Project Manual For

2022-2023

# C-Fund Paving Project #21334CF

March 1st, 2023

### **County Management**

David Hudspeth, County Manager

### **County Council**

District 1: Tom Audette District 2: Allison Love District 3: Tommy Adkins

District 4: William "Bump" Roddey
District 5: Christi Cox, Chairwoman
District 6: Watts Huckabee
District 7: Debi Cloninger

York County Engineering Reference No: 21334CF 22-23 C-Fund Paving Project

### **Prepared by**

York County Engineering Department
P.O. Box 148
6 South Congress Street
York, South Carolina 29745
803-684-8571

# **TABLE OF CONTENTS**

Section	Title	Pages
DIV. 00	Procurement and Contracting Requirements	
00 01 01	Project Title Page	1 - 1
00 01 10	Table of Contents	1 - 2
00 41 00	Bid Form	1 - 5
00 43 13	Bid Bond	1 - 3
00 45 19	Non-Collusion Affidavit	1 - 1
00 51 00	Notice of Award	1 - 1
00 52 00	Agreement	1 - 4
00 55 00	Notice to Proceed	1 - 1
00 61 13.13	Performance and Indemnity Bond	1 - 3
00 61 13.16	Payment Bond	1 - 4
00 62 16	Certificate of Insurance	1 - 3
00 62 76	Application for Payment	1 - 1
00 63 63	Change Order Form	1 - 1
00 65 19	Release and Waiver of Claim by Prime Contractor	1 - 1
00 72 00	General Conditions	1 - 14
00 73 00	Supplemental Conditions	1 - 1
DIV. 01	General Requirements	
01 11 00	Summary of the Work	1 - 2
01 21 00	Allowances	1 - 2
01 22 00	Unit Prices	1 - 3
DIV. 31	<u>Earthwork</u>	
30 00 00	Concrete	1 - 4
31 32 13	Cement Modified Recycled Base	1 - 3
31 25 00	Erosion and Sediment Controls	1 - 2
DIV. 32	Exterior Improvements	
32 12 16	Asphalt Paving	1 - 5
32 90 00	Planting	1 – 6

# **Reference Maps**

C-Fund Road Resurfacing Package Reference Map Index	(
Vandora Springs (Side Walk) Reference Map	1
Clarence Julian Reference Map	2
Alexandrite Way Reference Map	3
Fairmount Street Reference Map	4
Daniel Road Reference Map	5
Kilpatrick Lane Reference Map	6
Sea Island Boulevard Reference Map	7
Spandril Lane Reference Map	8
Singletary Lane Reference Map	9
Bonnie Glenn Reference Map	10
Joseph Court Reference Map	11
Carybrook Court Reference Map	12
Ole Eastpoint Drive Reference Map	13
Wigmore Lane Reference Map	14
C-Fund Road Paving Package Alternative A	
FM Wallace Road Reference Map	1
C-Fund Road Paving Package Alternative B	
Lakewood Road Reference Map	1

#### **BID FORM**

2022-2023 C-Fund Paving Project #21334CF

Submitted: March 1st, 2023

York County Government 6 South Congress Street York, SC 29745

Sir or Madam:

The undersigned, as Bidder, hereby declares that the only person or persons interested in the Bid, as principal or principals, is or are named herein and that no other person than herein mentioned has any interest in the Bid of the Contract to which the work pertains; that this Bid is made without connection or arrangement with any other person, company, or parties making a bid or proposal and that the Bid is in all respects fair and made in good faith without collusion or fraud.

The Bidder further declares that he has examined the site of the Work and, through personal knowledge and experience and/or subsurface investigations, has fully satisfied himself in regard to all conditions pertaining to such site and he assumes full responsibility therefore; that he has examined the Drawings and Specifications for the Work and from his own experience or from professional advice that the Drawings and Specifications are sufficient for the Work to be done; that he has examined the other Contract Documents and all addenda relating thereto, and that he has satisfied himself fully, relative to all matters and conditions with respect to the Work to which this Bid pertains.

The Bidder proposes and agrees, if this Proposal is accepted, to contract with York County Government (OWNER) in the form of contract specified, to furnish all necessary materials, equipment, machinery, tools, apparatus, transportation and labor and to perform all work necessary to complete the Work specified in the Bid and other Contract Documents.

The Bidder further proposes and agrees to commence substantial work on this project within 15 days of a Notice to Proceed and agrees that the Work will be completed and ready for final payment <u>within</u> **150 days** of the Notice to Proceed.

The Bidder further agrees that the deductions for liquidated damages, as stated in the Agreement and General Conditions, constitute fixed, agreed, and liquidated damages to reimburse the OWNER for additional costs to the OWNER resulting from the Work not being completed within the time limit stated in the Contract Form. The liquidated damages shall be \$600.00 for each consecutive calendar day thereafter.

The Bidder further agrees to execute a Contract and furnish satisfactory Performance and Indemnity and Payment Bonds, and the required Certificates of Insurance, within ten consecutive calendar days after receipt of Notice of Award of the Contract, and the undersigned agrees that in case of failure on his part to execute the said Contract and Performance and Indemnity and Payment Bonds within the ten (10) consecutive calendar days after the award of the Contract, the Bid Guarantee accompanying his Bid and the money payable thereon shall be paid to the OWNER as liquidation of damages sustained by the OWNER; otherwise, the Bid Guarantee shall be returned to the undersigned after the Contract is signed and the Performance and Indemnity and Payment Bonds are filed.

Documents.		
Addendum No	Dated:	
Addendum No	Dated:	
Addendum No	Dated:	

Acknowledgement is hereby made of the following Addenda received since issuance of the Bid

Note:

All work performed by the Contractor as essential to the completion of the intent of the Contract Documents shall be paid in accordance with the Bid Schedule. No direct payment will be made for work performed which is not shown as a separate Bid Item. The undersigned proposes the following unit prices to be utilized on the Work or Extra Work should modifications or variations incorporate these items of work into the Work.

# Bid Form

# 2022-2023 C-Fund Paving Project #21334CF

# **Base Bid List**

(The base bid of this bid document shall include all costs to provide each line item described to the roads contained within this bid and as outlined in this bid document).

lumber	Item	Quantity	Unit Price	Total Cost	
1.	Mobilization	1 LS	\$	\$	
	Unit Price (in words)				
2.	Traffic Control	1 LS	\$	<u>\$</u>	
	Unit Price (in words)				
3.	Removal of Existing Asphalt (2" Uniform)	40,430 <u>SY</u>	<u>\$</u>	<u>\$</u>	
	Unit Price (in words)				
4.	Cement Modified Recycled Base (10" Uniform)	40,430 <u>SY</u>	\$	\$	
	Unit Price (in words)				
5.	2" HMA Surface Course, Type C	40,430 <u>SY</u>	\$	\$	
	Unit Price (in words)				
6.	5' Wide Concrete Sidewalk (4" Uniform)	480 <u>LF</u>	<u>\$</u>	\$	
	Unit Price (in words)				
7.	Permanent Pavement Markings	1 <u>LS</u>	\$	\$	
	Unit Price (in words)				
	Base Bid Subtotal			\$	
	Subtotal (use words)				
For	prices if needed				
1.	Full Depth Asphalt Pavement Patching (6" Unifo	orm) <u>SY</u>	<u>\$</u>	<u>\$</u>	
	Unit Price (in words)				
2.	Removal of Unsuitable Material	<u>SY</u>	\$	<u>\$</u>	
	Unit Price (in words)				

# Contingency

(Contingency covers Owner authorized changes in the scope of work.)

umber	Item	Unit Price	Total Cost
1.	Contingency	10% of Base Bid Subtotal	\$
	Contingency Subtotal (in words)		
TOTA	AL BASE BID		 \$
(Base Bid Subtotal + Contingency) Total (use words)			•
	<u> </u>		

\*Note: The above quantity totals are estimates, and shall be verified in the field prior to bidding, by bidding contractor.

# Alternative A (FM Wallace Road)

(The base bid of this bid document shall include all costs to provide each line item described to the roads contained within this bid and as outlined in this bid document).

Number	Item	Quantity	Unit Price	Total Cost
1.	Mobilization	1 LS	\$	\$
	Unit Price (in words)			
2.	Traffic Control	1 LS	<u>\$</u>	<u>\$</u>
	Unit Price (in words)			
3.	8" Graded Aggregate Base Course	<u>SY</u>	\$	\$
	Unit Price (in words)			
4.	2" HMA Surface Course, Type C	<u>SY</u>	\$	\$
	Unit Price (in words)			
	Base Bid Subtotal			\$
	Subtotal (use words)			
For p	rices if needed			
1.	Full Depth Asphalt Pavement Patching (6" Unifo	orm) <u>SY</u>	\$	<u>\$</u>
	Unit Price (in words)			
2.	Removal of Unsuitable Material	<u>SY</u>	<u>\$</u>	<u>\$</u>
	Unit Price (in words)			

# Contingency

# (Contingency covers Owner authorized changes in the scope of work.)

lumber	Item	Unit Price	Total Cost
1.	Contingency	10% of Base Bid Subtotal	\$
	Contingency Subtotal (in words) _		
	L BASE BID		<b>¢</b>
(Base	Bid Subtotal + Contingency) (use words)		<u>Ψ</u>
* Nota			

\*Note: The above quantity totals are estimates, and shall be verified in the field prior to bidding, by bidding contractor.

# Alternative B (Lakewood Road)

(The base bid of this bid document shall include all costs to provide each line item described to the roads contained within this bid and as outlined in this bid document).

Number	Item	Quantity	Unit Price	Total Cost
1.	Mobilization	1 LS	\$	\$
	Unit Price (in words)			
2.	Traffic Control	1 LS	\$	\$
	Unit Price (in words)			
3.	8" Graded Aggregate Base Course	<u>SY</u>	\$	<u>\$</u>
	Unit Price (in words)			
4.	2" HMA Surface Course, Type C	<u>SY</u>	\$	\$
	Unit Price (in words)			
	Base Bid Subtotal			\$
	Subtotal (use words)			
For p	rices if needed			
1.	Full Depth Asphalt Pavement Patching (6" Unif	orm) <u>SY</u>	\$	<u>\$</u>
	Unit Price (in words)			
2.	Removal of Unsuitable Material	<u>SY</u>	\$	\$
	Unit Price (in words)			

# Contingency

# (Contingency covers Owner authorized changes in the scope of work.)

lumber	Item	Unit Price	Total Cost
1.	Contingency	10% of Base Bid Subtotal	\$
	Contingency Subtotal (in words) _		
TOTAL BASE BID			<b>\$</b>
(Base Bid Subtotal + Contingency) Total (use words)			Ψ
	<u> </u>		

\*Note: The above quantity totals are estimates, and shall be verified in the field prior to bidding, by bidding contractor.

#### **BID BOND**

# STATE OF SOUTH CAROLINA COUNTY OF YORK

KNOW ALL MEN BY THESE PRESENTS, that	
as Principal, and	, as Surety, a
Corporation chartered and existing under the laws of the State of	
, with its principal offices in the City of	, and authorized to do business
in the State of South Carolina are held and firmly bound unto the OV	VNER,
in the penal Sum of	of
Dollars (\$	) lawful money of the
United States, for the payment of which sum will and truly to be	made, we bind ourselves, our heirs,
executors, administrators, and successors, jointly and severally, firm	nly by these presents.
THE CONDITION OF THIS OBLIGATION IS SUCH, that wherea	s the Principal has submitted to the
OWNER the accompanying bid, dated, 2023, for:	

### 2022-2023 C-Fund Paving Project #21334CF

NOW, THEREFORE,

A. If said Bid shall be rejected, or

- B. If the principal shall not withdraw said Bid within twenty-four (24) hours after date of opening of the same, and shall within ten (10) days after the prescribed forms are presented to him for signature, enter into a written contract with the OWNER in accordance with the Bid as accepted, and give bonds with good and sufficient surety or sureties, as may be required, for the faithful performance and proper fulfillment of such contract, then the above obligations shall be void and of no effect, otherwise to remain in full force and effect.
- C. In the event of the withdrawal of said Bid within the period specified, or the failure to enter into such contract and give such bonds within the time specified, if the principal shall pay the OWNER the difference between the amount specified in said bid and the amount for which the OWNER may procure the required work and supplies, if the latter amount be in excess of the former, then the above obligations shall be void and of no effect, otherwise to remain in full force and effect.

BID BOND 00 43 13 - 1

seals, this	VHEREOF, the above bounded day of	d parties have executed this instrument under their seve, A.D., 2023, the name and corporate seal of each e presents duly signed by its undersigned representativ	eral ⁄e,
WITNESS:	(If Sole Ownership or Partner (If Corporation, Secretary onl	rship, two (2) Witnesses required). ly will attest and affix seal).	
WITNESSES:	PRIN	NCIPAL:	
		Name of Firm	
		Signature of Authorized Officer (Affix Seal)	
		Title	
		Business Address	
		City State	
WITNESS:		SURETY:	
		Corporate Surety	
(Affix Attorney-	in-Fact Seal)		
Business Addr	ess		
		City State	
		Name of Local Insurance Agency	

BID BOND 00 43 13 - 2

# 

Notary Public

State of South Carolina-at-Large

My Commission Expires:\_\_\_\_\_

**END OF SECTION** 

to original Bid Bond)

BID BOND 00 43 13 - 3

# **NON-COLLUSION AFFIDAVIT**

State	of		)		
Coun	ty of		)		
		, b	eing first duly swo	orn, deposes and says that:	
(1)	He isthat has submitte	of Title ed the attached Bid;	Company Name	, the Bidder	
(2)	He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;				
(3)	Such Bid is genu	ine and is not a sham	Bid;		
(4)	employees or pa connived or agre collusive or shan submitted or to re manner, directly conference with Bid or of any othe the Bid price of a conveyance or u	rties in interest, included, directly or indirectly or Bid in connection wite frain from bidding in corindirectly, sought by any other Bidder, firmer Bidder, or to sure bidder.	ing this affiant, ha y with any other B th the Contract for connection with su y agreement or co or person to fix the overhead, profit cosecure through an	wners, agents, representatives, s in any way colluded, conspired, idder, firm, or person to submit a which the attached Bid has been ach Contract, or has in any llusion or communication or e price or prices in the attached or cost element of the Bid price or by collusion, conspiracy, st the OWNER or any person	
(5)	any collusion, co	nspiracy, connivance	or unlawful agreer	d proper and are not tainted by nent on the part of the Bidder or r parties in interest, including this	
			(Signed)		
				(Title)	
Subs	cribed and sworn to	before me		(Title)	
this _	day of	, 20	_		
	(Title)				
Мусс	mmission expires				

# **NOTICE OF AWARD**

TO:	FROM: York County Engineering
	P.O. Box 148 – 6 South Congress St.
	York, SC 29745
PROJECT TITLE: 22-23 C-Fund Pavi	ng Project #21334CF
	c consists of the FY 22/23 C-Fund Paving Project for fourteen (14) ct total estimated length of roadway is 15,532 linear feet,
	mitted by you for the above described work in response to its and Information for Bidders.
•	as been accepted for items in the amount of
<u>(\$</u>	
	Bidders to execute the Agreement and furnish the required ent Bond and certificates of insurance within ten (10) calendar.
Notice, said Owner will be entitled to co	nd to furnish said Bonds within ten (10) days from the date of this onsider all your rights arising out of the Owner's acceptance of your your Bid Bond. The Owner will be entitled to such other rights as
You are required to return an acknowle	dged copy of this Notice of Award to the Owner.
Dated this day of March, 2023	<u>3</u> .
	On behalf of the York County Council
	Ву:
	Title: County Engineer
,	ACCEPTANCE OF NOTICE
Receipt of the above Notice of Award is	hereby acknowledged
	By:
	Title:
Thisday of	,2023.

NOTICE OF AWARD 00 51 00

#### **AGREEMENT**

Yc		S AGREEMENT, made and entered into this day of, 2023 A.D., by and between the bunty Government, party of the first part (hereinafter sometimes called the "OWNER"), and, party of the second part (hereinafter sometimes called the "CONTRACTOR").
fol	WIT lows:	NESSETH: That the parties hereto, for the consideration hereinafter set forth, mutually agree as
1.		SCOPE OF THE WORK
	1.1.	The CONTRACTOR shall furnish all labor, materials, equipment, machinery, tools, apparatus, and transportation and perform all of the work shown on the maps and drawings and described in the Specifications entitled:
		2022-2023 C-Fund Paving Project #21334CF
		as prepared by York County Engineering Department acting as, and in the Contract Documents entitled the ENGINEER, and shall do everything required by this Contract and the other Contract Documents.
2.		THE CONTRACT SUM
	2.1.	The OWNER shall pay to the CONTRACTOR for the faithful performance of the Contract, in lawful money of the United States, and subject to addition and deductions as provided in the Contract Documents, a total sum as follows:
		Based upon the prices shown in the Bid heretofore submitted to the OWNER by the CONTRACTOR, a copy of said Proposal being a part of these Contract Documents, the aggregate amount of this Contract (obtained from either the lump sum price, the application of unit prices to the quantities shown in the Bid, or the combination of both) being the sum of
		<u>(\$)</u> .
2		COMMENCEMENT AND COMPLETION OF WORK

#### COMMENCEMENT AND COMPLETION OF WORK

- 3.1. The CONTRACTOR shall commence Work and the Contract Time will commence to run on the date fixed in the Notice to Proceed.
- 3.2. The CONTRACTOR shall prosecute the Work with faithfulness and diligence and shall be completed and ready for final payment on or before XXXXXXXXXXXXXX.

#### CONTRACTOR'S ACCEPTANCE OF CONDITIONS 4.

- 4.1. The CONTRACTOR hereby agrees that, by virtue of submitting a completed Bid including his declarations therein of full satisfaction, knowledge and understanding of the Contract Documents, site conditions (surface and subsurface) and all other conditions affecting the Work, he assumes full responsibility for performance of the Work as required under this Contract. It is expressly agreed that under no circumstances, conditions or situations shall this Contract be more strongly construed against the OWNER than against the CONTRACTOR and his Surety.
- 4.2. It is understood and agreed that the passing, approval and/or acceptance of any part of the Work or material by the OWNER, ENGINEER, or by any agent or representative, as being in

**AGREEMENT** 00 52 00 - 1 compliance with the terms of this Contract and/or of the Contract Documents, shall not operate as a waiver by the OWNER of strict compliance with the terms of this Contract, and/or the Contract Documents covering said Work; and the OWNER may require the CONTRACTOR and/or his surety to repair, replace, restore and/or make to comply strictly and in all things with this Contract and the Contract Documents any and all of said Work and/or materials which within a period of two years from and after the date of the acceptance of any such Work or material, are found to be defective or to fail in any way to comply with this Contract or with the Contract Documents. This provision shall not apply to materials or equipment normally expected to deteriorate or wear out and become subject to normal repair and replacement before their condition is discovered. Failure on the part of the CONTRACTOR and/or his Surety, immediately after notice to either, to repair or replace any such defective materials and workmanship shall entitle the OWNER, if it sees fit, to replace or repair the same and recover the reasonable cost of such replacement and/or repair from the CONTRACTOR and/or his surety, who shall in any event be jointly and severally liable to the OWNER for all damage, loss and expense caused to the OWNER by reason of the CONTRACTOR's breach of this Contract and/or his failure to comply strictly and in all things with this Contract.

#### LIQUIDATED DAMAGES

- 5.1. It is mutually agreed that time is of the essence of this Contract and should the CONTRACTOR fail to complete the work within the specified time, or any authorized extension thereof, there shall be deducted from the compensation otherwise to be paid to the CONTRACTOR, and the OWNER will retain the amount of *Six Hundred Dollars* (\$600.00) per calendar day as fixed, agreed, and liquidated damages for each calendar day elapsing beyond the specified time for substantial completion or any authorized extension thereof, which sum shall represent the actual damages which the OWNER will have sustained by failure of the CONTRACTOR to complete the work within the specified time. After substantial completion, if the CONTRACTOR shall neglect, refuse, or fail to complete the remaining Work within the Contract Time or any proper extension thereof granted by OWNER, Contractor shall pay OWNER *Six Hundred Dollars* (\$600.00) per for each calendar day that expires after the date specified for Final Completion and readiness for final payment until the work is complete and ready for final payment. It being further agreed that said sum is not a penalty, but is the stipulated amount of damages sustained by the OWNER in the event of such default by the CONTRACTOR.
- 5.2. For the purposes of this Article, the day of final acceptance of the Work shall be considered a day of delay, and the scheduled day of completion of the work shall be considered a day scheduled for production.

#### PARTIAL AND FINAL PAYMENTS

- 6.1. In accordance with the provisions fully set forth in the General Conditions, and subject to additions and deductions as provided, the OWNER shall pay the CONTRACTOR as follows:
  - 6.1.1. Within 30 days after receipt by the OWNER of the CONTRACTOR's request for partial payment, the OWNER shall make partial payments to the CONTRACTOR, on the basis of the estimate of Work as approved by the ENGINEER, for work performed during the preceding calendar month, less ten percent (10%) of the amount of such estimate which is to be retained by the OWNER until all Work has been performed strictly in accordance with this Agreement and until such Work has been accepted by the OWNER.
  - 6.1.2. Upon submission by the CONTRACTOR of evidence satisfactory to the OWNER that all payrolls, material bills and other costs incurred by the CONTRACTOR in connection with the construction of the Work have been paid in full, including all retainage to subcontractors on the project, and also after all guarantees that may be required in the specifications have been furnished and are found acceptable by the OWNER, final payment on account of this Agreement shall be made within sixty (60) days after

AGREEMENT 00 52 00 - 2

completion by the CONTRACTOR of all Work covered by this Agreement and acceptance of such Work by the OWNER.

6.1.3. Retainage will be released in full at Final Completion.

#### 7. ADDITIONAL BOND

7.1. It is further mutually agreed between the parties hereto that if, at any time after the execution of this Agreement and the Performance and Payment Bonds hereto attached for its faithful performance, the OWNER shall deem the surety or sureties upon such bonds to be unsatisfactory, or if, for any reason, such bond(s) ceases to be adequate to cover the performance of the Work, the CONTRACTOR shall, at his expense, and within three days after the receipt of notice from the OWNER to do so, furnish an additional bond or bonds, in such form and amount, and with such sureties as shall be satisfactory to the OWNER. In such event, no further payment to the CONTRACTOR shall be deemed due under this Agreement until such new or additional security for the faithful performance of the Work shall be furnished in manner and form satisfactory to the OWNER.

#### 8. CONTRACT DOCUMENTS

8.1. The Contract Documents, as stated in the Instructions to Bidders, including this Project Manual and the accompanying Contract Drawings, shall form the Contract and are as fully a part of this Contract as if herein repeated.

AGREEMENT 00 52 00 - 3

IN WITNESS WHEREOF the parties hereto have executed this Agreement on the day and date first above written in three (3) counterparts, each of which shall, without proof or accounting for the other counterparts, be deemed an original Contract.\*

York County Government				
Owner	Contractor			
By:	By:			
[Corporate Seal]	[Corporate Seal]			
Attest:	Attest:			
Address for giving notices:	Address for giving notices:			
	License No  Agent for service of process:			

(\*) In the event that the CONTRACTOR is a Corporation, a certificate of resolution of the Board of Directors of the Corporation, authorizing the officer who signs the Contract to do so in its behalf shall be completed and submitted with this form.

**END OF SECTION** 

AGREEMENT 00 52 00 - 4

# **NOTICE TO PROCEED**

Date:	xxxxxxxxxxxx	<del>_</del>	
To:	xxxxxxxxxxxxxxxx	_	
	xxxxxxxxxxxx	_	
	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	_	
Projec		und Paving Project #21334CF	
on or I	pefore, and you are to o	ccordance with the Agreement dated, 2023 complete the work within <b>150</b> consecutive calenda ork is therefore <b>no later than XXXXXXXXXXXX</b> .	r
		On behalf of the	
		YORK COUNTY GOVERNMENT	
		Ву:	
		Title: York County Engineer	
	ACCEPTA	NCE OF NOTICE	
Receil the	ot of the above Notice to Proceed is hereb day of, <b>2023</b> .	oy acknowledged by	, this
		Ву:	
		Title:	

NOTICE TO PROCEED 00 55 00

#### PERFORMANCE AND INDEMNITY BOND

STATE OF SOUTH CAROLINA COUNTY OF YORK

KNOW ALL MEN BY THESE PRESENT	S that	
as Principal, he	reinafter called Contractor, and	
	as Sure	ty, hereinafter
called Surety, are held and firmly bound unto the	York County Government, as Obligee, he	ereinafter called
owner, in the amount of		
Dollars (\$	) for the payment whereof Contractor and	Surety bind
themselves, their heirs, executors, administrators	s, successors and assigns, jointly and sev	erally, firmly by
these presents.		
WHEREAS, Contractor has by written ag into a Contract with Owner for:	greement dated	, 2023, entered
2022-2023 C-E	Fund Paving Project #21334CF	

in accordance with Drawings and Specifications prepared by York County Engineering Department, ENGINEER, which Contract is by reference made a part hereof and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that, if the Principal shall in all respects promptly and faithfully perform and comply with the terms and conditions of said Contract and his obligations thereunder and shall indemnify the OWNER and the ENGINEER and save either or all of them harmless against and from all costs, expenses and damages arising from the performance of said Contract or the repair of any work thereunder, then this obligation shall be void; otherwise, this Bond shall remain in full force and effect, in accordance with the following terms and conditions:

- The Principal and Surety jointly and severally agree to pay the OWNER any difference between the sum to which the said Principal would be entitled on the completion of the Contract. and that sum which the OWNER may be obliged to pay for the completion of said work by Contract or otherwise, and any damages, direct or indirect or consequential, which the said OWNER may sustain on account of such work, or on account of the failure of said CONTRACTOR to properly and in all things, keep and execute all of the provisions of said Contract.
- B. And this Bond shall remain in full force and effect for a period of two (2) years from the date of final payment of the project by the OWNER and shall provide that the CONTRACTOR guarantees to repair or replace for said period of two (2) years all work performed and materials and equipment furnished that were not performed or furnished according to the terms of the Contract, and shall make good, defects thereof which have become apparent before the expiration of said period of two (2) years. If any part of the project, in the judgment of the OWNER, for the reasons above stated needs to be replaced, repaired or made good during that time, the OWNER shall so notify the CONTRACTOR in writing. If the CONTRACTOR refuses or neglects to do such work within five (5) days from the date of service of such Notice, the OWNER shall have the work done by others and the cost thereof shall be paid by the CONTRACTOR or his Surety.

extension of time, alterati thereunder or the specific bond, and it does hereby	ion or addition to the term	s of the Contr same shall ir nge, extension	act or to the	ffect its obligations on this	
	ety represents and warran blicyholder's Rating of " <u>A</u>			ey have a minimum Best's Ke v of " <u>Class VIII</u> ".	y
several seals, this c	eto affixed and these pre	2023, A.D., the	e name and	s instrument under their corporate seal of each indersigned representative,	
	Ownership or Partnership ration, Secretary only will			red).	
			PRINCIPA	AL:	
			Signature (Affix Seal	of Authorized Officer	
WITNESSES:					
			Title		_
			Business	Address	
			City	State	
			SURETY:		
WITNESS:			Corporate	Surety	
			Attorney-in	n-Fact (Affix Seal)	
			Business	Address	
			City	State	_
			Name of L	ocal Insurance Agency	_

# **CERTIFICATES AS TO CORPORATE PRINCIPAL**

l,	, certify that I am the Secretary of the Corporation named as
Principal in the within bond; that	who signed the said bond on behalf of
the Principal, was then	of said Corporation; that I know his signature,
and his signature hereto is genuine; and	d that said bond was duly signed, sealed, and attested for and in
behalf of said Corporation by authority of	its governing body.
	Secretary
Corporate Seal	
CTATE OF COUTU CAROLINA	
STATE OF SOUTH CAROLINA	
COUNTY OF YORK	
Before me, a Notary Public, duly	commissioned, qualified and acting, personally appeared
to me w	vell known, who being by me first duly sworn upon oath, says that
he is the Attorney-in-Fact, for the	
	and that he has been authorized by
	to execute the foregoing bond on behalf of the Contractor
named therein in favor of the	<u> </u>
Subscribed and sworn to before me this	, 2023, A.D.
(Attach Power of Attorney)	<del></del>
	Notary Public State of South Carolina-at-Large
	My Commission Expires:

**END OF SECTION** 

#### **PAYMENT BOND**

# STATE OF SOUTH CAROLINA COUNTY OF YORK

KNOW ALL MEN BY THESE PRESENT	S that			
	as Principal, herein	after call	ed CON	TRACTOR,
and	as	Surety,	hereina	after called
Surety, are held and firmly bound unto the Yo	rk County Governm	ent, as 0	Obligee,	hereinafter
called OWNER, in the amount of				
	Dollars(\$			) for the
payment whereof CONTRACTOR and Sure	ty bind themselve	es, their	heirs,	executors,
administrators, successors and assigns, jointly a	nd severally, firmly b	y these p	resents.	
WHEREAS, CONTRACTOR has by written a into a Contract with OWNER for:	greement dated		, 202	23, entered

#### 2022-2023 C-Fund Paving Project #21334CF

in accordance with Drawings and Specifications prepared by York County Engineering Department, ENGINEER, which Contract is by reference made a part hereof and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION ARE SUCH, that, if the Principal shall promptly make payments to all claimants, as herein below defined, then this obligation shall be void; otherwise, this Bond shall remain in full force and effect, subject to the following terms and conditions:

- A. A claimant is defined as any person supplying the Principal with labor, material and supplies, used directly or indirectly by the said Principal or any subcontractor in the prosecution of the work provided for in said Contract.
- B. The above named Principal and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after performance of the labor or after complete delivery of materials and supplies by such claimant, may sue on this Bond for the use of such claimant, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.
- C. No suit or action shall be commenced hereunder by any claimant:
  - 1. Unless claimant, other than one having a direct contract with the Principal, shall within forty-five (45) days after beginning to furnish labor, materials or supplies for the prosecution of the work, furnish the Principal with a notice that he intends to look to this bond for protection.
  - 2. Unless claimant, other than one having a direct contract with the Principal, shall within ninety (90) days after such claimant's performance of the labor or complete delivery of materials and supplies, deliver to the Principal written notice of the

- performance of such labor or delivery of such material and supplies and the nonpayment therefore.
- 3. After the expiration of one (1) year from the performance of the labor or completion of delivery of the materials and supplies; it being understood, however, that if any limitation embodied in this Bond is prohibited by any law controlling the construction hereof such limitations shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
- 4. Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.
- D. The Principal and the Surety jointly and severally, shall repay the OWNER any sum which the OWNER may be compelled to pay because of any lien for labor or materials furnished for any work included in or provided by said Contract.
- E. The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration of or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications applicable thereto shall in any way affect its obligations on this Bond, and the Surety hereby waives notice of any such change, extension of time, alterations of or addition to the terms of the Contract, or to the work or to the Specifications.

F.	The Sur	ety rep	resents ar	nd warrants	to the	Owner	that	they	/ have	e a minim	um Best's l	Key
	Rating 6	Guide G	Seneral Po	licyholder's	rating	of "	A -	"	and	Financial	Category	of
	"Class			•	_	· · · · · · · · · · · · · · · · · · ·						

several seals, t seal of each	SS WHEREOF, the above bounde this day of corporate party being hereto afferesentative, pursuant to authority	2022, A.D., fixed and these pre-	the name and corporate esents duly signed by its
WITNESS:	(If Sole Ownership or Partnership (If Corporation, Secretary only will		
		PRINCIPAL:	
WITNESSES:		Signature of A (Affix Seal)	Authorized Officer
		Title	
		Business Add	dress
		City	State
		SURETY:	
WITNESS:		Corporate Su	retv
		Attorney-in-Fa	
		(Affix Seal)	
		Business Add	
		City	State
		Name of Loca	al Insurance Agency

# CERTIFICATES AS TO CORPORATE PRINCIPAL

I,, certify that	I am the Secretary of the Corporation
named as Principal in the within bond; that	who signed the
said bond on behalf of the Principal, was then	
that I know his signature, and his signature hereto	•
signed, sealed, and attested for and in behalf of said	
body.	corporation by dutilonly of its governing
body.	
Secre	tary
Corporate	•
Seal	
STATE OF SOUTH CAROLINA	
COUNTY OF YORK	
Before me, a Notary Public, duly commis	
appeared to me	
sworn upon oath, says that he is the Attorney-in-Fact, f	or the
	and that he has been
authorized by	_ to execute the foregoing bond on behalf
of the CONTRACTOR named therein in favor of the	·
Cuba suibad and assume to before man this	5 2002 A D
Subscribed and sworn to before me this day o	., 2023, A.D.
(Attach Power of Attorney)	Noton, Dublic
	Notary Public State of
	My Commission Expires:
	wy commosion Explics.

**END OF SECTION** 

# CERTIFICATE OF INSURANCE (May also use applicable Accord form)

THIS IS TO CERTIFY THAT THE					
Insurance Company Address					
Of	scribed below and identi It such policies are in ful be cancelled or changed ter sometimes called the	I force and effect at this time. It is so as to affect the interest(s) of OWNER) until thirty (30) days			
Insured:					
Address:					
Status of Insured Corporation	Partnership _	Individual			
Insured:					
Description of Work:					
INSURANCE POLICIES IN FORCE					
Forms of Coverage	Policy Number	Expiration Date			
*Worker's Comp./Employers' Liability					
**Comprehensive Auto Liability					
***Excess Liability					
Other (Please specify type)					

POLIC	CY INCLUDES COVERAGE FOR:	YES	NO		
1.	Additional Insured: OWNER and ENGINEER				
2.	*Liability under the United States Longshore-men's and Harbor Workers' Compensation Act.				
3.	**All owned, hired, or nonowned automotive equipment used in connection with work done for the Owner.				
4.	Contractual Liability				
5.	Damage caused by explosion, collapse or structural injury, and damage to underground utilities.				
6.	Products/Completed Operations				
7.	Owners and Contractors Protective Liability				
8.	Personal Injury Liability				
9.	***Excess Liability applies excess of:  (a) Employers' Liability				
	(b) Comprehensive General Liability				
	(c) Comprehensive Automobile Liability				

Types of Coverage	Forms of Coverage	Minimum Limits	of Liability
Workers' Compensation	Bodily Injury	\$ 1,000,000	Statutory
Employers' Liability	Bodily Injury	\$ 500,000	Each Accident
	Disease	\$ 500,000	Each Person
	Disease	\$ 500,000	Policy Limit
Comprehensive Auto Liability	Combined Single Limit BI/PD	\$ 1,000,000	Each Accident
Comprehensive General Liability	Bodily Injury	\$ 1,000,000	Each Occurrence
		\$ 5,000,000	Aggregate

The Insurance Company hereby agrees to deliver, within ten (10) days, two (2) copies of the above policies to the Engineer when so requested.

NOTE: Entries on this certificate are limited to the Authorized Agent or Insurance Company Representative.

Date	(SEAL)	
	Insurance Company	
Issued at		
	Authorized Representative	

Insurance Agent or Company

- Send original and one copy to:

York County Engineering 6 South Congress Street Post Office Box 148 York, South Carolina 29745

**END OF SECTION** 

# APPLICATION FOR PAYMENT No. \_\_\_\_\_

Date:	Contractor:			
Project:				
Project Number: _		_ For Pe	riod	To
Total value of work	completed to date	(see attached	d sheet)	\$
Total value of mate	erials stored for pro	ject (see attac	ched sheet)	\$
			SUB TOTAL	\$
		LESS	%RETAINED	\$
			TOTAL	\$
		LESS PREV	IOUS PAYMENTS	\$
	Other Char	nges, addition: (see attached	s, or deductions d sheet)	\$
	TOTAL AM	OUNT DUE	THIS PAYMENT	\$
		Previous	s Payments	
1	4		7	10
2	5		8	11
3	6	!	9	12
for Payment has been by the Contractor for	en completed in acco	ordance with the us Applications	e Contract Documents, an	e Work covered by this Application d that all amounts have been paid and payments received from the
Signed By:				
(affix seal)	pires:			
Recommended By: Architect/Engineer:			Oate:	
Certified Amount: 5	\$			
			tor named herein. Issuar or Contractor under this C	nce, payment, and acceptance of Contract.
Accepted By: Owner:		[	Date:	<u> </u>

APPLICATION FOR PAYMENT (REV 07-2013)

# Contract Change Order

CHANGE ORDER NO: 1

PROJECT:						
DATE OF IS	SSUANCE:					
DESCRIPTION	ON OF CHANGE:					
	Contract Amo	unt		Contract Time (Calendar Days)		
Original			_	Original Duration	-	Days
Original Co	ontingency		_			
Previous C	ontingency Change	\$0.00	_	Contract Start Date		
☐ Decre	ease 🗌 Increase					
This Contingency Change			_	Dravious Change D	) nu c	O Davis
☐ Decrease ☐ Increase				Previous Change D	Jays	<u>0</u> Days
Previous C	ontract Changes	\$0.00	_			
☐ Deduct ☐ Add				This Change Order	-	Days
This Contract Change						
☐ Dedu	ct 🗆 Add					
Revised Contingency		\$0.00				
Revised Contract		\$0.00		Revised Contract 1	Гime	0 Days
	REVISED (	CONTRACT COMPLE	ETION D	ATE IS		1/0/1900
	OWNER	CONTRACTOR	СМ		ENGINEER	/ARCHITECT
PRINT NAME						
SIGNATURE						
COMPANY	York County Engineering					

DATE

# RELEASE AND WAIVER OF CLAIM BY PRIME CONTRACTOR

Know all men by these presents that		
first being	duly sworn, states t	hat all payrolls, materials bills, sales tax, privilege tax or lic
ense, old age benefits tax, state an	d federal unemploy	ment insurance, and other liabilities
		the 2022-2023 C-Fund Paving Project #21334CF located
·		and waives any and all claims and releases York
		m any rights or claims for debts due and owing by virtue of
the furnishing of any material or sup		
the fulfillshing of any material of sup	opiles of ally lieff th	516011.
	/Non	e of Company)
	(IVali	e or Company)
	Dv.	
	By:	
	Its:	
	IIS.	
Cwarn to hofore me		
Sworn to before me	00	
thisday of	, 20 _	<del></del> •
		<del></del>
Notary Public for		<del></del>
My Commission expires:		
IVIY COITHINGSION GAPILES.		

#### **GENERAL CONDITIONS**

#### 1. DEFINITIONS

- 1.1. Whenever used in any of the Contract Documents, the following meanings shall be given to the terms herein defined:
- 1.1.1. *Addendum* or *Addenda* Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the Bidding Requirements or the Contract Documents.
- 1.1.2. *Agreement* The written contract between OWNER and CONTRACTOR covering the Work to be performed; other Contract Documents are attached to the Agreement and made a part thereof as provided therein.
- 1.1.3. Application for Payment The form accepted by ENGINEER which is to be used by CONTRACTOR in requesting progress or final payments and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
- 1.1.4. *Bid* The offer or proposal of the bidder on the prescribed Bid Form setting forth the prices for the Work to be performed.
- 1.1.5. *Bidder* One who submits a Bid directly to OWNER, as distinct from sub-bidder, who submits a Bid to a Bidder.
- 1.1.6. *Bidding Documents* The Invitation for Bids, Information to Bidders, the Bid Form, and the proposed Contract Documents (including all Addenda issued prior to receipt of Bids).
- 1.1.7. Bonds Performance and Indemnity and Payment Bonds and other instruments of security.
- 1.1.8. Change Order A document recommended by ENGINEER, which is signed by CONTRACTOR and OWNER and authorizes an addition, deletion or revision in the Work, or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.
- 1.1.9. *Contract Documents* Executed Agreement, Addenda (if any), Invitation for Bids, Information to Bidders, Signed Copy of Bid, Bid Guarantee, Statement of Bidder's Qualifications, Performance and Indemnity Bond, Payment Bond, Certification of Insurance, General Conditions, Supplemental Conditions (if any), Special Conditions (if any), Technical Specifications, and Drawings.
- 1.1.10. Contract Price The moneys payable by OWNER for completion of the Work in accordance with the Contract Documents.
- 1.1.11. *Contract Times* The numbers of days or the dates stated in the Agreement: (i) to achieve Substantial Completion, and (ii) to complete the work so that it is ready for final payment as evidenced by ENGINEER's written records.
- 1.1.12. *CONTRACTOR* The person, firm, or corporation entering into Contract with the OWNER to construct and install the improvements embraced in this Contract.
- 1.1.13. *Defective* An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, in that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or had been damaged prior to ENGINEER's recommendation or final payment.

- 1.1.14. *Drawings* The construction drawings which graphically show the scope, extent, and character of the Work to be furnished and performed by the CONTRACTOR and which have been prepared or approved by ENGINEER and are referred to in the Contract Documents.
- 1.1.15. *ENGINEER* The person, firm or corporation serving the OWNER with Engineering services, his successors, or any other person or persons, employed by said OWNER for the purpose of directing or having charge of the work embraced in this Contract.
- 1.1.16. Laws and Regulations; Laws or Regulations Any and all applicable laws, rules, regulations, ordinances codes and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.
- 1.1.17. *Liens* Liens, charges, security interests or encumbrances upon project funds, real property or personal property.
- 1.1.18. Local Government York County, South Carolina, within which the Project Areas are situated.
- 1.1.19. *Milestone* A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
- 1.1.20. *Notice of Award* The written notice by OWNER to the apparent successful Bidder stating that upon compliance by the apparent successful Bidder with the conditions precedent enumerated therein, within the time specified, OWNER will sign and deliver the agreement.
- 1.1.21. *Notice to Proceed* A written notice given by OWNER to CONTRACTOR (with a copy to ENGINEER) fixing the date on which the Contract Times will commence to run and on which CONTRACTOR shall start to perform, CONTRACTOR's obligations under the Contract Documents.
- 1.1.22. OWNER The York County Government, which is authorized to undertake this Contract.
- 1.1.23. *Partial Utilization* Use by OWNER of a substantially completed part of the Work for the purpose for which it is intended (or a related purpose) prior to Substantial Completion of all the Work.
- 1.1.24. *Project* The total construction of which the Work to be provided under the Contract Documents may be the whole, or a part as indicated elsewhere in the Contract Documents.
- 1.1.25. *Project Area* The area within which are the specified limits of the improvements to be constructed in whole or in part under this Contract.
- 1.1.26. *Project Manual* The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
- 1.1.27. Resident Project Representative The authorized representative of ENGINEER who may be assigned to the Site or any part thereof.
- 1.1.28. *Samples* Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portion of the Work will be judged.
- 1.1.29. Site Lands or areas indicated in the Contract Documents as being furnished by OWNER upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by OWNER which are designated for the use of the CONTRACTOR.

- 1.1.30. *Shop Drawings* All drawings, diagrams, illustrations, schedules and other data or information which are specifically prepared or assembled by or for CONTRACTOR and submitted by CONTRACTOR to illustrate some portion of the Work.
- 1.1.31. *Special Conditions* The part of the Contract Documents that amends or supplements the Technical Specifications.
- 1.1.32. *Subcontractor* An individual, firm or corporation having a direct contract with CONTRACTOR or with any other Subcontractor for the performance of a part of the Work at the site.
- 1.1.33. Substantial Completion The Work (or specified part thereof) has progressed to the point where, in the opinion of ENGINEER as evidenced by ENGINEER's definitive certification of Substantial Completion, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended; or if no such certificate is issued, when the Work is complete and ready for final payment as evidenced by ENGINEER's written recommendation of final payment. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.
- 1.1.34. *Successful Bidder* The lowest, qualified, responsible and responsive Bidder to whom OWNER (on the basis of OWNER's evaluation as hereinafter provided) makes an award.
- 1.1.35. Supplier A manufacturer, fabricator, supplier, distributor, material man or vendor having a direct contract with CONTRACTOR or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by CONTRACTOR or any Subcontractor.
- 1.1.36. *Supplemental Conditions* The part of the Contract Documents that amends or supplements these General Conditions.
- 1.1.37. *Technical Specifications* The part of the Contract Documents that describes, outlines, and stipulates: the quality of materials, equipment and systems to be furnished; the quality of workmanship required; and the methods to be used in carrying out the construction work to be performed under this Contract.
- 1.1.38. *Underground Facilities* All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems, or water.
- 1.1.39. *Unit Price Work* Work to be paid for on the basis of unit prices.
- 1.1.40. *Work* The entire completed construction or the various separately identifiable parts thereof required to be furnished under the Contract Documents. Work includes and is the result of performing or furnishing and incorporating materials and equipment into the construction, and furnishing, installing and incorporating all materials and equipment into such construction, all as required by the Contract Documents..
- 1.2 Other technical terms not specifically defined within the Contract Documents shall have the meanings given in AIA Document "Glossary of Construction Industry Terms," current edition. Technical terms not defined as above and used to describe items of the Work, and which so applied have a well-known technical or trade meaning, shall be deemed to have such recognized meaning.

#### 2. CONTRACTOR'S OBLIGATIONS

2.1. All work shall be done in strict accordance with the Contract Documents. Observations, construction reviews, tests, recommendations or approvals by the ENGINEER or persons other than the

CONTRACTOR, shall in no way relieve the CONTRACTOR of his obligations to complete all work in accordance with the Contract Documents. All work shall be done under the direct supervision of the CONTRACTOR. The CONTRACTOR shall be responsible for construction means, methods, techniques, and procedures, and for providing a safe place for the performance of the work by the CONTRACTOR, Subcontractors, suppliers, and their employees and for access, use, work, or occupancy by all authorized persons.

#### 3. LANDS BY CONTRACTOR

- 3.1. OWNER shall furnish the Site. OWNER shall notify CONTRACTOR of any encumbrances or restrictions not of general application, but specifically related to the use of the Site with which the CONTRACTOR must comply in performing work.
- 3.2. Any land and access thereto not specifically shown to be furnished by the OWNER that may be required for temporary construction facilities or for storage of materials and equipment shall be provided by the CONTRACTOR with no liability to the OWNER. The CONTRACTOR shall confine his apparatus and storage to such additional areas as he may provide at his expense.
- 3.3. The CONTRACTOR shall not enter upon private property for any purpose without obtaining permission, and he shall be responsible for the preservation of all public property, trees, monuments, structures and improvements, along and adjacent to the street and/or right-of-way, and shall use every precaution necessary to prevent damage or injury thereto. He shall use suitable precautions to prevent damage to pipes, conduits, and other underground structures, and shall protect carefully from disturbance or damage all monuments and property marks until an authorized agent has witnessed or otherwise referenced their location and shall not remove them until directed.

#### 4. SURVEYS BY CONTRACTOR

4.1. Based upon the Construction Documents and any additional information provided by the OWNER, the CONTRACTOR shall develop and make all detailed surveys necessary for construction, including working points, lines and elevations.

#### 5. PUBLIC UTILITIES

5.1. The elevation and location of all public utilities shown on the Drawings were taken from existing public records. It shall be the duty of the CONTRACTOR to make final and exact determination of the location and extent of all utilities and he will be liable for any expense resulting from damage to them.

#### 6. SUPERINTENDENT

6.1. A qualified superintendent, who is acceptable to the OWNER, shall be maintained on the Work and shall give efficient supervision to the Work until its completion. The superintendent shall have full authority to act in behalf of the CONTRACTOR, and all instruction given to the superintendent shall be considered as given to the CONTRACTOR. It shall be the responsibility of this CONTRACTOR's superintendent to coordinate the Work of all the Subcontractors. The superintendent shall be present on the site at all times required to perform adequate supervision and coordination.

#### 7. SUBCONTRACTORS

7.1. At the time set forth in the Contract Documents or when requested by the OWNER, the CONTRACTOR shall submit in writing for review of the OWNER the names of the Subcontractors proposed for the work. Subcontractors may not be changed except at the request or with the approval of the OWNER. The CONTRACTOR is responsible to the OWNER for the acts and deficiencies of his Subcontractors, and of their direct and indirect employees, to the same extent as he is responsible for the acts and deficiencies of his employees. The Contract Documents shall not be construed as creating any

contractual relation between any Subcontractor and the OWNER. The CONTRACTOR shall bind every Subcontractor by the terms of the Contract Documents.

### 8. ASSIGNMENTS

8.1. The CONTRACTOR shall not assign the whole or any part of this Contract or any moneys due or to become due hereunder without written consent of the OWNER. In case the CONTRACTOR assigns all or any part of any moneys due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any moneys due or to become due to the CONTRACTOR shall be subject to prior claims of all persons, firms, and corporations for services rendered or materials supplied for the performance of the work called for in this Contract.

### 9. MUTUAL RESPONSIBILITY OF CONTRACTORS

9.1. If through acts of neglect on the part of the CONTRACTOR, any other CONTRACTOR or any Subcontractor shall suffer loss or damage on the work, the CONTRACTOR agrees to settle with such other CONTRACTOR or Subcontractor by agreement or arbitration if such other CONTRACTOR or Subcontractor will so settle. If such other CONTRACTOR or Subcontractor shall assert any claim against the OWNER on account of any damage alleged to have been sustained, the OWNER shall notify the CONTRACTOR, who shall indemnify and save harmless the OWNER against any such claim.

### 10. ORAL AGREEMENTS

10.1. No oral order, objection, claim or notice by any party to the others shall affect or modify any of the terms or obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or modification thereof in writing, and no evidence shall be introduced in any proceeding of any other waiver or modification.

# 11. MATERIALS, SERVICE AND FACILITIES

- 11.1. It is understood that except as otherwise specifically stated in the Contract Documents, the CONTRACTOR shall provide and pay for all materials, labor, tools, equipment, water, gas, light, power, transportation, superintendence, taxes, insurance, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete, and deliver the work within the specified time.
- 11.2. Any work necessary to be performed after regular working hours, on Sundays or Legal Holidays, shall be performed without additional expense to the OWNER.

### 12. MATERIALS AND EQUIPMENT

The materials and equipment installed in the work shall meet the requirements of the Contract Documents and no materials or equipment shall be ordered until reviewed by the ENGINEER. The CONTRACTOR shall furnish all materials and equipment not otherwise specifically indicated or provided by the OWNER. The CONTRACTOR shall guarantee all materials and equipment he provides in accordance with Section 16 of these GENERAL CONDITIONS.

- 12.1. Substitutions: In order to establish standards of Quality, the ENGINEER has, in the detailed Specifications, referred to certain products by name and catalog number without consideration of possible substitute or "or equal" items. This procedure is not to be construed as eliminating from competition other products of equal or better quality by other manufacturers where fully suitable in design.
- 12.1.1. Whenever it is indicated in the Drawings or specified in the specifications that a substitute or "orequal" item of material or equipment may be furnished or used by the CONTRACTOR, application for

such acceptance will not be considered by the ENGINEER until after the Effective Date of the agreement. The CONTRACTOR shall furnish the complete list of proposed desired substitutions, together with such engineering and catalog data as the ENGINEER may require. All proposals for substitutions shall be submitted in writing by the General Contractor and not by individual trades or material suppliers. The ENGINEER will review proposed substitutions and make his recommendations in writing within reasonable time.

- 12.1.2. The CONTRACTOR shall abide by the ENGINEER's recommendation when proposed substitute materials or items of equipment are not recommended for installation and shall furnish the specified material or item of equipment in such case.
- 12.2. Space Requirements: It shall be the responsibility of the CONTRACTOR to ensure that materials and equipment to be furnished fit the space available. He shall make necessary field measurements to ascertain space requirements, including those for connections, and shall order such sizes and shapes of equipment that the final installation shall suit the true intent and meaning of the Contract Documents.
- 12.3. Arrangement: Where equipment requiring different arrangement of connections from those shown is approved, it shall be the responsibility of the CONTRACTOR to install the equipment to operate properly, and in harmony with the intent of the work required by such arrangement.
- 12.4. Unacceptable Materials and Equipment: Materials and equipment which do not conform to the requirements of the Contract Documents, or are not equal to samples reviewed by the ENGINEER, or are in any way unsatisfactory or unsuited to the purpose for which they are intended, shall not be furnished nor installed.
- 12.5. Storage: Materials and equipment shall be so stored as to ensure the preservation of their quality and fitness for the work. When considered necessary, they shall be placed on wooden platforms or other hard, clean surfaces, and not on the ground and/or they shall be placed under cover. Stored materials and equipment shall be located so as to facilitate prompt inspection. Private property shall not be used for storage purposes without the written permission of the property owner or leasee. Materials, equipment, construction machinery, fuel, and oils shall not be stored or parked within the drip-line of any trees in or adjacent to the project site or additional off-site easements and right-of-ways.
- 12.6. Manufacturer's Directions: Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer.

## 13. INSPECTION AND TESTING OF MATERIALS

13.1. Unless otherwise specifically provided for in the specifications, the inspection and testing of material and finished articles to be incorporated in the work at the site shall be made by bureaus, laboratories, or agencies approved by the OWNER. The cost of such inspection and testing shall be paid by the CONTRACTOR. The CONTRACTOR shall furnish evidence satisfactory to the OWNER that the material and finished articles have passed the required tests prior to the incorporation of such materials and finished articles in the work. The CONTRACTOR shall promptly segregate and remove rejected material and finished articles from the site of the work.

# 14. SAMPLES

- 14.1. All samples called for in the Specifications or required by the ENGINEER shall be furnished by the CONTRACTOR and shall be submitted to the ENGINEER for his review. Samples shall be furnished so as not to delay fabrication, allowing the ENGINEER reasonable time for the consideration of the samples submitted.
- 14.1.1. Samples for Tests: CONTRACTOR shall furnish such samples of material as may be required for examination and test. All samples of materials for tests shall be taken according to standard methods or as provided in the Contract Documents.

- 14.1.2. CONTRACTOR's Guaranty: All samples shall be submitted by the CONTRACTOR with a covering letter indicating that such samples are recommended by the CONTRACTOR for the service intended and that the CONTRACTOR's Guaranty will fully apply.
- 14.1.3. All materials, equipment and workmanship shall be in accordance with samples guaranteed by the CONTRACTOR and reviewed by the ENGINEER.

### 15. SHOP DRAWINGS

- 15.1. The CONTRACTOR shall provide shop drawings, setting schedules and such other drawings as may be necessary for the prosecution of the work in the shop and in the field as required by the Drawings, Specifications or the ENGINEER's instructions. Deviations from the Drawings and Specifications shall be called to the attention of the ENGINEER at the time of the first submission of shop drawings and other drawings for consideration. The ENGINEER's review of any drawings shall not release the CONTRACTOR from responsibility for such deviations. Shop drawings shall be submitted according to a schedule prepared jointly by the CONTRACTOR and the ENGINEER.
- 15.1.1. CONTRACTOR's Certification: When submitted for the ENGINEER's review, shop drawings shall bear the CONTRACTOR's certification that he has reviewed, checked and approved the shop drawings, that they are in harmony with the requirements of the Project and with the provisions of the Contract Documents, and that he has verified all field measurements and construction criteria, materials, catalog numbers and similar data. CONTRACTOR shall also certify that the work represented by the shop drawings is recommended by the CONTRACTOR and the CONTRACTOR's Guaranty will fully apply.

### 16. GUARANTY

- 16.1. The CONTRACTOR shall guarantee all materials and equipment furnished and work performed for a period of two years from the date of final payment of the work.
- 16.1.1. The Performance and Indemnity Bond shall remain in full force and effect during the guaranty period.
- 16.1.2. Correction of faulty work after final payment shall be as provided in Paragraph 41.

### 17. INSURANCE

17.1. The CONTRACTOR shall not commence any work until he obtains, at his own expense, all required insurance. Such insurance must have the approval of the OWNER as to the limit, form, and amount. The CONTRACTOR will not permit any Subcontractor to commence work on this project until such Subcontractor has complied with the same insurance requirements.

Types: The types of insurance the CONTRACTOR is required to obtain and maintain for the full period of the Contract will be: Workmen's Compensation Insurance, Automobile and Comprehensive General Liability Insurance as detailed in the following portions of this specification.

17.1.2. Evidence: As evidence of specified insurance coverage, the OWNER may, in lieu of actual policies, accept certificates issued by the insurance carrier showing such policies in force for the specified period. Each policy or certificate will bear an endorsement or statement waiving right of cancellation or reduction in coverage within ten days' notice in writing to be delivered by registered mail to the OWNER. Should any policy be cancelled before final payment by the OWNER to the CONTRACTOR and the CONTRACTOR fails immediately to procure other insurance as specified, the OWNER reserves the right to procure such insurance and to deduct the cost thereof from any sum due the CONTRACTOR under this Contract.

- 17.1.3. Adequacy of Performance: Any insurance bearing on adequacy of performance shall be maintained after completion of the project for the full guaranty period. Should such insurance be cancelled before the end of the guaranty period and the CONTRACTOR fails immediately to procure other insurance as specified, the OWNER reserves the right to procure such insurance and to charge the cost thereof to the CONTRACTOR.
- 17.1.4. Payment of Damages: Nothing contained in these insurance requirements is to be construed as limiting the extent of the CONTRACTOR's responsibility for payment of damages resulting from his operations under this Contract.

### 18. WORKMEN'S COMPENSATION INSURANCE

18.1. Before the Agreement between the OWNER and the CONTRACTOR is entered into, the CONTRACTOR shall submit written evidence that he and all Subcontractors have obtained, for the period of the Contract, full Workman's Compensation Insurance coverage for all persons whom they employ or may employ in carrying out the work under this Contract. This insurance shall be in strict accordance with the requirements and statutory limits of the most current and applicable South Carolina Workman's Compensation Insurance Laws.

### 19. COMPREHENSIVE GENERAL LIABILITY AND AUTOMOBILE INSURANCE

- 19.1. Before commencement of the work, the CONTRACTOR shall submit written evidence that he and all his Subcontractors have obtained for the period of the Contract, full Comprehensive General Liability Insurance and automobile coverage. This coverage shall provide for both bodily injury and property damage.
- 19.1.1. Comprehensive General Liability Insurance shall include coverage for bodily injury, sickness or disease, death, or property damage arising directly or indirectly out of or in connection with the performance of work under this Contract, and shall provide for a combined single limit of not less than one million (\$1,000,000) dollars for all damages arising out of bodily injury, sickness or disease, death, or property damage for each occurrence.
- 19.1.2. Automobile insurance shall include coverage for bodily injury and property damage arising directly or indirectly out of or in connection with the performance of work under this Contract, and shall provide for a combined single limit of not less than one million (\$1,000,000) dollars for all damages arising out of bodily injury or property damage for each occurrence.
- 19.1.3. Indemnity: Included in such insurance will be contractual coverage sufficiently broad to insure the provisions of Paragraph 20.

### 20. INDEMNITY

20.1. The CONTRACTOR shall hold harmless, indemnify and defend the OWNER, it's successors and assigns, the ENGINEER, their consultants, and each of their officers and employees and agents, from any and all liability claims, losses or damage arising or alleged to arise from the performance of the work described herein, but not including the sole negligence of the OWNER or the ENGINEER.

## 21. PATENTS AND ROYALTIES

21.1. If any design, device, material or process covered by letters, patent or copyright is used by the CONTRACTOR, he shall provide for such use by legal agreement with the OWNER of the patent or a duly authorized licensee of such OWNER, and shall save harmless the OWNER, and the ENGINEER, from any and all loss or expense on account thereof, including its use by the OWNER.

### 22. PERMITS

22.1. All permits and licenses necessary for the prosecution of the work shall be secured and paid for by the CONTRACTOR. This shall include all Business Licenses required by the Local Government.

### 23. LAWS TO BE OBSERVED

23.1. The CONTRACTOR shall give all notices and comply with all Federal, State and local laws, ordinances and regulations in any manner affecting the conduct of the work, and all such orders and decrees as exist, or may be enacted by bodies or tribunals having any jurisdiction or authority over the work, and shall indemnify and save harmless the OWNER its successors and assigns, the ENGINEER, their consultants, and each of their officers and employees and agents against any claim or liability arising from, or based on, the violation of any such law, ordinance, regulation, order or decree, whether by himself or his employees.

### 24. WARNING SIGNS AND BARRICADES

24.1. The CONTRACTOR shall provide adequate signs, barricades, and watchmen and take all necessary precautions for the protection of the work and the safety of the public.

### 25. PUBLIC CONVENIENCE

25.1. The CONTRACTOR shall at all times so conduct his work as to ensure the least possible obstruction to traffic and inconvenience to the general public and the residents in the vicinity of the work, and to ensure the protection of persons and property. No road or street shall be closed to the public except with permission of the proper authorities. Fire hydrants on or adjacent to the work shall be kept accessible to fire-fighting equipment at all times. Temporary provisions shall be made by the CONTRACTOR to ensure the use of sidewalks and the proper functioning of all gutters, sewer inlets, drainage ditches, and irrigation ditches, which shall not be obstructed.

### 26. SAFETY

- 26.1. The CONTRACTOR shall be solely and completely responsible for the conditions of the job site, including safety of all persons and property affected directly or indirectly by his operation during the performance of the work. This requirement will not be limited to normal working hours but will apply continuously 24 hours per day until written acceptance of the work by the OWNER and shall not be limited to normal working hours.
- 26.2. The ENGINEER's construction reviews of the CONTRACTOR's performance is not intended to include review of the adequacy of the CONTRACTOR's safety measures in, on, or near the construction site.

### 27. NOTICE TO PROCEED

27.1. Following the execution of the Contract by the OWNER and the CONTRACTOR, written Notice to Proceed with the work shall be given by the OWNER to the CONTRACTOR. The CONTRACTOR shall begin and shall prosecute the work regularly and uninterruptedly thereafter (except as provided for herein) with such force as to secure the completion of the work within the Contract Time.

### 28. TIME FOR COMPLETION AND LIQUIDATED DAMAGES

28.1. It is hereby understood and mutually agreed, by and between the CONTRACTOR and the OWNER, that the date of beginning and the time for completion as specified in the Contract of the work to be done hereunder are **ESSENTIAL CONDITIONS** of this Contract; and it is further mutually understood and agreed that the work embraced in this Contract shall be commenced on a date to be specified in the Notice to Proceed. Liquid damages will be in the amount of \$600.00 per day.

- 28.2. The CONTRACTOR agrees that said work shall proceed regularly, diligently, and uninterruptedly at such rate of progress as will ensure full completion thereof within the time specified. It is expressly understood and agreed, by and between the CONTRACTOR and the OWNER, that the time for the completion of the work described herein is a reasonable time for the completion of the same, taking into consideration the average climatic range and usual industrial conditions prevailing in this locality.
- 28.3. If said CONTRACTOR shall neglect, fail, or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the OWNER, then the CONTRACTOR does hereby agree, as a part consideration for the awarding of this Contract, to pay to the OWNER the amount specified in the Contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the CONTRACTOR shall be in default after the time stipulated in the Contract for completing the work.
- 28.4. The said amount is fixed and agreed upon by and between the CONTRACTOR and the OWNER because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the OWNER would in such event sustain, and said amount is agreed to be the amount of damages which the OWNER would sustain and said amount shall be retained from time to time by the OWNER from current periodical estimates.
- 28.5. It is further agreed that time is of the essence of each and every portion of this Contract and of the Specifications wherein a definite and certain length of time is fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. PROVIDED, that the CONTRACTOR shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following:
- 28.5.1. Any preference, priority or allocation order duly issued by the Federal or State Government.
- 28.5.2. Unforeseeable cause beyond the control and without the fault or negligence of the CONTRACTOR, including, but not restricted to, acts of God, or of the public enemy, acts of the OWNER, acts of another CONTRACTOR in the performance of a contract with the OWNER, fires, flood, epidemics, quarantine restrictions, strikes, freight embargoes and unusually severe weather; and
- 28.5.3. Any delays of Subcontractors or suppliers occasioned by any of the causes specified in subsection 28.5.1. and 28.5.2. of this article:

PROVIDED, FURTHER, that the CONTRACTOR shall, within 10 days from the beginning of such delay, unless the OWNER shall grant a further period of time prior to the date of final settlement of the contract, notify the OWNER, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the CONTRACTOR within a reasonable time of its decision in the matter, and grant such extension of time as the OWNER shall deem equitable and just.

### 29. CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES

29.1. Immediately after execution and delivery of the contract, and before the first partial payment is made, the CONTRACTOR shall deliver to the OWNER an estimated construction progress schedule in a form satisfactory to the OWNER, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the Contract Documents.

### 30. EXTENSION OF CONTRACT TIME

- 30.1. A delay beyond the CONTRACTOR's control occasioned by an Act of God, by act or omission on the part of the OWNER or by strikes, lockouts, fire, etc., may entitle the CONTRACTOR to any extension of time in which to complete the work as agreed by the OWNER, provided, however, that the CONTRACTOR shall immediately give written notice to the OWNER of the cause of such delay.
- 30.2. Act of God shall mean an earthquake, flood, cyclone, or other cataclysmic phenomenon. Storms of normal intensity for the locality shall not be construed as an Act of God and no reparation shall be made to the CONTRACTOR for damages to the work resulting there from.

### 31. EXTRA WORK

- 31.1. New and unforeseen items of work found to be necessary, and which cannot be covered by any item or combination of items for which there is a Contract price, shall be classed as Extra Work. It shall be the responsibility of the CONTRACTOR to identify necessary work items classed as Extra Work and for which no previous contract price has been arranged and advise the ENGINEER and the OWNER of the need for the aforesaid necessary Extra Work. The CONTRACTOR shall do such Extra Work and furnish such materials as may be required for the proper completion or construction of the whole work contemplated, upon written order from the OWNER as approved by the ENGINEER. In the absence of such written order, no claim for Extra Work shall be considered.
- 31.2. Extra Work shall be performed in accordance with these Contract Documents where applicable and work not covered by such shall be done in accordance with the best construction practice and in a workmanlike manner.
- 31.3. Extra Work required in an emergency to protect life and property shall be performed by the CONTRACTOR as required.

### 32. CLEANING UP

32.1. The CONTRACTOR shall at all times, keep the premises clean and shall remove from the OWNER's property, and from all public and private property, temporary structures, rubbish, waste materials resulting from his operation or caused by his employees, and all surplus materials, leaving the site smooth, clean and true to line and grade and in the same condition as existed prior to the work performed by the CONTRACTOR or his Subcontractors and as approved by the OWNER. Failure to maintain a clean project site or to complete clean-up of the project site at the completion of the work shall be cause for the OWNER to perform the necessary clean-up and the costs thereof shall be charged to the CONTRACTOR.

### 33. REQUEST FOR PAYMENT

33.1. The CONTRACTOR may submit to the OWNER periodically, but not more than once each month, a Request for Payment for work done and materials delivered to and stored on the site. The CONTRACTOR shall furnish the OWNER all reasonable information required for obtaining the necessary data relative to the progress and execution of the work. Payment for materials stored on the site will be conditioned upon evidence submitted to establish the OWNER's title to such materials. Each Request for Payment shall be computed on the basis of work completed on all items listed in the Detailed Breakdown of Contract (or on unit prices, as the case may be), less 10 percent to be retained until final completion and acceptance of the work and less previous payments.

### 34. ENGINEER'S ACTION ON REQUEST FOR PAYMENT

- 34.1. All CONTRACTOR's Requests for Payment shall be referred to the ENGINEER for his review and, within a reasonable period, the ENGINEER shall:
- 34.1.1. Recommend payment by the OWNER of the Request for Payment as submitted.

- 34.1.2. Recommend payment by the OWNER of such other amount as the ENGINEER shall consider as due the CONTRACTOR, informing the OWNER and the CONTRACTOR in writing of his reasons for recommending the amended amount.
- 34.1.3. Recommend to the OWNER that payment of the Request for Payment be withheld, informing the CONTRACTOR and the OWNER in writing of his reasons, for so recommending.
- 35. OWNER'S ACTION ON REQUEST FOR PAYMENT
- 35.1. Within thirty days after receipt of a Request for Payment from the CONTRACTOR, the OWNER shall:
- 35.1.1. Pay the Request for Payment as recommended by the ENGINEER.
- 35.1.2. Pay such other amount, in accordance with Paragraph 36, as he shall decide is due the CONTRACTOR, informing the CONTRACTOR and the ENGINEER in writing of this reasons for paying the amended amount.
- 35.1.3. Withhold payment in accordance with Paragraph 36, informing the CONTRACTOR and the ENGINEER of his reasons for withholding payment.
- 36. OWNER'S RIGHT TO WITHHOLD PAYMENT OF A REQUEST FOR PAYMENT
- 36.1. The OWNER may withhold payment, in whole or in part, of a Request for Payment to the extent necessary to protect himself from loss on account of any of the following:
- 36.1.1. Defective work.
- 36.1.2. Evidence indicating the probable filing of claims by other parties against the CONTRACTOR that may adversely affect the OWNER.
- 36.1.3. Failure of the CONTRACTOR to make payments due to Subcontractors, material suppliers, or employees.
- 36.1.4. Damage to another CONTRACTOR.
- 37. PAYMENT FOR EXTRA WORK
- 37.1. Written notice of claims for payment for Extra Work shall be given by the CONTRACTOR within ten days after receipt of instructions from the OWNER to proceed with the Extra Work and also before any work is commenced, except in emergency endangering life or property. No claim shall be valid unless so made. In all cases, the CONTRACTOR's itemized estimate sheets showing all labor and material shall be submitted to the OWNER. The OWNER's order for Extra Work shall specify any extension of the Contract Time and one of the following methods of payment:
- 37.1.1. Unit prices or combination of unit prices which formed the basis of the original Contract.
- 37.1.2. A lump sum based on the CONTRACTOR's estimate and accepted by the OWNER.
- 37.1.3. Actual cost plus 15 percent for overhead and profit. Actual costs are defined as follows:
- 37.1.3.1. Labor costs, including time of foreman while engaged directly upon extra work.
- 37.1.3.2. Labor insurance and taxes.
- 37.1.3.3. Materials and supplies actually used on the work.

37.1.3.4. Associated General Contractors of America standard rental rates on each piece of equipment having a value in excess of \$50.00. Equipment and tools of lesser value are considered "small tools" and, as such, are considered to be part of overhead.

### 38. ACCEPTANCE AND FINAL PAYMENT

- 38.1. When the CONTRACTOR has completed the work in accordance with the terms of the Contract Documents, he shall certify completion of the work to the OWNER and submit a final Request for Payment, which shall be the Contract Amount plus all approved additions, less all approved deductions and less previous payments made. The CONTRACTOR shall furnish evidence that he has fully paid all debts for labor, materials, and equipment incurred in connection with the work, and upon acceptance by the OWNER, the OWNER will release the CONTRACTOR except as to the conditions of the Performance and Indemnity Bond and the Labor and Material Payment Bond, any legal rights of the OWNER, required guaranties, and Correction of Faulty Work after Final Payment, and will pay the CONTRACTOR's final Request of Payment. The CONTRACTOR shall allow sufficient time between the time of completion of the work and approval of the final Request for Payment for the ENGINEER to assemble and check the necessary data.
- 38.1.1. Release of Liens: The CONTRACTOR shall deliver to the OWNER a complete release of all liens arising out of this Contract before the retained percentage or before the final Request for Payment is paid. If any liens remains unsatisfied after all payments are made, the CONTRACTOR shall refund to the OWNER such amounts as the OWNER may have been compelled to pay in discharging such liens including all costs and a reasonable attorney's fees.

### 39. OWNER'S RIGHT TO TERMINATE AGREEMENT

- 39.1. The OWNER shall have the right to terminate his agreement with the CONTRACTOR after giving ten days' written notice of termination to the CONTRACTOR in the event of any default by the CONTRACTOR.
- 39.1.1 Default by CONTRACTOR: It shall be considered a default by the CONTRACTOR whenever he shall:
- 39.1.1.1. Declare bankruptcy, become insolvent, or assign his assets for the benefit of his creditors.
- 39.1.1.2. Disregard or violate provisions of the Contract Documents or fail to prosecute the work according to the agreed Schedule of Completion, including extensions thereof.
- 39.1.1.3. Fail to provide a qualified superintendent, competent workmen or Subcontractors, or proper materials, or fail to make prompt payment thereof.
- 39.1.2. Completion by the OWNER: In the event of termination of the Agreement by the OWNER because of default by the CONTRACTOR, the OWNER may take possession of the work and of all materials and equipment thereon and may finish the work by whatever method and means he may select.

### 40. TERMINATION OF CONTRACTOR'S RESPONSIBILITY

40.1. The Contract will be considered complete when all work has been finished and the project accepted in writing by the OWNER. The CONTRACTOR's responsibility shall then cease, except as set forth in his Performance and Indemnity Bond, as provided in Paragraph 16, Guaranty, and as provided in Paragraph 41, Correction of Faulty Work After Final Payment.

# 41 CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

41.1. The making of the final payment by the OWNER to the CONTRACTOR shall not relieve the CONTRACTOR of responsibility for faulty materials or workmanship. The CONTRACTOR shall promptly replace any such defects, as determined by the ENGINEER, discovered within two years from the date of final payment of the work.

### 42. INSPECTION

42.1. The authorized representatives of the ENGINEER and OWNER shall be permitted to inspect all materials, workmanship, and other relevant project records and data. Materials and workmanship will be subject to the approval of the OWNER and/or his representative.

### 43. CORRECTION OF WORK

43.1. All work, all materials, whether incorporated in the work or not, all processes of manufacture, and all methods of construction shall be, at all times and places, subject to the inspection of the ENGINEER who shall be the final judge of the quality and suitability of the work, materials, process of manufacturer, and methods of construction for the purposes for which they are used. Should they fail to meet his approval, they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the CONTRACTOR at his own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the ENGINEER, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the Contract hereunder shall be reduced by such amount as in the judgment of the ENGINEER shall be equitable.

### 44. SUBSURFACE CONDITIONS FOUND DIFFERENT

44.1. Should the CONTRACTOR encounter subsurface and/or latent conditions at the site materially differing from those shown on the Plans or indicated in the Specifications, he shall immediately give notice to the ENGINEER of such conditions before they are disturbed. The ENGINEER will thereupon promptly investigate the conditions, and if he finds and so determines that they materially differ from those shown on the Plans or indicated in the Specifications, he will at once make such changes in the Plans and/or Specifications, as he may find necessary. Any increase or decrease of cost resulting from such changes are to be adjusted in the manner provided in Paragraph 37 of the General Conditions.

### 45. CONTRACT SECURITY

45.1. The CONTRACTOR shall furnish a Performance Indemnity Bond and Payment Bond (forms attached) in an amount at least equal to 100% of the contract prices as security for the faithful performance of this Contract, as the security for the payment of all persons performing labor on the project under this Contract, and furnishing materials in connection with this Contract. The Performance and Indemnity Bond and the Payment Bond may be in one or in separate instruments in accordance with local law. Before final acceptance, each bond must be approved by the OWNER.

### **46. DISPUTE RESOLUTION**

- 46.1 OWNER and CONTRACTOR agree to negotiate all disputes between them in good faith prior to exercising their rights under law.
- 46.2 Any claim, dispute or other matter in question arising from or related to this Agreement or the performance or breach thereof, which cannot be resolved through direct discussions between parties shall be subject to mediation as a condition precedent to the institution of legal or equitable proceedings by either party, and only after both parties have completed the mediation process.
- 46.3 Through mediation, CONTRACTOR and OWNER shall endeavor to resolve claims, disputes, or other matters in question between them by mediation in an informal process in which a third-party

mediator facilitates discussion between the parties. The parties may designate a mediator mutually agreeable to both CONTRACTOR and OWNER to conduct the mediation. If the parties are unable to agree upon a mediator, mediation shall be conducted in accordance with the mediation provision of the South Carolina Circuit Court Alternative Dispute Resolution Rules. The mediation shall be conducted in York County, South Carolina. A request for mediation shall be filed in writing with the other party to this Agreement, and legal or equitable proceedings shall be stayed pending mediation for a period of sixty (60) days from the date of the request for mediation is filed, unless stayed for a longer period of time by agreement of the parties or court order. The cost of a third-party mediator will be shared equally by the parties.

46.4 If the parties reach an agreement during the mediation process, they shall reduce the agreement to writing and sign it with their attorneys, if any. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

46.5 In any action or proceedings to enforce or interpret any provision of this Agreement, or where any provision herein is validity asserted as a defense, each Party shall bear its own attorney fees, costs, and expenses.

**END OF SECTION** 

### SUPPLEMENTAL CONDITIONS

- 1. Utilities within the right-of-way requiring relocation or adjustment for construction activities will be the responsibility of the utility owner. The CONTRACTOR shall coordinate with the utility owners to accomplish the utility construction within the total project schedule. Disruption of various utilities must be avoided if possible. Should disruption occur as a result of activities described in this contract, the CONTRACTOR is to contact the appropriate agency immediately and coordinate the restoration of service. The CONTRACTOR must also notify the OWNER of the disruption.
- 2. CONTRACTOR shall develop and submit within 15 days of the Notice to Proceed, a schedule of work which will identify a sequence of work by road name and start date for each road. CONTRACTOR shall update this schedule the first day of each month.
- 3. Billing shall be made in the following format only:
  - 3.1. Invoices shall be submitted on the 15<sup>th</sup> day of the month after the pay period ending on the last day of the previous month. Only one invoice per month may be submitted.
  - 3.2. Invoices must have the following documents attached to be considered for payment:
    - 3.2.1. Material Tickets with accounting of totals for the road
    - 3.2.2. Approved inspection report(s) (i.e. asphalt core or final)
    - 3.2.3. Copies of any applicable signed change orders
    - 3.2.4. Materials list such as asphalt binder, asphalt surface, milling, mix designs and material certifications, etc.
    - 3.2.5. Third party testing results
    - 3.3. Include with each invoice an itemized breakdown of materials and costs for work completed by road name.
- 4. There will be a pre-construction meeting on-site prior to construction. A member of York County Engineering and the CONTRACTOR must be present at this meeting. This meeting must take place prior to beginning any work and will allow for the review of the areas construction noted in the contract and on the strip maps. If additional construction is needed, the CONTRACTOR and the inspector will determine the necessary changes at this time. These areas of deterioration will be completely removed and replaced with asphalt as defined in this bid.
- 5. The following inspections are required and shall serve as minimum:
  - 5.1. Pre-construction
  - 5.2. Cement Modified Recycled Base installation, proof-roll and penetrative compaction testing
  - 5.3. Asphalt intermediate course inspection and core
  - 5.4. Asphalt surface course inspection and core
  - 5.5. Final Roadway inspection
    - 5.5.1 It is the CONTRACTOR'S responsibility to schedule these inspections with the York County Engineering Department 24 hours prior to the desired inspection time by contacting the project inspector at (803) 684-8571. York County reserves the right to perform random inspections as it sees fit to ensure proper roadway construction.
- 6. A warranty period of two years from the date of final payment of this contract is required. This warranty period will include any and all portions of work covered in these documents. Repairs will be the responsibility of the CONTRACTOR. York County will notify the CONTRACTOR in writing of any deficiencies, which must be repaired. These repairs will be reviewed and approved by York County and must be completed within 15 days of the written notification. END OF SECTION

# SUMMARY OF THE WORK

# PART 1 - GENERAL

# **Related Documents**

Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to work of this section.

# **Project/Work Identification:**

<u>General</u>: Project name is the 2022-2023 C-Fund Paving Project #21334CF, as shown on Contract Documents prepared by York County Engineering Department.

<u>The Work:</u> The work consists of the FY 22/23 C-Fund Paving Project #21334CF for ten (10) County maintained roads, one (1) Town of Clover road, and three (3) City of York roads. The project total estimated length of roadway is 15,035 linear feet, (2.85 miles).

# **Submittals Quantity**

Where material or equipment submittal data is required, furnish two copies plus the number of approved copies required by the Contractor. Submittals which are not approved by the Engineer will be returned in two copies to the Contractor.

## **Location of Existing Utilities**

The location of existing utilities, as shown on the Construction Drawings, is approximate. The Contractor is to contact all utility companies for exact location of underground utilities. The Engineer is to be contacted if interference exists.

### **Restoration and Surface Stabilization**

Utilize construction methods which will minimize damage to existing improvements and vegetation. Avoid any activity which might result in significant ditch siltation. Accomplish these objectives by restricting construction operations to favorable seasons, constructing temporary siltation impoundments, installing of sediment fence, stockpiling and respreading topsoils and vegetation, grassing, and other effective means.

Promptly restore ground surfaces, vegetation and improvements.

Areas disturbed by the new construction are to be final dressed, seeded, fertilized and mulched as soon as construction is completed. Final payment to CONTRACTOR by the OWNER will not be made until permanent vegetation is established and all temporary erosion and sediment control devices are removed.

## **Accessibility and Maintenance**

For the convenience of the public, the Contractor shall so conduct his operations as to offer the least possible obstruction and inconvenience and he shall have under construction no greater amount of work than he can prosecute properly with due regard to the rights of the public.

Construction operations shall be scheduled and executed in such a manner as to cause minimal inconvenience to owners of abutting property. Convenient access to all property, roads, highways, sidewalks and driveways along the line of Work shall be maintained. Routes normally used by vehicular traffic shall be safely negotiable without slipping, sliding or loss of traction.

SUMMARY OF WORK 01 11 00 - 1

Maintenance operations are to be performed on a day to day basis as necessary to provide access at all times. Once construction operations have begun, it shall be the Contractor's responsibility to maintain access until final Project acceptance.

No material or equipment shall be stored where it will interfere with the free and safe passage of public traffic. At the end of each work day, and at other times when construction operations are not in progress for any reason, the Contractor shall remove all equipment and other obstructions from that portion of the project intended for public use.

Access to fire hydrants shall be maintained by the Contractor throughout the prosecution of the Work. Hydrants shall be kept clear of obstructions and visible at all times. If visibility cannot be maintained, the Contractor shall provide clearly visible signs showing the location of the fire hydrant.

Utility companies and public agencies having facilities within the limits of the Work shall have access to their facilities at all times for inspection and repair.

The Contractor's ability and intention to maintain access must be demonstrated by his construction schedule, required to be submitted elsewhere in these Contract Documents.

All costs of maintaining access during construction, and before the Project is accepted, shall be considered distributed pro rata among the payment items listed on the Bid Form.

# **Contractor Use of Premises**

<u>General</u>: During the entire construction period the Contractor shall limit his work and storage areas to areas which include the rights-of-way that have been procured.

PART 2 - PRODUCTS (Not applicable).

PART 3 - EXECUTION (Not applicable).

**END OF SECTION** 

SUMMARY OF WORK 01 11 00 - 2

# **ALLOWANCES**

### PART 1 - GENERAL

### **Related Documents**

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

### **Summary**

This Section includes administrative and procedural requirements governing allowances.

Selected materials and equipment are specified in the Contract Documents by allowances. In some cases, these allowances include installation. Allowances have been established in lieu of additional requirements and to defer selection of actual materials and equipment to a later date when additional information is available for evaluation. If necessary, additional requirements will be issued by Change Order

Types of allowances include the following:

Lump-sum allowances.
Unit-cost allowances.
Contingency allowances.
Inspection and testing allowances.

### Submittals

Submit proposals for purchase of products or systems included in allowances, in the form specified for Change Orders.

Submit invoices or delivery slips to show the actual quantities of materials delivered to the site for use in fulfillment of each allowance.

### **Contingency Allowances**

Use the contingency allowance only as directed for the Owner's purposes and only by Change Orders that indicate amounts to be charged to the allowance.

The Contractor's related costs for products and equipment ordered by the Owner under the contingency allowance are not part of the Contract Sum. These costs include delivery, installation, taxes, insurance, equipment rental, and similar costs.

Change Orders authorizing use of funds from the contingency allowance will include Contractor's related costs and reasonable overhead and profit margins.

At Project closeout, credit unused amounts remaining in the contingency allowance to the Owner by Change Order.

ALLOWANCES 01 21 00 - 1

## **Inspection and Testing Allowances**

Inspection and testing allowances include the cost of engaging the inspection or testing agencies, the actual inspections and tests, and reporting the results.

The allowance does not include incidental labor required to assist the testing agency or costs for retesting upon failure of previous tests and inspections.

Costs of services not required by the Contract Documents are not included in the allowance.

At Project closeout, credit unused amounts remaining in the inspection and testing allowance to Owner by Change Order.

# **Unused Materials**

Return unused materials to the manufacturer or supplier for credit to the Owner, after installation has been completed and accepted.

When requested by the Owner, prepare unused material for storage by Owner where it is not economically practical to return the material for credit. When directed by the Owner, deliver unused material to the Owner's storage space. Otherwise, disposal of unused material is the contractor's responsibility.

### PART 2 - PRODUCTS (Not Applicable)

## PART 3 - EXECUTION

# **Examination**

Examine products covered by an allowance promptly upon delivery for damage or defects.

# Preparation

Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

### Schedule of Allowances

<u>Contingency:</u> Include the sum of 10% of the total base bid for changes to the scope of work authorized by the Owner.

**END OF SECTION** 

ALLOWANCES 01 21 00 - 2

# **UNIT PRICES**

### PART 1 - GENERAL

### **Related Documents**

General provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

### **Summary**

This Section includes administrative and procedural requirements for unit prices.

### **Definitions**

Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if the estimated quantities of Work required by the Contract Documents are increased or decreased.

### **Procedures**

Unit prices include all necessary material, plus cost for delivery, installation, insurance, overhead, profit, and applicable taxes.

<u>Measurement and Payment</u>: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

The Owner reserves the right to reject the Contractor's measurement of work-in-place that involves use of established unit prices, and to have this work measured, at the Owner's expense, by an independent surveyor acceptable to the Contractor.

<u>Schedule</u>: A "Unit Price Schedule" is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Applicable)

**PART 3 - EXECUTION** 

Base Bid

# Bid Package

# **Mobilization**

Mobilization is paid at the lump sum (LS) price bid, which price and payment is full compensation for organizing and moving all forces, supplies, equipment, and incidentals to each project site, regardless of the number of times such moves are made, and all preconstruction costs incurred after award of the Contract. The price and payment also includes costs for demobilization.

Payment will be full compensation for operations including moving personnel and equipment to the job site; paying bond and insurance premiums; establishing facilities necessary for work on the project; and all other work or materials necessary to complete the work. Partial payment for this item in no way acts to preclude or limit any of the provisions or partial payment otherwise provided for by the Contract.

# **Traffic Control**

Traffic Control will be measured for payment on the basis of lump sum (LS) cost required to maintain adequate traffic control according to the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways.

Payment will be full compensation for all materials, labor, and equipment necessary for fabricating, preparing, installing, removing or relocating, maintaining, and repairing or replacing all traffic control items needed to complete the work.

# Removal of Existing Asphalt (2" Uniform)

Removal of Existing Asphalt (2" Uniform) will be measured for payment on the basis of per square yard (SY) of material removed from the roadway, *prior to introduction of cement/lime*, in order to prepare for a desired final grade.

Payment will be full compensation for removal of two (2) inches of material off the top of the roadway before the initial pulverization, prior to introduction of chemical treatment, to prepare for a desired final grade in relation to existing curb and gutter; location and protection of existing above and below ground utilities and structures; hauling and legally disposing of removed materials off-site; repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition; and all other materials, labor, equipment, tools, transportation, and incidentals necessary to complete the work.

Removal of Existing Asphalt will be used on the following roads in this project for the entire area specified.

- 1. Clarence Julian 1.260 SY
- 2. Alexandrite Way 3,103 SY
- 3. Fairmount Street 725 SY
- 4. Daniel Road 5,750 SY
- 5. Kilpatrick Lane 2,855 SY
- 6. Sea Island Boulevard 4,298 SY
- 7. Spandril Lane 3,074 SY
- 8. Singletary Lane 3,020 SY
- 9. Bonnie Glenn 4,370 SY
- 10. Joseph Court 2,605 SY
- 11. Carybrook Court 3,670 SY
- 12. Ole Eastpoint Drive 3,500 SY
- 13. Wigmore Lane 2,200 SY

## Cement Modified Recycled Base (10" Uniform)

Cement Modified Recycled Base (10" Uniform) will be measured for payment on the basis of per square yard (SY) of construction of a cement modified base at a rate of sixty (60) pounds per square yard (LB/SY)\* of portland cement in accordance with these specifications.

Payment will be full compensation for constructing the cement modified recycled base course per contract documents; including pulverizing and scarifying the existing pavement or base material to a minimum depth of 10 inches; furnishing, weighing, applying and spreading cement at a rate established in the mix design for each road; watering and maintaining proper moisture content; processing and mixing base course material; compacting, finishing, establishing a 2% cross slope and curing base course; an application of a modified cationic emulsion (CRS-2P) and an application of aggregate that conforms to Section 406 of the SCDOT Standard Specifications, constructed on a prepared base course until application of the specified

HMA; selecting curing method from specifications and submitting for approval; allowing for a curing time of no less than 3 days; cleaning construction area of construction debris and excess material; locating and protecting existing above and below ground utilities and structures; repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition; and all other materials, labor, equipment, tools, transportation, and incidentals necessary to complete the work.

\*Cement rate of 60 lb/sy, previously specified, is for bidding purposes only. Bid price shall include the cost of a third party testing service approved by OWNER. The testing service shall provide a mix design specifying cement rate, optimum moisture, and maximum dry density for each road in the project. Should mix design dictate a cement rate other than 60 lb/sy, CONTRACTOR and OWNER will negotiate price adjustment. Testing service shall also be present on site to verify and monitor moisture and compaction for each road in the project.

CMRB will be used on the following roads in this package for the entire area specified.

- 1. Clarence Julian 1,260 SY
- 2. Alexandrite Way 3,103 SY
- 3. Fairmount Street 725 SY
- 4. Daniel Road 5,750 SY
- 5. Kilpatrick Lane 2,855 SY
- Sea Island Boulevard 4,298 SY
- 7. Spandril Lane 3,074 SY
- 8. Singletary Lane 3,020 SY
- 9. Bonnie Glenn 4,370 SY
- 10. Joseph Court 2,605 SY
- 11. Carybrook Court 3,670 SY
- 12. Ole Eastpoint Drive 3,500 SY
- 13. Wigmore Lane 2,200 SY

### 2" HMA Surface Course, Type C

This item will be measured for payment on the basis of square yard (SY) of hot mix asphalt (HMA) required to complete the work described.

Payment for construction will be full compensation for providing all labor, equipment, and materials necessary to place a two (2) inch asphalt overlay per contract documents, including broom cleaning base to be overlaid; providing manhole and valve collars as necessary; providing, placing and compacting the minimum two (2) inch compacted thickness of HMA Type C Surface Course along the entire specified area; ensuring that there are no areas where water ponds on the asphalt and making any repairs as needed; surfacing driveway and road intersections with a smooth transition from the new pavement onto the existing apron; tying to existing concrete if applicable; relocating mailboxes and street signs as necessary for construction; cleaning the construction area; restoring and stabilizing disturbed surfaces; placement of erosion and sediment controls as needed; removal of temporary erosion control measures at the end of construction and all other related work.

2" HMA Surface Course, Type C will be used on the following roads in this package for the entire areas specified.

- 1. Clarence Julian 1,260 SY
- 2. Alexandrite Way 3,103 SY
- Fairmount Street 725 SY
- Daniel Road 5,750 SY
- 5. Kilpatrick Lane 2,855 SY
- 6. Sea Island Boulevard 4,298 SY
- 7. Spandril Lane 3,074 SY

- 8. Singletary Lane 3,020 SY
- 9. Bonnie Glenn 4.370 SY
- 10. Joseph Court 2,605 SY
- 11. Carybrook Court 3,670 SY
- 12. Ole Eastpoint Drive 3,500 SY
- 13. Wigmore Lane 2,200 SY

### 5' Wide Concrete Sidewalk (4" Uniform)

5' Wide Concrete Sidewalk (4" Uniform) will be measured for payment on the basis of per linear foot (LF) of construction of sidewalk in accordance with these specifications.

Payment will be full compensation for constructing sidewalk including location and protection of existing above and below ground utilities and structures; leveling and ensuring compaction of base material; forming; pouring concrete to a minimum uniform four (4) inch thickness and five (5) foot width per Contract Documents; tying new construction into existing sidewalk at appropriate locations and installing construction joints; installing contraction joints and contraction joint material; finishing concrete; installing two (2) detectable warning surfaces per construction documents; curing concrete; back-filling and stabilizing construction areas; removal of temporary erosion control devices previously installed by others; hauling and legally disposing of construction debris or other material off-site; repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition; and all other materials, labor, equipment, tools, transportation, and incidentals necessary to complete the work.

Sidewalk construction will be done on the following road in this project for the area specified.

1. Vandora Springs Road - 480 LF (See strip map for location)

## Full Depth Asphalt Pavement Patching – 6" Uniform (if needed)

Full Depth Asphalt Pavement Patching will be measured for payment on the basis of per square yard (SY) of asphalt and base removal and replacement as required to complete the repair in accordance with these specifications.

Payment will be full compensation for providing all materials, equipment, and labor necessary to remove the asphalt and base material to a depth of six (6) inches including removing, hauling, and legally disposing of unclassified materials off-site; location and protection of existing above and below ground utilities and structures; placing and compacting six (6) inches of HMA Asphalt Binder Course, Type B; or HMA Type C Asphalt Surface Course; and all other related work. Payment for Full Depth Asphalt Pavement Patching shall also include full compensation of repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition. York County Engineering staff will locate areas for repair in the field if any is needed during construction.

### **Permanent Pavement Markings**

This item will be measured for payment on a lump sum (LS) basis to complete the permanent pavement markings described on sheet 4 pavement and striping plan in the attached plans.

Payment for the Permanent Pavement Markings shall be full compensation for providing all labor, equipment, and materials necessary for applying fast dry paint, thermoplastic pavement markings, and RPM's as specified for the (1) road listed below; including preparing the pavement surface; removing existing pavement markings as needed; and all other material, labor, equipment, supplies, and incidentals necessary to complete the work. Locations will be marked by York County.

Permanent pavement markings will be used on the following roads in this package for the entire area specified.

1. Vandora Springs Road – 1 crosswalk (See strip map for location)

# Removal of Unsuitable Material - 2' uniform (If needed)

Backfill Material will be measured for payment on the basis of per square yard (SY) of Geotextile fabric, and ABC stone in accordance with these specifications.

Payment will be full compensation for removing unstable material if any, hauling, and legally disposing of materials off-site, providing geotextile fabric, and adequate ABC stone for backfilling the volume of material removed, and thoroughly compacting in layers not exceeding eight (8) inches with vibratory compactors. York County Engineering staff will locate areas for repair in the field if any are needed during construction.

# Alternative Packages A & B

# **Mobilization**

Mobilization is paid at the lump sum (LS) price bid, which price and payment is full compensation for organizing and moving all forces, supplies, equipment, and incidentals to each project site, regardless of the number of times such moves are made, and all preconstruction costs incurred after award of the Contract. The price and payment also includes costs for demobilization.

Payment will be full compensation for operations including moving personnel and equipment to the job site; paying bond and insurance premiums; establishing facilities necessary for work on the project; and all other work or materials necessary to complete the work. Partial payment for this item in no way acts to preclude or limit any of the provisions or partial payment otherwise provided for by the Contract.

## **Traffic Control**

Traffic Control will be measured for payment on the basis of lump sum (LS) cost required to maintain adequate traffic control according to the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways.

Payment will be full compensation for all materials, labor, and equipment necessary for fabricating, preparing, installing, removing or relocating, maintaining, and repairing or replacing all traffic control items needed to complete the work.

### 8" Graded Aggregate Base Course

This item will be measured for payment on the basis of square yards (SY) specified in the Contract.

Payment for construction will be full compensation for providing all labor, equipment, and materials necessary to place a 8"uniform graded aggregate base per the contract documents. Remove existing subgrade to a depth of 8 inches, clear all debris from road bed, compact the total area for stability, preform foundation proof roll to confirm proper compaction. Place the base course aggregate on the prepared foundation. Perform the spreading so that the finished base course conforms to the lines, grades, dimensions, and the typical cross-sections shown in the contract. Use crushed stone meeting the grading requirements of Aggregate Number CR-14. Spread and grade the aggregate to a uniform 8" thickness while at optimum moisture content, consolidate it until the aggregates and subbase is compacted to at least 98.0% of the maximum dry density as determined by ASTM D-698. Continue operations until a 8" uniform, dense surface, free from loose material, is produced. Take care during the shaping and rolling operations to retain the material within the limits indicated in the contract. If during the shaping and rolling operations, the material becomes segregated, then re-work the material until a 8" uniform thickness is obtained. Material must be wet at a minimum of twice per day until paved. Once a passing final proof roll is complete, paving operations can commence. All construction in this section must confine to the **2007 SCDOT Standard Specifications Section 305.** 

Graded aggregate base course will be used on the following roads in this project for the entire area specified.

- 1. FM Wallace Road 1705 SY
- Lakewood Road 820 SY

# 2" HMA Surface Course, Type C

This item will be measured for payment on the basis of square yard (SY) of hot mix asphalt (HMA) required to complete the work described.

Payment for construction will be full compensation for providing all labor, equipment, and materials necessary to place a two (2) inch asphalt overlay per contract documents, including broom cleaning base to be overlaid; providing manhole and valve collars as necessary; providing, placing and compacting the minimum two (2) inch compacted thickness of HMA Type C Surface Course along the entire specified area; ensuring that there are no areas where water ponds on the asphalt and making any repairs as needed; surfacing driveway and road intersections with a smooth transition from the new pavement onto the existing apron; tying to existing concrete if applicable; relocating mailboxes and street signs as necessary for construction; cleaning the construction area; restoring and stabilizing disturbed surfaces; placement of erosion and sediment controls as needed; removal of temporary erosion control measures at the end of construction and all other related work.

2" HMA Surface Course, Type C will be used on the following roads in this package for the entire areas specified.

- 1. FM Wallace Road 1705 SY
- 2. Lakewood Road 820 SY

# Full Depth Asphalt Pavement Patching – 6" Uniform (if needed)

Full Depth Asphalt Pavement Patching will be measured for payment on the basis of per square yard (SY) of asphalt and base removal and replacement as required to complete the repair in accordance with these specifications.

Payment will be full compensation for providing all materials, equipment, and labor necessary to remove the asphalt and base material to a depth of six (6) inches including removing, hauling, and legally disposing of unclassified materials off-site; location and protection of existing above and below ground utilities and structures; placing and compacting six (6) inches of HMA Asphalt Binder Course, Type B; or HMA Type C Asphalt Surface Course; and all other related work. Payment for Full Depth Asphalt Pavement Patching shall also include full compensation of repairing, replacing, or relocating any items that are inadvertently damaged during the demolition process which were not scheduled for demolition. York County Engineering staff will locate areas for repair in the field if any is needed during construction.

### Removal of Unsuitable Material - 2' uniform (If needed)

Backfill Material will be measured for payment on the basis of per square yard (SY) of Geotextile fabric, and ABC stone in accordance with these specifications.

Payment will be full compensation for removing unstable material if any, hauling, and legally disposing of materials off-site, providing geotextile fabric, and adequate ABC stone for backfilling the volume of material removed, and thoroughly compacting in layers not exceeding eight (8) inches with vibratory compactors. York County Engineering staff will locate areas for repair in the field if any are needed during construction.

**END OF SECTION** 

# **EROSION AND SEDIMENT CONTROLS**

# PART 1 - GENERAL

# **Related Documents**

Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division - 1 Specification sections, apply to work specified in this section.

### Summary

Furnish all labor, materials, equipment and incidentals required to install and maintain erosion control devices shown on the Drawings and specified herein, including but not limited to silt fences.

# **Quality Assurance**

Some products and execution specified in this section are referenced to the latest edition of published specifications or standards of the following (with respective abbreviations).

- South Carolina Department of Health and Environmental Control (SCDHEC) "South Carolina Stormwater Management and Sediment Control Handbook for Land Disturbance Activities"
- South Carolina Department of Transportation (SCDOT) "Standard Specification for Highway Construction"
- York County "Stormwater Management and Sediment Control Ordinance"

### Schedule

A construction schedule shall be an integral part of the erosion control plan. It shall establish a sequence of construction operations that will facilitate control for erosion and permanent seeding.

Site grading operations shall not be commenced until immediate and temporary soil erosion measures are installed.

Whenever land-disturbing activity is undertaken, a ground cover sufficient to restrain erosion must be planted or otherwise provided within 30 days on that portion of the tract upon which further active construction is not being undertaken.

# **Jurisdiction**

The contractor shall, at all times, comply with the York County "Stormwater Management and Sediment Control Ordinance" and the SCDHEC "South Carolina Stormwater Management and Sediment Control Handbook for Land Disturbance Activities". Routine inspections of the site will be made by an authorized representative of the County and/or State. Any and all deficiencies noted by the representative shall be corrected in a timely manner.

### **PART II - MATERIALS**

### **Temporary Silt Fence**

Fence material shall be a minimum of 2-foot-6-inches high with a 14 gauge (min) wire fence having a maximum grid spacing of 6 inches. All fencing is to be galvanized.

Posts for the fence shall be standard 4-foot steel fence posts. Post spacing shall be a maximum of 6-foot on center.

EROSION CONTROL 31 25 00 - 1

Silt fence fabric will be Mirafi 140 or approved equal.

# **PART III - EXECUTION**

Final dressing, seeding, fertilizing, and mulching of disturbed areas are to begin as soon as possible after grading activities have been completed.

Silt fence shall be installed as necessary prior to beginning cleaning and grading work.

Temporary erosion control measures are to be inspected at least once every seven (7) calendar days and after any storm event of greater than 0.5 inches of precipitation during any 24-hour period. All erosion control measures are to remain fully functional at all times until construction is completed and all areas have been stabilized.

Sediment is to be removed from behind the temporary silt fence when it becomes approximately 6 inches deep at the fence. The sediment fence will be repaired as necessary.

Sediment removed from erosion control structures will be placed on-site, upstream of erosion and sediment control measures. Sediment shall be stabilized by seeding, fertilizing, and mulching.

Once surface stabilization has been achieved and the threat of sediment runoff has been eliminated, the temporary measures shall be removed and legally disposed offsite. Any areas disturbed during the removal of the temporary measures are to be dressed, seeded, fertilized, and mulched in accordance with the specifications.

**END OF SECTION** 

EROSION CONTROL 31 25 00 - 2

# **CEMENT MODIFIED RECYCLED BASE**

# **PART 1- GENERAL**

### RELATED DOCUMENTS

General provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

# **SUMMARY**

This Section contains provisions for the materials, equipment, construction, measurement, and payment for the modification of an existing roadway or shoulder by scarifying the existing pavement structure, mixing it with Portland cement, and constructing the base course in conformance with the lines, grades, dimensions, and cross-sections as specified or directed. The work is to be in accordance with York County Road Design Standards and the SCDOT Standard Specifications for Highway Construction.

# **QUALITY ASSURANCE**

Some products and execution specified in this Section are reference to the latest edition of published specifications or standards of the following (with respective abbreviations)

- South Carolina Department of Transportation (SCDOT) "Standard Specifications for Highway construction"
- SCDOT "Manual on Uniform Traffic control Devices for Streets and Highways"

### **SUBMITTALS**

<u>General</u>: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

<u>Mix Design or Material Certificates</u> signed by material producer and Contractor, certifying that each material item complies with or exceeds specified requirements.

### SITE CONDITIONS

<u>Weather Limitations</u>: Apply cement only when the temperature is 40°F in the shade and rising. Do not perform work on frozen or excessively wet subgrade. The temperature restrictions for single treatment, when used as a curing option, shall meet the requirements of the successive HMA course to be placed. If the successive course is a surface course, the seasonal restrictions of December, January and February apply unless otherwise approved.

<u>Construction Limitations:</u> Perform work in daylight hours unless adequate artificial light is provided. Limit the area over which the cement-pavement mixture is spread so that all operations specified in Subsections 306.4.3 and 306.4.4 are performed continuously until completion of a section. Complete all work on a section within 2 hours after the application of water to the aggregate and cement mixture.

If operations are interrupted for a continuous period of greater than 1 hour after the cement has been mixed with the aggregate, reconstruct the entire affected section in accordance with these specifications. When the un-compacted mixture of aggregate and cement is wetted so that the moisture content exceeds that specified, manipulate and aerate the mixture to reduce the moisture to the specified content provided the base course is completed within the time limits of these specifications.

<u>Traffic Control</u>: Schedule and conduct Work in a manner which will minimize inconvenience to vehicular and pedestrian traffic. Provide flagmen, barricades, warning signs, warning lights, and other warning means as appropriate. Signing of construction area will comply with the SCDOT "Manual on Uniform Traffic Control Devices for Streets and Highways".

## PART 2 – MATERIALS

<u>Portland Cement:</u> Use Portland cement that conforms to the requirements of SCDOT Subsection 301.2.1.

Water: Use water conforming to the requirements of SCDOT Subsection 701.2.11.

### **PART 3- EXECUTION**

### **CONSTRUCTION**

<u>General:</u> Regulate the sequence of work to process the necessary quantity of material to provide the full depth of modification as specified in the reference maps:

- Use the proper amount of Portland cement.
- Maintain the work.
- Rework the courses as necessary to meet the requirements of this specification.
- Incorporate appropriate material as specified in the plans for drainage correction, cross-slope correction or roadway strengthening.

<u>Shoulders:</u> Remove all excess vegetation generated from the cleaning of shoulders prior to performing the mixing operations from the roadway.

<u>Pulverization and Scarification:</u> Pulverize the pavement so that at the completion of moist-mixing 100% (by weight) passes a 1½-inch sieve. Carefully control the depth of scarification and conduct blading operations in a manner to ensure that the surface of the roadbed below the scarified and pulverized material remains undisturbed and conforms to the required cross-section.

<u>Application of Cement:</u> The rate of cement will be determined by the Owner. Spread Portland cement uniformly on the roadway at the rate (in pounds per square yard) established by the Owner. Spread the cement with equipment that can be calibrated and adjusted so that the established rate is attained uniformly throughout the length and width of the roadway.

Use spreading equipment that has adjustable openings or gate headers and that is not solely dependent on vehicle speed to obtain the required spread rate. A tolerance of 5% will be allowed in the spread rate for individual sections of roadway; however, adjustments should be made in order to keep the actual spread rate as close to that established by the Owner. Only apply cement to such an area that all the operations can be continuous and completed in daylight, unless adequate artificial light is provided, within 6 hours of such application.

Do not allow the percentage of moisture in the soil at the time of cement application to exceed the quantity that permits uniform and thorough mixture of soil and cement during dry mixing operations and do not exceed the specified optimum moisture content for the soil-cement mixture. Do not allow equipment, except that used in spreading and mixing, to pass over the freshly spread cement until it is mixed with the soil. Apply cement only when the temperature is above  $40^{\circ}\text{F}$  in the shade and rising. Do not perform work on a frozen or excessively wet roadway.

<u>Mixing and Processing:</u> Unless otherwise provided or shown on the Reference Maps, mix and process the soil-pavement material as specified in Subsection 301.4.5. Select the single pass or multiple pass method based on the required depth of reclamation and the equipment capabilities. Excess material generated from the mixing process after final grading operations have been completed shall be removed from the roadway.

<u>Compaction:</u> Compact the base as specified in Subsection 307.4.5. The moisture content of the reclaimed roadway must be verified within 30 minutes of the initial watering application to ensure that the moisture is within 2% of optimum moisture prior to beginning grading and compaction efforts.

<u>Surface Smoothness and Rideablility</u>: Ensure that the finished surface of the recycled base meets the requirements of Subsection 301.4.10. The grade of the road will be based on existing conditions of the roadway. The cross slope will be graded to obtain positive drainage as well as smooth transitions from crown to superelevated sections of the roadway. Roads with a pre-existing cross slope of 2% or greater shall be re-graded to the same cross slope. On roads with a pre-existing cross slope of less than 2%, the Contractor and Owner shall determine the measures required to obtain positive drainage and the final cross slope.

The final asphalt surface placed on cement modified recycled base course shall meet the Rideability requirements of SC-M 403 for either New Construction or Resurfacing, whichever is applicable based on the specified pavement structure.

<u>Manholes and Valves</u>: After the final pass of the reclaimer and final compaction, water shutoffs valves and manholes shall be adjusted to the appropriate height to accommodate the final overlay.

**END OF SECTION** 

# **ASPHALT PAVING**

### **PART 1- GENERAL**

### RELATED DOCUMENTS

General provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

# **SUMMARY**

This Section includes provisions for preparing subbase, proof-rolling subbase, applying base course, proof-rolling base course (if required) and applying bituminous pavements. The work is to be in accordance with York County Road Design Standards and the SCDOT Standard Specifications for Highway Construction.

### **QUALITY ASSURANCE**

Some products and execution specified in this Section are reference to the latest edition of published specifications or standards of the following (with respective abbreviations)

- South Carolina Department of Transportation (SCDOT) "Standard Specifications for Highway Construction"
- SCDOT "Manual on Uniform Traffic control Devices for Streets and Highways"

### SUBMITTALS

<u>General</u>: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

<u>Mix Design or Material Certificates</u> signed by material producer and Contractor, certifying that each material item complies with or exceeds specified requirements of the South Carolina Department of Transportation (SCDOT) "Standard Specifications for Highway Construction."

# **SITE CONDITIONS**

<u>Weather Limitations</u>: Apply prime coats, tack coats, hot mix asphalt surface courses, and hot mix aggregate base courses in accordance with the requirements of the SCDOT "Standard Specifications for Highway Construction".

Weather and surface temperature restrictions for placing bituminous pavements are included in section 401.44 – Weather and Surface Temperature Restrictions of the SCDOT "Standard Specifications for Highway Construction". No bituminous pavements are to be applied during restricted periods as stipulated in the specifications.

Do not apply HMA when the existing surface is wet of frozen.

Place HMA in accordance with the following relationship of minimum air temperature and lift thickness:

1.0 inch or less – 55.0 degrees Fahrenheit

1.1 to 3.0 inches – 45.0 degrees Fahrenheit

\*Measuring the ambient air temperature in the shade with a calibrated thermometer, away from artificial heat in compliance with SC-T-84.

HMA asphaltic courses can not be placed during the months of December, January and February, except by written approval from York County Engineering.

<u>Traffic Control</u>: Schedule and conduct Work in a manner which will minimize inconvenience to vehicular and pedestrian traffic. Provide flagmen, barricades, warning signs, warning lights, and other warning means as appropriate. Signing of construction area will comply with the latest edition of the "Manual on Uniform Traffic Control Devices for Streets and Highways".

<u>Site Conditions</u>: Site must be kept in order. No trash or miscellaneous equipment/supplies shall be left on site that may pose a hazard to the residents or traveling public (i.e., asphalt, gravel, sand, oils, gasoline, etc.)

Overnight storage or general parking of equipment must be done within the provided rights-of-way and must not cause damage to adjacent properties. Damage occurring would be the responsibility of the CONTRACTOR.

### PART 2 - MATERIALS

<u>General</u>: Use locally available materials and gradations that exhibit a satisfactory record of previous installations. Minimum compacted thicknesses are found in the Reference Maps and these specifications.

<u>Base Course Materials</u>: Base course materials are to meet the requirements of Section 305 - Graded Aggregate Base Course of the SCDOT "Standard Specifications for Highway Construction".

<u>Prime or Tack Coat</u>: Prime and/or tack coats are to be in accordance with Section 401.4.18 – Application of Prime or Tack Coat of the SCDOT "Standard Specifications for Highway Construction".

<u>Asphalt (HMA) Pavement</u>: Materials for asphalt pavements are to meet the requirements of Section 401 – Hot Mixed Asphalt (HMA) Pavement of the SCDOT "Standard Specifications for Highway Construction".

Hot Mix Asphalt Intermediate (or Binder) Course: Materials shall conform to Section 402 – Hot Mix Asphalt Binder Course of the SCDOT "Standard Specifications for Highway Construction".

Primary Roadways: Hot Mix Asphalt Binder Course, Type C

**Secondary Roadways, Local Streets and Parking Areas:** Hot Mix Asphalt Binder Course, Type C

<u>Hot Mix Asphalt Surface Course</u>: Materials shall conform to Section 403 – Hot Mix Asphalt Surface Course of the SCDOT "Standard Specifications for Highway Construction". Hot Mix Asphalt Surface Courses are to be as follows:

Primary Roadways: Hot Mix Asphalt Surface Course, Type C

**Secondary Roadways, Local Streets and Parking Areas:** Hot Mix Asphalt Surface Course, Type C

## PERMANENT PAVEMENT MARKINGS

Cleaning: Sweep and clean surface to eliminate loose material and dust.

Do not apply striping until layout and placement have been verified with Engineer.

<u>Permanent Pavement Markings</u>: Permanent pavement markings are to meet the requirements of Section 625 – Permanent Pavement Markings of the SCDOT "Standard Specifications for Highway Construction", fast-dry waterborne paint.

### **PART 3- EXECUTION**

### **Pavement Repair**

<u>Inspection:</u> Examine areas and conditions under which pavement repair will be conducted, giving special attention to stability of subbase. Do not proceed with pavement patching work until unsatisfactory conditions have been corrected in a manner acceptable to personnel or subcontractor doing the paving work.

<u>Preparation:</u> Saw cut any ragged edges of existing pavement or in the case of concrete work, remove existing pavement to nearest joint. Remove all loose material from underlying and adjacent surfaces.

Strength and Stability: Use material and construction techniques as necessary to obtain strength, stability and durability of pavement patch at least equal to that of remaining adjacent pavement of the same type. Do not permit the finished surface to have dips, objectionable roughness or discontinuity or non-draining areas. Do not create any unsafe pavement conditions.

<u>Placing:</u> Construct pavement using methods and equipment in general use for the type of work being performed.

#### Subbase

<u>Subbase</u> is to be prepared in accordance with Division 300 – Bases and Subbases of the SCDOT "Standard Specifications for Highway Construction".

### **Base Course**

Application of base materials is to meet the minimum depth requirements (if any) as shown on the Drawings. Base course materials are applied in accordance with Section 305 - Graded Aggregate Base Course of the SCDOT "Standard Specifications for Highway Construction".

# <u>Preparation of Base Course for Bituminous Pavement</u>

General: Remove loose material from compacted base surface immediately before applying prime coat.

Adjust utility and valve box elevations so that the top of the casting will match surrounding finished pavement surface grades.

<u>Proof-roll</u> prepared macadam base surface to check for unstable areas and areas requiring additional compaction. Proof-roll with a tandem dump truck having a minimum load weight ticket of fifteen (15) tons. The proof-rolling procedure should consist of the following:

- <u>1. Parking areas:</u> Two complete passes of the area being tested, with each pass being in a direction perpendicular to the previous one.
- <u>2. Roadways:</u> Complete coverage of the area receiving pavement. The first pass should be completed with the wheels of the truck adjacent to the curb (if curb is present) or a minimum distance of 1 foot outside the limits of pavement where curb is not present. Subsequent passes shall be completed with the truck located adjacent to the previous pass. Number of

passes shall be determined by the proposed pavement width, and the proof-roll shall be conducted until the entire width of the area to be paved is tested.

If any area deflects, ruts, or pumps excessively during proof-rolling or fails to "tighten up" after successive passes, determine cause for failure, make repairs (at Contractor's expense) and repeat proof-roll. Contractor is responsible for obtaining good proof-roll test of the site.

Emphasis shall be placed on uniform mixing and cement distribution across the entire roadway paving width, in addition to ensuring compliance with the desired cross-section with designed crown.

Do not begin paving work until deficient base areas have been corrected and are ready to receive paving.

<u>Prime Coat</u>: Apply at rate of 0.10 to 0.18 gallons per square yard (targeting 0.14 gallons per square yard). Apply material to penetrate and seal, but not flood, surface. Cure and dry as long as necessary to attain penetration and evaporation of volatile. In areas where residences are inhabited, apply the prime coat directly in front of the bituminous course being placed, allowing as much time as possible for the prime or tack coat to "break," so as to avoid the tracking of prime material on adjacent paved surfaces, including curb and gutter, and driveways. Remove and clean damaged surfaces.

## **Placing Mix**

<u>General</u>: Place hot-mixed asphalt mixture on prepared surface, spread, and strike off. Spread mixture at minimum temperature of the design mix, customarily 275 deg F. Place areas inaccessible to equipment by hand. Place each course to required grade, cross-section, and compacted thickness.

<u>Paver Placing</u>: Place in strips not less than 10 feet wide, unless otherwise acceptable to Engineer. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete base course for a section before placing surface course.

Immediately correct surface irregularities in finish course behind paver. Remove excess material forming high spots with shovel or lute.

<u>Joints</u>: Make joints between old and new pavements, or between successive days' work, to ensure continuous bond between adjoining work. Construct joints to have same texture, density, and smoothness as other sections of hot-mixed asphalt course. Clean contact surfaces and apply tack coat.

## Rolling

<u>General</u>: Begin rolling when mixture will bear roller weight without excessive displacement. Shall be in compliance with SCDOT Section 401.3.11 Rollers.

Compact mixture with hot hand tampers or vibrating plate compactors in areas inaccessible to rollers.

<u>Breakdown Rolling</u>: Accomplish breakdown or initial rolling immediately following rolling of joints and outside edge. Check surface after breakdown rolling and repair displaced areas by loosening and filling, if required, with hot material. Between 8 and 12 ton rollers.

<u>Second Rolling</u>: Follow breakdown rolling as soon as possible, while mixture is hot. Continue second rolling until mixture has been evenly compacted. Between 8 and 12 ton rollers.

<u>Finish Rolling</u>: Perform finish rolling while mixture is still warm enough for removal of roller marks. Continue rolling until roller marks are eliminated and course has attained 95 percent laboratory density. Pneumatic-Tire rollers with a minimum effective width of 60 inches.

## Roller specifics and guidance:

**Steel-Wheel Rollers** – As specified, use steel wheel rollers that are between 8 and 10 tons in weight, which develop a minimum pressure of 250 psi of compression per inch of roller width under working conditions. Ensure rollers are in good working condition, without leaks, and capable of reversing without backlash. Ensure the rollers have adjustable scrapers to keep the rollers clean and with effective means of keeping the wheels/drums wet to prevent mixes from sticking to the rollers. Ensure the surface of the rollers are free of flat areas, openings and projections which could mar the pavement surface.

**Vibratory Rollers** – Utilize vibratory rollers of a minimum 8-ton size, with 1 or 2 vibrating wheels/drums. The vibratory roller shall be operated at a speed, frequency and amplitude that yields the desired maximum compaction and a smooth pavement. Care should be given to vibratory operations during direction changes to prevent heaving and shoving.

**Pneumatic-Tire Rollers** – The pneumatic-tire rollers shall be self-propelled and have an effective rolling width of not less than sixty (60) inches. The roller shall be equipped with pneumatic tires of equal size and diameter that will be capable of providing uniform contact pressures. The desired contact pressure is 60psi to 80 psi, which will be achieved by monitoring the ballast and tire inflation pressures. The roller shall be operated so that the wheels will provide complete coverage of the rolling width of the machine in one pass. Ensure that the wheels are tight, do not wobble and provide a minimum ¼ inch overlap with the tracking wheels. The roller shall be designed and maintained to ensure that the contact pressure is uniform on all wheels and the tire pressures do not vary more than 5 psi. The pneumatic-tire roller shall be constructed with enough ballast weight to provide the required uniform wheel loading. Be capable of varying the total operating weight and tire pressure on the roller, at the direction of the QC/QA inspector, in order to achieve the desired contact pressures and the required compaction.

<u>Patching</u>: Remove and replace paving areas mixed with foreign materials and defective areas. Cut out such areas and fill with fresh, hot hot-mixed asphalt. Compact by rolling to specified surface density and smoothness.

<u>Protection</u>: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.

Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

# FIELD QUALITY CONTROL

<u>General</u>: Testing in-place hot-mixed asphalt courses for compliance with requirements for thickness and surface smoothness will be done by Contractor's testing laboratory. The CONTRACTOR must have a Quality Control inspector present during all paving installation. The Quality Control inspector shall demonstrate to the York County inspector that asphalt has been compacted per SCDOT 401.4.20 and 401.4.21.

Repair or remove and replace unacceptable paving as directed by the county. CONTRACTOR shall make provisions for all testing required by the <u>South Carolina State Highway Department Standard Specifications for Highway Construction</u>, latest edition, and in accordance with the General Conditions. CONTRACTOR will submit SCDOT approved mix design or material specifications prior to placement. In the event of a significant failure of the roadway or related materials, additional core density testing per SCDOT SC-M-400 may be required at the expense of the CONTRACTOR. Testing results shall be provided to the OWNER and ENGINEER for review.

Asphalt cores will be required for each project. The core sampling must be performed during the asphalt inspection with a York County Inspector present and will be up to the CONTRACTOR to provide these to York County at no cost. The frequency and location of the cores is noted in the South Carolina State Highway Department Standard Specifications for Highway Construction. All core holes must immediately be properly cleaned out, repaired with hot mix asphalt, and be properly compacted after being inspected or it will not pass the inspection.

All asphalt courses provided in the contract must meet the minimum required compacted depth. Areas not meeting this minimum depth will require an asphalt overlay. Areas of repair with less than 150 feet in length and/or less than the entire road width will require extended overlays to reduce the impact to the appearance of the roadway surface. The extent of the areas will be determined by the ENGINEER. In cases where minimum depths are not met for longer areas of repair, the entire roadway may require overlays to ensure the minimum required depth is provided.

<u>Thickness</u>: In-place compacted thickness tested in accordance with ASTM D3549 will not be acceptable if exceeding following allowable variations:

Intermediate Course: Plus or minus ¼ inch.
 Surface Course: Plus or minus ¼ inch.

<u>Surface Smoothness</u>: Test finished surface of each hot-mixed asphalt course for smoothness, using 10-foot straightedge applied parallel with and at right angles to centerline of paved area. Surfaces will not be acceptable if exceeding the following tolerances for smoothness:

Intermediate Course: 1/4 inch.
 Wearing Course Surface: 3/16 inch.

Check surface areas at intervals as directed by Engineer.

**END OF SECTION** 

# **PLANTING**

### PART 1 - GENERAL

### **Related Documents**

General provisions of the contract, including General Conditions, Supplementary Conditions, and Technical Specification sections, apply to work of this section.

## **Summary**

This specification pertains to preparing planting, fertilizing, and maintaining grass on all fill slopes, cut slopes, and graded areas disturbed by installation of utilities or by road construction. The Contractor shall furnish all labor, equipment, tools, and materials necessary to perform all tasks required to complete all grassing within the limits of right-of-way and other disturbed areas shown on the Reference Maps and these specifications, in coordination with all other divisions of work. Any incidental work, material, or appurtenances not specifically shown, but necessary for completion of the work, shall be furnished as required. All unpaved areas cleared and grubbed, graded, filled, excavated, or otherwise disturbed during construction, both within and beyond the right-of-way limits shown on the plans, shall be stabilized with grass. Planting may include both temporary and permanent grassing. Establishment of permanent grassing is required for the completion of the contract and final payment.

Established lawns and landscaped areas damaged by construction are to be restored to their former condition by seeding, sod or other necessary means.

### **Quality Assurance**

Some products and execution specified in this Section are referenced to the latest edition of published specifications or standards of the following:

- South Carolina Department of Transportation (SCDOT) Designation SC-M-810 (11/08)
- York County "Stormwater Management and Sediment Control Ordinance."

### **Submittals**

The Contractor will, upon request, furnish the invoices and or other documentation of all materials used in order to determine rates and quality of materials. This includes seed, lime and fertilizer as well as any other materials used.

### Delivery, Storage, and Handling

Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from deterioration during delivery, and while stored at the site.

## **Job Conditions**

This specification is intended to provide a complete grassing procedure, which is to be carefully followed. Some procedures may be adjusted, upon consultation with the Engineer, so as to meet unforeseen weather and soil conditions.

Proceed with and complete grassing work as rapidly as portions of the project site become available.

# **Special Project Warranty**

Warranty grassing throughout the specified maintenance period, and until final acceptance.

PLANTING 32 90 00 - 1

# PART 2 - PRODUCTS

### **Soil Amendments**

A certified soil test analysis is preferred on disturbed areas. In the absence of a soil test general recommendations required are as follows:

<u>Lime</u>: Natural dolomitic limestone containing not less than 85 percent of total carbonates with a minimum of 30 percent magnesium carbonates, ground so that not less than 90 percent passes a 10-mesh sieve and not less than 50 percent passes a 100-mesh sieve. Use a minimum of 2000 pounds (1 ton) of dolomitic limestone per acre.

<u>Commercial Fertilizers</u>: Use complete fertilizer of neutral character, with some elements derived from organic sources and containing the following percentages of available plant nutrients.

For grassing provide fertilizer with not less than 10% total nitrogen, 10 % available phosphoric acid, and 10 % soluble potash. Nitrogen is to be a form that will be available to grass during the initial growth period. If no soil sample is available, use a minimum of 600 pounds of 10-10-10 or equivalent per acre. (example: approximately 360 lbs. of 17-17-17 per acre is equivalent to 600 lbs of 10-10-10 per acre)

## **Grass Materials**

<u>Grass Seed</u>: Provide fresh, clean, new-crop seed. At a minimum, seed shall have a purity of no less than 90 percent and a germination rate of no less than 80 percent, and complying with SC-M-810 of the SCDOT Seeding Specifications.

### **Anti-Erosion Materials**

Mulch: Provide clean, seed-free hay or straw of wheat, rye, oats, or barley.

<u>Permanent Erosion Control Matting:</u> North American Green SC150 or approved equal, unless otherwise indicated in the Drawings. Install in accordance with Manufacturer's recommended installation guidelines in locations as shown on the Drawings as required.

### **PART 3 - EXECUTION**

# **Preparation**

Preparation of Planting Soil: Lime should be applied and mixed with soil before planting.

<u>Preparation of Seed Bed</u>: The seed shall be prepared by pulverizing the soil in an approved manner to a depth of four (4) inches for field conditions or slopes that are 3:1 or flatter and to a depth of three (3) inches, as determined on site for slopes steeper than 3:1. The soil shall be tilled until a well pulverized, firm, reasonably uniform seed bed is prepared conforming substantially to ground elevations as shown on the Plans and/or existed prior to construction. The disturbed area shall blend uniformly into adjacent topography. Good surface drainage must be provided, allowances for settlement made and ground elevations adjusted accordingly. Visible ponding will not be allowed. Rocks, roots, sticks, trash and other objectionable material shall be removed. Slopes should be "tracked in" parallel to the slope or otherwise prepared to hold seed in place.

Apply specified commercial fertilizer at the specified rates, and thoroughly mix into the upper 2 inches of the seedbed. Delay application of fertilizer if lawn planting will not follow within a few days.

In established lawn areas, fine grade seedbed to a smooth, even surface with loose, uniformly fine texture.

PLANTING 32 90 00 - 2

Roll, rake, and drag lawn areas, remove ridges and fill depressions as required to meet finished grades. Limit fine grading to areas, which can be planted immediately after grading.

Watering prepared lawn areas before grassing if soil is dry is recommended. Water thoroughly and allow surface moisture to dry before planting. Do not create a muddy soil condition.

Restore seedbeds to specified conditions if eroded or otherwise disturbed after fine grading and prior to planting.

# Seeding

Do not use wet seed or seed that is moldy or otherwise damaged in transit or storage.

The seed bed must be in good, friable condition and not muddy or hard at the time the seeding is performed.

Sow seed using a spreader or seeding machine. Do not spread seed when there is excessive wind velocity. Distribute seed evenly over entire area by sowing equal quantity in two directions at right angles to each other.

Sow not less than the quantity of seed specified.

Rake or cover seed lightly into the top one-eighth inch of soil, roll lightly, and water with a fine spray when necessary.

Slopes must be "tracked in" or seed shall be applied at the rate specified and raked or tilled into the topsoil with the resulting furroughs running across the natural slope of the ground. Under no circumstances will any tilling activity be allowed parallel with slopes. Slopes steeper than 3:1 or more than 8 feet in length will require an approved matting or the use of hydraulic seeding to achieve the 70% achieved stand results unless otherwise specifically approved by the Engineer.

Fertilizer, lime, and seed should be applied within 24 hours of completing seed bed preparation.

Protect seeded slopes against erosion by spreading specified mulch after completion of seeding operations. Spread uniformly to form a continuous blanket not less than 1 ½ inches, loose measurement, over seeded areas.

### Hydroseeding

Mix specified seed, fertilizer, and pulverized mulch in water, using equipment specifically designed for hydroseed application. Continue mixing until uniformly blended into homogenous slurry, suitable for hydraulic application.

Apply slurry uniformly to all areas to be seeded. Rate of applications is to be as required to obtain specified seed sowing rate and acceptable end results.

## <u>Maintenance</u>

The Contractor shall maintain the seeded areas until there is <u>uniform</u> growth three (3) inches high with at least 80% total coverage of each square foot of the site. Maintenance shall consist of watering, weed and pest control within established areas, fertilization, erosion repair, reseeding and all else necessary to establish a vigorous healthy and uniform stand of permanent grass. <u>All areas and spots which do not show a uniform stand of grass</u>, for any reason, shall be treated repeatedly until a uniform stand is attained.

PLANTING 32 90 00 - 3

#### **Mulch and Tackifiers**

Hydraulic Mulch (HM), Stabilized Mulch Matrix (SMM), Bonded Fiber Matrix (BFM), Fiber Reinforced Matrix (FRM) as well as straw or hay with an environmentally friendly tackifier may be used as necessary to achieve stabilization. Erosion control blankets (ECB's) and turf reinforcement matting (TRM's) may also be used as necessary or as per plans.

After fertilizing, seeding, raking, and tilling, dried straw is to be uniformly spread over the area at a minimum rate of 2000 pounds per acre. "Environmentally friendly" tackifiers or mulch is required when used. **Diluted emulsified asphalt is not an acceptable alternative.** 

#### **Inspection and Maintenance**

When grassing is completed, including maintenance, the Engineer or his representative will, upon request, make an inspection to determine acceptability. (Permanent grass must be in place for final acceptance.)

Grassing may be inspected for acceptance in parts agreeable to the Engineer, provided work offered for inspection is complete, including maintenance.

When inspected grassing does not comply with the requirements, replace rejected work and continue specified maintenance until reinspected by the Engineer and found acceptable.

### **Seasonal Seeding**

Seasonal seeding mixtures and rates of application shall be as follows. <u>All rates are in pounds per acre.</u> This includes lime, fertilizer, seed and other materials.

Unless otherwise required by the County or the Engineer (pursuant to potential erosion of ditches or steep slopes) seeding within road right-of-way will be treated like all other disturbed areas.

# **Temporary Grassing**

Temporary grassing shall be performed in selected areas in advance of permanent grassing operations for the purpose of minimizing erosion on disturbed areas during construction. <u>Temporary grassing is considered to be a supplement to, and not a substitute for, permanent grassing operations or, erosion or sediment control measures.</u> The work shall include preparing seed beds; furnishing, placing, and covering fertilizer and seed; mowing; and any other operations necessary for establishing temporary grassing.

Temporary grassing shall be done promptly at the location and times directed by the Engineer and under the following conditions:

- When a graded area cannot be brought to final grade and will remain disturbed during construction, temporary grassing shall be provided until final grade can be obtained and the graded area permanently grassed. Temporary mulch or grassing may be used when site will not be worked for 14 to a maximum of 21 days. If not worked for 21 days or longer, a temporary grass must be planted.
- When washing or erosion can occur on disturbed areas where temporary suspension of construction activity has taken place.
- When an immediate ground cover is desirable to minimize washing, erosion, sedimentation, or pollution on any area.
- When the season of the year is not suitable for establishing permanent grass.

Areas to be Grassed shall be loosened to a depth of 4 inches. The area to be grassed shall be "tracked in" or

PLANTING 32 90 00 - 4

otherwise suitably prepared to lessen erosion or prevent seed and soil loss.

<u>Seed and Fertilizer</u> shall be applied uniformly at the required application rates over the prepared area to be grassed.

<u>10-10-10 Fertilizer or equivalent</u> shall be applied at a rate of 600 pounds per acre and dolomitic limestone shall be applied at the rate of 2000 pounds per acre.

<u>Areas of Temporary Grassing</u> shall be maintained in satisfactory condition until being permanently grassed. The maintenance shall include repair of erosion, reseeding, and mowing. All work to maintain areas of temporary seeding shall be done promptly at the direction of the Engineer or his representative.

# **Use of Temporary Mulch**

In some cases if a site will not be worked for a short period of time (14 to 21 days) a temporary organic mulch cover may be used for temporary stabilization only.

# Seasonal Seeding Specifications (all rates are in pounds per acre)

# **Permanent Seeding**

## September - March

Tall Fescue (Ky31) – 50lbs. per acre
Plus 10-10-10 Fertilizer – 600 lbs per acre or equivalent
Plus Dolomitic Limestone – 2000 lbs. (1 ton) per acre
Or
Tall Fescue (Ky31) – 40 lbs. per acre
Plus Rye Grain – 10 lbs per acre (nurse - crop)
Plus 10-10-10 Fertilizer – 600 lbs. per acre or equivalent
Plus Dolomitic Limestone – 2000 lbs. (1 ton) per acre

#### **April - August**

Bahia grass – 30 lbs per acre
Or Bermuda grass – 30 lbs. per acre (hulled = hull off)
Plus 10-10-10 Fertilizer – 600 lbs. per acre or equivalent
Plus Dolomitic Limestone – 2000 lbs. (1 ton) per acre
(May use 10lbs. Millet or Sudan grass with Bahia or Bermuda as a nurse crop.)

Sericea Lespedeza or Weeping Lovegrass may be used on steep slopes (3:1 or greater or more than 8 feet in length) to achieve the desired 70% permanent stabilization requirement.

#### \*Note: Special Consideration:

Disturbed lawns and landscape areas must be re-established to their original condition and grass type. Some may require other grasses than those listed above. (Example: Centipede grass, Carpet Grass or others at recommended rates.)

## **Temporary Seeding**

#### <u>September – March</u>

Rye Grain – 55 lbs. per acre or Oats – 150 lbs. per acre or Wheat – 100 lbs. per acre or Barley – 190 lbs. per acre Plus Fertilizer and lime at listed rates.

PLANTING 32 90 00 - 5

## April - August

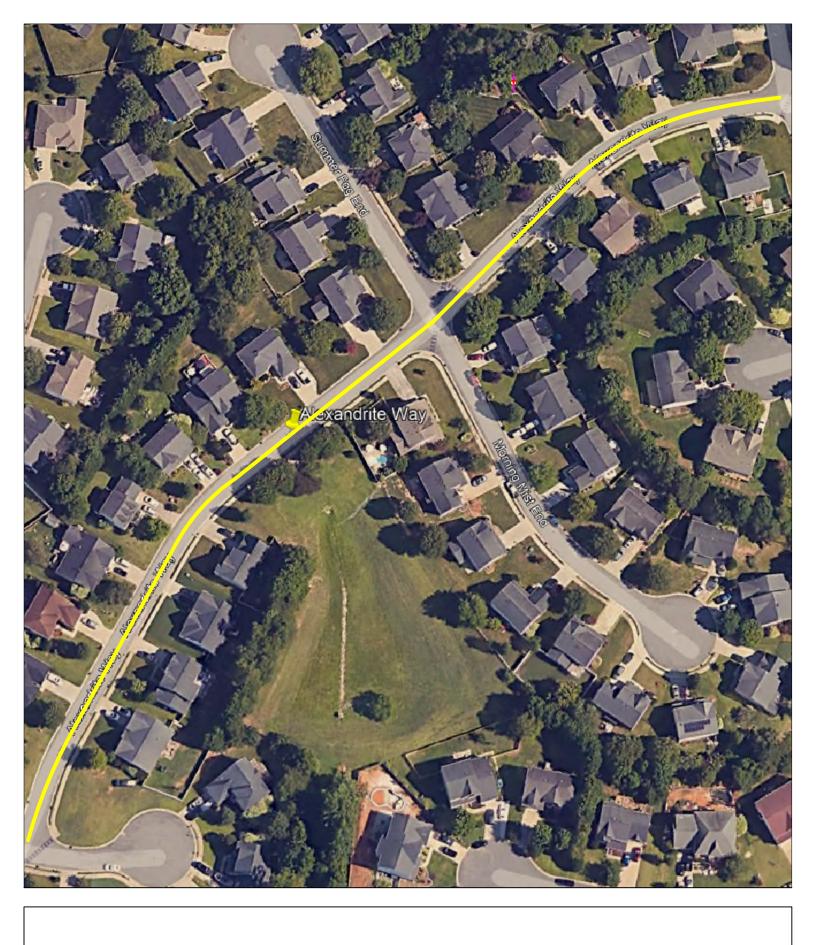
Browntop Millet – 40 lbs. per acre or Sundangrass – 60 lbs. per acre Plus Fertilizer and lime at listed rates.

#### \*Notes

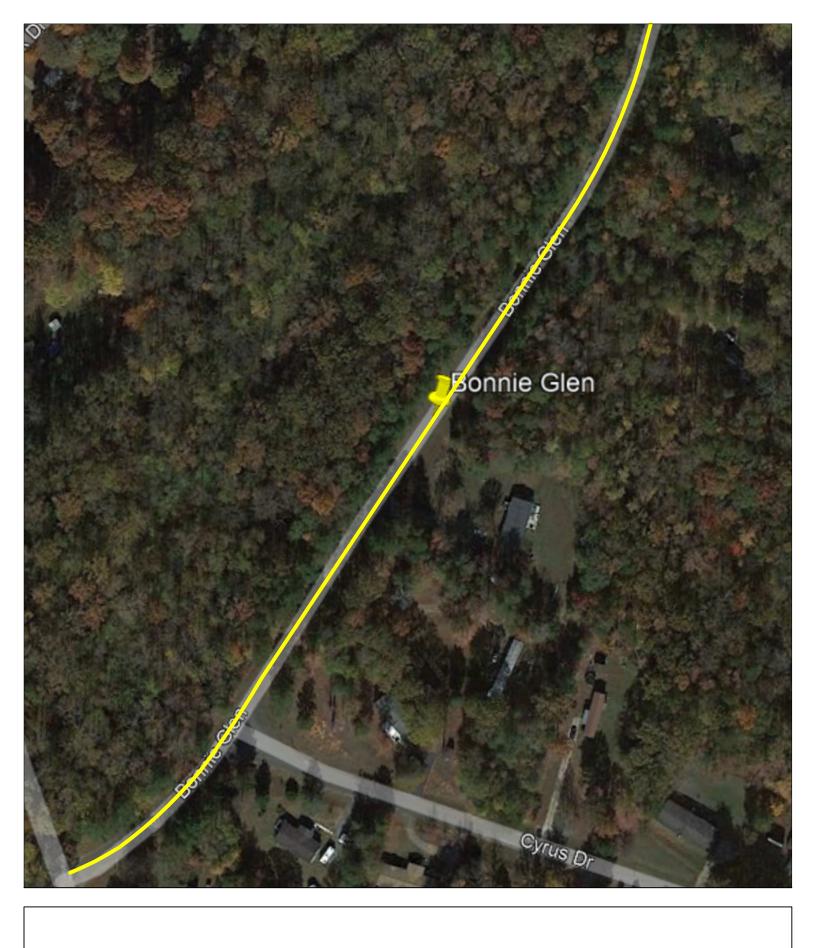
- 1. Annual Ryegrass is not recommended.
- 2. Any substitutions or changes must be approved by County Engineer or his representative prior to planting.
- 3. The Contractor will, upon request, submit the invoices and/or other documentation of all materials used in order to determine rates and quality.
- 4. Seeding recommendations are based on ideal soil, planting and weather conditions. Some changes may be made on approval of the County Engineer or his representative to achieve desired results.

**END OF SECTION** 

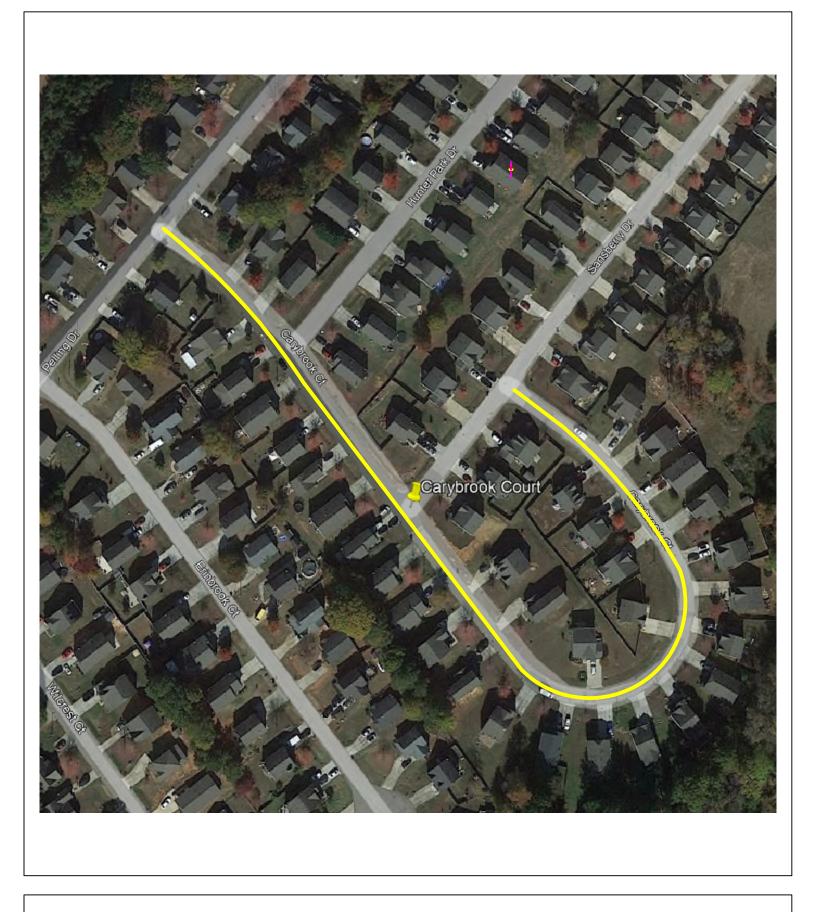
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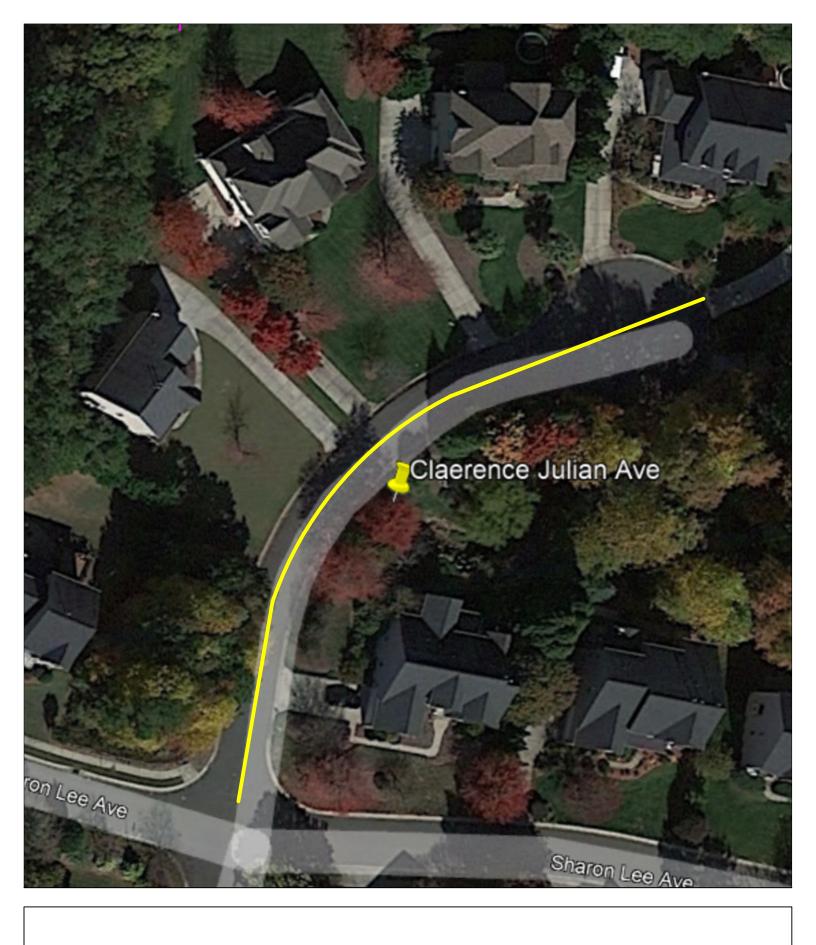


ALEXANDRITE WAY



BONNIE GLEN

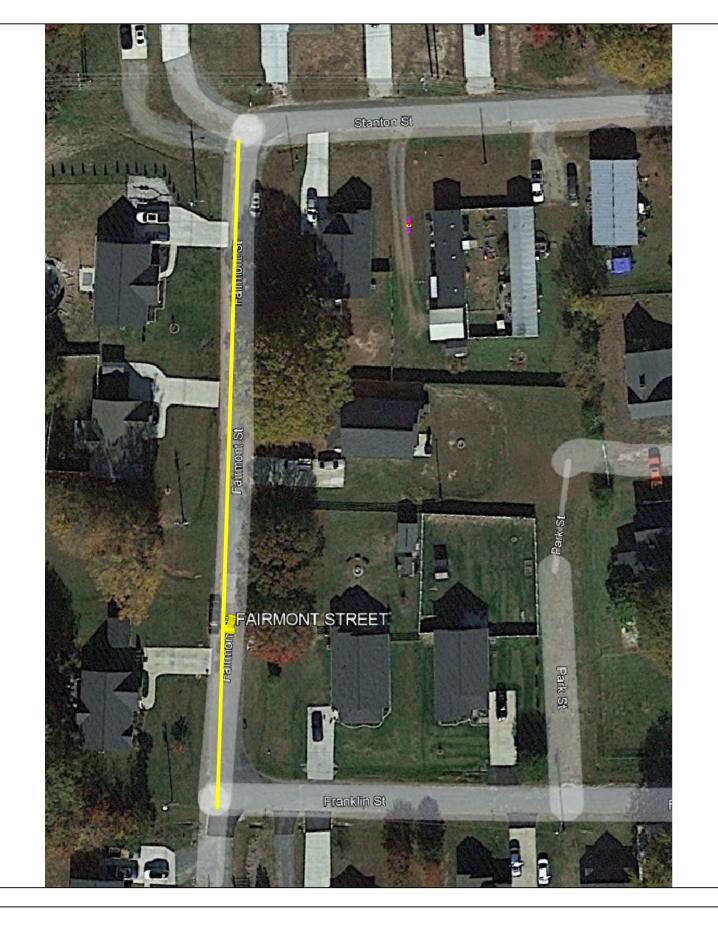




CLARENCE JULIAN AVE



DANIEL RD

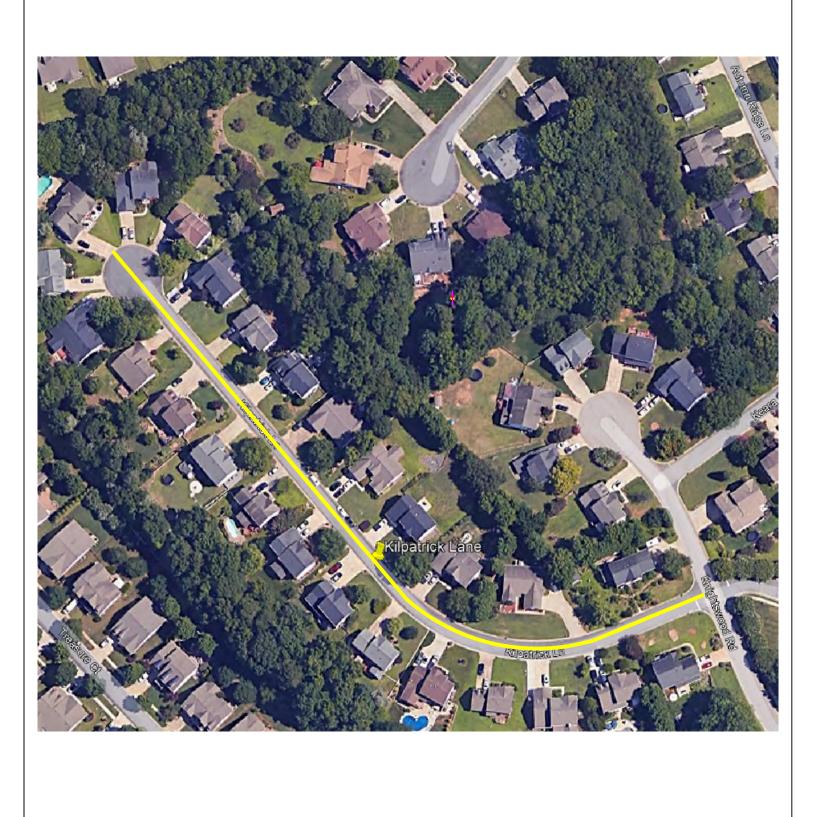


FAIRMONT ST

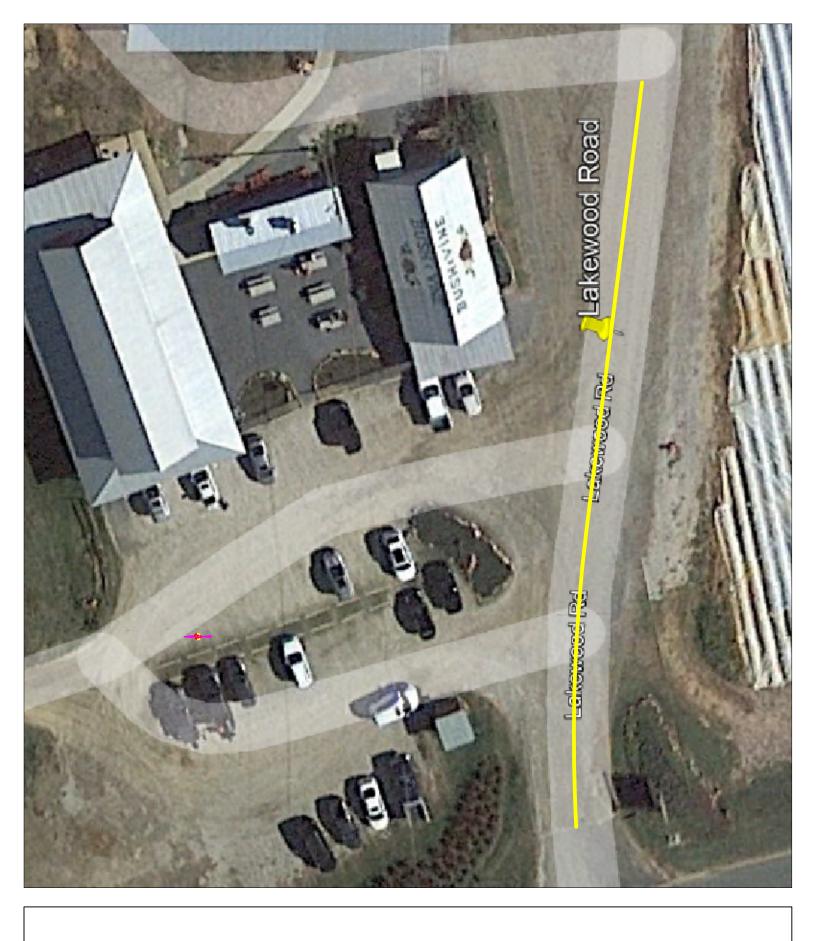




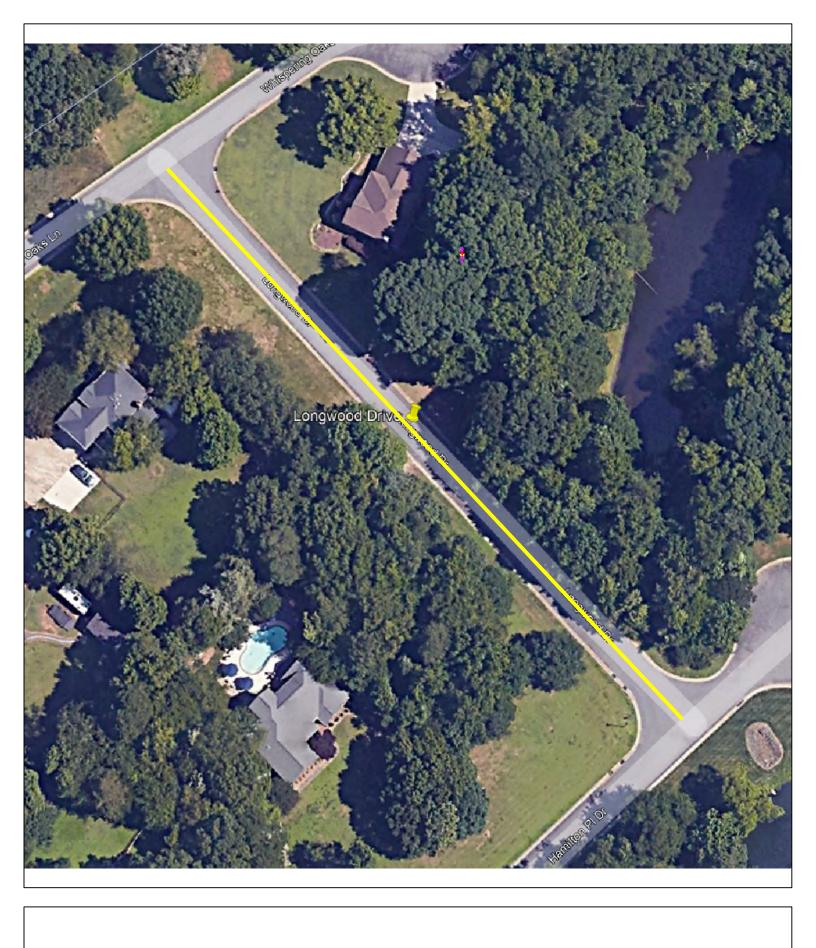
JOSEPH CT



# KILPATRICK LN



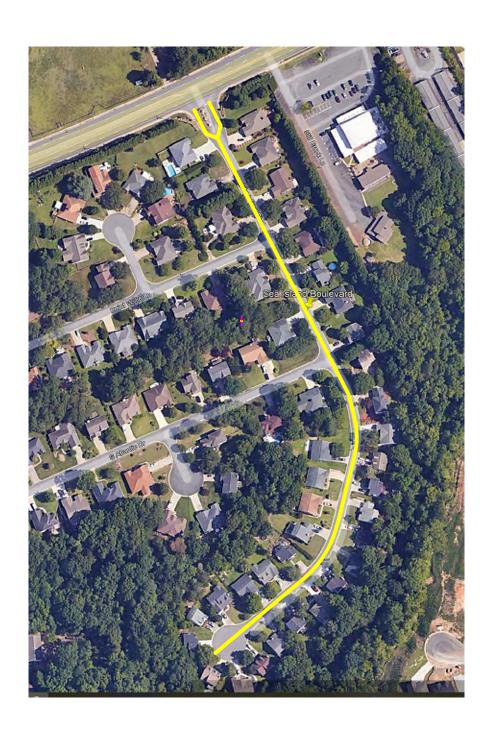
LAKEWOOD RD



LONGWOOD DR



OLE EASTPOINTE DR



SEA ISLAND BLVD



SINGLETARY LN



