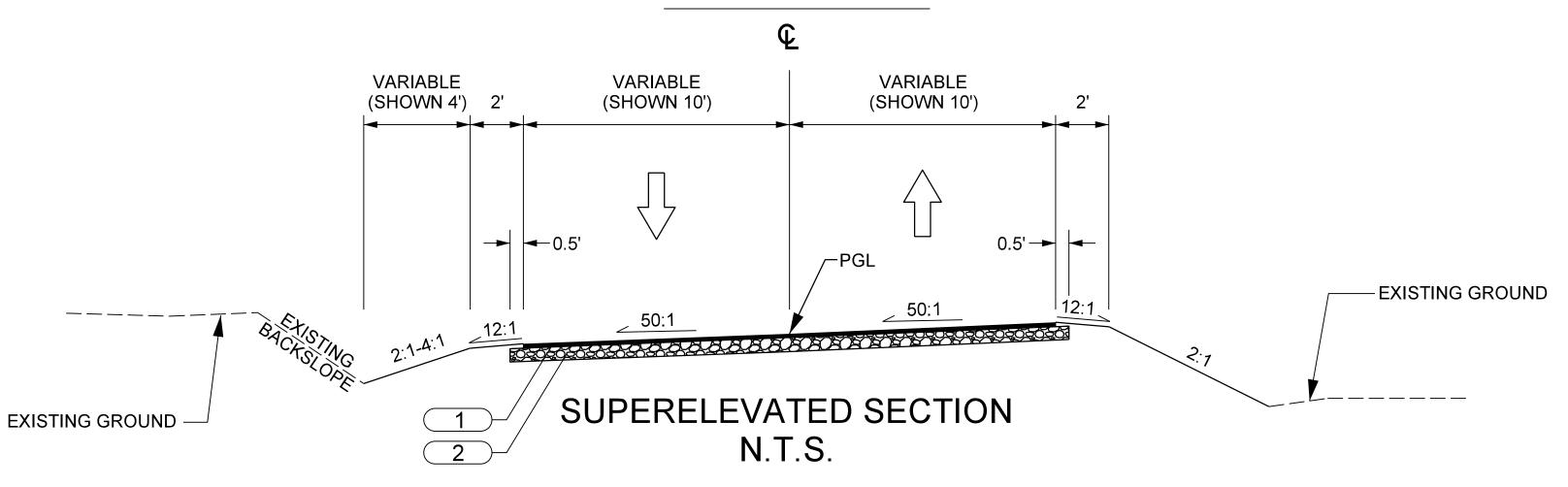
2022 DIRT ROAD PAVING PROJECT TITLE SHEET







# TYPICAL B



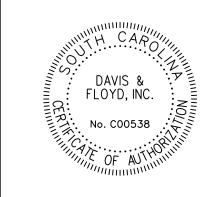
1)

HOT MIX ASPHALT SURFACE COURSE (TYPE C) (200 PSY)

2

CEMENT STABILIZED EARTH BASE COURSE (6" UNIFORM)

NOTE: ALL WORK PERFORMED ON THIS PROJECT WAS CONSTRUCTED WITHIN THE EXISTING DITCH-TO-DITCH COUNTY MAINTENANCE RIGHT OF WAY (APPROXIMATED GIS LOCATIONS SHOWN). CONSTRUCTION PROCEDURES AND MATERIALS USED UNDER THIS CONTRACT CONFORMED TO THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION (SCDOT) 2007 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. REPLACEMENT OF EXISTING CROSSLINE PIPES TO MATCH EXISTING GRADE.



DAVIS & FLOYD

SUITE 305 COLUMBIA, SC 29210

**SINCE 1954** 

4				
3				
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REV. NO.	BY	DATE	DESCRIPTION OF REVISION	
OGN	DATE			
R/W	Date			
CHK	Date			

FLORENCE COUNTY

2022 DIRT ROAD PAVING PROJECT TYPICAL SHEET



LE: 5



DATE

SCALE 1"= 50'

CHK.



50.000 ft / in. Florence-PDF.tbl

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SCALE 1"= 50'

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TO MATCH EXISTING GRADE.

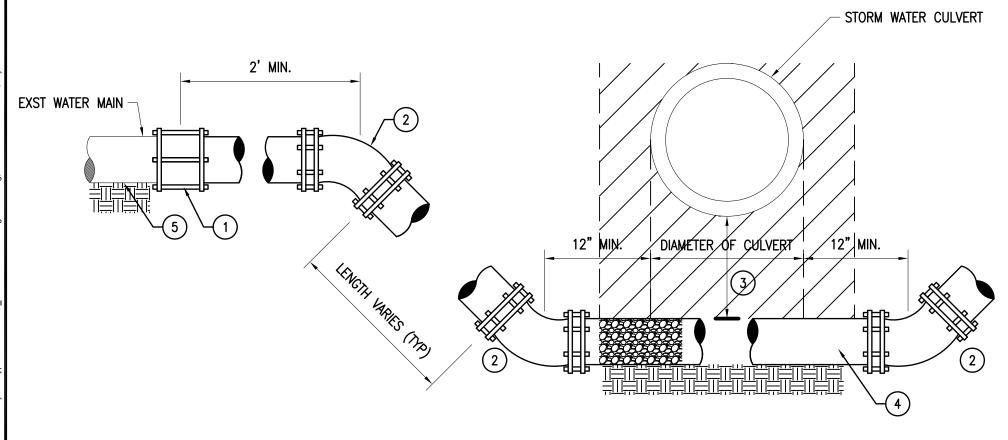


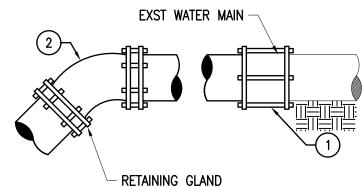
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# ESTIMATED BID QUANTITIES PER ROAD - BID 25 21/22 2022 Florence County Dirt Road Paving Project - District 5

3973.71 0 75 LENGTH (FT.) LENGTH (MI.)

LENGTH (MI.)	()		0.81		0.75		
BAMS#	DESCRIPTION	UNITS	JAVA ROAD	JAVA ROAD PROJECT QUANTITY	WYLIE ROAD	WYLIE ROAD PROJECT QUANTITY	TOTAL PROJECT QUANTITY
1031000	1031000 MOBILIZATION	ST	NEC.	1.00	NEC.	1.00	1.00
1071000	TRAFFIC CONTROL	ΓS	NEC.	1.00	NEC.	1.00	1.00
2016000	SELECTED REMOVAL OF MARKED TREE	ΓS	1.000	1.00	0.000	0.00	1.00
3071060	3071060 CEMENT STABILIZED EARTH BASE COURSE (6" UNIFORM)	SY	8117.00	8117.00	10149.00	10149.00	18266.00
3072000	PORTLAND CEMENT FOR CEMENT STAB. EARTH BASE COURSE	TON	183.00	183.00	229.00	229.00	412.00
4011004	4011004 LIQUID ASPHALT BINDER PG64-22	TON	48.00	48.00	00.09	60.00	108.00
4030340	H/M ASPH. SURF. CR. TYPE C	TON	747.00	747.00	941.00	941.00	1688.00
6051120	PERM.CONST.SIGNS(GRND.MNTD)	SF	96.00	96.00	96.00	96.00	192.00
7141113	7141113 18" RC PIPE CULCLASS III	LF	536.00	536.00	104.00	104.00	640.00
7141114	7141114 24" RC PIPE CULCLASS III	LF	0.00	0.00	96.00	96.00	96.00
8041020	RIP-RAP (CLASS B)	TON	340.00	340.00	146.00	146.00	486.00
8048200	GEOTEX/EROS.CONT(CLASS2)TYPE A	SY	408.00	408.00	186.00	186.00	594.00
8100101	PERMANENT GRASSING FOR SMALL PROJECTS	ACRE	2.00	2.00	2.00	2.00	4.00
8152007	SEDIMENT TUBES	LF	57.00	57.00	53.00	53.00	110.00
8153000	8153000 SILT FENCE	LF	2130.00	2130.00	1987.00	1987.00	4117.00





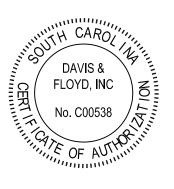
### TYPICAL WATER MAIN/FORCE MAIN CROSSING AT STORM DRAINS

NO SCALE

### NOTES:

- 1. INSTALL MECHANICAL JOINT SLEEVES WITH TRANSITION GASKETS OR A COMPRESSION TYPE REPAIR SLEEVE SUCH AS HYMAX BY KRAUSZ OR APPROVED EQUAL. ALL MATERIALS SHALL BE APPROVED FOR POTABLE WATER SYSTEMS AND NSF-61.
- 2. USE SCHEDULE 40 SOLVENT WELDED FITTINGS FOR PIPE SYSTEMS UNDER 3" DIAMETER. USE MECHANICAL JOINT COMPACT DUCTILE IRON FITTINGS CONFORMING TO ANSI/AWWA C154/A21.53 AND NSF-61 FOR PIPE 3" DIAMETER AND LARGER. CONNECT PVC PIPE TO MECHANICAL JOINT DUCTILE IRON FITTINGS USING JOINT RESTRAINT DEVICES SIMILAR TO EZ GRIP BY SIP INDUSTRIES OR APPROVED EQUAL.
- 3. PROVIDE 18" MINIMUM CLEARANCE BETWEEN BOTTOM OF DRAINAGE PIPE AND TOP OF WATER MAIN. USE SAND CLAY MATERIALS TO FILL ABOVE WATER MAIN BEDDING MATERIALS AND UNDER DRAINAGE PIPE AND COMPACT IN 6" TO 8" LIFTS TO A MINIMUM OF 95 PERCENT COMPACTION STANDARD PROCTOR DENSITY.
- 4. USE SCHEDULE 40 PVC CONFORMING WITH ASTM D1785 AND NSF 61 FOR PIPE LESS THAN 4" DIAMETER. USE PIPE CONFORMING WITH AWWA C900 AND NSF 61 FOR PIPING 4" DIAMETER AND LARGER OR APPROVED EQUAL. INSTALL PIPE & FITTINGS WITH 4" MINIMUM BEDDING PER PIPE MANUFACTURER'S RECOMMENDATIONS TO PROVIDE ADEQUATE PIPE SUPPORT. USE MATERIALS FOR EMBEDMENT ZONE (BOTTOM OF BEDDING TO MINIMUM OF 12" ABOVE TOP OF WATER MAIN CONFORMING TO CLASS I, II OR III MATERIALS AS DEFINED IN ASTM D2487 AND D2321.
- 5. USE BELL JOINT RESTRAINTS WHERE NECESSARY TO RESTRAIN JOINTS WHICH ARE IN CLOSE PROXIMITY TO EXISTING BELLS WHEN CONNECTING REPAIR COUPLINGS/SLEEVES TO EXISTING PIPING. BELL JOINT RESTRAINTS SHALL BE COMPATIBLE WITH THE TYPE OF PIPING MATERIALS BEING JOINED.
- 6. ALL WORK TO BE DONE IN ACCORDANCE WITH SCDHEC AND THE UTILITY COMPANY STANDARD PROCEDURES. CONTRACTOR SHALL MAINTAIN A RECORD DRAWING OF EACH ACTUAL LOCATION WHERE A CROSSING CONFLICT OCCURS AND SUBMIT TO THE ENGINEER UPON COMPLETION. PROVIDE ADEQUATE NOTICE TO ALLOW UTILITY COMPANY REPRESENTATIVE TO WITNESS THE INSTALLATION WORK.





DAVIS & FLOY

RENCE COUNTY	DAVIS &
LOCATION	SINCE 195
PROJECT TITLE	

TYPICAL WATER MAIN/STORM DRAIN CROSSING DETAIL					
JEK	APPROVED	JER	DATE	AUG 31, 2015	
JEK	DRAWN	BKC	JOB NO.	013278.00	