

PROJECT MANUAL

FOR

THE CITY OF GEORGETOWN SOUTH CAROLINA WATER UTILITIES

KAMINSKI STREET WATER IMPROVEMENTS

PROJECT # 1511

HEYWARD STREET WATER IMPROVEMENTS

PROJECT # 1509

Date: April 11, 2018

REV	DATE	DESCRIPTION	BY	CHK	APR

CITY OF GEORGETOWN
1134 NORTH FRASER STREET
GEORGETOWN SC 29440
(843) 545-4000

FOR BID ONLY

W&S Job No. 2170819



Weston & Sampson
672 Marina Drive, Suite 204
Charleston, SC 29492

Phone 843-881-9804
www.westonandsampson.com

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**KAMINSKI & HEYWARD STREET
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(END OF SECTION)

**SECTION 00010
ENUMERATION OF THE DOCUMENTS**

The drawings, specifications and addenda, which form a part of this contract as set forth in Paragraph 1 of the General Conditions, Contract and Contract Documents are enumerated in Section 00005 - Table of Contents.

The order of precedence when conflicts in the documents occur is as follows:

1. Permits from other Agencies as may be required by law
2. Change Orders and/or supplemental agreements according to the latest date
3. Contract Agreement
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5. Bid Forms or Contractor's Proposal Response
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The figured dimensions shown on the Drawings and in the Specifications may not, in every case agree with the scale dimension. Figured dimensions take precedence over scaled dimensions and finer scaled drawings take precedence of coarser scaled drawings, i.e. one inch equals twenty feet drawings takes precedence over one inch equals fifty feet drawings.

(END OF SECTION)

**SECTION 00015
REFERENCES**

The following reference shall be used hereinafter:

<u>Owner:</u> City of Georgetown, SC 1134 North Fraser Street Georgetown, SC 29440	The City of Georgetown hereinafter will be referred to as the “Owner” and/or the “City”.
<u>City Administrator:</u> Mr. Carey Smith 1134 North Fraser Street Georgetown, SC 29440	Mr. Carey Smith hereinafter will be referred to as the “City Administrator”.
<u>Risk Manager:</u> Ms. Suzanne Anderson 1134 North Fraser Street Georgetown, SC 29440	Ms. Suzanne Anderson hereinafter will be referred to as the “Risk Manager”.
<u>Purchasing Agent:</u> Mrs. Daniella Howard 1134 North Fraser Street Georgetown, SC 29440	Mrs. Daniella Howard hereinafter will be referred to as the “Purchasing Agent”.
<u>Project Manager:</u> Mr. Orlando Arteaga, P.E. City Engineer 2377 Maybank Drive Georgetown, SC 29440	Mr. Arteaga hereinafter will be referred to as the “Project Manager”.
<u>Engineer</u> Weston & Sampson Engineers, Inc. 672 Marina Drive, Suite204 Charleston, SC 29492	Weston & Sampson hereinafter will be referred to as the “Engineer”.

(END OF SECTION)

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

**SECTION 00020
ADVERTISEMENT FOR BID**

PROJECT NAME: Kaminski Street and Heyward Street Water Improvements
PROJECT #: 1511 & 1509
DATE OF ISSUE: Wednesday, April 11, 2018
DUE DATE: **No later than 2:30 pm (EST), Tuesday, May 8, 2018**

The City of Georgetown, (hereinafter called the “Owner and/or the “City”) requests sealed bids from qualified general contractors for the above referenced project. The scope of work for this project is described in the complete Bid Documents.

Bid documents including, but not limited to, forms, specifications and milestone events, may be downloaded free of charge from the City website: www.cogsc.com. Select “Bids” from the bottom of the home page. You may also send an email request to purchasing@cogsc.com for a direct link.

NOTICE TO BIDDERS: A mandatory Pre-Bid Meeting will be held at 2:00 pm Wednesday, April 25, 2018, at the Water Utilities Department, 2377 Anthuan Maybank Drive, Georgetown, SC. Therefore, bids will be considered only from those bidders who are represented at this pre-bid meeting. Attendance at the meeting will be evidenced by the representative's signature on the attendance roster.

Bids will be publicly opened at 2:30 pm (EST), Tuesday, May 8, 2018, and read aloud at the Water Utilities and Engineering Dept. Building, 2377 Anthuan Maybank Drive, Georgetown, SC 29440.

Each bidder shall fully acquaint himself with conditions relating to the scope and restrictions attending the execution of the work under the conditions of this bid. The failure or omission of a bidder to acquaint himself with existing conditions shall in no way relieve him of any obligation with respect to this bid or to the contract. The City shall not be legally bound by any amendment or interpretation that is not in writing.

Bid documents will be modified only by written addenda. It is the responsibility of the Bidder to obtain information regarding projects directly from the City’s website, www.cogsc.com, under “Bids”. Bids received after the due date and specified time will not be considered for any reason and will remain unopened. City will not accept bids by fax or electronic mail.

Bids are to be mailed or hand delivered only to the address listed below:

Physical Address:
City of Georgetown
Attn: Purchasing - Bid Proposal
Kaminski Street & Heyward Street Water
Improvement Projects 1511 & 1509
2377 Anthuan Maybank Drive
Georgetown, SC 29440

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

Each bid must be accompanied by a certified check of the Bidder, or by Bid Bond made payable to the City, for an amount equal to not less than five percent (5%) of the total bid as a guarantee that, if the bid is accepted, the required Agreement will be executed and that a one hundred and ten percent (110%) Performance Bond and a one hundred percent (100%) Payment Bond will be furnished.

Any prospective bidder, offeror, contractor or subcontractor who believes they are aggrieved in connection with the solicitation of this contract may protest to the Owner in accordance with Section 11-35-4210 of the South Carolina Code of Laws, within 15 days of the date of issuance of the Notice of Intent to Award.

All bidders shall be legally qualified under the provisions of the South Carolina Contractor's Licensing Law, Chapter 11- General Contractors of the South Carolina Code of Laws as amended; and shall be capable of meeting the bond requirements. Any bid submitted by a bidder who does not meet these requirements shall be rejected.

The City reserves the right to waive any informality in bidding and to reject any or all bids if it is in City's best interest to do so. Unless all bids are rejected, award will be to the low responsive, responsible Bidder.

The City of Georgetown is an equal opportunity/ affirmative action employer.

No Bidder may withdraw the bid within sixty (60) days after the actual date of the opening and thereof.

These bid documents will be modified only by written addenda.

(END OF SECTION)

**SECTION 00100
INFORMATION FOR BIDDERS**

1. PROJECT DETAIL

Furnish all labor, material and equipment to install approximately 2,060 LF of 6-in. PVC water main. The scope of the work is highlighted on the construction plans prepared by Weston & Sampson Engineering, Inc. and in general includes the following:

1. Mobilization
2. Tree Protection
3. Sediment and Erosion control
4. Abandon and of existing water main
5. Installation of 6-inch PVC C-900 Water Main, Fittings, and Appurtenances
6. Installation of Fire Hydrants
7. Installation of Gate Valves and Valve Boxes
8. Replacing Service Connections
9. Performing Directional Dry Bore for New Water Services
10. Meter Boxes
11. Performing Jack and Bore for 6-in. PVC Water Main
12. Repair of Driveways
13. Replacement of Sidewalk

2. RECEIPT AND OPENING OF BIDS

The City of Georgetown (hereinafter called the "Owner") invites bids on the form (s) attached hereto, all blanks of which must be appropriately filled in. Sealed bids will be received by the Owner at the Water Utilities Department office at 2377 Anthuan Maybank Drive until **Tuesday, May 8, 2018 @ 2:30 PM** at which time said bids will be publicly opened and read aloud. The envelopes containing the bids and bid bonds must be sealed and addressed to:

Mrs. Daniella Howard
Purchasing Agent
City of Georgetown
2377 Anthuan Maybank Drive
Georgetown, S.C. 29440

and designated as Bid for "KAMINSKI STREET PROJECT #1511 AND HEYWARD STREET WATER IMPROVEMENTS PROJECT #1509".

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within sixty (60) days after the actual date of the opening thereof.

3. PREPARATION OF BID

Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in with ink or typewritten.

Bids which are incomplete, unbalanced, conditional or obscure, or which contain additions not called for, erasures, alterations, or irregularities of any kind, or which do not comply with the Information for Bidders, may be rejected at the option of the Owner.

The correct total amount bid for the completed work is defined as the correct sum total of the amounts bid for the individual items in the proposal. The correct amount bid for each unit price item is defined as the correct product of the quantity listed for the item by the unit price bid.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the Bidder, Bidder's address, Contractor's license number, Bidder's license number, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified above.

4. SUBCONTRACTS

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the Owner.

5. TELEGRAPHIC MODIFICATION

Any bidder may modify its bid by telegraphic or facsimile communication at any time prior to the scheduled time for receipt of bids, provided such telegraphic or facsimile communication is received by the Owner prior to closing time, and provided further the Owner is satisfied that a written confirmation of the telegraphic or facsimile modification over the signature of the bidder was mailed prior to the closing time.

The telegraphic or facsimile communication should not reveal the bid price, but should provide the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened. If written confirmation is not received within two (2) days from the closing time, no consideration will be given to the telegraphic or facsimile modification.

6. QUALIFICATION OF BIDDER

The Owner may make such investigations as is deemed necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request.

The Owner reserves the right to reject any bid if the evidence submitted by, or

investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein. Conditional bids will not be acceptable.

7. BID SECURITY

Each bid must be accompanied by cash, certified check of the bidder, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of five percent (5%) of the bid. Cash or checks will be returned to all except the three (3) lowest bidders within three (3) days after the opening of bids, and the remaining cash or checks will be returned promptly after the Owner and the accepted bidder have executed the contract, or, if no award has been made within sixty (60) days after the date of the opening of the bids, upon demand of the bidder at any time thereafter so long as bidder has not been notified of the acceptance of its bid.

8. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

The successful bidder, upon failure or refusal to execute and deliver the contract and bonds required within ten (10) days after they have received notice of the acceptance of their bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with the bid.

9. TIME OF COMPLETION AND LIQUIDATED DAMAGES

Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within the number of consecutive calendar days thereafter as indicated on the Bid Form. Bidder must agree also to pay as liquidated damages the sum indicated on the Bid Form for each consecutive calendar day thereafter as hereinafter provided in General Conditions.

10. CONDITIONS OF WORK

Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of the obligation to furnish all material and labor necessary to carry out the provisions of the contract.

Insofar as possible, the Contractor in carrying out the work must employ such methods and means as will not cause any interruption of, or interference with, the work of any other contractor.

11. ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally. Each request for such interpretation should be in writing and addressed to the Project Manager. To be given consideration, the request must be received at least five (5) days prior to the date fixed for the opening of bids.

Any and all such interpretations and any supplemental instructions will be in the form of

written addenda which, if issued, will be posted in the Project listing that is located at the City of Georgetown website <http://www.cogsc.com> no later than three (3) days prior to the date fixed for the opening of bids. It shall be the bidder's responsibility to check for addenda before issuing its bid. Failure of any bidder to receive any addendum shall not relieve the bidder from any obligation under its bid as submitted. All addenda so issued shall become part of the contract documents.

12. PAYMENT AND PERFORMANCE BONDS

Simultaneously with bidder's delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as secured for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract, as specified in General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company, bond shall be countersigned by an agent residing in South Carolina, and the said surety shall be satisfactory to the Owner. The Performance Bond shall be in the amount of one-hundred and ten percent (110%) of the bid and the Payment Bond shall be in the amount of one-hundred percent (100%) of the bid.

13. POWER OF ATTORNEY

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

14. NOTICE OF SPECIAL CONDITIONS

Attention is particularly called to those parts of the contract documents and specifications which deal with the following:

- A. Insurance requirements

15. LAWS AND REGULATIONS

The Bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

16. METHOD OF AWARD - LOWEST QUALIFIED BIDDER

If at the time this contract is to be awarded, the lowest base bid or alternate bid submitted by a responsible bidder does not exceed the amount of funds then estimated by the Owner as available to finance the contract, the contract will be awarded on the base bid or alternate bid. If such bid exceeds such amount, the Owner may reject all bids or may award the contract on the base bid combined with such deductible alternates applied in numerical order in which they are listed in the Form of Bid, as produces a net amount which is within the available funds.

The Owner will decide which the lowest qualified bidder is, and in determining such bidder, the following elements will be considered for each bidder:

- A. Maintains a permanent place of business.

- B. Has successfully completed other work with the City
- C. Has adequate plant equipment and personnel to perform the Work properly and expeditiously.
- D. Has suitable financial status to meet obligations incident to the work.
- E. Has appropriate technical experience with a minimum of five (5) years of practice.

17. RIGHT TO INCREASE OR DECREASE THE AMOUNT OF WORK

The work comprises approximately the quantities shown in the bid form which will be used as a basis for comparison of Bids and not for final estimate. The Owner does not, by expression or by implication, agree that the actual amount of work shall correspond with the estimated quantities. The Owner reserves the right to increase or decrease the amount of work under the Contract of the work contemplated, at the unit prices quoted in the Bid.

18. OBLIGATION OF BIDDER

At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and be thoroughly familiar with the plans and contract documents, including all addenda. If a site visit is required, contact the Project Manager to schedule a date and time. The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect to its bid.

19. FORCE MAJEURE

When the Purchasing Division is closed due to force majeure, bid openings will be postponed to the same time on the next official business day.

20.

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

(END OF SECTION)

**SECTION 00110
CONTRACTOR'S AND SUBCONTRACTOR'S
INSURANCE REQUIREMENTS**

1. As required under Paragraph 29 of the General Conditions, the Contractor shall not commence work under this Contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the Owner, nor shall the Contractor allow any Subcontractor to commence work on his Subcontract until all similar insurance required of the Subcontractor has been so obtained and approved.
2. Unless otherwise specified in this Contract, the Contractor shall, at its sole expense, maintain in effect at all times, during the performance of work, insurance coverage with limits not less than those set forth below with insurers and under forms of policies satisfactory to Owner.
3. The Contractor shall deliver Certificates of Insurance to the Engineer no later than ten (10) days after award of the Contract but in any event, prior to execution of the Contract by the Owner and prior to commencing work on the site as evidence that policies providing such coverage and limits of insurance are in full force and effect.
 - A. Certificates shall provide not less than thirty (30) days advance notice will be given in writing to the Owner prior to cancellation, termination, or material alteration of said policies of insurance.
 - B. Certificates shall identify on their faces the project name "**KAMINSKI STREET AND HEYWARD STREET WATER IMPROVEMENTS PROJECT**" and the "**PROJECT NUMBERS 1511 AND 1509**".
4. Additional Insured: The Commercial General Liability, Auto Liability and Excess Liability (Umbrella) insurance policies shall be endorsed to include the Owner as additional insured.
5. The Owner is not maintaining any insurance on behalf of the Contractor covering against loss or damage to the work or to any other property of the Contractor unless otherwise specifically stated herein and as may be described by appendix hereto. In the event the Contractor maintains insurance against physical loss or damage to the Contractor's construction equipment and tools, such insurance shall include an insurer's waiver of rights of subrogation in favor of Owner.
6. The Contractor shall indemnify the Owner and the Engineer as stated in Part 47 of The General Conditions.

7. Insurance Requirements:

- A. Commercial General Liability Insurance: The Contractor shall take out and maintain during the life of the Contract such commercial general liability insurance as shall protect him from claims for damage for bodily injury, including accidental death, as well as from claims for property damage, which may arise from operations under this contract whether such operations are by himself or by any Subcontractor or by anyone directly or indirectly employed by either of them. The amount of such insurance shall not be less than the following:

General Aggregate	\$2,000,000.00
Products - Complete/Operations Aggregate	\$2,000,000.00
Personal and Advertising Injury	\$1,000,000.00
Each Occurrence	\$1,000,000.00
Fire Damage (any one fire)	\$ 50,000.00
Medical Expenses (any one person)	\$ 5,000.00

1. The General Aggregate listed above shall be for this project only.
2. Special Hazards: The Contractor's and his Subcontractors General Liability Insurance shall provide adequate protection against use of explosives, collapse, and underground hazards. Each detonation of blasting shall be considered a single occurrence.

B. Comprehensive Automobile Liability Insurance:

1. Includes coverage for all owned, hired, and non-owned automobiles
2. The combined single limit of liability shall not be less than the following:

Any One Accident or Loss	\$1,000,000.00
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C. Excess Liability (Umbrella) Insurance:

1. Contractor shall carry and maintain Combined Excess Liability (Umbrella) insurance for a limit not less than the following:

Each Occurrence	\$2,000,000.00
Aggregate	\$2,000,000.00

D. Worker's Compensation: The insurance required by this section shall be written for not less than the following or greater if required by law:

1. Statutory benefits as provided by South Carolina Law
2. Employers' Liability:

Each Accident	\$500,000.00
Disease - Policy Limit	\$500,000.00
Disease - Each Employee	\$500,000.00

~~E. Builders Risk Insurance: The Contractor shall purchase and maintain an "all risk" or special perils form builder's risk policy issued in the name of the Contractor, Owner and Subcontractors for the full contract value of the insurable portions of the work. This policy shall contain a provision that in the event of payment of any loss or damage, the insurer will have no rights of recovery against any of the parties named as insurers or additional insured.~~

~~F. Flood Insurance: The Contractor is required to carry flood insurance for projects located in designated flood hazard area in which Federal Flood Insurance is available when applicable.~~

~~G. Owner's Protective Liability Insurance: The Contractor shall purchase and maintain an Owner's Protective Liability policy issued in the name of the Owners with a combined single limit of liability of not less than the following:~~

Each Occurrence	\$2,000,000.00
Aggregate	\$2,000,000.00

**KAMINSKI & HEYWARD STREET
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(END OF SECTION)

**KAMINSKI & HEYWARD STREET
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**SECTION 00311
BID FORM**

**KAMINSKI STREET PROJECT #1511 & HEYWARD STREET PROJECT #1509
WATER IMPROVEMENTS PROJECT**

FOR THE
THE CITY OF GEORGETOWN
SOUTH CAROLINA

Georgetown, S.C.

Date: _____

PROPOSAL OF _____

(Hereinafter called "Bidder"), a _____ (State)

Corporation/partnership/individual (Strike out inapplicable terms) doing business as

TO: Mrs. Daniella Howard
Purchasing Agent
City of Georgetown

Gentlemen:

The Bidder, in compliance with your invitation for bids for the **KAMINSKI STREET AND HEYWARD STREET WATER IMPROVEMENTS PROJECT** having examined the drawings and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, for the Sum of:

_____ Dollars (\$_____)

The price indicated above shall include all labor, materials, overhead, profit, insurance, taxes, fees, etc., to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

The price indicated above shall also include the amounts indicted as Allowances and as described in the Division 1 Section "Allowances". Should actual cost vary from the Allowance

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listed, The Contract Sum shall be adjusted by Change Order.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project within **One Hundred (100) consecutive calendar days** thereafter as stipulated in the specifications.

Bidder further agrees to pay as liquidated damages the sum of \$500.00 for each consecutive calendar day thereafter as hereinafter provided in Paragraph 19 of the General Conditions.

The specifications and addenda are complementary of each other. What is called for by one shall be as binding as if called for by all. If a conflict between any of the above is discovered by the contractor, the problem shall be referred to the Owner as soon as possible for resolution by the Owner. Should a conflict occur which is not resolved before bid time and/or is necessary to comply with mandatory requirements (i.e., codes, ordinances, etc.), it shall be the contractor's responsibility to price and bid the more expensive method.

Bidder acknowledges receipt of the following addendum:

No.: _____ Dated: _____

No.: _____ Dated: _____

No.: _____ Dated: _____

No.: _____ Dated: _____

No.: _____ Dated: _____

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The Bidder agrees that this Bid shall be good and may not be withdrawn for a period of ninety (90) calendar days after the scheduled closed time for receiving bids.

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SCHEDULE OF UNIT PRICES

Additions and deletions from the Work shall be paid in accordance with the Unit Prices indicated below.

Heyward Street					
Item	Description	Unit	Quantity	Unit Price	Total Price
A	Mobilization (3% of total cost, less items N and O)	LS	1		
B	Tree Protection and Reseeding	LS	1		
C	Traffic Control and Pedestrian Safety Plan	LS	1		
D	Sediment & Erosion Control	LS	1		
E	6-inch PVC C-900 Water Main, Fittings, Appurtenances, and Connections	LF	505		
F	Asphalt Patch and Overlay (Repair of driveways and repaving intersection with Black River Rd.)	SF	5,700		
G	Concrete Patch for Driveway	LS	1		
I	Fire Hydrants	Ea.	2		
J	Gate Valves and Valve Boxes	Ea.	1		
K	Service Connections	-	-	-	-
-	1. General	Ea.	4		
-	2. Directional Dry Bore	Ea.	1		
L	Meter Boxes (Connection of existing meter to new service only)	Ea.	5		
M	Jack and bore	LF	46		
N	Contingency Allowance	LS	1	\$ 1,500	\$ 1,500
O	Allowance for Materials Testing	LS	1	\$ 750	\$ 750
Sub-Total					

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Kaminski Street					
Item	Description	Unit	Quantity	Unit Price	Total Price
A	Mobilization (3% of total cost, less items N and O)	LS	1		
B	Tree Protection and Reseeding	LS	1		
C	Traffic Control and Pedestrian Safety Plan	LS	1		
D	Sediment & Erosion Control	LS	1		
E	6-inch PVC C-900 Water Main, Fittings, Appurtenances, and Connections	LF	1,555		
F	Asphalt Patch and Overlay (Open cut patch and pavement overlay intersections per SCDOT permit)	SF	33,000		
H	Sidewalk Demolition, Disposal, and Replacement (including pedestrian ramps and driveway repairs)	LS	1		
I	Fire Hydrants	Ea.	3		
J	Gate Valves and Valve Boxes	Ea.	5		
K	Service Connections	-	-	-	-
-	1. General	Ea.	8		
-	2. Directional Dry Bore	Ea.	1		
L	Meter Boxes	Ea.	9		
N	Contingency Allowance	LS	1	\$ 5,000	\$ 5,000
O	Allowance for Materials Testing	LS	1	\$ 2,250	\$ 2,250
Sub-Total					

Heyward and Kaminski Street	
Total	

**Note: See Section 01270 – Measurement and Payment for details about all items included in each of the above lists.

Total Bid: \$ _____

Note: Item letters match those in the Measurement and Payment section (01270).

The above Unit Prices shall include all labor, materials, overhead, profit, insurance, taxes, fees, etc., to cover the finished work called for.

The undersigned declares that his firm is (delete those not applicable):

A corporation organized and existing under the laws of the

State of _____.

A partnership consisting of

_____.

The undersigned declares that the person or persons signing this proposal is fully authorized to

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

sign the proposal on behalf of the firm listed and to fully bind the firm listed to all the conditions and provisions thereof.

It is agreed that no person or persons or company other than the firm listed below or as otherwise indicated hereinafter has any interest whatsoever in this proposal or the contract that may be entered into as a result thereof, and that in all respects the proposal is legal and fair, submitted in good faith, without collusion or fraud.

Respectfully Submitted:

Contractor

(SEAL – if bid is by a Corporation)

By:

(Type/Print Name)

(Title)

(Street Address)

(City, State, Zip Code)

S.C. General Contractor's License No. _____

FID No. _____ and/or SSN _____

(END OF SECTION)

**SECTION 00350
BID BOND**

KNOW ALL MEN BY THESE PRESENT:

That we, the undersigned _____, as Principal, and _____, as Surety, are hereby held and firmly bound unto the **City of Georgetown, South Carolina**, as Owner, in the penal sum of (5% of total bid) _____ Dollars _____ Cents (\$ _____), for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed this _____ day of _____, 20_____.

The condition of the above obligation is such that:

WHEREAS, the Principal has submitted to _____ a certain Bid, attached hereby and by reference made a part hereof, to enter into a contract in writing for the _____.

NOW, THEREFORE,

- (A) If said Bid shall be rejected, or
- (B) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a Bond for faithful performance of said contract, and for the payment of all persons performing labor furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid, then this obligation shall be void; otherwise the same shall remain in force and effect - it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by an extension of the time within which the Owner may accept such Bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

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SOUTH CAROLINA**

Principal

(Corporate Seal)

By : _____ (L.S)

Surety

(Corporate Seal)

By : _____ (L.S)

Important: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

Note: Bond must be countersigned by a South Carolina resident agent.

(END OF SECTION)

**SECTION 00500
CONTRACT**

STATE OF SOUTH CAROLINA

COUNTY OF GEORGETOWN

THIS AGREEMENT, entered into this _____ day of _____, 20____ and effective immediately by and between _____, doing business as a (individual/partnership/corporation), with its principal office in the City of _____, _____ County, _____ State,(hereinafter called the "Contractor") and the City of Georgetown, a duly organized and validly existing political body of the State of South Carolina (hereinafter called "City"),

WITNESSETH THAT WHEREAS, The City desires to engage the services of a professional contractor for the purpose of **Kaminski Street and Heyward Street Water Improvements**, hereinafter referred to as "Project"; and,

WHEREAS, The City has solicited bids for same by that certain Request for Bids for Construction Services, hereinafter referred to as "RFB", a copy of which is attached hereto for all purposes as **EXHIBIT "1"**; and,

WHEREAS, The Contractor has represented to City that it has the qualifications, experience, expertise, training, and personnel to timely perform the Project for City; and,

WHEREAS, The Contractor has expressed its desire to do so by their bid opened _____, 20____, hereinafter referred to as "Bid", a copy of which is attached hereto for all purposes as **EXHIBIT "2"**;and,

WHEREAS, the parties desire to enter in an agreement for the Contractor to perform the Project for City per all the terms and conditions more particularly set out herein below;

NOW, THEREFORE, for and in consideration of the foregoing, and of other good and valuable consideration, the adequacy of which is hereby acknowledged, the parties hereto agree as follows:

(1) **SCOPE OF SERVICES:**

- a. Contractor hereby agrees to perform construction of project **Kaminski Street and Heyward Street Water Improvements** as outlined in the Project Manual, incorporated into this Agreement as **ATTACHMENT "A"** and hereinafter referred to as "Work";
- b. Contractor further agrees to commence and complete any and all extra work in connection therewith, under the terms as stated in the General and Special Conditions of the Contract; and at his/hers (it's or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendents, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal and the General Conditions, Supplemental General Conditions, and Special Provisions of the Contract, the plans, including all maps, plats, blueprints, and other drawings and printed or written explanatory matters thereof, the specifications and contract documents therefore as prepared by the Engineer, and as enumerated in Paragraph 1 of the General Conditions, all of which are made a part hereof and collectively evidence and constitute the Contract.
- c. City may, from time to time require changes in the Work of the Contractor to be performed hereunder. Such changes, which are mutually agreed upon by and between City and the Contractor, shall be incorporated by written amendment to this Agreement.

(2) **COMPENSATION:**

- a. City agrees to pay Contractor a sum not to exceed _____ dollars (\$_____.__) in accordance with the Schedule of Values, incorporated into this Agreement as **ATTACHMENT "B"** and hereinafter referred to as "Compensation";
- b. In the event funds are not appropriated or become non-appropriated for an included fiscal year by City, it is agreed by the parties that this Agreement will become null and void and the City's obligations cannot extend beyond the date of non-appropriation.

(3) **PERIOD OF SERVICES:**

- a. the Work to be performed hereunder by the Contractor shall begin upon the date outlined to the City's Notice to Proceed letter to the Contractor, incorporated into this Agreement as **ATTACHMENT "C"** and hereinafter referred to as "NTP"
- b. The Work shall be completed in accordance with the Schedule, incorporated into this Agreement as **ATTACHMENT "D"** and hereinafter referred to as "Schedule".
- c. Modifications to the Schedule may be required. Such modifications, which are mutually agreed upon by and between City and the Contractor shall be incorporated by written amendment to this Agreement.

(4) **FORCE MAJEURE:**

- a. Force majeure includes acts of God, acts of other branches of government in either their sovereign or contractual capacities, or any similar cause beyond the reasonable control of the parties.
- b. Any delays in or failure of performance by either party that are caused by a Force Majeure shall not constitute breach of this Agreement.
- c. In the event that any event of force majeure, as herein defined occurs, both parties shall be entitled to a reasonable extension of time for performance of its WORK.

(5) **NOTICES:**

- a. Any notices, bills, invoices, or reports required by this Agreement shall be sufficient if sent by the parties in the United States mail, postage paid, to the addresses of the Project Manager (See Section 00015)

(6) **RECORDS AND INSPECTIONS:**

- a. Contractor shall maintain full and accurate records with respect to all matters covered under this Agreement for a period of one year after the completion of the project.
- b. City shall have free access at all proper times to such records, and the right to examine and audit the same and to make transcripts there from, and to inspect all program data, documents, proceedings, and activities.

(7) **COMPLETENESS OF AGREEMENT:**

- a. This Agreement and any additional or supplementary document or documents incorporated herein by specific reference contain all the terms and conditions agreed upon by the parties hereto, and no other agreements, oral or otherwise, regarding the subject matter of this Agreement or any part thereof shall have any validity or bind any of the parties hereto
- b. This Agreement is entered into with full understanding and awareness of such requirement.
- c. City shall be allowed to rely upon the representations of Contractor as set out in the Proposal.
- d. With the exception of the foregoing, this Agreement constitutes the entire agreement between the parties hereto and may not be modified or amended except in writing signed by both parties hereto.

(8) **CONFLICTS:**

- a. In the case of any conflict between the terms and conditions of this Agreement and the terms of any other agreement between the parties hereto, the terms of this Agreement shall control
- b. If there is a conflict between the City's Proposal and this Agreement, then this Agreement shall control.
- c. If there is a conflict between the City's Request for Bids and the Contractor's Proposal, the City's Request for Bids shall control.
- d. Both parties agree that all conflicts arising under this Agreement that cannot be settled between the parties shall be resolved in the Georgetown County Court of Common Pleas (Non-Jury)

(9) **SEVERABILITY:**

- a. If any part or provision of this Agreement is held invalid or unenforceable under applicable law, such invalidity or unenforceability shall not in any way affect the validity or enforceability of the remaining parts and provisions of this Agreement.

(10) **NONWAIVER:**

- a. The waiver by City or Contractor of a breach of this Agreement shall not operate as a waiver of any subsequent breach, and no delay in acting with regard to any breach of this Agreement shall be construed to be a waiver of the breach.
- b. In no event shall the making of any payment by City to the Contractor constitute or be construed as a waiver by City of any breach of covenant, or any default which may exist on the part of the Contractor.
- c. The making of any such payment by City while any such breach or default shall exist in no way impairs or prejudices any right or remedy available to City in respect to such breach or default.

(11) **GOVERNING LAW:**

- a. This Agreement and the rights, obligations and remedies of the parties hereto, shall in all respects be governed by and construed in accordance with the laws of the State of South Carolina.

(12) **RESPONSIBILITY:**

- a. Each party shall be responsible for its own acts as provided under the law of South Carolina and will be responsible for all damages, costs, fees and expenses which arise out of the performance of this Agreement which are due to that party's own negligence, tortious acts and other unlawful conduct and the negligence, tortious action and other unlawful conduct of its respective agents, officers and employees.

(13) **FREEDOM OF INFORMATION ACT (FOIA)**

- a. The parties acknowledge that all documents are subject to release under the South Carolina Freedom of Information Act (FOIA) and will be released to the public unless exempt from disclosure under the FOIA.
- b. If the Contractor contends a document is exempt from disclosure under the FOIA, it shall mark any such documents plainly, and seek protection from disclosure by filing an appropriate action in Circuit Court and shall bear the cost of the action and any monetary or attorney's fees awarded to the person or entity making the FOIA request.

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- c. If the Contractor objects to release and litigation is commenced against the City under the FOIA, the City agrees to promptly notify the Contractor, who shall move in intervene as a party. The Contractor agrees to hold the City harmless from and indemnify for all costs (including plaintiff's attorney's fees if awarded by the Court) incurred by the City in defending the lawsuit and the funds necessary to satisfy any judgment and all costs on appeal, if any.

(14) THIRD PARTY OBLIGATIONS:

- a. Neither party shall be obligated or liable hereunder to any party other than the second party to this Agreement.

(15) RESTRICTIONS ON LOBBYING:

- a. Contractor shall comply with all requirements of Section 1352, Title 31 of the U.S. Code, which prohibits all recipients of federal funds from using appropriated monies for lobbying activities.

(16) SUCCESSORS AND ASSIGNS:

- a. The rights and obligations herein shall inure to and be binding upon the successors and assigns of the parties hereto.

**KAMINSKI & HEYWARD STREET
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**CITY OF GEORGETOWN
SOUTH CAROLINA**

IN WITNESS WHEREOF, City and the Contractor have executed this agreement as of the date first written above.

CITY OF GEORGETOWN, SOUTH CAROLINA
(OWNER)

(SIGNATURE)

By: _____

(SEAL)

Title: _____

(CONTRACTOR)

(SIGNATURE)

By: _____

(CORPORATE SEAL)

Title: _____

Attest:

It's Secretary

Witness

(END OF SECTION)

**SECTION 00500
PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS THAT

(NAME OF CONTRACTOR)

(ADDRESS OF CONTRACTOR)

A Corporation Partnership, hereinafter called Principal, and

(NAME OF SURETY)

(ADDRESS OF SURETY)

Hereinafter called Surety, are held and firmly bound unto

THE CITY OF GEORGETOWN, SOUTH CAROLINA
(NAME OF OWNER)

1134 NORTH FRASER STREET, GEORGETOWN, SC 29440
(ADDRESS OF OWNER)

hereinafter called Owner, in the penal sum of (110% of total bid)
_____ Dollars _____ Cents (\$ _____),
in lawful money of the United States, for the payment of which sum well and truly to be made,
we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally,
firmly by these present.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal entered into a certain Contract with the Owner dated the _____ day of _____, 20____, a copy of which is hereto attached and made part hereof for **KAMINSKI STREET AND HEYWARD STREET WATER IMPROVEMENTS.**

NOW, THEREFORE, if the Principal shall well, truly, and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said Contract during the original term thereof, and any extensions thereof which may be granted by the Owner, with or without notice to the Surety, and if he shall satisfy all claims and demands incurred under such contract and fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

**KAMINSKI & HEYWARD STREET
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PROVIDED FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extensions of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

PROVIDED FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20____.

Signed, sealed and delivered in the presence of:

(PRINCIPAL - CONTRACTOR)

(SIGNATURE)

As to Principal

By: _____

Title: _____

(SURETY)

As to Surety

(SIGNATURE)

By: _____

ATTORNEY-IN-FACT
(Power of Attorney to be attached)

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

By: _____
(RESIDENT AGENT)

(RESIDENT AGENT COMPANY NAME)

(RESIDENT AGENT COMPANY ADDRESS)

(RESIDENT AGENT ADDRESS)

NOTES:

1. Date of Bond must not be prior to date of Contract.
2. If Contractor is a Partnership, all partners should execute Bond.
3. Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

(END OF SECTION)

**SECTION 00501
PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS THAT

(NAME OF CONTRACTOR)

(ADDRESS OF CONTRACTOR)

A Corporation Partnership, hereinafter called Principal, and

(NAME OF SURETY)

(ADDRESS OF SURETY)

Hereinafter called Surety, are held and firmly bound unto

THE CITY OF GEORGETOWN, SOUTH CAROLINA
(NAME OF OWNER)

1134 NORTH FRASER STREET, GEORGETOWN, SC 29440
(ADDRESS OF OWNER)

hereinafter called Owner, in the penal sum of (100% of total bid)
_____ Dollars _____ Cents (\$ _____),
in lawful money of the United States, for the payment of which sum well and truly to be made,
we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally,
firmly by these present.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal entered into a certain Contract with the Owner dated the _____ day of _____, 20____, a copy of which is hereto attached and made part hereof for **KAMINSKI STREET AND HEYWARD STREET WATER IMPROVEMENTS**.

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the prosecution of the work provided for in such contract, and any authorized extension of modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such work, and all insurance premiums on said work, and for all labor, performed in such work whether by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

and effect.

PROVIDED FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extensions of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

PROVIDED FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this _____ day of _____, 20__.

Signed, sealed and delivered in the presence of:

(PRINCIPAL - CONTRACTOR)

(SIGNATURE)

As to Principal

By: _____

Title: _____

(SURETY)

(SIGNATURE)

As to Surety

By: _____

ATTORNEY-IN-FACT
(Power of Attorney to be attached)

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

By: _____
(RESIDENT AGENT)

(RESIDENT AGENT COMPANY NAME)

(RESIDENT AGENT COMPANY ADDRESS)

(RESIDENT AGENT ADDRESS)

NOTES:

1. Date of Bond must not be prior to date of Contract.
2. If Contractor is a Partnership, all partners should execute Bond.
3. Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

(END OF SECTION)

**SECTION 00502
NOTICE OF INTENT TO AWARD**

OWNER: City of Georgetown, SC

PROJECT: **Kaminski Street and Heyward Street Water Improvements**

TO ALL BIDDERS

This is to notify all Bidders that it is the intent of the Owner to award a contract as follows:

NAME OF BIDDER: _____

DATE BIDS WERE RECEIVED: _____

AMOUNT OF BASE BID: \$ _____

ALTERNATE(S) ACCEPTED: \$ _____

TOTAL AMOUNT WITH ALTERNATE(S): \$ _____

The Owner has determined that the above named Bidder is responsible and has submitted the winning bid. The Owner may enter into a contract with this Bidder subject to the contract review by _____.

(Print or Type Name)

(Award Authority Title)

(Signature)

(Date Posted)

(END OF SECTION)

**SECTION 00503
NOTICE OF AWARD**

TO: _____

PROJECT DESCRIPTION: KAMINSKI STREET AND HEYWARD STREET WATER IMPROVEMENTS

PROJECT NO. : 1511 AND 1509

The City of Georgetown (Owner) has considered the bid dated _____, 20____, submitted by you for the above described work in response to its Advertisement for Bids and its Information for Bidders.

You are hereby notified that your bid has been accepted for items in the amount of \$_____.

You are required by the Information for Bidders to execute the Agreement and furnish the required Contractor's W-9 form, City business license, performance bond, payment bond, and certificates of insurance within ten (10) business days from the date of this notice to you. If you fail to execute said agreement and to furnish said bonds within ten (10) days from the date of this notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your bid as abandoned and as a forfeiture of your bid bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this _____ day of _____, 20_____.

CITY OF GEORGETOWN, SOUTH CAROLINA

By: _____

Title: _____

Acceptance of Notice

Receipt of the above Notice of Award is hereby acknowledged this _____ day of _____, 20_____.

(Signature)

By: _____

Title: _____

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

(END OF SECTION)

**NOTICE OF AWARD
00503**

**SECTION 00600
EMPLOYMENT ELIGIBILITY VERIFICATION REQUIREMENT**

- A. Contractor is required to comply with all applicable State and Federal employment eligibility verification requirements including but not limited to the following:
1. By signing its bid or proposal, Contractor certifies that it will comply with the applicable requirements of Title 41, Chapter 8 of the South Carolina Code of Laws and agrees to provide to the City of Georgetown upon request any documentation required to establish either: (a) that Title 41, Chapter 8 is inapplicable both to Contractor and its subcontractors or sub-subcontractors are in compliance with Title 41, Chapter 8. Pursuant to Section 41-8-70, "In addition to other penalties provided by law, a person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony, and upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both. "Contractor agrees to include in any contracts with its subcontractors language requiring its subcontractors to (a) comply with the applicable requirement of Title 41, Chapter 8, and (b) include in their contracts with the sub-subcontractors language requiring the sub-subcontractors to comply with the applicable requirements of Title 41, Chapter 8.
- B. Contractor is required to complete and submit the attached affidavit along with the executed contract documents.
- C. E-Verify.
1. In addition to completing and maintaining the federal employment eligibility verification form (Form I-9), Contractor must, within three (3) business days after employing a new employee, verify the employee's work authorization through the E-Verify federal work authorization program administered by the U.S. Department of Homeland Security. Employers may no longer confirm a new employee's employment authorization with a driver's license or state identification card.
 2. Contractor shall enroll in E-Verify at www.dhs.gov/e-verify.

CONTRACTOR AFFIDAVIT

SOUTH CAROLINA ILLEGAL IMMIGRATION REFORM ACT (Amended)

In accordance with the requirements of the South Carolina Illegal Immigration Reform Act, Contractor hereby certifies that it is currently in compliance with the requirements of Title 40, Chapter 8 of the S.C. Code Annotated and will remain in compliance with such requirements throughout the term of its contract with the Owner.

The Contractor hereby acknowledges that in order to comply with requirements of S.C. Code Annotated Section 41-8-20:

- (A) All private employers in South Carolina shall be imputed a South Carolina employment license, which permits a private employer to employ a person in this State. A private employer may not employ a person unless the private employer's South Carolina employment license and any other applicable licenses as defined in Section 41-8-10 are in effect and are not suspended or revoked. A private employer's employment license shall remain in effect provided the private employer complies with the provisions of this chapter.
- (B) All private employers who are required by federal law to complete and maintain federal employment eligibility verification forms or documents must register and participate in the E-Verify federal work authorization program, or its successor, to verify the work authorization of every new employee within three business days after employing a new employee. A private employer who does not comply with the requirements of this subsection violates the private employer's licenses.
- (C) The South Carolina Department of Employment and Workforce shall provide private employers with technical advice and electronic access to the E-Verify federal work authorization program's website for the sole purpose of registering and participating in the program.
- (D) Private employers shall employ provisionally a new employee until the new employee's work authorization has been verified pursuant to this section. A private employer shall submit a new employee's name and information for verification even if the new employee's employment is terminated less than three business days after becoming employed. If a new employee's work authorization is not verified by the federal work authorization program, a private employer must not employ, continue to employ, or reemploy the new employee.
- (E) To assist private employers in understanding the requirements of this chapter, the director shall send written notice of the requirements of this section to all South Carolina employers, and shall publish the information contained in the notice on its website.

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Nothing in this section shall create a legal requirement that any private employer receive actual notice of the requirements of this chapter through written notice from the director, nor create any legal defense for failure to receive notice.

- (F) If a private employer is a contractor, the private employer shall maintain the contact phone numbers of all subcontractors and sub-subcontractors performing services for the private employer. The private employer shall provide the contact phone numbers or a contact phone number, as applicable, to the director pursuant to an audit or investigation within seventy-two hours of the director's request.

The Contractor agrees to provide to the Owner upon request any documentation required to establish the applicability of the South Carolina Illegal Immigration Reform Act (Amended) to the contractor, subcontractor or sub-subcontractor. The Contractor further agrees that it will upon request provide the Owner with any documentation required to establish that the Contractor and any subcontractors or sub-subcontractors are in compliance with the requirements of Title 41, Chapter 8 of the S.C. Code Annotated.

Date: _____

(Signature)

By: _____

Title: _____

(END OF SECTION)

**SECTION 00606
NOTICE TO PROCEED**

TO: _____

PROJECT DESCRIPTION: **KAMINSKI STREET AND HEYWARD STREET WATER IMPROVEMENTS**

OWNER: City of Georgetown, South Carolina

PROJECT NUMBER: **1511 AND 1509**

This is your Notice to Proceed with the Work, on the above-mention Project, in accordance with The Agreement dated _____, 20____. You are authorized to commence Work on _____ 20____, and you are required to complete the Work within **One Hundred (100)** consecutive calendar days thereafter.

The date of final completion for all Work is therefore: _____ 20____.

You are required to return an acknowledged copy of this Notice to Proceed to the Owner.

Dated this _____ day of _____, 20____.

CITY OF GEORGETOWN, SOUTH CAROLINA

(Signature)

By: _____

Title: _____

Acceptance of Notice

Receipt of the above Notice to Proceed is hereby acknowledged this the _____ day of _____, 20____.

(Signature)

By: _____

Title: _____

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

(END OF SECTION)

**NOTICE TO PROCEED
00606-2**

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

**SECTION 00610
APPLICATION FOR PAYMENT**

TO: CITY OF GEORGETOWN, SC

PAY REQUEST NO.: _____

FROM: _____

Distribution to:

VIA: _____

_____ Owner

_____ Engineer

_____ Contractor

PROJECT: Kaminski Street and Heyward

Street Water Improvements

PROJECT NO.: 1511 and 1509

DATE: _____

CONTRACT FOR: _____

CONTRACTOR'S APPLICATION FOR PAYMENT

CHANGE ORDER SUMMARY			
Change Orders approved in previous months by Owner		ADDITIONS	DEDUCTIONS
TOTALS:			
Approved this Month			
Number	Date Approved		
TOTALS:			
Net changes by Change Order			

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates of Payment were issued and payments received from the Owner, and that current payment shown herein are now due.

CONTRACTOR:

By: _____

Date: _____

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

Application for Payment, as indicated below, in connection with the Contract.

(Continuation Sheet is attached)

1 – ORIGINAL CONTRACT SUM	\$
2 – Net changes by CHANGE ORGERS	\$
3 – CONTRACT SUM TO DATE (Line 1 + Line 2)	\$
4 – TOTAL COMPLETED AND STORED TO DATE ("G" on Continuation Sheet)	\$
5 – RETAINAGE ("P" on Continuation Sheet)	\$
6 – TOTAL EARNED LESS RETAINAGE (Line 4 – Line 5)	\$
7 – LESS PREVIOUS CERTIFICATES FOR PAYMENT	\$
8 – CURRENT PAYMENT DUE	\$
9 – BALANCE TO FINISH, PLUS RETAINAGE (Line 3 – Line 5)	\$

State of: _____ County of: _____

Subscribed and sworn to before me this _____ day of _____ 20__.

Notary Public: _____ My Commission Expires: _____

CONTRACTOR’S APPLICATION FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the Engineer certifies to the Owner that to the best of the Engineer's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED. Some defects or problems with construction items may not be determined until final testing and operation of the system is performed. The Engineer cannot be held liable for approval for partial payments for the installation of these items from which the evidence of defects or problems were not determined until after the request for payment was approved.

AMOUNT CERTIFIED \$ _____

(Attach explanation if amount certified differs from amount applied for.)

ENGINEER:

By: _____ Date: _____

OWNER:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are not without prejudice to any rights of the Owner or Contractor under this Contract.

**SECTION 00620
CONTRACTOR'S AFFIDAVIT**

The State of _____ Date: _____
The County of _____ The City of _____
_____ of _____
(Officer's Name) (Officer's Title) (Contractor's Name)

being duly sworn, deposed and says that _____ has furnished
(Contractor's Name)
labor and materials entering into the Kaminski Street and Heyward Street Water Improvements
(Project Name)
Project dated _____ with the City of Georgetown, South Carolina.

_____ states further that this officer has full knowledge of all
(Contractor's Name)
obligations for such labor and materials which have entered into and become part of that certain project known and designated above, and that this officer further deposes and says that all debts and other obligations for such labor and materials have been fully and completely paid for in good and lawful money of the United States of America and that there are no suits for damages against them proceeding, prospective and/or that there are no suits for damages against them proceeding, prospective, or otherwise, in consequence of their operations on the above said project.

The said _____ will hold the Owner, the City of Georgetown
(Contractor's Name)
South Carolina, blameless of any and all mechanic's liens that may be hereafter entered or filed for record, so as to constitute charge against said premises for work or labor done or materials furnished by them.

IN WITNESS HEREOF, this officer has heretofore put his hand and seal:

(Officer's Name)
I, _____, Notary Public in and for the above named County and
State do hereby certify that _____ personally know to me to be the
(Officer's Name)
affiant in the foregoing Affidavit, personally appeared before me this day and, having been duly sworn, deposed and says the facts set forth in the above Affidavit are true and correct.

WITNESS my hand and seal this _____ day of _____ 20_____.

Notary Public for the State of _____
My Commission Expires: _____

**SECTION 00630
CONTRACT CHANGE ORDER**

DATE: _____

PROJECT: Kaminski Street and Heyward Street
Water Improvements

CHANGE ORDER #: _____

PROJECT #: 1511 and 1509

Description of and Reason for Change: _____

Itemization of Proposed Change and Basis for Payment

Original Contract Price \$ _____

Previous Change Orders \$ _____

This Change, (An Addition) (A Deduction) of \$ _____

Proposed Revised Contract Price \$ _____

Additional funds shall be provided in the following manner: _____

Extension of Contract Time Required: _____ days.

Revised Contract Completion Date: _____

Accepted by the Contractor:

By: _____

Date: _____

Recommended by _____ :

By: _____

Date: _____

Approved by the Owner:

By: _____

Date: _____

**SECTION 00700
GENERAL CONDITIONS**

1. CONTRACT AND CONTRACT DOCUMENTS. The drawings (plans), specifications and addenda, hereinafter enumerated in Section 00010, shall form part of this contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The table of contents titles, heading, running headlines, and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the contract documents and in no way affect, limit, or cast light on the interpretations of the provisions to which they refer.

<u>Contents</u>	
1. Contract and Contract Documents	27. Acceptance of Final Payment as Release
2. Definitions	28. Payments by Contractor
3. Additional Instructions and Detail Drawings	29. Insurance
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5. Materials, Services, and Facilities	31. Assignments
6. Contractor's Title to Materials	32. Mutual Responsibility of Contractors
7. Inspection and Testing of Materials	33. Separate Contracts
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9. Patents	35. Engineer's Authority
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11. Contractor's Obligations	37. Use of Premises and Removal of Debris
12. Weather Conditions	38. Quantities of Estimate
13. Protection of Work and Property, Emergency	39. Rights-of-Way and Suspension of Work
14. Interpretations	40. Warranty for One Year After Completion of Contract
15. Reports, Records, and Data	41. Notice and Service Thereof
16. Superintendence by Contractor	42. Required Provisions Deemed Inserted
17. Changes in Work	43. Protection of Lives and Health
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23. Right of Owner to Terminate Contract	
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2. DEFINITIONS. The following terms as used in this contract are respectively defined as

follows:

Wherever in the specifications or upon the drawings the words “directed”, “required”, “permitted”, “ordered”, “designated”, “prescribed”, or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation or prescription of the City is intended; and similarly, the words “approved”, “acceptable”, “satisfactory”, or words of like import shall mean approved by, or acceptable to, or satisfactory to the City, unless otherwise expressly stated.

- A. Contractor. A person, firm, or corporation with whom the contract is made by the Owner.
 - B. Subcontractor. A person, firm, or corporation supplying labor and materials, or only labor, for work at the site of the project for and under separate contract or agreement with the Contractor.
 - C. Work on or at the Project. Work to be performed at the location of the project, including the transportation of materials and supplies to or from the location of the project by employees of the Contractor and any Subcontractor.
3. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS. The Contractor will be furnished additional instructions and detail drawings as necessary to carry out the work included in the Contract. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry on the work in accordance with the additional detail drawings and instructions. The Contractor and Engineer will prepare jointly:
- A. A schedule fixing the dates at which special detail drawings will be required; such drawings, if any, to be furnished by the Engineer in accordance with said schedule; and
 - B. A schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacture, testing, and installation of materials, supplies, and equipment, and the completion of the various parts of the work; each such schedule to be subject to change from time to time in accordance with the progress of the work.
4. SHOP DRAWINGS AND SAMPLES. Submit to the Engineer for approval, in accordance with the requirement of Section 01340
- A. Samples. Contractor shall also submit to the Engineer for approval, all samples required by Section 01340. All samples will have been checked by and stamped

with the approval of the Contractor, identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended.

- B. Deviations. At the time of each submission, Contractor shall in writing call the Engineer's attention to any deviations that the Shop Drawings or Samples may have from the requirements of the Contract Document.
 - C. Engineer's Review. Engineer will review and approve with reasonable promptness Shop Drawings and Samples, but his review and approval shall be only for conformance with the design concept of the project and for compliance with the information given in the Contract Documents. The approval of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor shall make any corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and resubmit new samples until approved. Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by Engineer on previous submissions. Contractor's stamp of approval on any Shop Drawing or sample shall constitute a representation to Owner and Engineer that Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or he assumes full responsibility for doing so, and that he has reviewed or coordinated each Shop Drawing or sample with the requirements of the work and Contract Documents
 - D. Contractor's Records. Where a Shop Drawing or sample submission is required by the Specifications, no related work shall be commenced until the submission has been approved by the Engineer. A copy of each approved Shop Drawing and each approved sample shall be kept in good order by Contractor at the site and shall be available to Engineer.
 - E. Contractor's Responsibility. Engineer's approval of Shop Drawings or sample shall not relieve Contractor from his responsibility for any deviations from the requirements of the Contract Documents unless Contractor has in writing called the Engineer's attention to such deviation at the time of submission and Engineer has given written approval to the specific deviation, nor shall any approval by Engineer relieve Contractor from Responsibility for errors or omissions in the Shop Drawings.
5. MATERIALS, SERVICES, AND FACILITIES shall be furnished by the Contractor.
- A. 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, lights, power, transportation, superintendent, 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.

- B. Any work necessary to be performed after regular working hours, on Sundays, or legal holidays, shall be performed without additional expense to the Owner.
6. CONTRACTOR'S TITLE TO MATERIALS. No materials or supplies for the work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims, or encumbrances.
7. INSPECTION AND TESTING OF MATERIALS. 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 Owner. The cost of such inspection and testing shall be paid by the Contractor.
- A. Certification by Contractor. Where the detailed specifications call for certified copies of mill or shop tests to establish conformance of certain materials with the specifications, it shall be the responsibility of the Contractor to assure delivery of such certifications to the Owner. No materials or finished articles shall be incorporated in the work until such materials and finished articles have passed the required tests. The Contractor shall promptly segregate and remove rejected material and finished articles from the site of the work.
8. "OR EQUAL" CLAUSE. The phrase "or equal" shall be construed to mean that material or equipment will be acceptable only when, in the judgment of the Engineer, they are composed of parts of equal quality, equal workmanship and finish, designed and constructed to perform or accomplish the desired result as efficiently as the indicated brand, pattern, grade, class, make, or model. Written approval will be obtained from the Engineer prior to installation.
9. PATENTS. The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents. If the Contractor uses any design, device, or material covered by letter, patent, or copyright, he shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device, or material. It is mutually agreed and understood that, with exception, the contract prices shall include all royalties or costs arising from the use of such design, device, or materials, in any way involved in the work. The Contractor and/or his sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringements by reason of the use of such patented or copyrighted design, device, or materials or any trademark or copyright in connection with work agreed to be performed under this contract, and shall indemnify the Owner for any cost, expense, or damage which it may be obligated to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

10. SURVEYS, LAWS, AND REGULATIONS. The Contractor shall comply with the following:
 - A. Construction staking shall be the responsibility of the Contractor.
 - B. Laws and Regulations. The Contractor shall keep himself fully informed of all laws, ordinances, and regulations of the State, City, and County in any manner affecting those engaged or employed in the work, or the materials used in the work, or in any way affecting the conduct of the work, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. If any discrepancy or inconsistency should be discovered in this contract, or in the drawings or specifications herein referred to, in relation to any such law, ordinance, regulation, order, or decree, he shall forthwith report the same in writing to the Owner. He shall, at all times, himself observe and comply with all such existing and future laws, ordinance, and regulations (to the extent that such requirements do not conflict with Federal laws or regulations) and shall protect and indemnify the Owner and its agents against any claims or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself or by his employees.
11. CONTRACTOR'S OBLIGATIONS. The Contractor shall, in good workman-like manner do and perform all work and furnish all supplies and materials, machinery, equipment, facilities, and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with provisions of this contract and said specifications, and in accordance with the plans and drawings covered by this contract and any and all supplemental plans and drawings and in accordance with the directions of the Engineer as given from time to time during the progress of the work. He shall furnish, erect, maintain, and remove such construction plant and such temporary works as may be required. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitation of the contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Engineer and the Owner.
12. WEATHER CONDITIONS. In the event of temporary suspension of work or during inclement weather, or whenever the Engineer shall direct, the Contractor will, and will cause his subcontractors to, protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Engineer, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors to so protect its work, such materials shall be removed and replaced at the expense of the Contractor.
13. PROTECTION OF WORK AND PROPERTY, EMERGENCY. The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this contract. He shall at all times safely guard and protect his own work and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss, or injury. In case of emergency which threatens loss or injury of property and/or

safety of life, the Contractor will be allowed to act, without previous instructions from the Engineer, in a diligent manner. He shall notify the Engineer immediately thereafter. Any claim for compensation by the Contractor due to such extra work shall be promptly submitted to the Engineer for approval. The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in paragraph entitled "Changes in Work" of these specifications.

14. INTERPRETATIONS. If any person contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of these proposed contract documents, he may submit to the Engineer a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt and actual delivery. Any interpretation of such documents will be made only by addendum duly issued, and a copy of such addendum will be mailed or delivered to each person receiving a set of such documents. The Owner will not be responsible for any other explanation or interpretation of such documents which anyone presumes to make on behalf of the Owner before expiration of the ultimate time set for the receipt of bids.
15. REPORTS, RECORDS, AND DATA. The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records, and other data as the Owner may request concerning work performed or to be performed under this contract.
16. SUPERINTENDENCE BY CONTRACTOR. The Contractor shall employ only competent and skilled men on the work. The Contractor shall have competent Superintendent or Foreman present at all times when the work is in progress, who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Engineer and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll. The Contractor shall, upon demand from the Engineer, immediately remove any superintendent, foreman, or workman whom the Engineer may consider incompetent or undesirable.
17. CHANGES IN WORK. No changes in the work covered by the approved contract documents shall be made without having prior written approval of the Owner. Charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of, the following methods:
 - A. Unit bid prices previously approved.
 - B. An agreed lump sum.
 - C. The actual cost of:
 1. Labor, including social security and unemployment contributions.
 2. Materials.
 3. The ownership or rental cost of construction equipment
 4. Bond.

To the cost under (C) there shall be added a fixed fee to be agreed upon but not to exceed 15 percent (15%) of the estimated cost of the work. The fee shall be compensation to cover the cost of supervision, insurance, small tools, overhead, profit, and any other general expenses.

18. EXTRAS. Without invalidating the contract, the Owner may order extra work or make changes by altering, adding to, or deducting from the work, the contract sum being adjusted accordingly, and the consent of the surety being first obtained where necessary or desirable. All the work of the kind bid upon shall be paid for at the price stipulated in the proposal, and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the Owner, or the Engineer acting officially for the Owner, and the price is stated in such order. Extra work shall be performed only upon the execution of authorized change orders as set forth in the preceding paragraph.
19. TIME FOR COMPLETION AND LIQUIDATED DAMAGES. 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.
- A. To any preference, priority, or allocation order duly issued by the Government.
 - B. To unforeseeable cause beyond the control and without the fault or negligence of the Contractor including, but not restricted to, acts of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner; fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, hurricanes, and tornadoes.
 - C. To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (A) and (B) of this article

Provided, further that the Contractor shall, within seven (7) 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 delay, who shall ascertain the facts and extent of delay and notify the Contractor with a reasonable time of its decision in the matter, and grant such extension of time as the Owner shall deem suitable and just.

Normal weather conditions for the project area are taken into consideration in the time for completion of the contract; therefore, no extension of time will be extended for normal weather conditions, with the exception of hurricanes and tornadoes.

20. CORRECTION OF WORK. All work, all materials, whether incorporated in the work or not, all processes of manufacturer, 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, processes of manufacture, and methods of construction of 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 documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as, in the judgment of the Engineer, shall be equitable.

21. SUBSURFACE CONDITIONS FOUND DIFFERENT. 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 that they materially differ from those shown on the plans or indicated in the specifications, he will, in a timely manner, make such changes in the plans and/or specifications as he may find necessary; any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in paragraph 17 of these specifications.
 - A. Where no specific subsurface conditions are indicated or specified, no increase in cost will be considered in regards to subsurface conditions encountered
22. CLAIMS FOR EXTRA COSTS. No claim for extra work or cost shall be allowed unless the same was done in pursuance of a written order of the Engineer, as aforesaid, and the claim presented with the first estimate after the changes or extra work is done. When work is performed under the terms of subparagraph 17(C) of these specifications, the Contractor shall furnish satisfactory bills payrolls and vouchers covering all items of cost and when requested by the Owner, give the Owner access to accounts relating thereto.
23. RIGHT OF OWNER TO TERMINATE CONTRACT. In the event that any of the provisions of this contract are violated by the Contractor or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the surety of its intention to terminate the contract, such notices to contain the reasons for such intention to terminate the contract, and unless within ten (10) days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement or correction be made, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the surety and the Contractor, and the surety shall have the right to take over and perform the contract; provided, however, that if the surety does not commence performance thereof within ten (10) days from the date of the mailing to such surety of notice of termination, the Owner may take over the work and prosecute same to completion by the contract or by force account for the account and at the expense of the Contractor, and the Contractor and his surety shall be liable to the Owner for any excess cost occasioned thereby, and in such event the Owner may take possession of and utilize in completion the work such materials, appliances, and plant as may be on the site of the work and necessary therefore. If the Contractor should die, be declared an incompetent, be declared bankrupt or insolvent, make an assignment for the benefit of creditors during the term of his contract, the Owner may terminate the contract in the manner and under the procedure set forth above with the exception that no notices to the Contractor shall be required, but in lieu thereof, the Owner must make a reasonable effort to notify the estate of the Contractor, his guardian, assignee, or legal representative of the intention to

terminate and fact of termination, if there is any such guardian, assignee, or legal representative at the time of the Owner desires to terminate.

24. CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES. Immediately after execution and delivery of the contract and before the first partial payment is made, the Contractor shall deliver to the Owner
- A. Construction Schedule. An estimated construction progress schedule in 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 and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule.
 - B. Contractor's Estimate. The Contractor shall also furnish:
 - 1. A detailed estimate, giving a complete breakdown of the contract price; and;
 - 2. Periodic itemized estimates of work done for the purpose of making partial payments thereon. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for addition to or deductions from the contract price.
 - C. Materials and Equipment Delivery Schedule. The Contractor shall also prepare a schedule of anticipated shipping dates for materials and equipment. It is intended that equipment and materials be so scheduled as to arrive at the job site just prior to time for installation to prevent excessive materials on hand for inventory and the necessity for extensive storage facilities at the job site.
25. PAYMENT TO CONTRACTOR shall be made according to the following:
- A. Contractor shall submit separate monthly invoices for work completed for both project #1509 and #1511 along with a monthly progress report. No later than thirty (30) days after the City's Engineer approves the request for payment, the Owner shall make a progress payment to the Contractor on the basis of a duly certified approved estimate of the work performed during the preceding calendar month under this contract. The City requires that checks are to be mailed by USPS to the contractor. To insure the proper performance of this contract, the Owner will retain a portion of each payment until final completion and acceptance of all work covered by this contract in accordance with the following:
 - 1. Retention of 10% of payment claimed until construction is complete.
 - B. In preparing a payment request, the material delivered on the site and preparatory work done may be taken into consideration.

- C. All material and work covered by partial payments shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the Owner to require the fulfillment of all the terms of the contract.
- D. Owner's Right to Withhold Certain Amounts and Make Application Thereof. The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, material, men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If the Contractor fails so to do, then the Owner may, after having served written notice on the contractor, either pay unpaid bills, of which the Owner has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his surety. In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor, and the Owner shall not be liable to the Contractor for any such payment made in good faith.
26. ACCEPTANCE OF WORK AND FINAL PAYMENT. Before final acceptance of the work and payment to the Contractor of the percentage retained by the Owner, the following requirements shall be compiled with:
- A. Final Inspection. Upon notice from the Contractor that their work is completed, the Engineer will make a final inspection of the work and shall notify the Contractor of all instances where their work fails to comply with the specifications, as well as any defects he may discover. The Contractor shall immediately make such alterations as are necessary to make the work comply with the specifications and to satisfaction of the Engineer.
- B. Operating Test. After the alterations for compliance with the specifications have been made, and before acceptance of the whole or any part of the work, it shall be subjected to test to determine that it is in accordance with the specifications. The Contractor shall maintain all work in first class condition for a thirty (30) day operating period after the work has been completed as a whole, the final inspection has been made, and the Engineer has notified the Contractor in writing that the work has been finished to his satisfaction. The retained

percentage as provided herein will not become due or payable to the Contractor until after the thirty (30) day operating period has expired.

- C. Cleaning Up. Before the work is considered as complete, all rubbish and unused material due to or connected with the construction must be removed and the premises left in a condition satisfactory to the Owner. Streets, curbs, crosswalks, pavements, sidewalks, fences, and other public and private property disturbed or damages should be restored to their former condition. Final acceptance will be withheld until such work is finished.
 - D. Liens. Final acceptance of the work will not be granted and the retained percentage will not be due or payable until the Contractor has furnished the Owner proper and satisfactory evidence under oath that all claims for labor and material employed or used in the construction of the work under this contract have been settled, and that no legal claims can be filed against the Owner for such labor or material.
 - E. Final Estimate. Upon completion of all cleaning up, alterations, and repairs required by the final inspection or operating test, the satisfactory completion of the operating test, and upon submitting proper and satisfactory evidence to the Owner that all claims have been settled, the Contractor shall then prepare his final estimate. After review and approval of the final estimate by the Engineer and the Owner, the payment shall then become due.
27. ACCEPTANCE OF FINAL PAYMENT AS RELEASE. The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and others relating to or arising out of this work. No payment, final or otherwise, shall operate to release the Contractor of his sureties from any obligations under this Contract or his sureties from any obligations under this Contract or the performance and payment bond.
28. PAYMENTS BY CONTRACTOR. The Contractor shall pay:
- A. For all transportation and utility services not later than the 20th day of the calendar month following that in which services are rendered;
 - B. For all materials, tools, and other expendable equipment to the extent of ninety (90) percent of the cost thereof not later than the 20th day of the calendar month following that in which such materials, tools, and equipment are delivered at the site of the project, and the balance of the cost thereof not later than the 30th day following completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used; and

- C. To each of his subcontractors not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his subcontractors to the extent of each subcontractor's interest therein.
29. INSURANCE. The Contractor shall procure and shall maintain during the life of this contract, whether such operation be by himself or by a subcontractor or any- one directly or indirectly employed by either of them, such insurance as required by statute and/or ordinance to adequately protect the Owner from any claims or damages, including bodily injury or death, which may arise from them during operations under this contract
- A. Limits of Liability. Insurance shall be obtained for not less than the limits of liability as specified in Section 00110 entitled INSURANCE REQUIREMENTS.
- B. Certificates of Insurance. The Contractor shall furnish the Owner certificates shown in the type, amount, class of operations covered, effective dates, and dates of expiration of the policies. Certificates showing proof of such insurance shall be submitted to the Owner prior to commencement of services under this Agreement. Such certificates shall contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered except after ten (10) days written notice has been received by the Owner". Further, it shall be an affirmative obligation upon the Contractor to advise the City's Risk Manager within two days of the cancellation or substantive
30. PAYMENT AND PERFORMANCE BONDS. The Contractor shall furnish a one hundred and ten (110) percent performance bond and a one hundred (100) percent payment bond as security for the faithful performance of this contract, as 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 bond and payment bond shall be in separate instruments. Before the final acceptance, each bond must be approved by the Owner.
31. ASSIGNMENTS. 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 is agreed that the right of 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.
32. MUTUAL RESPONSIBILITY OF CONTRACTORS. If through acts of neglect on the part of the Contractor, any other contractor or any sub- contractor 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 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.

33. SEPARATE CONTRACTS. The Contractor shall coordinate his operations with those of other contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractor, including his subcontractor, shall keep informed of the progress and the detail work of other contractors and shall notify the Engineer immediately of lack of progress or defective workmanship on the part of other contractors. Failure of a contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.
34. SUBCONTRACTING shall comply with the following:
- A. The Contractor may utilize the services of specialty contractors on those parts of the work which under normal contracting practices are performed by specialty subcontractors.
 - B. The Contractor shall not award any work to any subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require.
 - C. The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he for the acts and omissions of persons employed by him.
 - D. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of General Conditions and other contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contract under any provisions of the contract documents.
 - E. Nothing contained in this contract shall create any contractual relation between any subcontractor and the Owner.
35. ENGINEER'S AUTHORITY. The Engineer shall determine the amount, quality, acceptability, and fitness of the several kinds of work and materials which are to be paid for under this contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Engineer's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any questions shall arise between the parties hereto relative to said contract or specifications, the determination or decision of the Engineer shall be a condition precedent to the right of the Contractor to

receive any money or payment for work under this contract affected in any manner or to any extent by such questions.

- A. Interpretation of Drawings and Specifications. The Engineer shall decide the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work, which may arise between the Contractor under this contract and other contractors performing work for the Owner, shall be adjusted and determined by the Engineer.

36. STATED ALLOWANCES: N/A

37. USE OF PREMISES AND REMOVAL OF DEBRIS. The Contractor expressly undertakes at his own expense:

- A. To take every precaution against injuries to persons or damage to property. To make arrangements with adjacent property owners for parking of equipment if necessary.
- B. To store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other contractors.
- C. To place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work.
- D. To clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly, and workmanlike appearance.
- E. Before final payment to remove all surplus material, false work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat, orderly condition.
- F. To effect all cutting, fitting, or patching of his work required to make the same conform to the plans or specifications, and, except with the consent of the Engineer, not to cut or otherwise alter the work of any other contractor.

38. QUANTITIES OF ESTIMATE. The estimated quantities of work to be done and materials to be furnished under this contract, shown in any of the documents, including the proposal, are given for use in comparing bids, and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the work contemplated by this contract,

and such increase or diminution shall in no way vitiate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

39. RIGHTS-OF-WAY AND SUSPENSION OF WORK. The Owner shall furnish all land and rights-of-way necessary for the carrying out of this contract and the completion of the work herein contemplated, and will use due diligence in acquiring said land and rights-of-way as speedily as possible. But it is possible that all lands and rights-of-way may not be obtained as herein contemplated before construction begins, in which event the Contractor shall begin his work upon such land and rights-of-way as the Owner may have previously acquired, and no claim for damages whatsoever will be allowed by reason of the delay in obtaining the remaining lands and rights-of-way.

Should the Owner be prevented or enjoined from proceeding with the work, or from authorizing its prosecution, either before or after the commencement, by reason of any litigation or by reason of its ability to procure any lands or rights-of-way for said work, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay or to withdraw from the contract except by consent of the Owner; but time for completion of the work will be extended to such time as the Owner determines will compensate for the time lost by such delay, such determination to be set forth in writing.

40. GENERAL WARRANTY FOR ONE YEAR AFTER COMPLETION OF CONTRACT. For a period of at least one (1) year after the completion of the contract, the Contractor warrants the fitness and soundness of all work done and materials and equipment put in place under the contract, and neither the final certificate of payment nor any provision in the Contract Documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility. **This warranty period shall be extended for a period of two (2) years after the completion of contract for all SCDOT roadway and shoulder work.**

41. NOTICE AND SERVICE THEREOF. Any notice to any Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted by registered mail to said Contractor or his authorized representative on the work, or is deposited in the regular United States Mail in sealed, postage prepaid envelope, and the receipt thereof is acknowledged by the Contractor.

A. Owner's Notice. All papers required to be delivered to the Owner shall be delivered as indicated in Section 00015 entitled REFERENCES.

42. REQUIRED PROVISIONS DEEMED INSERTED. Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein, and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted or is not correctly inserted, then upon the application of either party, the contract shall forthwith be physically amended to make such insertion or correction.

43. PROTECTION OF LIVES AND HEALTH. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
- A. All persons on the Site or who may be affected by the Work:
 - B. All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - C. Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury, or loss to any property caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or Engineer's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

44. WAGES AND OVERTIME COMPENSATION. The Contractor and each of his subcontractors shall comply with all applicable State and local laws or ordinances with respect to the hours worked by laborers and mechanics engaged in work on the project and with respect to compensation for overtime.
45. PROHIBITED INTERESTS. No official of the Owner, who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept, or approve or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction, or material supply contract or any sub- contract in connection with the construction of the project, shall become directly or indirectly interested personally in this

contract or in any part hereof. No officer, employee, architect, attorney, engineer, or inspector of and on behalf of the Owner to exercise any legislative, executive, supervisory, or other similar functions in connection with the construction of the project shall become directly or indirectly interested personally in this contract or in any part hereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

46. CONFLICTING CONDITIONS. Any provisions in any of the Contract Documents which may be in conflict or inconsistent with any of the paragraphs in these General Conditions shall be void to the extent of such conflict or inconsistency.

47. INDEMNIFICATION

A. The Contractor will indemnify and hold harmless the Owner, the Engineer, and their agents and employees from and against all claims, damages, losses, and expenses including attorney's fees arising out of or resulting from the performance of the Work, provided that any such claims, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act of omission of the Contractor and Sub-Contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

B. In any and all claims against the Owner or the Engineer, or any of their agents or employees, by an employee of the Contractor, any Sub-Contractor, anyone directly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts, or other employee benefit acts.

(END OF SECTION)

**SECTION 00800
SUPPLEMENTARY CONDITIONS**

1. WORKING HOURS

The Contractor is allowed to work during normal working hours from 7:00 AM to 6:00 PM unless warranted due to emergency conditions.

If the Contractor is to work outside normal working hours, then it is the Contractor's responsibility to contact all residents within the project limit and give them a notice of work being performed at least twenty four (24) hours prior to the start of work. All efforts must be made by the contractor to notify the residents verbally. If all efforts of verbal notifications fail, then the Contractor may use a door hanger to notify the resident. A copy of the door hanger must be sent to the City Engineer for approval.

2. PEDESTRIAN PROTECTION AND TRAFFIC CONTROL

The Contractor must provide pedestrian protection and traffic control in accordance with MUTC and SCDOT standard specifications.

3. BUSINESS LICENSE AND PERMITS

The selected contractor shall be required to obtain a City of Georgetown business licenses. Contact Jestin Gilliard, Revenues Manager, 843-545-4041, to obtain a City business license. Contractor shall obtain a construction permit from the City of Georgetown. These expenses shall be included in the total bid unit price.

4. PROJECT SCHEDULE OF EVENTS

The following is the schedule of events listed in the order of occurrence, showing the major milestones from issuance of the RFP to the contract award:

MILESTONE EVENT	DATE
1. Request For Bid (RFB) Advertisement	Wednesday, April 11, 2018
2. Mandatory Pre-Bid Meeting held at Water Utilities Conference Room	Wednesday, April 25, 2018 at 2:00 PM
3. Deadline for questions by interested participants and emailed to lagarennew@wseinc.com	Friday, April 27, 2018 before 2:00 PM
4. Post Addendum (if applicable) on City's website www.cogsc.com under Bids	Wednesday, May 2, 2018
5. Bid due date	Tuesday, May 8, 2018 by no later than 2:30 PM
6. Approval of Contract by City Council (tentative)	May 17, 2018
7. Notice to Proceed (tentative)	June 5, 2018
8. Completion Date	100 Days after NTP

(END OF SECTION)

**SECTION 00900
DRAWING INDEX**

<u>DRAWING NO.</u>	<u>TITLE</u>
C-100	COVER SHEET
C-101	NOTES AND LEGEND
C-102	SEDIMENT AND EROSION CONTROL DETAILS
C-103	SEDIMENT AND EROSION CONTROL PLAN
C-104	PEDESTRIAN SAFETY PLAN
C-200	HEYWARD STREET
C-201	KAMINSKI STREET, STA 0+00 TO STA 7+00
C-202	KAMINSKI STREET, STA 7+00 TO STA 16+00
C-300	DETAILS, WATER
C-301	DETAILS, WATER
C-302	DETAILS, SCDOT
C-303	DETAILS, SCDOT

(END OF SECTION)

**SECTION 01000
LOCAL VENDOR PREFERENCE OPTION –
MANDATORY VENDOR SUBMITTAL FORM**

Local Vendor Preference Option

1. A vendor shall be deemed a Local Georgetown City/County vendor for the purposes of this Section if such vendor is an individual, partnership, association or corporation that is authorized to transact business within the State, maintains an office in Georgetown County, and maintains a representative inventory or commodities within the City/County on which the bid is submitted, and has paid all taxes and business license fees duly assessed.
2. This option allows the lowest local bidder whose bid is within five-percent (5%) of the lowest non-local Bidder to match the bid submitted by the non-local Bidder and thereby be awarded the contract. This preference shall apply only when (a) the total dollar purchase is \$10,000 or more; (b) the vendor has a physical business address located and operating within the limits of Georgetown County and has been doing business in the City/County for a period of twelve (12) months or more; and (c) the vendor provides proof of payment of all applicable Georgetown City/County taxes, business license and fees if so requested.
3. Should the lowest responsible and responsive Georgetown City/County bidder not exercise its right to match the bid as granted herein, the next lowest qualified Georgetown City/County bidder shall have that right and so on. The right to match the non-Georgetown City/County bidder's bid shall be exercised within 24 hours of notification.
4. In order to qualify for the local preference authorized by this Section, the vendor seeking same shall be required to submit with its bid a statement containing relevant information which demonstrates compliance with the provisions of this Section. This statement shall be on the "MANDATORY VENDOR SUBMITTAL" form included in this bid document. Failure to provide such affidavit at the time the bidder submits its bid shall constitute a waiver of any claim for preference.
5. For all contracts for architecture, professional engineering, or other professional services governed by Section 2-187, Professional and Construction Services, the City shall include the local business status of a firm among the factors considered when selecting which firms are "most highly qualified." In determining which firm is the "most qualified" for purposes of negotiating a satisfactory contract, preference shall be given to a local business where all other relevant factors are equal.
6. Local preference shall not apply to the following categories of contracts:
 - (a) Goods or services provided under a cooperative purchasing agreement or similar "piggyback" contract;
 - (b) Contracts for professional services except as provided for in Section 2-187 above;

**KAMINSKI & HEYWARD STREET
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

- (c) Purchases or contracts which are funded, in whole or in part, by a governmental or other funding entity, where the terms and conditions of receipt of the funds prohibit the preference;
- (d) Purchases or contracts made pursuant to a noncompetitive award process, unless otherwise provided by this section; or
- (e) Any bid announcement which specifically provides that the general local preference policies set forth in this section are suspended due to the unique nature of the goods or services sought, the existence of an emergency as found by either
City Council or City Administrator, or where such suspension is, in the opinion of the City Attorney, required by law.



MANDATORY VENDOR SUBMITTAL FORM

AN ORDINANCE TO AMEND
CHAPTER 2 ADMINISTRATION - ARTICLE IV
PROCUREMENT – JANUARY 19, 2017

SECTION 2-185 COMPETITIVE SEALED QUOTES LOCAL VENDOR PREFERENCE

ARTICLE IV.
PROCUREMENT
DIVISION 2. ETHICS IN CITY CONTRACTING

I certify that [Company Name] _____
is a **Resident Bidder** of Georgetown City/County as defined in the City of Georgetown
Ordinance Chapter 2 Administration, Article IV Procurement, Section 2-185, and our principal
place of business is _____ [City and State].

I certify that [Company Name] _____
is a **Non-Resident Bidder** of Georgetown City/County as defined in the City of Georgetown
Ordinance Chapter 2 Administration, Article IV Procurement, Section 2-185, and our principal
place of business is _____ [City and State].

(X) _____

Signature of Company Officer

**SECTION 01000
LOCAL VENDOR PREFERENCE OPTION –
MANDATORY VENDOR SUBMITTAL FORM**

(END OF SECTION)

**SECTION 01046
CONTROL OF WORK AND MATERIALS**

PART 1 – GENERAL (NOT APPLICABLE)

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.01 HAULING, HANDLING AND STORAGE OF MATERIALS:

- A. The Contractor shall, at its own expense, handle and haul all materials furnished by it and shall remove any of its surplus materials at the completion of the work.
- B. The Contractor shall provide suitable and adequate storage for equipment and materials furnished by it that are liable to injury and shall be responsible for any loss of or damage to any equipment or materials by theft, breakage, or otherwise.
- C. All excavated materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the work. Materials and equipment shall be kept neatly piled and compactly stored in such location as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.
- D. The Contractor shall be responsible for all damages to the work under construction during its progress and until final completion and acceptance even though partial payments have been made under the Contract.

3.02 EASEMENTS AND ENCROACHMENTS:

- A. As indicated on the drawings, the work is located in encroachments obtained by the Owner. The Contractor has no rights outside of the encroachments unless they are obtained from the adjacent property owner(s).
- B. Contractor shall schedule work so that it will cause minimum inconvenience and nuisance to abutting property owners, over the shortest possible time.
- C. Encroachments shall be kept clean; no rubbish or discarded construction materials shall be allowed to accumulate. Storage of excess construction materials, including soil, ledge, equipment, or machinery on encroachments will not be allowed.
- D. Restoration of fences, shrubs, trees and grass shall be completed promptly following completion of the work in an encroachment(s), to minimize disruption and inconvenience to property owners.

3.03 OPEN EXCAVATIONS:

- A. All open excavations shall be adequately safeguarded by providing temporary barricades,

caution signs, lights and other means to prevent accidents to persons, and damage to property. The Contractor shall, at its own expense, provide suitable and safe means for completely covering all open excavations and for accommodating travel when work is not in progress.

- B. Bridges provided for access to private property during construction shall be removed when no longer required.
- C. The length of open trench will be controlled by the particular surrounding conditions but shall always be confined to the limits prescribed by the Engineer.
- D. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, then special construction procedures shall be taken, such as limiting the length of trench and prohibiting stocking excavated material in the street.
- E. All street excavations shall be completely closed at the end of each work day. Backfilling or use of steel plates of adequate strength to carry traffic shall be used.

3.04 MAINTENANCE OF TRAFFIC:

- A. Unless permission to close the street is received in writing from the proper authority, all excavated materials and equipment shall be placed so that vehicular and pedestrian traffic may be safely maintained at all times.
- B. The Contractor shall at its own expense provide and erect acceptable barricades, barrier fences, traffic signs, and all other traffic devices not specifically covered in a bid item, to protect the work from traffic, pedestrians, and animals. The Contractor shall provide sufficient temporary lighting such as lanterns/flashers (electric battery operated) or other approved illuminated traffic signs and devices to afford adequate protection to the traveling public, at no additional cost to the Owner.
- C. Nothing contained herein shall be construed as relieving the Contractor of any of its responsibilities for protection of persons and property under the terms of the Contract.

3.05 CARE AND PROTECTION OF PROPERTY:

The Contractor shall be responsible for the preservation of all public and private property and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be promptly restored by the Contractor, at its expense, to a condition similar or equal to that existing before the damage was done, to the satisfaction of the Engineer.

3.06 PROTECTION AND RELOCATION OF EXISTING STRUCTURES AND UTILITIES:

- A. All existing buildings, utilities, pipes, poles, wires fences, curbing, property line markers and other structures which the Engineer decides must be preserved in place without being temporarily or permanently relocated, shall be carefully supported and protected

from damage by the contractor. Should such property be damaged, it shall be restored by the Contractor, at no additional cost to the Owner.

- B. The Contractor shall determine the location of all underground structures and utilities (including existing water services, drain lines, electrical lines, and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by Contractor.
- C. When fences interfere with the Contractor's operations, it shall remove and (unless otherwise specified) promptly restore them to a condition similar or equal to that existing before removal was done, to the satisfaction of the engineer.
- D. On paved surfaces the Contractor shall not use or operate tractors, bulldozers, or other power-operated equipment with treads or wheels which are shaped so as to cut or otherwise damage such surfaces.
- E. All property damaged by the Contractor's operations shall be restored to a condition at least equal to that in which it was found immediately before work was begun. Suitable materials and methods shall be used for such restoration.
- F. Restoration of existing property and structures shall be carried out as promptly as practicable and shall not be left until the end of the construction period.

3.07 MAINTENANCE OF FLOW:

- A. The Contractor shall at its own cost, provide for the flow of sewers and drains interrupted during the progress of the work, and shall immediately cart away and dispose of all offensive matter. The entire procedure of maintaining existing flow shall be fully discussed with the Engineer well in advance of the interruption of any flow.
- B. All existing drainage facilities including, but not limited to; brooks, streams, canals, channels, ditches, culverts, catch basins and drainage piping shall be adequately safeguarded so as not to impede drainage or to cause siltation of downstream areas in any manner whatsoever. If the Contractor damages or impairs any of the aforesaid drainage facilities, it shall repair the same within the same day.
- C. At the conclusion of the work, the Contractor shall remove all silt in drainage structures caused by its operations as described in Section 01710, CLEANING UP.

3.08 REJECTED MATERIALS AND DEFECTIVE WORK:

- A. Materials furnished by the Contractor and condemned by the Engineer as unsuitable or not in conformity with the specifications shall forthwith be removed from the work by the Contractor, and shall not be made use of elsewhere in the work.
- B. Any errors, defects or omissions in the execution of the work or in the materials furnished by the Contractor, even though they may have been passed or overlooked or have appeared after the completion of the work, discovered at any time before the final

payment is made hereunder, shall be forthwith rectified and made good by and at the expense of the Contractor and in a manner satisfactory to the Engineer.

- C. The Contractor shall reimburse the Owner for any expense, losses or damages incurred in consequence of any defect, error, omission or act of the Contractor or his employees, as determined by the Engineer, occurring previous to the final payment.

3.09 SANITARY REGULATIONS:

Sanitary conveniences for the use of all persons employed on the work, properly screened from public observation, shall be provided in sufficient numbers in such manner and at such locations as may be approved. The contents shall be removed and disposed of in a satisfactory manner as the occasion requires. The Contractor shall rigorously prohibit the committing of nuisances within, on or about the work. Any employees found violating these provisions shall be discharged and not again employed on the work without the written consent of the Engineer. The sanitary conveniences specified above shall be the obligation and responsibility of the Contractor.

3.10 SITE INVESTIGATION:

The Contractor acknowledges that it has satisfied itself as to the conditions existing at the site of the work, the type of equipment required to perform this work, the quality and quantity of the materials furnished insofar as this information is reasonably ascertainable from an inspection of the site, as well as from information presented by the drawings and specifications made a part of this contract. Any failure of the Contractor to acquaint itself with available information will not relieve it from the responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner assumes no responsibility for any conclusion or interpretation made by the Contractor on the basis of the information made available by the Owner.

(END OF SECTION)

**SECTION 01050
FIELD ENGINEERING**

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: Provide such field engineering services as are required for proper completion of the Work including, but not necessarily limited to:
 - 1. Provide all staking required to construct the facility from coordinates established by the Engineer.
 - 2. Establish the proper line and levels for installation of utilities.
 - 3. Establish the proper grades and elevations for earthwork.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Additional requirements for field engineering also may be described in other Sections of these Specifications. These include but are not limited to the following:
- C. Work by others:
 - 1. Not less than one (1) benchmark elevations will be provided.

1.2 QUALITY ASSURANCE

- A. Provide a competent survey party and surveying instruments for staking the work.
- B. Exercise proper precautions to verify the figures shown on the Drawings prior to laying out any part of the Work.
 - 1. The Contractor will be held responsible for any errors therein that otherwise might have been avoided.
 - 2. Promptly inform the Engineer of any error or discrepancies discovered in the Drawings or Specifications in order that proper corrections may be made.

1.3 PROCEDURES:

- A. Locate and protect control points before starting work on the site.
- B. Preserve permanent reference points during progress of the Work.
- C. Do not change or relocate reference points or items of the Work without specific approval from the Engineer.
- D. Promptly advise the Engineer when a reference point is lost or destroyed, or requires relocation because of other changes in the Work.

1.4 CONSTRUCTION LAYOUT:

- A. Perform calculations, and the set of marks and stakes necessary to ensure that the work conforms to the required lines, grades, and dimensions.
- B. Relate such layout to the coordinate grid system, elevation datum, and related survey control monuments and bench marks identified on the drawings or elsewhere in the contract documents.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

(END OF SECTION)

**SECTION 01060
REGULATORY REQUIREMENTS**

The following requirements of Regulatory Agencies having an interest in this project are hereby made a part of this Contract.

- 1.1 The construction of the project, including the letting of the contracts in connection therewith, shall conform to the applicable requirements of State, territorial and local laws and ordinances to the extent that such requirements do not conflict with Federal laws and this subchapter.
- 1.2 South Carolina Sales Tax: All applicable South Carolina sales tax shall be to the account of the Contractors.
- 1.3 Use of chemicals: All chemicals used during the project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, must show approval of EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.
- 1.4 Safety and Health Regulations: The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54)
- 1.5 The Contractor shall comply with Part V of the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways.
- 1.6 Inspection by Agencies: The representatives of the South Carolina Department of Health and Environmental Control, USDA Rural Development, Environmental Protection Agency, Department of Natural Resources and the Corps of Engineers shall have access to the work wherever it is, in preparation or in progress, and the Contractor shall provide proper facilities for such access and inspection.
- 1.7 Withholding for non-residents shall comply with the following:
 - A. Attention of non-residents Contractors is invited to Code Sections 12-8-540 and 12-8-550 as amended effective July 1, 1994, Section 49, Appropriations Bill, Part II.
 - B. If a non-resident Contractor is the successful bidder on this project, he/she shall be required to provide the Owner with an Affidavit (Form I-312, Nonresident Taxpayer Registration Affidavit Income Tax Withholding) affirming registration with the South Carolina Department of Revenue or the South Carolina Secretary of State's office. (Refer to attached form)
 - C. Forms to register for all taxes administered by the South Carolina Department of Revenue may be obtained by calling the License and Registration Section at (803) 737-4872 or writing to South Carolina Department of Revenue, Registration Unit, Columbia, South Carolina 29214-0140.

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- D. In the absence of an Affidavit being provided, withholding in the amount of two (2) percent of the contract price will be made by the Owner.

(END OF SECTION)

SECTION 01061

PERMITS AND RIGHTS-OF-WAY

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work Included: This section established requirements pertaining to the securing and paying for licenses, building permits, right-of-way, etc. necessary for the construction of the project.
- B. Work Not Include: Owner will obtain and provide to the Contractor, as required, copies of the following:
 - 1. South Carolina Department of Transportation Encroachment Permit for work in the State Right-of-Way
 - 2. South Carolina Department of Health and Environmental Control - Permit to Construct Water/Wastewater Facilities
- C. Office of Ocean and Coastal Resource Management Certification
- D. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Additional requirements for field engineering also may be described in other Sections of these Specifications. These include but are not limited to the following:
 - a) None

1.2 SUBMITTALS

- A. Submit to the Engineer satisfactory evidence that all necessary licenses, building permits, etc., have been secured prior to commencing the work.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

2.1 BUSINESS LICENSE

- A. Determine licenses necessary to perform the work at project location.
- B. Obtain all necessary licenses at no permits required, whether of temporary or permanent nature.

2.2 BUILDING PERMITS

- A. Secure and pay for all building permits required, whether temporary or permanent nature.

2.3 RIGHT-OF-WAY, EASEMENTS

- A. Owner will provide necessary rights-of-way or easements for construction of utility lines, roads and sidewalks whether on privately or publicly owned property
- B. The Contractor shall confine their activities to the provided rights-of way and/or easements
- C. The Owner will provide no other rights-of way and/or easements over the property.

2.4 LAND

- A. Owner will provide necessary land for construction of treatment facilities, lift stations, pump stations, parks and buildings, whether on privately or publicly owned property

(END OF SECTION)

**SECTION 01090
REFERENCED STANDARDS**

PART 1 – GENERAL

1.1 DESCRIPTION

A. Throughout the Project Documents, reference is made to specifications and standards issued by nationally recognized professional and/or trade organizations:

1. These referenced standards are generally identified by abbreviating the name of the organization following with the specification/standard number.
2. Unless specifically indicated otherwise, all references to standards refer to the latest edition available at the time of the bidding.

1.2 ABBREVIATIONS

A. Wherever the following abbreviations are used in these Project Documents, they are to be construed the same as the respective expressions represented:

AASHTO American Association of State Highway and Transportation Officials

ACI American Concrete Institute

AISC American Institute of Steel Construction

ALS American Lumber Standards

ANSI American National Standards Institute, Inc

ASTM American Society for Testing and Materials

AWWA American Water Works Association

AWPA American Wood Preservers Association

AWS American Welding Society

FSS Federal Specifications and Standards

GSA General Services Administration

IBC International Building Code

NACE National Association of Corrosion Engineers

NFPA National Fire Protection Association

NSF Formerly: National Sanitary Foundation

OSHA Occupational Safety and Health Administration

SPIB Southern Pine Inspection Bureau

SSPC Steel Structures Painting Council

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

(END OF SECTION)

**SECTION 01200
CONTRACTOR/SUBCONTRACTOR QUALIFICATION**

PART 1 – GENERAL

The following information and completed forms may be requested by the Owner of the three lowest bidders. The request will be made within five (5) days following the bid opening. Requested data to be received by the Owner within five (5) days of the request. Failure to provide the data in this section, upon request, will subject bidder to disqualification.

1.1 DESCRIPTION

- A. Information submitted will be used by the Owner to determine the competency and ability of the Contractor/Subcontractor to perform the scheduled work in a manner deemed satisfactory to the Owner. The Owner’s decision shall be final.
- B. Any Subcontractor used by the General Contractor whose portion of this project exceeds 10% of the total bid shall be required to provide the same information as the General Contractor.
- C. The Contractor/Subcontractor shall include with this section a detailed financial statement indicating the Contractor’s/Subcontractor’s financial resources. The information on that statement shall be certified by a Certified Public Accountant and shall be submitted on the Associated General Contractors of America form “Standard Questionnaires and Financial Statement for Bidders.”
- D. The Contractor/Subcontractor shall certify by attaching his signature to this Section as provided that all information contained herein is complete and all statements and answers are accurate and true. Providing misinformation, incomplete information, inaccurate information, or failure to certify the information, will subject bidder to disqualification.

1.2 QUALIFICATIONS

- A. Complete the following (attach additional sheets as required):
 - 1. Name: _____
 - 2. Address: _____
 - 3. City, State, Zip: _____
 - 4. Principal: _____
- B. Number of years your firm has been in business: _____
- C. List and describe a minimum of five (5) previous projects of similar size and nature completed in the last five (5) years. (Attach additional sheets, if necessary):
 - 1. _____

2. _____

3. _____

4. _____

5. _____

D. List Owner, contact and telephone number for each of the five (5) projects referenced above. (Attach additional sheets, if necessary):

1. _____

2. _____

3. _____

4. _____

5. _____

E. For the projects listed in Item C, list the original bid price, final construction costs, specified completion time, actual completion time and explanations for differences in costs and times as required. (Attach additional sheets, if necessary):

1. Original contract price: _____
Final construction price: _____
Specified completion time: _____
Actual completion time: _____
Explanation: _____

2. Original contract price: _____
Final construction price: _____
Specified completion time: _____

Actual completion time: _____

Explanation: _____

3. Original contract price: _____

Final construction price: _____

Specified completion time: _____

Actual completion time: _____

Explanation: _____

4. Original contract price: _____

Final construction price: _____

Specified completion time: _____

Actual completion time: _____

Explanation: _____

5. Original contract price: _____

Final construction price: _____

Specified completion time: _____

Actual completion time: _____

Explanation: _____

F. List the names, addresses and work of any portion of this project which will be subcontracted (more than 10% of the bid price). (Attach additional sheets, if necessary):

1. _____

2. _____

3. _____

4. _____

5. _____

G. List equipment owned that is available for this project:

H. List equipment to be purchased, leased or rented to perform this work:

I. List superintendent(s), foreman or others in charge who will be assigned to this project. Provide resumes and qualifications (insert sheets as required):

J. List and describe current projects, current statuses of job and estimate schedule of completion. (Attach additional sheets, if necessary):

1. _____

2. _____

3. _____

4. _____

5. _____

K. List past projects completed with Owner of project proposed in last five (5) years. (Attach additional sheets, if necessary):

1. _____

2. _____

3. _____

4. _____

5. _____

L. List past projects bid on with Owner of project proposed in last five (5) years.
(Attach additional sheets, if necessary):

1. _____

2. _____

3. _____

4. _____

5. _____

M. List all past projects completed with Engineer in past five (5) years (Attach additional sheets, if necessary):

1. Project Name: _____

Project Manager: (Engineer's): _____

Original contract price: _____

Final construction price: _____

Specified completion time: _____

Actual completion time: _____

Explanation: _____

2. Project Name: _____

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Project Manager: (Engineer's): _____

Original contract price: _____

Final construction price: _____

Specified completion time: _____

Actual completion time: _____

Explanation: _____

3. Project Name: _____

Project Manager: (Engineer's): _____

Original contract price: _____

Final construction price: _____

Specified completion time: _____

Actual completion time: _____

Explanation: _____

4. Project Name: _____

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Project Manager: (Engineer's): _____

Original contract price: _____

Final construction price: _____

Specified completion time: _____

Actual completion time: _____

Explanation: _____

5. Project Name: _____

Project Manager: (Engineer's): _____

Original contract price: _____

Final construction price: _____

Specified completion time: _____

Actual completion time: _____

Explanation: _____

N. List all projects involving litigation, arbitration and/or mediation in past five (5) years (Attach additional sheets, if necessary):

CONTRACTOR/SUBCONTRACTOR QUALIFICATIONS

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1. Project Name: _____

Owner: _____

Engineer: _____

Date: _____

Explanation: _____

Result: _____

2. Project Name: _____

Owner: _____

Engineer: _____

Date: _____

Explanation: _____

Result: _____

3. Project Name: _____

Owner: _____

Engineer: _____

Date: _____

Explanation: _____

Result: _____

4. Project Name: _____

Owner: _____

Engineer: _____

Date: _____

Explanation: _____

Result: _____

5. Project Name: _____

Owner: _____

Engineer: _____

Date: _____

Explanation: _____

Result: _____

O. Attach rate schedule for equipment, labor, overhead and profit.

P. Additional information:

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I hereby certify that as a duly authorized representative of _____
(bidder), the information provided is to the best of my knowledge accurate and that failure to
provide accurate information will result in disqualification of my bid

(Seal)

Signature

Name (Print)

Title

Date

Notary Public of _____ (State)

My commission expires: _____

(END OF SECTION)

**SECTION 01210
PRECONSTRUCTION CONFERENCE**

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: To help clarify construction contract administration procedures, the Engineer will conduct a Preconstruction Conference prior to start of the Work. Provide attendance by the designated personnel.
- B. Related work: Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.2 QUALITY ASSURANCE

- A. For those persons designated by the Contractor, his Subcontractors, and suppliers to attend the Preconstruction Conference, provide required authority to commit the entities they represent to solutions agreed upon in the Conference.

1.3 SUBMITTALS

- A. To the maximum extent practicable, advise the Engineer at least 24 hours in advance of the Conference as to items to be added to the agenda.
- B. The Engineer will compile minutes of the Conference, and will furnish one copy of the minutes to the Contractor and required copies to the Owner. The Contractor may make and distribute such other copies as he/she wishes.

1.4 PRECONSTRUCTION CONFERENCE

- A. The Conference is not required but is recommended and will be scheduled to be held within 30 working days after the Owner has determined the low bidder and may be held prior to issuance of the Notice to Proceed when required by regulatory agencies having jurisdiction. In any event, the Conference will be held prior to actual start of the work.
- B. Attendance:
 - 1. Provide attendance by authorized representatives of the Contractor and major subcontractors. The Engineer will advise other interested parties, including the Owner, and request their attendance.
- C. Minimum agenda: Data will be distributed and discussed on:
 - 1. Organizational arrangement of Contractor's forces and personnel and those of subcontractors, materials suppliers, and the Engineer.
 - 2. Channels and procedures for communication.
 - 3. Construction schedule, including sequence of critical work.
 - 4. Contract Documents, including distribution of required copies of Drawings and revisions.

5. Processing of Shop Drawings and other data submitted to the Engineer for review.
6. Processing of field decisions and Change Orders.
7. Rules and regulations governing performance of Work.
8. Procedures for security, quality control, housekeeping, and related matters.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

(END OF SECTION)

**SECTION 01220
PROJECT MEETINGS**

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: To enable orderly review during progress of the Project, and to provide for systematic discussion of problems, the Owner will conduct project meetings throughout the construction period.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. The Contractor's relations with his subcontractors and materials suppliers, and discussions relative thereto, are the Contractor's responsibility and normally are not part of the project meetings content.

1.2 QUALITY ASSURANCE

- A. For those persons designated by the Contractor to attend and participate in project meetings, provide required authority to commit the Contractor to solutions agreed upon in the meetings.

1.3 SUBMITTALS

- A. Agenda items: To the maximum extent practicable, advise the Owner at least 48 hours in advance of project meetings regarding items to be added to the agenda.
- B. Minutes:
 - 1. The Owner will compile Minutes of each project meeting, and will furnish three copies to the Contractor and required copies to Engineer.
 - 2. Recipients of copies may make and distribute such other copies as they wish.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.1 MEETING SCHEDULE

- A. Project meetings will be held monthly.
- B. Coordinate as necessary to establish mutually acceptable schedule for meetings.

3.2 MEETING LOCATION

- A. The meeting will be held at the City of Georgetown – Water Utilities and Engineering Department.

2377 Anthuan Maybank Drive
Georgetown, SC 29440

3.3 PROJECT MEETINGS

- A. Attendance:

1. To the maximum extent practicable, assign the same person or persons to represent the Contractor at project meetings throughout progress of the Work.
2. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspect of the Work is involved.

- B. Minimum agenda:

1. Review, revise as necessary, and approve Minutes of previous meetings.
2. Review Safety Plan and any incidents since last meeting.
3. Review progress of the Work since last meeting, including status of submittals for approval.
4. Identify problems that impede planned progress.
5. Develop corrective measures and procedures to regain planned schedule.
6. Complete other current business.

3.4 Revision to Minutes:

- A. Unless published Minutes are challenged in writing prior to the next regularly scheduled progress meeting, they will be accepted as properly stating the activities and decisions of the meeting.
- B. Persons challenging published Minutes shall reproduce and distribute copies of the challenged to all Minutes.
- C. Challenge to Minutes shall be settled as priority portion of “old business” at the next regularly scheduled meeting.

(END OF SECTION)

**SECTION 01270
MEASUREMENT AND PAYMENT**

PART 1 – GENERAL

1.1 GENERAL

- A. The following subsections describe the measurement of and payment for the work to be done under the items listed in Section 00311-3, BID FORM.
- B. All work performed as described in these contract documents shall be paid for under one or more of the items listed in Section 00311-3, BID FORM. All other activities required in connection with performance of the work, including all work required under Division 1, GENERAL REQUIREMENTS, whether described in the contract documents or mandated by applicable codes, permits and laws, will not be separately paid for unless specifically provided for in the BID FORM, but will be considered incidental to performance of the overall project.
- C. Each unit or lump sum price stated in the Section 00311-3, BID FORM shall constitute full compensation as herein specified for each item of work completed in accordance with the plans and specifications.
- D. The payment items listed herein and in Section 00311-3, BID FORM are intended to provide full payment for the work shown on the plans and specified herein. Any work called for or implied in the documents but not listed as a payment item shall be considered incidental to the overall project.
- E. Unless otherwise noted, all earthwork shall be included under any item requiring excavation. Unless otherwise noted, each item specified or shown on the plans shall be furnished and installed in accordance with the technical section whether a specific applicable payment item exists or not.
- F. The prices for those items which involve excavation shall include compensation for disposal of surplus excavated material, and installation of all necessary sheeting and bracing.
- G. The price for all pipe items for water mains and fittings, hydrants and valves, and service connections shall constitute full compensation for earth excavation, sheeting, shoring, dewatering, bedding, furnishing, laying, jointing, testing pipe, tracer tape (if required), backfilling, curbing replacement, repair of aboveground and underground utilities and/or service connections, and cleaning up of site.

1.2 MEASUREMENT AND PAYMENT

- A. Mobilization:
 - 1. The lump sum price bid for mobilization shall include all costs for bonds, insurance, permits, establishing field offices, moving construction equipment to the site, and other necessary but "nonscheduled" work. Mobilization shall not exceed 3% of the Total Bid less the cost for "Contingency Allowance" and "Cash Allowance for Materials Testing".
- B. Tree Protection and Reseeding:

MEASUREMENT AND PAYMENT

1. Tree Protection and Reseeding cost shall be measured as a lump sum per complete installation of those items that pertain to tree protection and reseeded required by the contract documents.
2. The price for tree protection and reseeded shall include all costs for tree protection and reseeded that is described or shown on the plans and in the specifications. The Contractor shall include the cost of all materials and labor required for installation, maintenance, and removal all required items as specified, shown on the contract documents, and required by any local or state ordinance.
3. This includes but is not limited to fencing and fence posts for tree barricades, as well as any preventative or remedial measures required for tree protection or repair. Seeding, sodding, grassing, and loaming for all areas disturbed during this project is also included in this item.

C. Traffic Control and Pedestrian Safety Plan

1. Traffic Control and Pedestrian Safety Plan costs shall be measured as a lump sum per complete installation of those items that pertain to traffic control and the pedestrian safety plan, as required by the contract documents.
2. The Contractor shall include in the lump sum price for the traffic control and pedestrian safety plan the cost of all materials and labor required to install, maintain, and remove all items as specified on the contract documents, and required by the SCDOT, which are not included in other bid items.
3. This includes, but is not limited to signage, flagmen, detours, temporary fencing, traffic control plans and related requirements of the SCDOT. Maintenance and upkeep of all items is also included.

D. Sediment and Erosion Control:

1. Sediment and Erosion Control cost shall be measured as a lump sum per complete installation of those items that pertain to sediment and erosion control, as required by contract documents.
2. The Contractor shall include in the lump sum price for erosion control measures the cost of all materials and labor required to install, maintain, and remove all erosion control devices as specified, shown on the plans and details, and required by S.C. Erosion Control Regulations, which are not included in other bid items.
3. This includes, but is not limited to, temporary diversion ditches, temporary stream crossings, rock pile inlets, fabric drop inlets, and sediment pits. This also includes silt fencing and the cost of furnishing, installing and maintaining the silt fence as shown on the details, approved by the Engineer prior to construction, or required by S.C. Erosion Control Regulations.

E. 6-inch PVC C-900 Water Main, Fittings, Appurtenances, and Connections

1. Water mains, including all required fittings, compacted select backfill (as shown in the water main trench detail), couplings, joint and thrust restraints, and concrete backing, shall be measured per linear foot of water main installed.
2. Non -“tapping” valves are not included in this measurement. The laying length of all valves shall be taken as 12 inches and, for each valve; this length shall be subtracted from the length of pipe measured.
3. The cost of cutting, capping, filling, and abandoning existing water mains shall be considered incidental to the project. This includes all materials and labor required to fill abandoned pipe with flowable fill.
4. The cost of replacing repairing storm drains shall be considered incidental to the project.
5. The cost of tying into existing water mains shall be considered incidental to the project, including but not limited to cost of tapping sleeve and valve, coordination with applicable municipality, and protecting existing water supply to service connections throughout the duration of the project.
6. Testing, disinfecting and flushing (including water required) shall be considered incidental to the project.
7. Restoration to preconstruction conditions including driveway culverts, headwalls, fences, and mail boxes shall also be considered incidental to the project.
8. All other related and necessary materials, work, and equipment required to construct a complete operable water main in accordance with the contract documents shall be considered incidental to the project. Tracer wire and warning tape are also included in the cost.
9. Ten percent of the payment for the subdivisions of the item "Water Mains and Fittings" shall be withheld until the pipeline has satisfactorily passed the pressure test and disinfection requirements.

F. Asphalt Patch and Overlay

1. Asphalt patch and overlay costs shall be measured per square foot of asphalt installed, as required by the contract documents.
2. The contractor shall include in the unit price for asphalt patch and overlay the cost of all materials and labor required to install all items as specified on the contract documents, and required by the SCDOT, which are not included in other bid items.
3. The cost of repairing and replacing driveways shall be included in this item. This item includes but is not limited to demolition of existing paving, milling, screenings, base course, binder, primer, tack coat, restoring pavement markings, furnishing, placing, and installing asphalt pavement to original grade; disposing of waste material associated with asphalt paving (new or

existing), subgrade preparation, providing stone equal or similar to existing, grading, and other incidental work to replace asphalt to proposed condition, including culvert and storm drain replacement. All repairs made must be in accordance with the contract documents and the SCDOT encroachment permit.

4. The cost shall include any cost associated with the required two year warranty that protects the owner from costs incurred from defects of all paved surfaces.

G. Concrete Patch for Driveway

1. Concrete patch for driveway costs shall be measured as a lump sum cost for items that concrete patching as required by the contract documents.
2. The Contractor shall include in the lump sum price for the concrete patch of driveway the cost of all materials and labor required to install pertinent items per the contract documents.
3. Items include but are not limited to demolition of driveway, hauling off waste materials, subgrade preparation, bedding, formwork, pouring of concrete, finishing, driveway aprons, curb and gutter repair/replacement/addition, culvert and storm drain replacement/repair, and other incidental work to replace sidewalk to proposed condition. Driveways must me ADA compliant as shown on the plans.
4. Items in this section may be required because of water main installed, service connections, hydrants, valves, meter boxes, excavations.
5. The cost shall include any cost associated with the required two year warranty that protects the owner from costs incurred from defects of all paved surfaces.

H. Sidewalk Demolition, Disposal, and Replacement

1. Sidewalk demolition, disposal, and replacement costs shall be measured as a lump sum cost for items that pertain sidewalk demolition, disposal, and repair as required by the contract documents.
2. The Contractor shall include in the lump sum price for the sidewalk demolition, disposal, and replacement the cost of all materials and labor required to install pertinent items per the contract documents.
3. Items include but are not limited to demolition of existing sidewalk and necessary driveways, hauling off waste materials, subgrade preparation, bedding, formwork, pouring of concrete, finishing, driveway repair/replacement, driveway aprons, pedestrian ramps, curb and gutter repair/replacement/addition, culvert and storm drain replacement/repair, and other incidental work to replace sidewalk to proposed condition. Driveways and sidewalks must me ADA compliant as shown on the plans.

4. Items in this section may be required because of water main installed, service connections, hydrants, valves, meter boxes, excavations.
5. The cost shall include any cost associated with the required two year warranty that protects the owner from costs incurred from defects of all paved surfaces.

I. Fire Hydrants

1. Hydrants shall be measured per set installed. The set includes tapping sleeves, fittings, valves, and valve boxes.
2. The cost of making connections to existing mains, and the cost of joint restraints, couplings and concrete backing shall be considered incidental to the cost of the project.
3. The cost of removing and disposing of old (or to be abandoned) hydrant, piping, valves and valve boxes shall be considered incidental to the project.

J. Gate Valves and Valve Boxes

1. Gate Valves and Valve Boxes shall be measured per set installed.
2. Furnishing and installation of valves and valves boxes shall be included in the cost. The cost of removing old (or to be abandoned) valves, and valve boxes shall be considered incidental to the project.

K. Service Connections

1. General
 - a) General Service Connections shall be measured per connection installed.
 - b) Service piping (including couplings) corporation stops, saddles, and tracer wire shall be included in the cost of connection per set installed.
 - c) Costs for testing, disinfecting and flushing (including water required) shall be included.
2. Directional Dry Bore
 - a) Directional Dry Bore Connections shall be measured per connection installed by this method.
 - b) All costs associated with the drilling and connection process, including machinery and labor needed, shall be included in the cost.
 - c) Service piping (including couplings) corporation stops, saddles shall be included in the cost of connection per set installed.
 - d) Costs for testing, disinfecting and flushing (including water required), shall be included.

L. Meter Boxes

1. Heyward St.

- a) General (Heyward St.) Meter and/or Meter Boxes shall be measured per set re-connected.
- b) Cost per set shall include disconnecting and abandoning old service connection, connecting the existing meter and existing meter box to the new service line connections, and all necessary testing, disinfection, and flushing required for this portion of service connections.

2. Kaminski St.

- a) General (Kaminski St.) Meter and/or Meter Boxes shall be measured per set installed.
- b) Cost per set shall include abandoning old service connection, furnishing and installing a new meter box in the new position as shown on the plans, and connecting the existing meter and new meter box to the new service line connection.
- c) The cost for all necessary testing, disinfection, and flushing required for this portion of service connections shall be included.

M. Jack and Bore

- 1. Jack and Bore cost shall be measured per linear foot of casing installed underneath specified roadway as seen on plans.
- 2. Cost shall include all necessary labor and materials required to meet the plan and specification, including but not be limited to: steel casing pipe, casing spacers, jacking and receiving pit, sheeting and shoring, and boring.
- 3. Testing, disinfecting and flushing (including water required) shall be considered incidental to the project.
- 4. All other related and necessary materials, work, and equipment required to construct a complete operable water main in accordance with the contract documents shall be considered incidental to the project.

N. Contingency Allowance

- 1. CONTRACTOR shall pay for the cost of unforeseen items, those items not provided for elsewhere in the Bid Form, from the contingency allowance.
CONTRACTOR must get all purchases of unforeseen item(s) submitted to and approved by the ENGINEER before purchasing the item(s), before payment of the item(s) will proceed.

O. Allowance for Material Testing

1. CONTRACTOR shall pay for testing costs from the allowance in the Project Bid for inspections and tests, which pass specification requirements to be performed by an OWNER approved independent laboratory for:
 - a) Subgrade preparation and soil compaction testing.
 - b) Concrete testing.
 - c) Pavement materials and construction.

1.3 MATERIAL MANUFACTURER

- A. The Bidder shall list in the spaces provided on the Bid, the type of materials and manufacturer of that type of material that were used by the Bidder as the basis for the Bid submitted.

(END OF SECTION)

**SECTION 01310
CONSTRUCTION SCHEDULES**

PART 1 – GENERAL

1.1 DISCRIPTION

- A. Work included: To assure adequate planning and execution of the Work so that the Work is completed within the number of calendar days allowed in the Contract, and to assist the Engineer in appraising the reasonableness of the proposed schedule and in evaluating progress of Work, prepare and maintain the schedules and reports described in this Section.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Requirements for progress schedule: General Conditions.
 - 3. Construction period: Form of Agreement
- C. Definitions: “Day”, as used throughout the Contract unless otherwise stated, means calendar day.

1.2 QUALITY ASSURANCE

- A. Employ a scheduler who is thoroughly trained and experienced in compiling construction schedule data, and in preparing and issuing periodic reports as required below.
- B. Perform data preparation, analysis, charting, and updating in accordance with standards approved by the Engineer.
- C. Reliance upon the approved schedule:
 - 1. The construction schedule as approved by the Engineer will be an integral part of the Contract and will establish interim completion dates for the various activities under the Contract.
 - 2. Should any activity not be completed within 15 days after the stated scheduled date, the Owner shall have the right to require the Contract to expedite completion of the activity by whatever means the Owner deems appropriate and necessary, without additional compensation to the Contractor.
 - 3. Should any activity be 30 days or more behind schedule, the Owner shall have the right to perform the activity or have the activity performed by whatever method the Owner deems appropriate.
 - 4. Costs incurred by the Owner and by the Engineer in connection with expediting construction activity shall be reimbursed by the Contractor.
 - 5. It is expressly understood and agreed that failure by the Owner to exercise the option either to order the Contractor to expedite and activity or to expedite the

activity by other means shall not be considered to set a precedent for any other activities.

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Section 01340.
- B. Preliminary analysis: Within 10 calendar days after the Contractor has received the Notice to Proceed, submit one reproducible copy and four prints of a preliminary construction schedule prepared in accordance with Part 3 of this Section.
- C. Construction schedule: Within 10 calendar days after the Contractor has received the Engineer's approval to revisions of a preliminary construction schedule, submit one reproducible copy and four prints of a construction schedule prepared in accordance with Part 3 of this Section.
- D. Periodic reports: On the first working day of each month following the submittal described in Paragraph 1.3.C above, submit four prints of the construction schedule updated as described in Part 3 of this Section.

PART 2 – PRODUCTS

2.1 CONSTRUCTION ANALYSIS

- A. Graphically show by bar chart the order and interdependence of all activities necessary to complete the work, and the sequence in which each activity is to be accomplished, as planned by the Contractor and his project field superintendent in coordination with all subcontractors whose work is shown on the diagram.
 - 1. Provide two line bar chart; one for planned activity and one for actual completion.
- B. Include, but do not necessarily limit indicated activities to:
 - 1. Project mobilization.
 - 2. Submittal and approval of shop drawings and samples.
 - 3. Procurement of equipment and critical materials.
 - 4. Fabrication of special material and equipment, and its installation and testing.
 - 5. Final cleanup.
 - 6. Final inspecting and testing.
 - 7. All activities by the Engineer that affect progress, required dates for completion, or both, for all and each part of the Work.

PART 3 – EXECUTION

3.1 PRELIMINARY ANALYSIS

A. Contents:

1. Show all activities of the Contractor under this Work for the period between receipt of Notice to Proceed and submittal of construction schedule.
2. Show the Contractor's general approach to remainder of the Work.
3. Show cost of all activities scheduled for performance before submittal and approval of the construction schedule.

3.2 CONSTRUCTION SCHEDULE

- A. Provide a construction schedule incorporating all revisions from review of the preliminary analysis.**

3.3 PERIODIC REPORTS

- A. Provide monthly updates of the approved construction schedule.**

1. Indicate "actual" progress for each activity on the bar chart.
2. Provide written narrative summary of revisions causing delay in the program, and an explanation of correct actions taken or proposed.

3.4 REVISIONS

- A. Make periodic revisions to the schedule to incorporate delays, early completion, etc.**
- B. Make only those revisions to approved construction schedule as are approved in advance by the engineer.**

(END OF SECTION)

**SECTION 01340
SHOP DRAWINGS, PRODUCT DATA AND SAMPLES**

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: Make submittals required by the Contract Documents and revise and resubmit as necessary to establish compliance with the specified requirements.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to General Conditions, Supplementary Conditions and Sections in Division 1 of these specifications.
 - 2. Individual requirements for submittals also may be described in pertinent sections of these specifications.
- C. Work not included:
 - 1. Un-required submittals will not be reviewed by the Engineer.
 - 2. The Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Engineer.

1.2 QUALITY ASSURANCE

- A. Coordination of submittals:
 - 1. Prior to each submittal, carefully review and coordinate all aspects of each item being submitted.
 - 2. Verify that each item and the submittal for it conform in all respects with the specified requirements.
 - 3. By affixing the Contractor's signature to each submittal, certify that this coordination has been performed.
 - 4. Review and coordinate each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.
- B. Completeness of submittal:
 - 1. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes.

2. Determine and verify all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

C. "Or equal":

1. Where the phrase "or equal" occurs in the Contract Documents, do not assume that the materials, equipment or methods will be considered as equal unless the item has been specifically so approved for this Work by the Engineer.
2. The decision of the Engineer shall be final.

- D. The Engineer shall assume that no shop drawing or related submittal comprises a variation unless the Contractor advises the Engineer otherwise in writing.

1.3 SUBMITTALS

- A. Within 10 calendar days after the Contractor has received the Owner's Notice to Proceed, submit:
1. Schedule for submittals including specification section, type or submittal and submittal date.
 2. Construction schedule.
 3. Schedule of partial payment request.
- B. Make submittals of shop drawings, samples, substitution requests and other items in accordance with the provisions of this Section.

PART 2 – PRODUCTS

2.1 SHOP DRAWINGS

- A. Scale and measurements: Make shop drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.
- B. Large prints (11" x 17" or larger):
1. Submit shop drawings in the form of white copies.
 2. Blueprints will not be acceptable.
- C. Manufacturer's literature:
1. Where contents of submitted literature from manufacturers include data not pertinent to the submittal, clearly show which portions of the contents are being submitted for review.
 2. Cross out or strikethrough all data not pertinent to the submittal.
- D. Number of copies:
1. Product data: submit the number of copies which are required to be returned, plus three copies which will be retained by the Engineer.

2. Shop drawings: submit the number of copies which are required to be returned, plus four copies which will be retained by the Engineer.
- E. Do not begin fabrication of equipment or materials prior to Engineer's approval of shop drawings.

2.2 VARIATIONS

- A. With each submittal, provide specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review and approval of each such variation.
- B. Provide an explanation of why the item(s) submitted are considered to be equal to the item(s) specified.
- C. Failure to submit a written notice will result in rejection of the submittal.

2.3 SAMPLES

- A. Provide sample or samples identical to the precise article proposed to be provided. Identify as described under "Identification of submittals" below.
 1. Unless otherwise specified, submit samples in the quantity which is required to be returned, plus one which will be retained by the Engineer.
 2. By prearrangement in specific cases, a single sample may be submitted for review and, when approved, when installed in the work at a location agreed upon by the Engineer.

2.4 COLORS AND PATTERNS

- A. Unless the precise color and pattern is specifically called out in the Contract Documents, and whenever a choice of color or pattern is available to the specified products, submit accurate color and pattern charts to the Engineer for selection.

PART 3 – EXECUTION

3.1 CONTRACTOR'S REVIEW OF SUBMITTALS

- A. Before submitting a shop drawing or any related material, Contractor shall:
 1. Determine and verify all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto.
 2. Determine and verify the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the work.
 3. Review each such submission for conformance with the means, methods, techniques, sequences, and operations of construction, and safety precautions

and programs incidental thereto, all of which are the sole responsibility of Contractor.

4. Approve each such submission before submitting it.
 5. Stamp and sign each such submission before submitting it.
- B. Shop drawings and related materials shall be returned with comments provided that each submission has been specified and is stamped by the Contractor.
- C. Shop drawings or material not specified or which have not been approved by the Contractor shall be returned without comment.
- D. Contractor is to utilize the following stamp on all shop drawing submittals:

This shop drawing has been reviewed by (Contractor) and approved with respect to the means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incidental thereto. (Contractor) also warrants that this shop drawing complies with contract documents and comprises no variations thereto.

By:

Date:

- E. Engineer's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of the General Conditions and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review and approval shall not relieve Contractor from responsibility for complying with the requirements of the General Conditions.

3.2 IDENTIFICATION OF SUBMITTALS

- A. Consecutively number all submittals
1. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.
 2. On re-submittals, cite the original submittal number for reference.
- B. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.
- C. On at least the first page of each submittal, and elsewhere as required for positive identification, show the submittal number in which the item was included.
- D. Maintain an accurate submittal log for the duration of the work, showing current status of all submittals at all times. Make the submittal log available to the Engineer for his review upon request.

3.3 GROUPING OF SUBMITTALS

- A. Unless otherwise specified, make submittals in groups containing all associated items to assure that information is available for checking each item when it is received.
 - 1. Partial submittals may be rejected as not complying with the provisions of the Contract.
 - 2. The Contractor may be held liable for delays so occasioned.

3.4 TIMING OF SUBMITTALS

- A. Make submittals far enough in advance of scheduled dates for installation to provide time required for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery.
- B. In scheduling, allow at least twenty (20) days for review by the Engineer following his receipt of the submittal.

3.5 RESUBMITTAL SCHEDULE

- A. For submittals marked “Revise and Re-Submit”, “Submit Specified Item”, or “Rejected”, re-submittal shall be within ten (10) days of the review data shown on the Engineer’s shop drawing review stamp.

3.6 ENGINEER’S REVIEW

- A. Review by the Engineer does not relieve the Contractor from responsibility for errors which may exist in the submitted data.
- B. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer.
- C. Engineer’s review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given to the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
- D. Engineer’s review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto.
- E. The review and approval of a separate item as such will not indicate approval of the assembly in which the items functions.
- F. Revisions:
 - 1. Make revisions required by the Engineer.
 - 2. If the Contractor considers any required revision to be a change, he/she shall so notify the Engineer as provided for in the General Conditions.
 - 3. Make only those revisions directed or approved by the Engineer.

- G. Submittals which have been reviewed and returned to the Contractor marked “Revise and Re-submit” or “Rejected” and which are re-submitted and not in an approvable state, will not be reviewed a third time unless payment for the third and any subsequent review is by the Contractor. The engineering costs for review shall be equal to the Engineer’s charges to the Owner under the terms of the Engineering Agreement with the owner.

(END OF SECTION)

**SECTION 01400
QUALITY REQUIREMENTS**

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: Provide workforce and equipment as are required for proper completion of the Work including, but not necessarily limited to:
 - 1. All work described in the Project Manual and Plans
 - 2. Additional work mutually agreed upon by the Owner and the Contractor
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Additional requirements for quality requirements also may be described in other Sections of these Specifications. These include but are not limited to the following:
- C. Work by others:
 - 1. An inspection and testing agency, approved by the Owner, shall be retained by the Contractor to perform tests required by SCDOT as specified on plans and SCDOT Standard Specifications.
 - 2. The performance or lack of performance of such tests and inspections shall not be construed as granting relief from the requirements of these specifications or the other contract documents

1.2 QUALITY ASSURANCE

- A. The Contractor shall have a written Quality Control Program and Inspection Procedures document that shall provide details of how compliance with the requirements of these specifications and the shop and placement drawings shall be achieved.
- B. The Contractor shall use an adequate number of skilled personnel, who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specification requirements and the methods needed for the proper performance of the work of this Specification.
- C. The Contractor shall utilize equipment adequate in type, number, size and capacity to accomplish the work of this Specification in a safe and timely manner.
- D. The Owner reserves the right to make inspections at any time at the source of supply of materials, at the place of preparation of materials, and during execution of all work.

1.3 SUBMITTALS

- A. When required, an excavation Safety Plan shall be submitted for review and approval by the Engineer no less than 5 days before the scheduled date for start of excavation operations. The plan shall indicate the systems, methods, and techniques to be used to ensure that excavation sidewalls will be properly guarded to protect personnel, and existing facilities and structures in the vicinity of the work.
- B. When required, a Water Control Plan shall be submitted for review and approval no less than 5 days before the scheduled date for the start of earthwork operations. The plan shall indicate the methods and techniques to be used for control of water (both surface runoff and ground water) during Work.

1.4 EXISTING SITE CONDITIONS

- A. Before starting work the Contractor shall thoroughly examine the site to ascertain conditions under which the work must be performed.
- B. The Contractor is responsible for familiarizing himself with the existing site conditions and be prepared to adequately care for and safeguard himself, his workers, and the Owner from damage.
- C. Existing Geotechnical Conditions if available, a copy of the report is included in the contract documents. The information contained in the report shall not be construed as a guarantee of the depth, extent, or character of materials actually present.
- D. Existing Utilities
 - 1. There now may exist in the construction area potable and non-potable water distribution systems, wastewater and stormwater collection systems, natural gas and electrical power distribution systems, telecommunication systems and other utilities.
 - 2. These utilities are both underground and overhead and their location, as shown on the plans, is approximate and is for information purposes only. In addition other utilities not shown on the plans may exist.
 - 3. The South Carolina Underground Utility Damage Prevention Act (S.C. Ann Code, 58-35-10, CT-SEQ, Supp. 1978) requires persons to ascertain the location of underground utilities, prior to excavation and demolition. The Act also requires such persons to give timely notice of intent to excavate or demolish prior to commencing such operations.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.1 PRE-CONSTRUCTION EXAMINATION

- A. General

- B. Before starting work the Contractor shall thoroughly examine the site to ascertain conditions under which the work must be performed.
- C. Existing Facilities to Remain
- D. Take measures to protect existing facilities within the work area that are not designated for removal from being damaged by the work.
- E. Survey Monuments
 - 1. Locate and protect from damage any survey monuments within the work area. Properly relocate or witness any monument that must be disturbed by the work. After completion of the work, restore monument witnesses.
- F. Immediately notify Engineer of any discrepancies between the plans and the actual site conditions, or of any obstruction that will prevent or adversely affect the contractor's ability to complete the Work.

3.2 EXISTING OR COMPLETED UTILITIES

- A. Unless shown to be removed protect active utility lines shown on the drawings or otherwise made known to the Contractor.
- B. Use care in moving machinery and equipment over existing or newly installed pipes and utilities during construction so as not to cause damage to completed work.
- C. Do not use power-driven equipment to excavate closer than 2 feet from any existing utility or structure. For work immediately adjacent to, or for excavation exposing an existing utility or other structure, use manual or light equipment excavation methods until the obstruction is cleared.
- D. Support uncovered pipes and other existing work affected by the excavation until they are properly supported by backfill.
- E. Take the necessary precautions to maintain services provided by all active utility lines in the construction area. If service is interrupted as a result of the Work, immediately restore service by repairing the damaged utility.
- F. If during construction active utility lines not shown on the drawings or otherwise made known to the Contractor are encountered or if active utility lines will interfere with the work, immediately notify the Engineer

(END OF SECTION)

**SECTION 01500
TEMPORARY FACILITIES**

PART 1 – GENERAL

1.1 DESCRIPTION

A. Work included: Provide temporary facilities needed for the work including, but not necessarily limited to:

1. Temporary utilities such as heat, water and electricity.
2. Field office for the Contractor's personnel.
3. Sanitary facilities.

B. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to General Conditions, Supplementary Conditions and Sections in Division 1 of these specifications.
2. Permanent installation and hookup of the various utility lines are described in other Sections.

1.2 PRODUCT HANDLING

A. Maintain temporary facilities in proper and safe condition throughout progress of the work.

PART 2 – PRODUCTS

2.1 UTILITIES

A. Water:

1. Provide necessary temporary piping and water supply and, upon completion of the work, remove such temporary facilities.
2. The Owner shall provide water used in construction. The Contractor shall obtain a construction meter from the Owner.

B. Electricity:

1. Provide necessary temporary wiring and, upon completion of the work remove such temporary facility.
2. Provide and pay for electricity used in construction.

C. Heating: Provide and maintain heat necessary for proper conduction of operations needed in the work.

2.2 FACILITIES

A. Sanitary facilities:

1. Provide temporary sanitary facilities in the quantity required for use by all personnel.
2. Maintain in a sanitary condition at all times.

B. Strictly enforce their use.

2.3 PROJECT SIGNS

A. If required provide and maintain a project information sign with following information

1. Project Name
2. Project Cost
3. Anticipated Completion date
4. Contractor
5. Engineer
6. Owner
7. Members of City Council

B. EMPLOYMENT SIGN

C. SAFETY SIGN

PART 3 – EXECUTION

3.1 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the work.
- B. Remove such temporary facilities and controls as rapidly as progress of the work will permit, or as directed by the Engineer.

(END OF SECTION)

**SECTION 01530
TREE AND PLANT PROTECTION**

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes:

1. All protected trees (as defined by City of Georgetown’s Article XII: Tree Protection Regulations) shall be protected unless indicated otherwise.
2. Protection of trees to remain; all trees which are not specifically indicated to be removed shall be protected and shall not be removed.
3. Repair of trees damaged during construction operations as specified or directed.
4. Penalties and mitigation for trees removed or damaged beyond repair.

1.2 QUALITY ASSURANCE

- A. Qualifications: Repair of tree damage shall be done by or under the supervision of a certified arborist who shall be a member in good standing of the International Society of Arboriculture.
- B. Pre-Construction Conference: Review extent of tree protection and measures to be employed with the Engineer and Owner.
 1. Trees to remain and applicable protection measures.
 2. Trees to receive temporary fence enclosures.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Acceptable Temporary Tree Protection Fencing Material (subject to local code requirements):
 1. Posts: Durable metal “T” or equivalent. Post shall be set to two feet below ground surface.
 2. Synthetic Fencing: Four foot high orange polyethylene laminar sheeting, specifically manufactured in bright, contrasting colors for temporary barricade use.

PART 3 – EXECUTION

3.1 PROTECTION OF EXISTING TREES TO REMAIN

- A. Protect existing trees to remain against injury or damage. Protect roots out to the drip line. Protect against:
 1. Unauthorized cutting or breaking of roots or limbs.
 2. Unnecessary skinning of roots, trunks, or branches.
 3. Smothering or compacting by stockpiling construction materials or excavation

materials within drip lines.

4. Excess equipment or vehicular traffic within drip line.
- B. Temporary Fence Enclosures:
1. All construction shall be prohibited within tree protection fence areas. Unauthorized personnel are to keep out of these areas. All clean up, grading, and grassing in the areas are by landscape contractor. Coordinate access to drainage structure construction with landscape architect.
 2. Maintain temporary fencing during full construction period. Remove fencing when no longer needed or when acceptable to Landscape Architect.

3.2 REPAIR OF TREES INJURED DURING CONSTRUCTION

- A. Repair damaged trees promptly to prevent progressive deterioration caused by damage.
- B. Repairs to trees damaged during construction shall be at Contractor's expense.
- C. Repair trees injured during construction according to standard arboricultural techniques recognized by International Society of Arboriculture.
- D. Remove trees damaged beyond satisfactory repair as determined by Engineer and Owner. Refer to PENALTIES AND MITIGATION in this section for loss of trees to remain.
- E. Temporarily cover roots exposed during construction with wet burlap to prevent roots from drying out. Cover roots with earth as soon as possible.
- F. Roots cut during construction: coat roots 1-1/2 inches diameter or larger with antiseptic paint.

3.3 PENALTIES AND MITIGATION

- A. Penalty values and mitigation shall be determined by Engineer based on each tree's species, preconstruction condition, and site importance.
- B. Trees designated to remain that are removed or damaged beyond repair shall be mitigated in accordance with City of Georgetown's Zoning Ordinance, Article XII.
- C. Species Substitution: Obtain Engineer's approval prior to substitution of tree species.
- D. Plant trees at location indicated by Engineer. Plant the trees according to methods recommended in writing by the International Society of Arboriculture for the applicable species and size to be planted; methods shall be submitted to and approved by the Engineer before planting will be authorized.
- E. Contractor shall notify Engineer of any protected tree(s) located within ten (10) feet of proposed excavation limits. If so authorized in writing by Engineer, unavoidable damage to such designated trees will be exempt from specified penalties and mitigation indicated in Subsection 3.3B above. All reasonable measures and precautions shall be exerted to preserve these trees including top pruning, nutrient injection or other applicable methods by an approved arborist; such work shall be considered to construction and not compensatory.

(END OF SECTION)

**SECTION 01640
PRODUCT HANDLING**

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: Protect products scheduled for use in the work by means including, but not necessarily limited to, those described in this Section.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to General Conditions, Supplementary Conditions and Sections in Division 1 of these specifications.
 - 2. Additional procedures also may be prescribed in other Sections of these specifications.

1.2 QUALITY ASSURANCE

- A. Include within the Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.

1.3 MANUFACTURE'S RECOMMENDATIONS

- A. Except as otherwise approved by the Engineer, determine and comply with manufacture's recommendations on product handling, storage and protection.

1.4 PACKAGING

- A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.
 - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
 - 2. Promptly remove damaged material and unsuitable items from the job site and promptly replace with material meeting the specified requirements, at no additional cost to the Owner.
- B. The Engineer may reject as non-complying such material and products that do not bear identification satisfactory to the Engineer as to manufacture, grade, quality and other pertinent information.

1.5 PROTECTION OF MATERIAL AND WORK

- A. General:
 - 1. Carefully and properly protect all materials of every description, both before and after being used in the Work in accordance with manufacturer's recommendations.
 - 2. Provide any enclosing or special protection from weather deemed necessary by the Engineer at no additional cost to the Owner.

- B. Partial payments under the Contract will not relieve the Contractor from responsibility.
 - 1. When materials and work at the site that have been partially paid for are not adequately protected by the Contractor, such materials will be protected by the Owner at the expense of the Contractor and no further partial payment thereon will be made.
 - 2. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.

1.6 STORAGE

- A. Store all items of equipment, component parts, etc., in accordance with the manufacturer's recommendations or as may otherwise be necessary to prevent damage or deterioration of any sort.
- B. Electrical and control equipment:
 - 1. Store in a dry area protected from dust and humidity.
 - 2. Equipment can be protected by a weatherproof cover if shipped to the site no more than two (2) weeks prior to installation and energization.

1.7 REPAIRS AND REPLACEMENTS

- A. In the event of damage, promptly make replacements and repairs to the approval of the Engineer and at no additional cost to the Owner.
- B. Additional time required to secure replacements and to make repairs will not be considered by the Engineer to justify an extension in the contract time or completion.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

(END OF SECTION)

**SECTION 01700
CONTRACT CLOSEOUT**

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included shall be providing compliance with the requirements of the General Conditions of these Specifications for administrative procedures in closing out the project work.
- B. Related work:
 - 1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Other requirements for technical services are stated in other sections of these Specifications.
 - 3. Section 00620 – Contractors Affidavit.
 - 4. Section 01720 – Project Record Documents

1.2 SUBSTANTIAL COMPLETION

- A. The Contractor shall notify the Engineer that, in his/her opinion, the project is substantially complete. A written statement listing items complete shall be submitted.
- B. Upon receipt of the Contractor's notice, the Engineer shall make an observation to determine if substantial completion is provided.
- C. If, in the Engineer's opinion, the project is not substantially complete, a written notice to the Contractor shall follow outlining reasons and deficiencies in work that comprised the Engineer's decision. The Engineer's decision shall be final.

1.3 FINAL OBSERVATION

- A. The Engineer will make a final observation for the Contractor after all items noted in the substantial completion observation have been corrected. The Contractor shall notify the Engineer in writing when a final observation is needed. Incomplete and/or defective work shall be given to the Contractor by written notice.

1.4 RE-OBSERVATION

- A. Re-observation required due to failure by the Contractor to make previously noted corrections will be performed by the Engineer.
- B. Cost for such observations will be due to and payable by the Contractor at a rate equal to charges to the Owner for similar work.
- C. Re-observations will continue until the work is acceptable to the Engineer.

1.5 COMPLETION BY CONTRACTOR

- A. When the Engineer finds the Contractor's work acceptable, the Contractor shall be given such notice and should proceed with closeout submittals.
- B. Closeout submittals shall contain at least the following:
 - 1. Project record documents.
 - 2. Equipment operation and maintenance manuals and copies of start-up reports.
 - 3. Warranties and bonds.
 - 4. Spare parts and manuals.
 - 5. Evidence of payment and release to liens per General Conditions.
 - 6. Contractors Affidavit.

1.6 FINAL PAYMENT

- A. Final payment to the Contractor will be made upon completion of previous items and others required by these specifications. A final statement shall be forwarded to the Engineer. The statement shall address:
 - 1. Previous change orders.
 - 2. Unit Prices.
 - 3. Deductions for uncorrected work.
 - 4. Deductions for liquidated damages.
 - 5. Deductions for re-testing work.
 - 6. Deductions for re-observation.
 - 7. Deductions for shop drawing review.
 - 8. Adjusted contract sum.
 - 9. Previous payments.
 - 10. Amount Due.
- B. When required, the Engineer will prepare a contract change order for adjustments not previously made.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

(END OF SECTION)

**SECTION 01710
CLEANING UP**

PART 1 – GENERAL

1.1 DESCRIPTION

The Contractor must employ at all times during the progress of its work adequate cleanup measures and safety precautions to prevent injuries to persons or damage to property. The Contractor shall immediately, upon request by the Engineer provide adequate material, equipment and labor to cleanup and make safe any and all areas deemed necessary by the Engineer.

1.2 RELATED WORK

A. Section 00700 GENERAL CONDITIONS

B. Section 01046 CONTROL OF WORK AND MATERIALS

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.01 DAILY CLEANUP:

A. The Contractor shall clean up, at least daily, all refuse, rubbish, scrap and surplus material, debris and unneeded construction equipment resulting from the construction operations and sweep the area. The site of the work and the adjacent areas affected thereby shall at all times present a neat, orderly and workmanlike appearance.

B. Upon written notification by the Engineer, the Contractor shall within 24 hours clean up those areas, which in the Engineer's opinion are in violation of this section and the above referenced sections of the specifications.

C. If in the opinion of the Engineer, the referenced areas are not satisfactorily cleaned up, all other work on the project shall stop until the cleanup is satisfactory.

3.02 MATERIAL OR DEBRIS IN DRAINAGE FACILITIES:

A. Where material or debris has washed or flowed into or has been placed in existing watercourses, ditches, gutters, drains, pipes, structures, such material or debris shall be entirely removed and satisfactorily disposed of during progress of the work, and the ditches, channels, drains, pipes, structures, and work shall, upon completion of the work, be left in a clean and neat condition.

3.03 REMOVAL OF TEMPORARY BUILDINGS, STRUCTURES AND EQUIPMENT:

A. On or before completion of the work, the Contractor shall, unless otherwise specifically required or permitted in writing, tear down and remove all temporary buildings and structures it built; shall remove all temporary works, tools and machinery or other construction equipment it furnished; shall remove all rubbish from any grounds which it has occupied; shall remove silt fences and hay bales used for trapping sediment; and shall leave the roads and all parts of the property and adjacent property affected by its operations in a neat and satisfactory condition.

3.04 RESTORATION OF DAMAGED PROPERTY:

A. The Contractor shall restore or replace, when and as required, any property damaged by its work, equipment or employees, to a condition at least equal to that existing immediately prior to the beginning of operations. To this end the Contractor shall do as required all necessary highway or driveway, walk and landscaping work. Materials, equipment, and methods for such restoration shall be as approved by the Engineer.

3.05 FINAL CLEANUP:

A. Before acceptance by the Owner, the Contractor shall perform a final cleanup to bring the construction site to its original or specified condition. This cleanup shall include removing all trash and debris off of the premises. Before acceptance, the Engineer shall approve the condition of the site.

(END OF SECTION)

**SECTION 01720
PROJECT RECORD DOCUMENTS**

PART 1 – GENERAL

1.1 DESCRIPTION

A. Work included:

1. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents, as described in Article 3.1 below.
2. Upon completion of the Work, deliver the recorded changes to the Engineer

B. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
2. Additional requirements for field engineering also may be described in other Sections of these Specifications. These include but are not limited to the following:

1.2 QUALITY ASSURANCE

- A. Delegate the responsibility for maintenance of Record Documents to one person on the Contractor's staff as approved by the Engineer.
- B. Accuracy of records shall be such that future search for items shown on the Project Record Documents may rely reasonably on the information provided under this Section of the Work

1.3 SUBMITTALS

- A. The Engineer's approval of the current status of Project Record Documents may be a prerequisite to the Engineer's approval of requests for progress payment and request for final payment under the Contract.
- B. Prior to submitting each request for progress payment, secure the Engineer's approval of the current status of the Project Record Documents.
- C. Prior to submitting request for final payment, submit the final Project Record Documents to the Engineer and secure his approval.

1.4 PRODUCT HANDLING

- A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the Work and transfer to the Engineer.
- B. In the event of loss of recorded data, use all means necessary to again secure the data to the Engineer's approval
 1. Such means shall include, if necessary in the opinion of the Engineer, removal and replacement of concealing materials.

2. In such case, provide replacements to the standards originally required by the Contract Documents

PART 2 - PRODUCTS

2.1 JOB SET DOCUMENTS

- A. Promptly following receipt of the Owner's Notice to Proceed, secure from the Engineer, at no charge to the Contractor, one complete set of all Documents comprising the Contract

PART 3 - EXECUTION

3.1 MAINTENANCE JOB SET DOCUMENTS

- A. Immediately upon receipt of the job set described in above paragraph titled "JOB SET DOCUMENTS", identify each of the Documents with the title, "RECORD DOCUMENTS- JOB SET".
- B. Preservation:
 1. Considering the Contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set to the approval of the Engineer.
 2. Do not use the job set for any purpose except entry of new data and for review by the Engineer.
 3. Maintain the job set at the site of Work as that site is designated by the Engineer.
- C. Field work and making entries on Job Set Drawings:
 1. Use erasable colored pencil, preferably red (not ink or indelible pencil) to delineate changes.
 2. Show by station number location of all fittings, manholes, valves, wyes locations, etc.
 3. Reference all fittings and valves at least to two aboveground items reasonably safe from being relocated and indicate such references on the drawings.
 4. Reference all pipelines from the center of the parallel roadway at least every 100 feet or where changes occur in the direction of the pipeline.
 5. Reference all bores from the center of the roadway to the beginning and end of the casing and ductile iron pipe. Depths of bury must also be provided.
 6. Reference all stream crossings and their distance from the center of the parallel roadway and the bridge or other obstruction. A profile of the stream

crossing shall also be provided to show the depth of the pipeline under the stream.

7. Field measure and reference all fittings and valves to two aboveground items reasonably safe from being relocated and indicate such references on the drawings.
8. Show location of electrical conduit, pull boxes, etc.
9. Gravity sewers and storm sewers
 - a) Provide survey grade state plane Geographic Information System (G.I.S.) electronic data horizontal coordinates for each structure location.
 - b) Provide ground elevation, top elevation and invert elevations for each structure.
 - c) Comply with Section 01050.1

D. Submittals:

1. Submit “marked-up” set of drawings to the Engineer
2. Make any necessary additions as required by the Engineer

(END OF SECTION)

**SECTION 02110
CLEARING AND GRUBBING**

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Removal of surface debris to limits of the construction areas. Construction areas shall include SCDOT encroachments and rights-of-way boundaries.
- B. Clearing the construction areas of stumps, brush, roots, weeds and other debris.
- C. Other general clearing and clean-up necessary to eliminate obstacles and to remove features determined not necessary or desirable in the finished work.

1.2 RELATED SECTIONS

- A. Section 02900 – Sediment & Erosion Control.

1.3 REGULATORY REQUIREMENTS

- A. Conform to applicable permits, regulations, and codes for environmental requirements and disposal of debris.
- B. Coordinate clearing Work with utility companies.

PART 2 - PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

3.1 PREPARATION

- A. Provide lines and grades for the work. Staking to be performed under the supervision of a South Carolina Registered Land Surveyor.

3.2 PROTECTION

- A. Locate, identify, and protect utilities that remain from damage.
- B. Protect trees, plant growth, and features adjacent to area to be cleared and grubbed. Trees so located that they do not interfere with construction shall be protected and preserved.
- C. Protect bench marks and survey control points from damage or displacement.

3.3 CLEARING & GRUBBING

- A. Clear areas required for access to site and execution of Work.
- B. Remove trees, stumps, shrubs, and surface rock within construction areas.
- B. Remove root systems, as applicable, to a depth of 18 inches below the finished grade of pipelines, or 12 inches below the finished grade of the soil surface.
- C. Clear undergrowth and deadwood, without disturbing subsoils.
- D. Generally remove all material that cannot be compacted to 90% of maximum density in grassed areas and 98% of maximum density elsewhere. The "area of operations" includes all areas on site and off site where excavation or any other construction operation is performed.

3.4 REMOVAL

- A. Remove debris, rock, and extracted plant material from the construction areas.
- B. Alternatively, if plant material is to be burned within the construction areas, obtain necessary permits, conduct operation as directed by proper authorities, and remove any remaining ash.

(END OF SECTION)

**SECTION 02111
SITE PROTECTION AND RESTORATION**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Areas of the Work.
- B. Other Considerations.
- C. Sediment and Erosion Control Measures.

1.2 RELATED SECTIONS

- A. Section 02900 – Sediment and Erosion Control.
- B. Section 02936 – Seeding.

1.3 REGULATORY REQUIREMENTS

- A. Conform to applicable permits, regulations, and codes for environmental requirements and disposal of debris.
- B. Coordinate clearing Work with utility companies.

PART 2 – PRODUCTS

PART 3 - EXECUTION

3.1. AREAS OF THE WORK

- A. General: Utilize differing and appropriate types of site protection and restoration activities for the various areas of the work that will be encountered.
- B. Temporary Easements and Adjacent Work Areas:
 - 1. Acquired by the Owner.
 - 2. Occupy only as needed to properly perform the Work.
 - 3. Remove vegetation only when it interferes with performance of the Work.
 - 4. Restore temporary easements and adjacent work areas in accordance with Section 02936.

- C. Right-of-Way Work:
 - 1. Authorized by appropriate encroachment permit.
 - 2. Clear and prepare area either side of centerline of Work only as needed to properly install piping and appurtenances.
 - 3. Comply with requirements of all associated encroachment permits and permissions. Contact affected agency or utility prior to performing work in rights-of-way.

3.2 OTHER CONSIDERATIONS

- A. Do not occupy or disturb any private property located beyond these areas, unless the owner of such property has granted permission for such occupancy in writing.
- B. Immediately repair any damage made to private property, or make such settlement as may be agreed by the property owner, at no expense to the Owner. Provide written evidence of such repairs or settlement to OWNER.
- C. SCDOT Encroachment Permits and Traffic Control Plan: Comply with provisions of permit and SCDOT procedures regarding open excavations, general highway safety and traffic control.
- D. Permanent Structures Encountered: Protect from damage during all stages of the work. If damaged, make repairs or settlements immediately. Provide written evidence of such repairs or settlement to OWNER.

3.3 SEDIMENT AND EROSION CONTROL MEASURES

- A. Refer to Section 02900 - Sediment and Erosion Control for required sediment and erosion control measures.

(END OF SECTION)

**SECTION 02200
EARTHWORK**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Subsoil and aggregate materials.
- B. Removal of subsoil and excavating all classes of material encountered.
- C. Handling, storage, transportation and disposal of all excavated and unsuitable material
- D. Dewatering, pumping, draining, and handling of water encountered in the excavations.
- E. Sheeting, shoring, and bracing.
- F. Site filling, backfilling, and compaction around structures, trenches, pits, and from top of utility bedding to subgrade elevations.
- G. Fill under sidewalks, paving, and fill for over-excavation.
- H. Consolidation and compaction as scheduled.
- I. Excavating trenches for utilities.
- J. Related earthwork operations, including, but not limited to preparation of subgrades, surfacing and grading, and any other similar, incidental, or appurtenant earthwork operation which may be necessary to properly complete the work.
- K. Provide all services, labor, materials, and equipment required for all earthwork and related operations necessary or convenient for furnishing complete Work as shown on the Drawings or specified in these Contract Documents.

1.2 RELATED SECTIONS

- A. Section 02510 – Paving Repair
- B. Section 02511 - Flowable Fill.
- C. Section 02900 – Sediment & Erosion Control.
- D. Section 02936 – Seeding

E. Section 33 05 07 – Utility Boring and Jacking

F. Section 33 10 00 – Water Utility

1.3 REFERENCES

A. AASHTO - M147 - Materials for Aggregate and Soil-Aggregate.

B. AASHTO T180 - Moisture-Density Relations of Soils Using a 10-LB Rammer and an 18-in. Drop.

C. ASTM C33 - Specifications for Concrete Aggregates.

D. ASTM C136 - Method for Sieve Analysis of Fine and Coarse Aggregates.

E. ASTM D698 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures, Using 5.5 LB Rammer and 12 inch Drop.

F. ASTM D1556 - Test Method for Density of Soil in Place by the Sand-Cone Method.

G. ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures Using 10 LB Rammer and 18 inch Drop.

H. ASTM D2167 - Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.

I. ASTM D2419 - Test Method For Sand Equivalent Value of Soils and Fine Aggregate.

J. ASTM D2434 - Test Method For Permeability of Granular Soils (Constant Head).

K. ASTM D2487 - Classification of Soils for Engineering Purposes.

L. ASTM D2922 - Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

M. ASTM D3017 - Test Method for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).

N. ASTM D4318 - Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils.

1.4 QUALITY ASSURANCE

A. Perform Work in accordance with ASTM C136, ASTM D2419, ASTM D2434, and the South Carolina Department of Transportation (SCDOT) Standard Specifications for Highway Construction (SSHC), latest edition. Maintain one copy of each on site.

1.5 FIELD MEASUREMENTS

- A. Verify that survey bench mark and intended elevations for the Work are as indicated.

1.6 GENERAL

- A. The elevations shown on the Drawings as existing are taken from the best existing data and are intended to give reasonably accurate information about the existing elevations. They are not precise. Become satisfied as to the exact quantities of excavation and fill required.
- B. Perform earthwork operations in a safe and proper manner with appropriate precautions being taken against all hazards.
- C. Maintain all excavated and filled areas for structures, trenches, fills, topsoil areas, embankments and channels in good condition at all times until final acceptance by the Owner. Repair all damage caused by erosion or other construction operations using material of the same type as the damaged material.
- D. Perform earthwork within the rights-of-way of the SCDOT in accordance with requirements and provisions of the permits issued by this agency for the construction within its rights-of-way. Such requirements and provisions, where applicable, will take precedence and supersede the provisions of these Specifications.
- E. Control grading in a manner to prevent surface water from running into excavations. Obstruction of surface drainage shall be avoided and means shall be provided whereby storm water can be uninterrupted in existing gutters, other surface drains or temporary drains. Free access must be provided to all fire hydrants and water meters.
- F. No classification of excavated materials will be made. Excavation work will include the removal and subsequent handling of all materials excavated or otherwise removed in performance of the work, regardless of the type, character, composition or condition thereof.
- G. Ensure that all earthwork operations comply with the requirements of OSHA Construction Standards, Part 1926, Subpart P, Excavations, Trenching, and Shoring, and Subpart O, Motor Vehicles, Mechanized Equipment, and Marine Operations. Conduct operations in a manner acceptable to the OWNER.
- H. Make a thorough investigation of the surface and subsurface conditions of the site and any special construction problems which might arise as a result of nearby watercourses and floodplains, particularly in areas where construction activities may encounter water-bearing sands and gravels or limestone solution channels. Provide all services, labor,

equipment and materials necessary or convenient for completing the work within the time specified in these Contract Documents

1.7 COORDINATION

- A. Coordinate work with the OWNER and other Contractors as required.
- B. Verify work associated with lower elevation utilities is complete before placing higher elevation utilities.

PART 2 - PRODUCTS

2.1 MATERIALS AND CONSTRUCTION

- A. Earthwork Materials
 - 1. Fill Material, General
 - a. Approval Required: All fill material shall be subject to the approval of the OWNER.
 - b. Notification: For approval of imported fill material, notify the OWNER at least one week in advance of intention to import material, designate the proposed borrow area and sample as necessary from the borrow area for the purpose of making acceptance tests to prove the quality of the material.
 - 2. On-Site Fill Material: Soil exclusive of organic matter, frozen lumps or other deleterious substances, and containing no rocks larger than 2 inches or lumps larger than 3 inches.
 - 3. Imported Fill Materials: Meet the requirements of on-site fill material.
 - 4. Sand Cushions and Sand Fill: Consists of a sand-gravel fill of such gradation that 100 percent will pass a 3/8-inch sieve and not more than 10 percent by weight is lost by washing.
 - 5. Coarse Aggregate: Conform to the SCDOT SSHC 306.03 (SCDOT Aggregate No. 57) and having the following gradation:

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING
2-inch	-
1-1/2-inch	100
1-inch	95-100
1/2-inch	25-60
No. 4	0-10
No. 8	0-5

- 6. Drainage Aggregate: Conform to the SCDOT SSHC Section 801.02 (SCDOT Aggregate No. 789) and having the following gradation:

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING
3/4-inch	100
1/2-inch	95-100
3/8-inch	80-100
No. 4	20-50
No. 16	0-6
No. 100	0-2

7. Fine Aggregate: Conform to the SCDOT SSHC 306.04 and having the following gradation:

SIEVE DESIGNATION	PERCENT BY WEIGHT PASSING
No. 4	100
No. 16	25-75
No. 100	0-25

8. Pea Gravel: Clean, naturally rounded aggregate, 1/8 to 3/4-inch in diameter per ASTM C 33.
9. Topsoil: Dark organic weed free loam; free of muck, roots, rocks larger than 1/2 inch, subsoil, and foreign matter.

B. Sheeting, Bracing and Timbering:

1. Furnish, place and maintain all sheeting, bracing and timbering required to properly support trenches, boring and jacking pits, and other excavations in open cut and to prevent all movement of the soil, pavement, structures or utilities outside of the trench or pit.
2. Remove bracing and sheeting in units when backfill reaches the point necessary to protect the structures and adjacent property. Leave sheeting in place when in the opinion of the OWNER it cannot be safely removed. Cut off sheeting left in place at least two feet below the surface.

- C. Other Materials:** All other materials, not specifically described but required for proper completion of the work of this Section, shall be as selected and shall be subject to the approval of the OWNER.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify site conditions as required for the completion of this work.
- B. Verify that survey bench mark and intended elevations for the Work are as indicated.

3.2 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Stake and flag locations of known utilities.
- C. Locate, identify, and protect utilities that remain, from damage.
- D. Notify utility company to remove and/or relocate utilities.
- E. Maintain and protect above and below grade utilities that remain.
- F. Protect plant life, lawns, and other features remaining as a portion of final landscaping.
- G. Protect bench marks, survey control points, and property corners from excavating equipment and vehicular traffic.
- H. Compact subgrade to density requirements for subsequent backfill materials

3.3 GENERAL

- A. Safety: Comply with local regulations and with the provisions of the “Manual of Accident Prevention in Construction” of the Associated General Contractors of America, Inc., Occupational Safety and Health Act and all other applicable safety regulations.
- B. SCDOT Encroachment Permit: Comply with the General and Special Provisions of the SCDOT *Permit for Construction and Maintenance of Public Service Utility Line Along State Highway*.
- C. Bracing and Sheeting
 - 1. Furnish, put in place, and maintain all sheeting, bracing and shoring as may be required to properly support the sides of all excavations and to prevent all movement of earth which could in any way injure the work, adjacent property or workers.
 - 2. Properly support all excavations in locations indicated on the Drawing and where necessary to conform to all pertinent rules and regulations and these Specifications, even though, such locations are not indicated on the Drawings.
 - 3. Exercise care in the removal of sheeting, shoring, bracing and timbering to prevent collapse or caving of the excavation faces being supported and damage to the work and adjacent property.
 - 4. Do not leave any sheeting or bracing in the trench or excavation after completion of the work, unless approved by the OWNER.

- D. Obstructions: Remove and dispose of all trees, stumps, roots, boulders, and the like, as required for the performance of the work.
- E. Extra Earth Excavation
 - 1. In case soft or excessively wet material which is not suitable, is encountered below the final subgrade elevation of an excavation or underneath a structure, the OWNER may order the removal of this material and its replacement with crushed stone or other suitable material in order to make a suitable foundation for the construction of the structure.
- F. Cutting Paved Surfaces and Similar Improvements
 - 1. Remove existing pavement as necessary for installing pipe utilities and appurtenances or as otherwise shown on the Drawings.
 - 2. Before removing any pavement, mark the pavement neatly, paralleling pipe lines and existing street lines. Space the marks the width of the trench.
 - 3. Sawcut asphalt pavement along the marks. Break concrete pavement along the marks by scoring with a rotary saw and breaking below the score by the use of jack hammers or other suitable tools.
 - 4. Do not pull pavement with machines until completely broken and separated from pavement to remain.
 - 5. Do not disturb or damage the adjacent pavement. If the adjacent pavement is disturbed or damaged, remove and replace the damaged pavement. No additional payment will be made for removing and replacing damaged adjacent pavement.

3.4 EXCAVATION

- A. Method
 - 1. All excavation shall be by open cut from the surface except as indicated on the Drawings.
 - 2. All excavations for pipe and appurtenances shall be made in such manner and to such depth and width as will give ample room for building the structures and for bracing, sheeting and supporting the sides of the excavation, for pumping and draining groundwater which may be encountered, and for the removal from the excavation of all materials excavated.
- B. Grades
 - 1. Excavate to grades indicated on the Drawings.
 - 2. Where excavation grades are not indicated on the Drawings, excavate as required to accommodate installation.
- C. Disposal of Excavated Material
 - 1. Remove and properly dispose of all excavated material not needed to complete filling, backfilling and grading.
 - 2. Dispose of excavated material at locations approved by the OWNER. No debris of any kind shall be deposited in any stream or body of water.

3.5 EXCAVATION FOR TRENCHING

- A. Excavate subsoil required for utilities.
- B. Cut trenches sufficiently wide to enable installation and allow inspection. Remove water or materials that interfere with Work.
- C. Do not interfere with 45 degree bearing splay of foundations.
- D. Hand trim excavation. Hand trim for bell and spigot pipe joints. Remove loose matter.
- E. Remove lumped subsoil as required.
- F. Correct areas over excavated in accordance with this section.

3.6 BACKFILLING

- A. Backfill areas and trenches to contours and elevations with unfrozen materials. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen or spongy subgrade surfaces.
- B. Employ a placement method that does not disturb or damage other work.
- C. Maintain optimum moisture content of backfill materials to attain required compaction density.
- D. Backfill carefully to restore the ground surface to its original condition. Dispose of surplus material.
- F. Make gradual grade changes. Blend slope into level areas.
- G. Compact backfill underlying roadways, parking areas, sidewalks, structures, and retaining walls to 95 percent of the maximum dry density.
- H. Backfill for Pipe
 - 1. Initial: Place initial backfill material carefully around the pipe above bedding in uniform 6-inch layers to a depth of at least 18-inches above the pipe bell. Compact each layer thoroughly with suitable hand tools. Do not disturb or damage the pipe. Backfill on both sides of the pipe simultaneously to prevent the uneven side pressures. Initial backfill material is earth material excavated from the trench that is clean and free of rock, organics, and other unsuitable material. If materials excavated from the trench are not suitable for use as initial backfill material, obtain suitable materials elsewhere.

2. Final: After initial backfill material has been placed and compacted, backfill with general excavated material. Place backfill material in uniform layers and thoroughly compact with heavy power tamping tools of the “Wacker” type.
3. Settlement: If trenches settle, re-fill and grade the surface to conform to the adjacent surfaces.
4. Additional Material
 - a. Where final grades above the pre-existing grades are required to maintain minimum cover, additional fill material will be shown on the Drawings.
 - b. Utilize excess material excavated from the trench if the material is suitable.

3.7 ROADWAY AND DRIVEWAY SUBGRADE

A. Subgrade Preparation

1. Perform roadway subgrade related preparation and earthwork in accordance with the provisions of this section.
2. Prepare the subgrade to the lines and grades indicated on the Drawings.
3. Provide lines and grades for the work. Perform staking under the supervision of a Professional Land Surveyor.

B. Subgrade Drainage

1. Perform grading of the subgrade in such a manner that there will not remain on the roadway subgrade, at anytime, berms of earth or other material which will interfere with the immediate and proper drainage of water during construction.
2. Complete all ditches and other drainage structures so as to drain the roadway subgrade effectively prior to placing any construction materials.

C. Protection of Subgrade

1. Take precautions necessary in handling materials, equipment, tools, etc., to protect the subgrade from damage. Only hauling necessary for the purpose of construction will be permitted on the subgrade after completion thereof.
2. If ruts of 2 inches or more in depth are formed in the subgrade, remove all construction material, whether stored or in place, within the range of such ruts, and reshape and roll the subgrade. Smooth and re-roll ruts or rough places developing in the completed subgrade.

D. Subgrade Checking

1. Review subgrade lines, grades, and cross sections with the OWNER prior to proceeding with the construction of base or pavement thereon.
2. Conform to the lines, grades, and cross sections, indicated or directed, prior to proceeding with the construction of base or pavement thereon.

3.8 EXCESS WATER CONTROL

- A. Regulations and Permits: Comply with all pertinent rules, laws, and regulations of all applicable federal, state, county and municipal regulatory agencies.

- B. Unfavorable Weather
 - 1. Do not place, spread or roll any fill material during unfavorable weather conditions.
 - 2. Do not resume operations until moisture content and fill density are satisfactory.
- C. Provide berms or channels to prevent flooding of subgrade. Promptly remove all water collected in depressions.
- D. Pumping and Drainage
 - 1. Provide, maintain and use at all times during construction adequate means and devices to promptly remove and dispose of all water from every source entering the excavations or other parts of the work.
 - 2. Dewater by means that will insure dry excavations, preserve final lines and grades, do not disturb or displace adjacent soil.
 - 3. Perform all pumping and drainage operations with no damage to property or structures and without interference with the rights of the public, owners of private property, pedestrians, vehicular traffic or the work of other contractors, and in accordance with all pertinent laws, ordinances and regulations.
 - 4. Do not overload or obstruct existing drainage facilities.

3.9 SETTLEMENT

- A. Make repairs for all settlement of backfill, fills and embankments that may occur within one year after final acceptance of the Work by the Owner.
- B. Make all repairs or replacements within 30 days after receipt of written notice from the Owner.

3.10 SEDIMENT CONTROL

- A. Shape temporary berms and swales as required to control erosion and turn storm water into drainage structures. Install straw bales around all drainage structures to reduce sediment. Replace bales as needed.
- B. Correct all water and wind erosion and damage to this site and adjoining property.
- C. See Section 02900 for other erosion and sedimentation control requirements.

3.11 CLEANING

- A. Upon completion of the work of this Section, remove all rubbish, trash and debris resulting from construction operations. Remove surplus equipment and tools. Leave the site in a neat and orderly condition acceptable to the Owner.

(END OF SECTION)

**SECTION 02275
STONE FOR EROSION CONTROL**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. The work covered by this section consists of furnishing, stockpiling, if directed, placing and maintaining an approved stone liner placed in or at ditches, swales, pipe inlets, pipe outlets, and at other locations designed on the plans or directed by the Engineer. The Contractor shall furnish all equipment, tools, labor and materials necessary to complete the work in accordance with the plans and specifications.

1.2 RELATED SECTIONS

- A. Section 02900 – Sediment & Erosion Control.

PART 2 - PRODUCTS

2.1 **STONE** for erosion control shall conform to Section 804 of the “Standard Specifications for Highway Construction” dated 1986 published by the South Carolina Highway Department.

2.2 **STONE** for erosion control shall be resistant to the action of air and water, be of a hard, durable nature and shall range in size as follows:

<u>Class</u>	<u>Size</u>
A	2” – 6”
B	5” - 15” Rip Rap

2.3 **ALL STONE** shall meet the approval of the Engineer. While no specific gradation is required, the various sizes of stone shall be equally distributed within the required size range. The size of an individual stone particle will be determined by measuring along its long dimension.

PART 3 - EXECUTION:

3.1 **INSTALLATION:** Unless otherwise directed by the Engineer, the stone shall be placed on slopes less than the angle of repose of the material and to the line, grade and slope as indicated on the plans. The stone shall be placed so that the smaller stones are uniformly distributed throughout the mass. All stone shall be placed in a neat, uniform layer with an even surface meeting the approval of the Engineer. Geotextiles shall be used under all stone.

- 3.2 **AT LOCATIONS** where stone is required for channel changes and drainage ditches, the stone shall be placed prior to diverting the water into the channel changes and drainage ditches.
- 3.3 **AT LOCATIONS** where stone is required at the outlet of pipe culverts, the stone shall be placed immediately after completion of the pipe culvert installation.

(END OF SECTION)

**SECTION 02510
PAVING REPAIR**

PART 1 - GENERAL

1.01 APPLICABLE STANDARDS

- A. When used in this section, the term "Standard Specifications" shall mean the South Carolina State Highway Department Standard Specification for Highway Construction.
- B. American Society for Testing Materials (ASTM):

Reference	Title
ASTM D-698	Test for Moisture-Density Relations for Soils Using Standard Effort
ASTM D-1557	Test for Moisture-Density Relations for Soils Using Modified Effort

1.02 GUARANTEE

The Contractor shall guarantee all pavement work and pavement repair work for a period of two (2) years following acceptance by the OWNER, and shall repair or replace, at no cost to the OWNER, any pavement or pavement repair which crumbles, cracks, or is otherwise unsound during this two year period.

PART 2 - MATERIALS

2.01 MATERIALS

- A. Stabilized Aggregate Base Course with Prime
The base shall conform to Section 306 of the Standard Specifications.
- A. Prime
The prime coat shall conform to Section 406 of the Standard Specifications.
- B. Binder Course
The binder course shall conform to Section 402 of the Standard Specifications.
- C. Surface Course - Asphalt Plant Mix
The surface course shall be Type 1 Asphaltic Concrete and shall conform with Sections 401 and 403 of the Standard Specifications.
- D. Rigid Pavement
Portland cement concrete pavement shall conform to Section 501 of the Standard Specifications.

PART 3 - EXECUTION

3.01 COMPACTION

- B. Subgrade
Subgrade soils in all cut areas and all fill areas that are to receive new pavements shall be scarified and recompact until a density equivalent to 95% standard Proctor maximum dry density in accordance with ASTM D1557 has been obtained.
- A. Base
Stabilized aggregate base shall have minimum compaction of 95% of the maximum density obtained by the test procedure presented in ASTM D1557, Method D (Modified Proctor). The maximum permissible lift thickness shall be eight (8) inches (compacted).
- B. Moisture Content
Compaction shall be performed only when the moisture content of the soil is within 4% (four percent) of the optimum moisture content at the time of compaction. Soils are to be dried prior to compaction by disking and aeration. An Independent Testing Laboratory shall determine if soils are within the optimum moisture content.

3.02 CONSTRUCTION

- C. Preparation of Subgrade
Prior to placing of base and pavements, the construction of all utility lines (water, sewer, power, gas, etc.) which are to be placed under the pavements shall have been completed.
- A. Base
The base course shall be constructed in accordance with either Section 306 of the Standard Specifications.
- B. Prime
The prime coat shall be applied in accordance with Section 406 of the Standard Specifications.
- C. Binder and Surface Course - Asphalt Plant Mix
The binder and surface courses shall be constructed in accordance with Sections 401 and 403 of the Standard Specifications to the thickness required to match existing pavement.
- D. Rigid Pavement
Concrete pavement shall be constructed in accordance with Section 501 of the Standard Specifications to the thickness required to match existing pavement.

3.03 EXISTING PAVEMENT REMOVAL

- D. Prior to removing pavement materials the Contractor shall mark the pavement for cuts as nearly parallel to the pipe route and the existing street lines as possible.
- A. Asphalt pavement and bituminous surface treatment pavement shall be scored to a depth of 1/4 inch along marked lines with rotary saw or other approved device. After scoring, pavement may be broken by the use of a jack hammer with a spade blade or other approved device.
- B. Concrete pavement or asphalt pavement on concrete shall be scored to a depth of 2 inches along marked lines before breaking with a jackhammer or other approved device.
- C. Pavement shall be cut 12-inches wider than the excavated area on each side after trench is backfilled. Cuts shall be either parallel or perpendicular to the road centerline.
- D. Concrete sidewalks and curbs shall be removed for full width and to the nearest joint undisturbed by construction.
- E. Pavement shall not be machine pulled until completely separated along the marked lines.
- F. Adjacent pavement receiving damage by whatever cause shall be removed to neat lines at least six inches from the damaged edge or as directed. Damaged pavement shall be trimmed and replaced at the Contractors expense. Zig-zagged or rough edges will not be acceptable.

3.04 REPLACEMENT

- E. Backfill in trenches in areas receiving pavement replacement shall be accomplished by compaction methods set forth in Section 02200 of these specifications and in any case shall meet the requirements of the applicable sections of the Standard Specifications.
- A. Upon completion of backfilling and consolidation of the backfill, the Contractor shall furnish all materials and labor and shall replace all pavement removed for construction of the pipe lines and appurtenances; and shall also remove and replace, at his own expense, any all pavements adjacent to pipe trenches which may have been disturbed or damaged as the result of construction operations. Stone is not to be removed from trench before placing pavement, instead a suitable tap is to be used to further compact the ditch to depth of paving specified.
- B. Before the replacement of pavement, the existing pavement along ditch line shall be cut back from the top edge of ditch lines for a distance of at least twelve (12) inches on each side of the ditch to allow for solid bearing edges for pavement to be replaced.
- C. The various types of pavement removed shall be replaced as follows:

1. Concrete curb and gutter, street, driveway and sidewalk shall be replaced with concrete of the same thickness as was removed, but not less than 4 inches. Finish surface to match existing surface. The concrete shall be 3000 psi strength.
2. Asphalt pavement or bituminous surface treatment shall be replaced in accordance with details shown on the Plans. Top with minimum of 2 inches of asphaltic concrete. Finish surface to match existing surface.

(END OF SECTION)

**SECTION 02511
FLOWABLE FILL**

PART 1 - GENERAL

1.1 SECTION INCLUDES

Basic requirements for furnishing and placing flowable fill.

1.2 DESCRIPTION

- A. Flowable fill is a controlled low-strength material (CLSM) which can be placed in a self-leveling consistency or in a less-flowable state to reduce the fluid pressures exerted by the material. The ultimate unconfined compressive strengths should be less than 200 psi to maintain the ability to re-excavate. All voids of the excavation shall be filled without "honeycombs," and without shrinkage during the hardening process.
- B. Flowable fill is suitable for all routine backfilling and is especially beneficial as structural backfill beneath foundations and as a backfill for pipelines, culverts, tanks and other below-grade structures, utility trenches, catch basins and drop inlets, vertical taps, etc.
- C. Flowable fill may be placed from a ready-mix truck in a full depth layer without compaction of thin layers. The flowable fill hardens within a reasonable time, (at which point pavement shall be replaced), and can carry traffic without future settlement.
- D. Flowable fill is an acceptable material to use in original construction or in maintenance situations. It may be used to reduce the size of the excavation and in all weather conditions, including rain.

1.3 RELATED SECTIONS

- A. Section 02510 – Paving Repair.

PART 2 - PRODUCTS

2.1 AVAILABILITY (SOURCE OF SUPPLY)

- A. Most of the major ready-mix plants can provide flowable fill. It is supplied as a finished product by means of ready-mix trucks and is handled similarly to concrete except that it is flowable and does not require extensive labor for placement.

2.2 MIX DESIGNS (MAXIMUM DENSITY)

- A. The mixes fall into the categories of "very flowable" and "less flowable," which is controlled by the amount of water that is added. Both mixes contain sand from an

approved source with sufficient cement and fly ash to obtain maximum density at optimal moisture with load-bearing capacity and stability characteristics as good as or better than a well compacted granular base material. In either category, the mix design is the same except for the water content. The added volume shown in the very flowable mix is comprised only of the extra water used to obtain extra flowability. That extra water will be displaced during the consolidation process and the resulting in place volume (yield) will be approximately 27 cubic feet (one cubic yard).

- B. The less flowable mix can be used when it is desirable to put traffic back on a roadway quickly (usually 8 to 10 hours) or when being used to backfill pipes which could "float" out of position due to the buoyant effect of the very flowable fill mix. This mix will still have the workability necessary to self-consolidate around pipes without any "honeycomb" areas. The very flowable mix is still self-leveling and requires minimal effort to place but requires longer time to displace the extra water and develop load-bearing capacity (usually 10 to 20 hours). Adding water to flowable fill to obtain the desired plastic characteristics will not compromise the quality of the hardened flowable fill.

Mix 1 Less Flowable		Mix 2 Very Flowable	
Weights	Volume (ft ³)	Weights	Volume (ft ³)
Min. 50 lbs. Cement	.25	Min. 50 lbs. Cement	.25
Min. 600 lbs. Fly Ash	4.24	Min. 600 lbs. Fly Ash	4.24
SSD 2500 lbs. Sand	15.17	SSD 2500 lbs. Sand	15.17
55 Gal 458 lbs. Water	<u>7.34</u>	65 Gal 541 lbs. Water	<u>8.68</u>
Total Cubic Feet = 27.00		*Total Cubic Feet = 28.34	

* One cubic yard of very flowable fill will be mixed to contain more than 27 cubic feet due to the additional water.

- C. Above values are based on the following specific gravities: cement 3.15, fly ash 2.27, sand 2.64, and water 1.00. Anticipated unconfined compressive strength is 80 psi at 28 days and 150 psi at 56 days.
- D. If the situation demands greater flowability than Mix 2, the OWNER may increase the fly ash in increments of 50 pounds while decreasing the sand in increments of 58 pounds. If higher unconfined strengths are needed and the ability to easily re-excavate is not necessary, the OWNER may increase the cement in increments of 10 pounds while decreasing the sand in increments of 8 pounds.

2.3 LOW DENSITY FLOWABLE FILL

- A. Low-density flowable fill is an option. Low-density flowable fill depends on about 30% air entrained into the plastic material to obtain the flowability characteristics of maximum-density flowable fill. Low-density flowable fill also depends on the

development of cementitious bonds to obtain the load-bearing characteristics associated with the standard maximum-density flowable fill.

- B. Before using low-density flowable fill, the mix design and laboratory test data shall be submitted to the OWNER for approval at least 30 days in advance of starting the work. Test data should show set times, flowability characteristics, and compressive strength at 28 days.

2.4 MATERIAL AND EQUIPMENT

- A. The material and equipment used to produce flowable fill shall be in compliance with the requirements of the Department's Standard Specifications for Highway Construction (Latest Edition, Subsection 700) and applicable Special Provisions. Sampling and testing of maximum density flowable fill and the materials used to produce it will not be required.

PART 3 - EXECUTION

3.1. GENERAL

- A. The trench shall be prepared and the PVC pipe and appurtenances shall be wrapped in a polyethylene encasement. There should be at least 6 inches of flowable fill above the pipe.
- B. The OWNER will select the appropriate mix design for the application at the site. Typically, the less flowable mix will be used to cover the pipe. Once the pipe is covered, it will be sufficiently anchored and water may be added to the remaining flowable fill to ease placement without danger of floating the pipe. If it is important to quickly return traffic to the roadway, the less flowable mix would be preferred full depth.
- C. The flowable fill shall be discharged directly from the truck into the space to be filled, or by other methods approved by the OWNER. The mix may be placed part depth or full depth as conditions at the site dictate. Formed walls or other bulkheads shall be constructed to withstand the hydrostatic pressure exerted by the flowable fill. Trench ends outside the roadway should be blocked with sandbags or mounded soil rather than wood or metal forms. When backfilling utility lines such as water mains or force mains, flowable fill shall be distributed evenly to prevent any movement of the pipe.
- D. The flowable fill material is self-consolidating and there is no need to use vibrators, even when placed in a less-flowable state. No field testing is needed when using flowable fill. The less flowable mix can be placed in the rain or in standing water and the hardened flowable fill will obtain uniform (controlled) density.
- E. Finishing can be accomplished with a square shovel if the fill surface is at the bottom of the pavement.

- F. Once the flowable fill is in the trench, the self-consolidating material displaces the extra water not needed for maximum density. Provision shall be made for this "bleed water" to run off and away from surface of the hardening flowable fill (use of vapor barriers such as plastic sheets are not desired). Typically, full traffic can be allowed on the hardened flowable fill within 8 to 20 hours (depending on the mix used, site conditions, volume to be backfilled, etc.) without damage to the fill or any structure below. Steel plates shall be used to bridge over the hardening flowable fill as directed by the OWNER. If the filled cavity is too wide to bridge, steel plates shall be placed on top of the hardening flowable fill as soon as it is able to support foot traffic (one hour after bleeding ends). With steel plates in place, full traffic can be allowed without damage to the fill or the structure below.
- G. As the extra water is displaced from the consolidating flowable fill, there will be an initial subsidence of about one-eighth of an inch per vertical foot. Once the flowable fill hardens there will be no future settlement. The hardened flowable fill can be shaped to grade the next day to allow the pavement thickness required by the OWNER. The pavement may be applied directly on top of the flowable fill.
- E. Furnish the necessary information to obtain approval of the suggested mix design and to use the necessary construction techniques to assure that the finished material will perform as intended.

(END OF SECTION)

**SECTION 02675
DISINFECTION OF POTABLE WATER MAINS**

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Disinfection of potable finished water transmission main and water distribution system mains and any surfaces that will be in contact with potable water.
- B. Testing and reporting results.

1.2 RELATED SECTIONS

- A. Section 02676 – New Construction Water Usage

1.3 REFERENCES (LATEST EDITION)

- A. AWWA B300 - Standard for Hypochlorites.
- B. AWWA B301 - Standard for Liquid Chlorine.
- C. AWWA B303 - Standard for Sodium Chlorite.
- D. AWWA C605 - Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water (Reference Section 7.4 - Disinfecting).
- E. AWWA C651 - Standard for Disinfecting Water Mains.
- F. South Carolina State Primary Drinking Water Regulations: R.61-58 (Reference paragraph R.61-58.4(D)(f)).

1.4 SUBMITTALS FOR INFORMATION

- A. Section 01300 – Submittals: Procedure for submittals.
- B. Test Reports: Include results comparative to specified requirements.
- C. Certificate: Certify that cleanliness of water distribution system meets or exceeds specified requirements.

1.5 PROJECT RECORD DOCUMENTS

- A. Disinfection report:
 - 1. Type and form of disinfectant used.
 - 2. Date and time of disinfectant injection start and time of completion.
 - 3. Test locations.
 - 4. Initial and 24 hour disinfectant residuals (quantity in treated water) in ppm for each outlet tested.
 - 5. Date and time of flushing start and completion.
 - 6. Disinfectant residual after flushing in ppm for each outlet tested.

- B. Bacteriological report:
 - 1. Date issued, project name, and testing laboratory name, address, and telephone number.
 - 2. Time and date of water sample collection.
 - 3. Name of person collecting samples.
 - 4. Test locations.
 - 5. Initial and 24 hour disinfectant residuals in ppm for each outlet tested.
 - 6. Coliform bacteria test results for each outlet tested.
 - 7. Certification that water conforms, or fails to conform, to bacterial standards of zero coliform and <80 non-coliform bacterial colonies per 100 ml.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with AWWA C651.
- B. Testing Firm: Laboratory contracted to analyze samples shall be certified by the SCDHEC for coliform and non-coliform bacteria testing.

PART 2 - PRODUCTS

2.1 DISINFECTION CHEMICALS

- A. Chemicals: AWWA B300, Hypochlorite, AWWA B301, Liquid Chlorine, and AWWA B303, Sodium Chlorite.

2.2 WATER

- A. Once the new water mains are connected to the City of Georgetown water system, the Contractor shall coordinate the delivery of water for the purpose of filling, pressure testing, disinfection, and flushing of the new mains with the City of Georgetown.
- B. Any use of City of Georgetown water must be coordinated with City of Georgetown (843 545-4501) in accordance with Section 02676 – New Construction Water Usage. City of Georgetown will set water flow rates and volumes as well as the time and duration of availability.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that piping system has been cleaned, flushed, and pressure tested.
- B. Perform scheduling and disinfecting activity with start-up, testing, adjusting and balancing, demonstration procedures, including coordination with related systems.

- C. OWNER shall verify chlorine residual levels to confirm that it is within the range of the existing distribution system, preferably using the Hach Pocket Colorimeter Model 46700-00 on the Low-End Levels. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or “or equal” item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review. All “or-equal” substitutions must be submitted to Engineer for review.

3.2 EXECUTION

- A. Perform disinfection of new water mains in accordance with AWWA Standard for Disinfecting Water Mains, C651. Use one of three methods of chlorination: Tablet Method, Continuous-Feed Method, or Slug Method.
- B. Exercise all valves, service lines, and hydrants contained within the section of main being tested. Maintain isolation of water mains to be disinfected and tested.
- C. Dependent upon chlorination method used, achieve required chlorine concentrations and maintain disinfectant in system for the prescribed periods. At the end of the test period, check for the presence of the required free chlorine residual. Flush the tested section until free chlorine residual is no higher than that generally prevailing in the existing distribution system or is acceptable for domestic use. Include the chlorine residual reading on the Chain of Custody form.
- D. Flush heavily chlorinated water in such a manner as not to damage the environment. Use neutralizing chemicals as may be required.
- E. Two consecutive satisfactory bacteriological tests, taken at least 24 hours apart, are required at each sample site. The number of sample sites varies depending on the amount of new construction, but must be representative of the water in the newly constructed mains. Samples will be taken at each dead end and at a minimum of every 1,200 linear feet of new water main. Include a schedule of how to determine the number of samples to be taken.
- F. Upon completion of the disinfection procedure, reduce the chlorine residual to levels required for discharge to the environment. Treat disposed water with sulfur dioxide or other reducing agent to neutralize chlorine residual.
- G. The lab report for analytical testing must provide the chlorine residual at each sample point as well as the bacteriological test result for each sample point. If the membrane filter analysis method is used for bacteriological testing, non-coliform

growth must also be provided. If the non-coliform growth is greater than 80 colonies per 100 milliliters, the sample result is invalid and must be repeated. All samples analyzed must show the water line to be absent of total coliform bacteria. The Contractor is responsible for coordinating and providing these services.

3.3 FIELD QUALITY CONTROL

- A. Representative of the Owner must be present during sample collection.
- B. Collect and transport samples in accordance with the quality control procedures of the contract laboratory.

(END OF SECTION)

SECTION 02676

NEW CONSTRUCTION WATER USAGE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Procedures for coordinating and reporting water usage for filling, pressure testing, disinfection and flushing.

1.2 RELATED SECTIONS

- A. Section 02675 – Disinfection of Potable Water Mains

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 - EXECUTION

2.1 FILLING

- A. After a new line is installed and prior to filling, the Engineer will calculate the volume of water needed to fill the line. This information will be forwarded to the City of Georgetown along with a written request to fill the line. This information will be required 72 hours in advance of filling any new lines.

2.2 FLUSHING

- A. Once the Contractor is ready to flush in preparation for bacteriological testing, the Contractor shall coordinate with the City of Georgetown 72 hours in advance following the procedures below:

- 1.1 If the Contractor will be using hydrants for flushing, the Contractor shall pay a \$1,200.00 refundable deposit per hydrant meter to the City of Georgetown. The meter(s) shall be installed on the affected hydrant(s). The Contractor shall record all flow and forward this information to the City of Georgetown by 8:00 a.m. on the Monday after the previous week's flushing actions.

- 1.2 If the Contractor is using service connections for flushing, the Contractor shall pay a \$150.00 refundable deposit per service line meter. The meter(s) shall be installed on the affected service line(s). The Contractor shall record all flow data and forward this information to the City of Georgetown by 8:00 a.m. on the Monday after the previous week's flushing actions.

- 1.3 Once all meters are returned to the City of Georgetown, the Contractor's deposit will be refunded.

(END OF SECTION)

NEW CONSTRUCTION WATER USAGE

**SECTION 02900
SEDIMENT AND EROSION CONTROL**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Furnishing all equipment, labor, and materials necessary to comply with all Federal, State, and local laws and regulations pertaining to sedimentation and erosion control, including the approved South Carolina Department of Health & Environmental Control (SCDHEC) "Stormwater Management Permit."
- B. Temporary and permanent erosion and sedimentation control measures.
- C. Best management practices for erosion and sedimentation control.
- D. Sequence of erosion and sedimentation control construction activities.

1.2 RELATED SECTIONS

- A. Section 02200 - Earthwork.
- B. Section 02275 – Stone for Erosion Control
- C. Section 02936 - Seeding.

1.3 REFERENCES

- A. FHWA - (Federal Highway Administration) - Task Force 25 – Geotextile Engineering Manual.
- B. SCLRCC - (South Carolina Land Resources Conservation Commission) - Erosion and Sediment Control Practices for Developing Areas.
- C. AASHTO - (American Association of State Highway and Transportation Officials) - Guide Specifications for Highway Construction.
- D. SCDOT - (South Carolina Department of Transportation) - Standard Specifications for Highway Construction.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the SCDOT Standard Specifications for Highway Construction.
- B. Maintain one copy of approved SCDHEC Stormwater Management permit, plans, and specifications at the project site.

PART 2 - PRODUCTS

2.1 BALED STRAW

Standard size (18 in. by 48 in.) rectangular, mechanically baled straw.

2.2 SILT FENCE A.

Manufacturers:

1. Mirafi, Inc. - 100X.
2. Amoco Fabric and Fibers Company - 1380 Silt Stop.
3. Engineer approved equal.

B. Silt Fence and Support Devices:

1. Demonstrate proven record of satisfactory performance.
2. Silt fence fabric: Meet the Task Force 25 Specifications as published in the FHWA Geotextile Engineering Manual.
3. Netting: Polymer-type with a built-in cord running throughout the top edge of the fabric.
4. Support posts: Steel or pressure treated Southern yellow pine; spaced not more than six feet on center.
5. Equivalent opening size (EOS): 40 to 100.
6. Fabric permeability: 40 gallons per minute per square foot maximum.

2.3 TEMPORARY SEEDING

- A. General: Seed and fertilizer to conform with all State law and to all requirements and regulations of the South Carolina Department of Agriculture.
- B. Seeding and Fertilization Schedule: In accordance with Section 810 of the SCDOT Standard Specifications for Highway Construction.

2.4 GRAVEL

- A. Gravel for Temporary Site Access: 1 to 2 ½ inch washed stone meeting AASHTO designation M43, size No. 2.

2.5 FILTER FABRIC A.

Manufacturers:

1. Mirafi, Inc. – 140NS.
2. Engineer approved equal.

- B. Non-biodegradable, 4 oz. non-woven filter fabric.

2.6 EROSION CONTROL & REVEGETATION MAT A.

Manufacturers:

- 1. Mirafi, Inc. – Miramat.
- 2. Engineer approved equal.
- B. Non-biodegradable, bonded vinyl monofilament.

PART 3 - EXECUTION

3.1 BEST MANAGEMENT PRACTICES

- A. General: Properly care for all disturbed areas during construction to prevent or minimize sedimentation damage downstream of the construction area. Conduct site grading and drainage operations in such a manner as to prevent or minimize soil erosion on and around the construction site.
- B. Minimum Requirements: Measures shown on the Drawings. Method of operation may dictate additional erosion and sedimentation control measures not indicated. Failure to stabilize disturbed areas immediately following intermediate or final grading may dictate additional erosion and sedimentation control measures not indicated.
- C. Sediment and Erosion Control:
 - 1. Provide satisfactory means of preventing or minimizing the movement and washing of soil onto downstream properties or into adjacent waterways and drainage channels. If such erosion occurs, provide immediate means of removing soil and debris from the affected areas.
 - 2. Periodically review site grading and drainage operations with the Owner to determine the areas most susceptible to erosion.
 - 3. Provide temporary measures to minimize the washing away of the site soils that would likely occur before the areas are finish graded, topsoiled, grassed, and accepted by the Owner.
 - 4. Notify the Owner of any changes or additions to the erosion and sedimentation control plan as submitted.
 - 5. Pay all fines imposed for improper erosion and sedimentation control.

3.2 GENERAL SEQUENCE OF EROSION AND SEDIMENTATION CONTROL

ACTIVITIES DURING CONSTRUCTION

- A. Clear and grub areas necessary for installation of perimeter control measures.
- B. Install sediment control measures.
- C. Construct perimeter control measures.
- D. Complete clearing and grubbing operations. E. Install underground utilities.
- F. Finish grade work site and restore disturbed areas.
- G. Remove sediment and erosion controls measures once permanent vegetation is established.

3.3 BALED STRAW CHECK DAMS AND INLET FILTERS

- A. Provide and construct baled straw check dams and inlet filters in accordance with details as shown on the Drawings and as specified.
- B. Locate as depicted on the Drawings, as directed by the Engineer, or as necessary to control on-site erosion.
- C. Provide additional straw bales wherever severe erosion occurs during the construction process.

3.4 SILT FENCING

- A. Provide and install silt fences in accordance with details as shown on the Drawings and as specified by the manufacturer.
- B. Locate as depicted on the Drawings, as directed by the Engineer, or as necessary to control on-site erosion.
- C. Adjust location and length of silt fencing as necessary to ensure proper sedimentation and erosion control.
- D. Maintain silt fencing until capacities are reached or erosion activity in the construction areas is stabilized. Construct additional silt fencing when original fencing has reached its functional capacity.

3.5 MAINTENANCE AND REMOVAL

- A. Inspect all sediment control measures at least once every seven calendar days and after every rain event of 1/2 inch or greater during any 24 hour period. Repair and maintain all sediment control measures until final stabilization has been obtained.
- B. Remove any sediment spilled, dropped, washed or tracked onto public rights-of-way immediately.

3.6 COMPLETION OF CONSTRUCTION

- A. Remove and dispose of all temporary erosion and sediment control structures at the conclusion of construction activity. Spread and finish grade accumulated soil.
- B. Provide permanent seeding in accordance with Section 02936.

(END OF SECTION)

**SECTION 02936
SEEDING**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Preparation of subsoil.
- B. Placing topsoil.
- B. C. Seeding, mulching, and fertilizing

1.2 RELATED SECTIONS

- A. Section 02900 – Sediment and Erosion Control.
- B. Section 02200 – Earthwork

1.3 REFERENCES

- A. FS O-F-241 – Fertilizers, Mixed, Commercial.
- B. SCDOT - (South Carolina Department of Transportation) - Standard Specifications for Highway Construction.

1.4 SUBMITTALS FOR REVIEW

- A. See Section 01340.

1.5 QUALITY ASSURANCE

- A. Provide seed mixture in containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging.
- C. Provide fresh, clean, new crop seed complying with the tolerance of purity and germination established by the Official Seed Analysis of North America and certified by the Crop Pest Commission, as follows:
 - 1.Pennisetum Glaucum (Browntop Millet): Testing 98% purity and 85% germination.
 - 2.Bermuda Common: Testing 98% purity and 85% germination.
 - 3.Domestic Italian Rye: Testing 98% purity and 90% germination.

1.6 REGULATORY REQUIREMENTS

- A. Comply with regulatory agencies for fertilizer and herbicide composition.

- B. Provide certificate of compliance from authority having jurisdiction indicating approval of seed mixture

1.7 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.
- C. Seed, fertilizer, ect. shall be handled and stored in a manner that will prevent damage. Tags and labels shall be maintained secure and legible.
- D. Include the latest SCDOT schedule of seeding and temp. seeding.

PART 2 - PRODUCTS

2.1 SEED MATERIALS

- A. Conform to all State laws and to all requirements and regulations of the South Carolina Department of Agriculture.
- B. Individually package and tag different varieties of seed to show name of seed, net weight, origin and lot number.
- C. Seed mixture: In accordance with section 810.04 of the SCDOT “Standard Specifications for Highway Construction.”

2.2 SOIL MATERIALS

- A. Shape and grade topsoil stockpiled on the site in accordance with Section 02900.
- B. Complete seeding operations at the earliest practical date in order to establish a grass cover sufficient to protect soil materials from wind and water erosion.

2.3 ACCESSORIES AND OTHER PLANTING MATERIALS

- A. Provide following materials, all meeting or exceeding regulations of the South Carolina State Department of Agriculture, as follows:
 - 1. Fertilizer: 10-10-10 or as indicated in analysis.
 - 2. Limestone: Ground dolomite containing not less than 85% of total carbonates; grind to fineness such that 50% will pass through a 100 mesh sieve and 90% will pass a 20 mesh sieve.

3. Emulsified asphalt: Meet the requirements of Section 406 of the SCDOT “Standard Specifications for Highway Construction.” Dilute with water to provide a homogenous material satisfactory for spraying.
4. Straw mulch material: (1) wheat, rye, barley, or oat straw, or (2) timothy, pearline, alfalfa, or coastal bermuda hay. Ensure that materials are dry and reasonably free of mature seed-bearing stalks of Johnson grass, nutgrass, sandbary, wild garlic, wild onion, wild mustard, Crotolaria, pigweed, witchweed, and cocklebur.

PART 3 - EXECUTION

3.1 PREPARATION OF SOIL

- A. Prepare subsoil to eliminate uneven areas and low spots. Maintain lines, levels, profiles and contours. Make changes in grade gradual. Blend slopes into level areas.
- B. Remove foreign materials, weeds and undesirable plants and their roots. Remove contaminated subsoil.
- C. Spread stockpiled topsoil to a minimum depth of six inches. Rake until smooth.
- D. Place topsoil during dry weather and on dry unfrozen subgrade.
- E. Remove vegetable matter and foreign non-organic material from topsoil while spreading.
- F. Grade topsoil to eliminate rough, low or soft areas, and to ensure positive drainage.

3.2 FERTILIZER AND LIME APPLICATION

- A. Apply fertilizer over the area to be seeded at the rate of 250 pounds per acre.
- B. Apply lime over the area to be seeded at the rate of 500 pounds per acre.
- C. Apply after smooth raking of topsoil.
- D. Do not apply fertilizer and lime at the same time or with the same machine used to apply seed.

3.3 SEED APPLICATION

- A. On the prepared area, evenly distribute seed at the rates noted in the Seeding Schedule shown on the Drawings (Refer to Water Panel 11C).

(END OF SECTION)

**SECTION 33 05 07
UTILITY BORING AND JACKING**

PART 1 - GENERAL

1.01 WORK INCLUDED:

- F. This Section covers the work necessary to furnish and install steel casing carrier pipes under surface structures, where indicated, as specified herein, and as needed for a complete and proper installation.
- G. Where laws or orders of public authority prescribes a higher degree of protection than specified herein, then the higher degree so prescribed shall be deemed a part of this specification and govern the specific installation.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

Section 02200 – Earthwork

1.03 CONTRACTOR FURNISHED AND INSTALLED:

- A. All casing, casing spacers, restrained joint ductile iron carrier pipe, and accessories, which become part of the finished product.

1.04 QUALITY ASSURANCE:

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.

1.05 SUBMITTALS:

- H. Comply with pertinent provisions of Section 01 – General Requirements.
- I. Product data: Within 60 calendar days after the Contractor has received the Owner's Notice to Proceed, submit Manufacturer's specifications and other data needed to prove compliance with the specified requirements.

1.06 SAFETY:

- A. Perform all excavation and backfilling activities in accordance with the Occupational Safety and Health Act of 1970 (PL 91-597), as amended.

PART 2 - MATERIAL

2.01 CARRIER PIPE

UTILITY BORING AND JACKING

- A. Carrier pipe shall be restrained joint PVC in accordance with specification Section 33 10 00 – Water Utility.

2.02 STEEL PIPE CASING:

- A. Steel pipe casing shall be manufactured from steel conforming to ASTM A 139 for Grade B, with minimum yield strength of 35,000 psi before cold forming.
 - 1. Pipe shall be straight seam welded. A protective coat will not be required. Spacers for installation of the carrier pipe shall be installed by the Contractor.
 - 2. Minimum diameter and wall thickness of the steel piping shall be as listed in the following table.

Restrained Joint PVC Carrier Pipe Size (inches)	Minimum Casing Size (inches)	Minimum Casing Thickness (inches)
4	14	0.250
6	16	0.281
8	18	0.312
10	20	0.375
12	24	0.375

- 3. The thicknesses of the casing shown in 2.02.A.2 are minimum thicknesses. Actual thicknesses shall be determined by the casing installer based on an evaluation of the required jacking forces. Any buckling of the casing due to jacking forces shall be repaired at no additional cost to the owner.

2.03 CASING SPACERS:

- A. Casing spacers shall be flanged, bolt-on style with a two-section stainless steel shell lined with a PVC liner, minimum 0.09-inch thick, also having a hardness of 85-90 durometer. Runners shall be attached to stainless steel risers which shall be properly welded to the shell. The height of the runners and risers shall be manufactured such that the pipe does not float in the casing. Casing spacers shall be as manufactured by Cascade Waterworks Manufacturing Company, Contractors Manufacturing, Inc., or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION OF STEEL PIPE CASING:

Installation of steel pipe casing shall be by the dry bore method at locations as shown on the Contract Drawings and approved by the applicable permits. Installation of steel pipe

casing shall be in accordance with applicable regulations, the Contract Drawings, these specifications, and any permits required with respect to the particular boring

A. Boring Pit and Receiving Pit

The boring pit shall be solid sheeted, braced, and shored as necessary to provide a safe operation. The Contractor shall take all precautions, and comply with all local, state and federal requirements as may be necessary to protect private property, public property and/or existing utilities. Maintain in dry condition by use of pumps, drains or other approved method.

The receiving pit shall be constructed in accordance with the Contract Drawings and applicable permit.

B. Line and Grade

The Contractor shall set the boring rig so that after the casing is complete, and the carrier pipe is installed, the invert of the pipe shall conform to grade and alignment as shown on the Contract Drawings. As the casing is installed, Contractor shall check the horizontal and vertical alignment frequently. Contractor shall install the boring at a 90-degree angle to the crossing unless permitting authority approves a different specific angle of crossing. The depth shall be a minimum depth as prescribed by the governing authority unless a deeper depth is dictated by design.

C. Boring

In all cases, boring and jacking of the casing pipe shall be accomplished by the dry jack and bore method without jetting, sluicing, or wet boring. For casing pipes 48-inch in diameter and larger, a closed face shield bore head shall be utilized in front of the casing. For casing pipes less than 48-inches in diameter, the casing may be installed via open face method whereby the hole shall be bored and cased through the soil by a cutting head on a continuous auger mounted inside the casing pipe. The distance between the leading end of the first auger section and the leading end of the casing shall be as necessary to maintain a solid plug of spoil material inside the forward portion of the casing. At no time during the boring and jacking operation shall the auger head be allowed to extend out in front of the casing being installed. The boring of the hole and jacking of the casing pipe shall be done simultaneously, with continuous installation, until the casing pipe is in final position

D. Dewatering

Contractor shall fully investigate the locations of all jack and bores for the project and determine required dewatering methodologies for each location in order to provide for and conduct a dry jack and bore. Contractor shall submit plans and specifications for dewatering to the Engineer for approval prior to beginning the process (for railways, railway authority must also approve). Pumps of sufficient capacity to handle the flow shall be maintained at the site,

provided the Contractor has received approval from the engineer to operate them. Pumps in operation shall be constantly attended on a 24-hour basis until, in the sole judgement of the DOT or railway authority; the operation can be safely halted. When dewatering, a process for monitoring any settlement of tracks, roads, or structures must be in place. Prior to commencing boring, the Contractor shall verify, with acceptance by the Engineer, the absence of groundwater to below the lowest elevation of the casing at each entry/exit pit and as necessary along the casing route.

E. Diameter of Hole

Bored installations shall have a bored hole no more than 1-inch greater than outside diameter of the casing pipe to be installed. In the event that voids are detected, the voids shall be grouted.

F. Casing Pipe Length

Lengths of casing pipe shall be as long as practical for site conditions. Joints between lengths shall be completely welded in accordance with American Welding Society recommended procedures. Prior to welding joints, the Contractor shall ensure that both ends of the casing sections being welded are square. The length of the casing shall be such that each end of the casing shall extend a minimum of 6' beyond the edge of pavement/back of curb or a paved roadway, or if railway installation, in accordance with requirements of the railway authority.

G. Lubricant

The Contractor shall plan to use a casing lubricant, such as bentonite, in the event excessive frictional forces jeopardize the successful completion of the casing installation.

H. Jacking

Once the jacking procedure has begun, it shall be continued without stopping until the boring and jacking operation is complete.

I. Installation of the Carrier Pipe

1. Inspect carefully, insuring that all foreign material is removed from the casing and the casing meets alignment criteria for the type of carrier pie being used.
2. For pressure systems, the casing deflection shall not exceed the maximum deflection recommended by the carrier pipe.
3. Install casing spacers on the carrier pipe per the manufacturer's instructions.
4. Provide a minimum of one spacer per ten linear feet of pipe.
5. Install the carrier pipe in the casing ensuring each joint is pushed "home" before the joint is installed into the casing.
6. Provide centered and restrained configuration.

J. End Seals

Grout each end of the casing with concrete brick and Type II concrete in such a manner to prevent the infiltration of foreign materials into the casing pipe, but allowing leakage to pass in the event of a carrier pipe break

3.02 RIGHTS-OF-WAY, EASEMENTS, AND PERMITS

- A. Prior to the beginning of the Work, consult with the Owner to determine that all rights-of-way, easements, permits or other legalities are in order and become familiar with the requirements thereof. Confine the Work as required to comply with such requirements. Any encroachment beyond such limits shall be the Contractor's responsibility.

3.03 CONFLICTS OF SPECIFICATIONS:

- A. Where laws or orders of public authority prescribes a higher degree of protection than specified herein, then the higher degree so prescribed shall be deemed a part of this specification and govern the specific installation.

(END OF SECTION)

**SECTION 331000
WATER UTILITY**

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work included: Provide water distribution system as shown on the Drawings, specified herein, and needed for a complete and proper installation.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these specifications.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.3 SUBMITTALS

- A. Comply with pertinent provisions of Division 01.

1.4 PRODUCT HANDLING

- A. Comply with pertinent provisions of Section 01640.
- B. Shipment of pipe:
 - 1. Protect pipe with tarp or other means during shipment to prevent truck exhaust from damaging pipe.
- C. Avoid severe impact blows, gouging or cutting by metal surfaces or rocks.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Use any pipe material and associated fittings as specified herein, except where use of a particular material is indicated on the plans, or specified herein.

2.2 PIPE AND FITTINGS

- A. General:
 - 1. Pipe size 3" and larger use plastic pipe unless otherwise indicated. No asbestos cement pipe allowed. Pipe less than 3" use plastic pipe.

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2. Any pipe, solder, or flux used shall be lead free (lead free is defined as less than 0.2% lead in solder or flux and less than 8.0% lead in pipes and fittings).
3. Gaskets are to be factory-installed and integral with the pipe.
4. All pipe 4" and larger shall be National Sanitary Foundation (NSF) approved and shall be third party certified as meeting the specifications of ANSI/NSF Standard 61.
5. All materials and products that contact potable water shall be third party certified as meeting the specifications of ANSI/NSF Standard 61.
6. All chemical or products added to the public water supply must be third party certified as meeting the specifications of ANSI/NSF Standard 60.
7. For valves cast all markings integral on the valve body with the size of valve, year of manufacture and the class working pressure.
 - a. Certifications to rate a 150B valve body to a Class 250 valve will not be acceptable.
8. For valves spray coat all interior wetted ferrous surfaces with two-component epoxy applied to a nominal thickness of 3 to 4 mils.
 - a. Coating material to be AWWA and U.S. Food and Drug Administration approved for use with potable water.

B. PVC Pipe:

1. Plastic pipe, 4" and 12" (PVC):
 - a. General:
 - 1) Marked with National Sanitation Foundation approval at 18" intervals.
 - 2) Gaskets to comply with ASTM F 477.
 - a) Natural rubber gaskets are not acceptable.
 - b. 4" - 12": Comply with ANSI/AWWA C900, Table 2, Pressure Class 150 (DR18).
 - c. Color of pipe to be blue.
2. Plastic Service Pipe, 1-1/2" in diameter and larger
 - a. Provide PVC pipe complying with ASTM D2241 for PVC 1120, SDR 26, with NSF approval marked at 18" intervals. PVC, SDR 21 for pipe sizes under 4"
 1. Use integral bell or coupling type joints with elastomeric gaskets.
 - 1) Integral bells to comply with ASTM D2672.
 - 2) Couplings to comply with ANSI/AWWA C900.
 - 3) Gaskets to comply with ASTM F477.
 - 4) Lubricants shall be compatible with pipe and gasket materials, shall not support bacteria growth and shall not adversely affect potable quality of line contents.
 2. Use PVC fittings, 160 psi at 73° pressure rating, joint design to conform to pipe joints.
 - b. Provide pipe complying with ASTM D1785 for PVC 1120. Schedule 80, dark gray color NSF approved solvent weld coupling joints, unless otherwise indicated.
 - c. Provide standard weight, hot-dip galvanized steel pipe complying with ASTM A53, ends threaded and coupling on one end.

C. Joints:

1. Plastic pipe:
 - a. Use integral bell or coupling type with elastomeric gaskets.
 - b. Integral bells to comply with ASTM D2672.
 - c. Couplings to comply with ANSI/AWWA C900.

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- d. Gaskets to comply with ASTM F477.
 - 1) Natural rubber gaskets are not acceptable.
 - e. Lubricants shall be compatible with pipe and gasket materials, shall not support bacteria growth and shall not adversely affect potable quality of line contents. Vegetable shortening shall not be used to lubricate joints.
 - 1) NSF approved.
3. Polyethylene pipe joining:
- a. Sections of polyethylene pipe should be joined into continuous lengths on the job site above ground. The joining method shall be the butt fusion method and shall be performed by the manufacturer's recommendations. The butt fusion equipment used in the joining procedures should be capable of meeting all conditions recommended by the pipe manufacturer, including, but not limited to, temperature requirements, alignment, and fusion pressures. Prior approval of equipment and personnel shall be obtained before fusion begins. The completed pipe joints shall be guaranteed for five years in writing to the Owner and its Contractor.
 - b. End connections: Special restrained joint mechanical joint adapters may be required for each end of the P.E. pipeline. The price quoted shall include any special end configuration and polyethylene ring to hold a standard mechanical joint.

D. Fittings and specials:

- 1. Plastic pipe:
 - a. Use 150 psi pressure rated ductile iron fittings or specials unless otherwise indicated, complying with ANSI/AWWA C110/A21.10.
 - b. Compact fittings for piping 3" - 16" may be provided in accordance with ANSI/AWWA C153/A21.53.88.b.
 - c. Fittings for use with push-on joint pipe, comply with ANSI/AWWA C111/A21.11.
 - d. Provide adapter glands, gaskets, etc. as required to accommodate any differences in pipe and fitting dimensions.
 - e. Use cement mortar lining complying with ANSI/AWWA C104/A21.4, standard thickness.
 - f. The maximum phosphorous level in the casting will be 0.08%.
 - g. The fitting surface finish will conform to MSS SP-112 Quality Standard for Evaluation of Cast Surface Finishes.
 - h. The manufacturer shall be ISO 9000 certified.
 - i. Markings
 - * Each fitting shall have the following markings cast integrally to the fitting:
 - 1. Manufacturer's Name or Logo
 - 2. "MJ"
 - 3. Country of origin
 - 4. Manufacturer's Foundry Mark
 - 5. AWWA C-153 or C110
 - 6. Pressure Rating
 - 7. Nominal Diameter (each leg)
 - 8. "DI" or "Ductile"
 - 9. No. of Degrees (bends)
- 2. Plastic pipe 3" and smaller: Use PVC fittings, 160 psi at 73°F pressure rating, joint design to conform to pipe joints.

E. DIP Pipe:

1. Ductile iron pipe (DIP):
 - a. Comply with ANSI/AWWA C150/A21.50 or AWWA C151/A21.51, latest revision.
 - b. The class or nominal thickness, net weight without lining, and casting period shall be clearly marked on each length of pipe. Additionally, the manufacturer's mark, country where cast, year in which the pipe was produced, and the letters "DI" or "Ductile" shall be cast or stamped on the pipe.
 - c. Wall thickness in accordance with Table 50.5 of ANSI/AWWA C150/A21.50, depth of cover indicated and Type 3 bedding conditions, minimum Pressure Class (Choose pressure rating) as follows:
 - 4" – 12" Pressure Class 350.
 - d. Use cement mortar lining complying with ANSI/AWWA C104/A21.4, standard thickness.

F. Joints:

1. Ductile iron pipe:
 - a. Use mechanical or push-on joints complying with ANSI/AWWA C111/A21.11 as modified by ANSI/AWWA C151/A21.51.
 - b. Use gaskets and lubricant complying with ANSI/AWWA C111/A21.11. Natural rubber gaskets are not acceptable.
 - c. Lubricants shall be compatible with pipe and gasket materials, shall not support bacteria growth and shall not adversely affect potable quality of line contents. Vegetable shortening shall not be used to lubricate joints.
 - 1) NSF approved.
 - d. Exposed pipe:
 - 1) Class 53 minimum.
 - 2) Use flanged joints complying with ANSI/AWWA C115/A21.11, latest revision; and
 - i) Provide solid type flanges with country where cast stamped or cast into the flange."
 - ii) Use full face, red rubber, factory cut, 1/16" thick for pipe up to 10" diameter and 1/8" thick for larger sizes.
 - iii) Bolts and nuts shall be standard carbon steel machine bolts, hex head complying with ANSI A21.11/AWWA C111.

G. Fittings and specials:

1. Ductile iron pipe:
 - a. Provide 250 psi rated ductile iron fittings or specials unless otherwise indicated, complying with ANSI/AWWA C110/A21.10 and in accordance with ANSI/AWWA C111/A21.11.
 - b. Clearly cast the manufacturer's mark, country where cast, year in which the fitting was produced, and the letters "DI" or "Ductile" on the fitting."
 - c. Compact fittings for piping 3" - 16" may be provided in accordance with ANSI/AWWA C153/A21.53.88.b.
 - d. Fittings for use with push-on joint pipe, comply with ANSI/AWWA C111/A21.11.
 - e. Use cement mortar lining complying with ANSI/AWWA C104/A21.4, standard thickness.
 - f. The maximum phosphorous level in the casting will be 0.08%.

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- g. The fitting surface finish will conform to MSS SP-112 Quality Standard for Evaluation of Cast Surface Finishes.
- h. The manufacturer shall be ISO 9000 certified.
- i. Markings
 - * Each fitting shall have the following markings cast integrally to the fitting:
 1. Manufacturer’s Name or Logo
 2. “MJ”
 3. Country of origin
 4. Manufacturer’s Foundry Mark
 5. AWWA C-153 or C110
 6. Pressure Rating
 7. Nominal Diameter (each leg)
 8. “DI” or “Ductile”
 9. No. of Degrees (bends)

H. Couplings:

1. Provide couplings where needed to make piping connections and where located on the plans.
2. Provide mechanical joint ductile iron sleeve, full length, minimum 12".
3. Provide cutting-in sleeve where installing fittings in an existing line.
 - a. Provide ductile iron with mechanical joint.
4. Provide restrained joint couplings where restrained joints are indicated on the plans.

I. Restrained joint pipe and fittings:

1. Provide restrained joint pipe and fittings where indicated on the plans
 - a. Provide one of the following:
 - 1) Snap-Lok by Griffin Pipe.
 - 2) American Cast Iron Pipe Company.
 - a) Flex-Ring (4" - 48").
 - 3) U. S. Pipe.
 - a) TR-Flex (4" – 36")
 - 4) Super-Lock by Clow (4" - 30").
 - 5) Fast Grip Gasket by American Cast Iron Pipe Company.
 - 6) Field Lok by U.S. Pipe.
 - b. Provide restraint for C900 PVC by mechanical means separate from the mechanical joint gasket sealing gland.
 - 1) Provide wide, supportive contact around full pipe circumference as follows:

<u>Size</u>	<u>Restraint Width</u>
4", 6"	1-1/2"
8", 10", 12"	1-3/4"

- 2) Provide means of restraint by machined serrations on inside surface of restraint device designed to provide circumferential loading over the entire restrainer.
 - a) Design to be such that restraint increases with increased in-line pressure.
 - b) Provide a minimum of 8 serrations per inch of restraint width.
- 3) Restraint device to be pressure rated at 350 psi, or equal to the pipe on which it is used and capable of withstanding test pressures of 2 times pressured rating.

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- 4) Fusion applied epoxy coating finish per AWWA C-213.
 - 5) Provide series 1600 as manufactured by EBAA Iron, Inc. of Eastland, Texas, or approved equal.
- c. Provide restraint for PVC pipe 3" and smaller by split serrated ring.
- 1) Restraint device to be a two-piece configuration with plurality of individually actuating gripping services.
 - 2) Restraint device body to be manufactured from ductile iron conforming with ASTM A536.
 - 4) Pressure rating to match PVC pipe on which it is used with capability to withstand test pressure of 2 times rated pressure.
 - 5) Fusion applied epoxy coating finish per AWWA C-213.
 - 6) Provide series 6500 as manufactured by EBAA Iron, Inc. of Eastland, Texas, or approved equal.
- d. Provide restraint between PVC and mechanical joint ductile iron fitting where indicated on the plans.
- 1) Provide device consisting of multiple gripping wedges incorporated into a follower gland meeting the applicable requirements of ANSI/AWWA C111/A21.11.
 - 2) The device will have a working pressure rating equal to the pipe on which it is used and include a minimum design pressure safety factor of 2:1.
 - 3) Gland body, wedges and wedge actuating components will be cast from grade 65-45-12 ductile iron material in accordance with ASTM A536.
 - 4) An identification number consisting of year, day, plant and shift will be cast into each gland body.
 - 5) Proper actuation of the gripping wedges shall be ensured with torque limiting twist off nuts.
 - 6) Provide series 2000 PV by EBBA Iron, Inc. or equal.

2.3 LINE DETECTION TAPE

A. Provide the following:

1. Provide 2" wide metallic detection tape on all buried PVC piping.
 - a. Provide 5.0 mil overall thickness with no less than a 50 gauge solid aluminum foil core.
 - b. Foil to be visible from both sides.
 - c. No inks or printing extended to the edges of the tape.
 - d. Encase printing to avoid ink rub-off.
 - e. Tensile strength - 28 lbs/inch.
 - f. Use heat set mylar inks.
 - g. Locate 12" below ground surface in pipe trench.
 - h. Color to be Safety Precaution Blue.
 - i. Wording on tape to indicate "Potable Water" at no greater than 24" on center.

2.4 COPPER TRACER WIRE

- A. Provide a continuous 12 gauge blue insulated copper tracer wire when PVC or polyethylene pipe is used.**
- B. Approved for direct burial by the manufacturer.**

- C. Locate tracer wire a minimum of 6" above top of water main.
- D. Terminate tracer wire at each valve and meter and make provisions to allow for connection of testing apparatus without interfering with the proper operation of valves and meters.
- E. Connect to the water line with duct tape at every bell connection or every 20' to ensure that the wire is directly over the top of the pipe.
- F. Place in the trench with all service lines.
- G. Splice at each service lateral and tee connection with an approved copper compression lug.
- H. Test all tracer wire for conductivity in accordance with Part 3.

2.5 VALVES

A. General:

- 1. Use gate valves.
- 2. Open by turning clockwise.
- 3. End connections as required for the piping in which they are installed.
- 4. Two-inch metal operating nut with arrow indicating direction of opening.
- 5. Use valves designed for a working pressure of not less than 250 psi.
- 6. Provide stem extensions on all valves where the top of the operator nut is located greater than 36" below the top of the valve box.
- 7. Fully coat all internal ferrous metal surfaces with two part thermosetting epoxy.
- 8. Design for external stem failure when excessive closing torque is applied with no failure of the pressure retaining parts.
- 9. Provide double disc gate valves with bevel gears, grease case, and other necessary appurtenances for horizontal installation.
- 10. Provide two-part thermosetting epoxy coating on valve exterior.
- 11. Provide stainless steel bolting.
- 12. Valves to be manufactured in the United States.
- 13. Provide all wetted rubber compounds of synthetic rubber.

B. Gate valves:

- 1. Use double disc valves complying with ANSI/AWWA C500 or resilient seated wedge valves complying with ANSI/AWWA C509.
- 2. Provide integrally cast bronze stem nut on resilient seated wedge valves.
- 3. Suitable for working pressure of not less than 250 psi.
- 4. Design for external stem failure outside of the valve body or bonnet when excessive closing torque is applied with no failure of the pressure retaining parts per AWWA Section 3.2.
 - a. Factory test with no leakage from either side of the disc.
 - b. Test shell to 500 psig.
- 5. Provide certified to NSF 61.
- 6. Resilient wedge valves:
 - a. Completely encapsulate resilient iron wedge by an elastomer, without thin spots or voids.

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- b. Provide polymer wedge guide bearing caps bearing surface between the encapsulated wedge and the interior epoxy coating, lowering operation torque and extending service life of the valve.
- c. The manufacturing plant to have ISO9001 certification.

1. Acceptable Products:

- a. Mueller Square Nut for 2" and up
- b. Hammond for under 2"
- c. Valves shall have an adjustable cast iron valve box. Valves outside of the pavement shall have a concrete collar installed.

C. Valve operator:

- 1. Provide one T-handle operator for each ten buried valves with nut operator.
- 2. Provide one stainless steel T-handle operator for each four buried valves with "T" head.

D. Provide valve boxes and position indicators for all buried service valves and operators.

- 1. Hermetically sealed for installation in a C.I. valve box.
- 2. Show valve disc position, direction of rotation and number of turns from full open to full close.
- 3. Shaft extension and pins to be stainless steel.
- 4. Base plate and housing to be aluminum.
- 5. Provide all bronze gearing.
- 6. Provide 2" AWWA square nut.
- 7. Locate top of indicator no more than 6" below grade.
- 8. Approved manufacturer: Valcom or approved equal.

2.6 HYDRANTS

A. Fire hydrants:

- 1. Comply with the standard fire hydrant approved by the City of Georgetown.
- 2. Comply with ANSI/AWWA C502.
- 3. Waterway valve opening, 5-1/4".
- 4. Six inch bell connection, two 2-1/2" hose connections, one 4-1/2" steamer connection with cap chain on all connections.
- 5. National Standard screw threads on outlet nozzles. Open by turning clockwise (left), with arrow cast in top indicating direction of opening Hydrants shall have Storz pumper nozzle
- 6. Two part breakable safety flange shall be an integral part of barrel casting.
- 7. Depth of bury, 3'6".
- 8. Finish coat with industrial enamel, Painted Red
- 9. Provide one hydrant wrench for each ten hydrants.
- 10. Acceptable products:
 - Fire Hydrant - Mueller 423 (5 1/4")
 - Post Hydrant - Mueller 411
 - Flush Hydrants - Mueller

B. Reflector:

- 1. Provide industry standard blue hydrant reflector for paved roadway.

C. Offset fitting:

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1. Provide an offset fitting at sloped areas where required for the hydrant connections to be located 1'4" above finished grade.
2. Locate between the shut-off valve and each hydrant with a 12" offset.
3. Provide ductile iron per AWWA C153, compact design, coated per AWWA C104.
4. Provide Grade Lok as manufactured by Assured Flow Sales, Inc., or approved equal.

2.7 VALVE BOXES

- A. Provide at each buried valve.
- B. Cast iron extension type, suitable for minimum cover of 3'6" over the pipe.
- C. Minimum inside diameter at the top of 5", minimum riser wall thickness 1/4" and thickness at the top of 11/16".
- D. Have the word "WATER" cast into the cover.
- E. Provide Tyler Series 6850 or Bingham Taylor #4905.
- F. Where depth requires more than a two piece box use adjustable cast iron extensions.
- G. Coat box and cover with two (2) shop coats of bitumastic paint.

2.8 METER BOXES

- A. Provide 3/4" – Ford Long Yokebox, Model No. LYL241-233-LL-T-G-NL (confirm with OWNER the specific model before ordering).
- B. Provide 1" – Ford Long Yokebox for 1" Meters (confirm with OWNER the specific model before ordering).

2.9 VALVE BOX PROTECTION RING

- A. Provide at each valve box a precast concrete protection ring.
- B. Provide two rings of No. 3 reinforcing steel, one 14" in diameter, and one 23" in diameter.
- C. Inside dimensions to be 9-1/4".
- D. Outside diameter to be 27".
- E. Provide 5" thickness at interior with a continuous slope to 2" thickness at the outside.
- F. Minimum weight of 110 lbs.

2.10 SERVICE SADDLE

- A. Provide of the following materials:

Body	Type 304 Stainless Steel
Bales and Strips	Type 304 Stainless Steel
Studs	Type 304 Stainless Steel
Hardware	Type 304 Stainless Steel

- B. Provide double-strap for all sizes.
- C. Provide Romac 202 or approved equal.
- D. Connect to pipeline using a 6" stainless steel nipple.
 - 1. Do not use a threaded PVC connection.

2.11 TAPPING SLEEVE AND VALVE

- A. Tapping sleeve:
 - 1. Provide stainless steel tapping sleeve and saddles
 - 2. Provide bolts, follower rings and gaskets on each end of the sleeve.
 - 3. Provide for maximum working pressure of 150 psi.
 - 4. Provide square head bolts with hexagonal nuts.
 - 5. Provide 3/4" NPT test plug.
 - 6. Service saddles shall be double strap, stainless steel. Case iron body shall be nylon coated.
- B. Tapping valve:
 - 1. Construct of material compatible with tapping sleeve.
 - 2. Valve to conform to Paragraph 2.3 above.
 - 3. Joints - Flange to tapping sleeve for pipe end.

2.12 SERVICE LINE

- A. Type K, soft copper or CTS HDPE 200 psi tubing
- B. Single Services shall be a minimum 3/4". Double services shall be a minimum of 1" trunk and 2/3" branches.

2.13 CORPORATION STOP AND FITTINGS

- A Ford

2.14 MISCELLANEOUS PARTS AND ACCESSORIES

- A. Use standard commercial grade suitable for the type of installation or system involved, and conforming to the applicable standards and specifications of the AWWA.

PART 3 - EXECUTION

3.1 HANDLING

- A. Handle pipe accessories so as to ensure delivery to the trench in sound, undamaged condition:
 - 1. Carry pipe into position - do not drag.
 - 2. Use pinch bars or tongs for aligning or turning the pipe only on the bare end of the pipe.

3. Use care not to injure pipe linings.
 4. Do not damage pipe with chokers or lifting equipment.
- B. Thoroughly clean interior of pipe and accessories before lowering pipe into trench. Keep clean during laying operations by plugging or other method approved by the Engineer.
- C. Before installation, inspect each piece of pipe and each fitting for defects.
1. Material found to be defective before or after laying: Replace with sound material meeting the specified requirements, and without additional cost to the Owner.
- D. Gaskets: Store in a cool dark place until just prior to time of installation.

3.2 PIPE CUTTING

- A. Cut pipe neatly and without damage to the pipe.
- B. Unless otherwise recommended by the pipe manufacturer, and authorized by the Engineer, cut pipe with mechanical cutter only.
1. Use wheel cutters when practicable.
 2. Cut plastic pipe square, remove all burrs, and grind bevel on end.

3.3 LOCATING

- A. Water mains shall be laid at least 10' edge-to-edge horizontally distanced from any existing or proposed sewer pipes.
- B. Should a 10' separation not be practical, then the water main may be located closer with South Carolina Department of Health and Environmental Control (SCDHEC) approval provided:
1. It is laid in a separate trench.
 2. It is laid in the same trench with the water main located at one side on a bench of undisturbed earth.
 3. In either of the above cases, crown elevation of the sewer shall be at least 18" below invert elevation of water line.
- C. Where water lines cross over sewers, maintain 18" vertical separation between the outside of the sewer and the outside of the water line.
- D. Where water lines cross under sewers, each line shall be cast iron or ductile iron.
1. A full length of water line shall be located over an existing sewer so that joints of each line will be as far from each other as possible.
 2. Where a new water main crosses a new sewer line, a full length of pipe shall be used for both the water main and sewer line and the crossing shall be arranged so that the joints of each line will be as far as possible from the point of crossing and each other.
- E. No water pipe shall pass through or come in contact with any part of a sewer manhole.
- F. Water lines shall not be laid within 25' horizontally from any portion of a wastewater tile or spray field.

- G. Water lines shall be located outside all contaminated areas, unless using pipe materials that will protect the water supply.
- H. No flushing device or drain directly connected to any type of sewer is allowed.
- I. No cross connections between water lines and any pipes, valves, tanks or pumps that are not part of the potable water system are allowed.
- J. Water lines may come in contact with storm sewers or catch basins if there are no other practical alternatives provided that ductile iron is used and no joints of the water line are within the storm sewer or catch basin, and, provided that the joints are located as far as possible from the storm sewer or catch basin.
- K. Structures containing valves, blowoffs, meters, air release valves, etc., shall not be connected directly to any storm drainage or sewer system.

3.4 EXCAVATION AND BACKFILLING

- A. Comply with pertinent provisions of Section 02200 of these Specifications.

3.5 ALIGNMENT OF PIPE

- A. Pipe lines intended to be straight shall be so laid.
- B. Where vertical or horizontal alignment requires deflection from straight line or grade, such deflection shall not exceed maximum deflection recommended by the pipe manufacturer.
- C. If alignment requires deflection exceeding recommended limits, furnish special bends or a sufficient number of shorter lengths of pipe to provide angular deflections within the allowable limits.

3.6 PLACING AND LAYING

- A. General:
 - 1. Lower pipe and accessories into trench by means of derrick, ropes, belt slings, or other equipment approved by the Engineer.
 - 2. Do not dump or drop any of the materials of this Section into the trench.
 - 3. Except where necessary in making connections to other lines, lay pipe with the bells facing in the direction of laying.
 - 4. Rest the full length of each section of pipe solidly on the pipe bed, with recesses excavated to accommodate bells, couplings, and joints.
 - 5. Take up and relay pipe that has the grade or joint disturbed after laying.
 - 6. Do not lay pipe in water, or when trench conditions are unsuitable for the work; keep water out of the trench until jointing is completed.
 - 7. Securely close open ends of pipe, fittings, and valves when work is not in progress.
 - 8. Where any part of coating or lining is damaged, repair to the approval of the Engineer and at no additional cost to the Owner.
 - 9. Structures containing valves, blowoffs, meters, air release valves, etc., shall not be connected to any storm drain or sewer system.
- B. Ductile iron pipe:
 - 1. Mechanical, push on and flanged joints, install in accordance with ANSI/AWWA C600.

2. Gaskets: Handle, lubricate where necessary and install in strict accordance with manufacturer's recommendations.

C. Flanged joints:

1. Provide true face flanges, field clean and fit with one full face gasket and make bolts up finger tight.
2. Use torque wrench to alternately tighten bolts 180° apart until full gasket flow and seal are secured.
3. Bias cut or unusual refacing of any flange will not be acceptable.

D. Restrained joints:

1. Install in accordance with manufacturer's instructions.
2. Tighten set screws to the manufacturer's rated torque using a torque wrench. If twist-off nuts are provided, tighten screws until nut breaks loose.

3.7 SETTING VALVES AND VALVE BOXES

A. General:

1. Center valve boxes on the valves, setting plumb.
2. Tamp earth fill around each valve box to a distance of 4' on all sides, or to the undisturbed trench face if less than 4'.
3. Install shaft extensions plumb without any binding.
4. Fully open and close each valve to assure that all parts are in working condition.
5. Place valve box protection ring around top of valve box as indicated on the plans.
 - a. Install ring level with top 1" above finished grade.
 - b. Top of ring to be level with or no more than 1" above the top of the valve box.
 - c. Valves shall have an adjustable cast iron valve box. Valves outside of the pavement shall have concrete collar (18" or 24").
6. Mueller square nut for valves 2" and up
7. Hammond for valves under 2"

3.8 INSTALLATION OF REDUCE PRESSURE PRINCIPLE BACKFLOW PREVENTER

A. General:

1. Minimum clearance of 12" maximum clearance of 30" between port and floor or grade.
2. Install where no discharge is objectionable and can be positively drained away.
3. Must be easily accessible for testing and maintenance and protected from freezing.
4. Eliminate excessive pressure situations to avoid possible damage to system and assemblies.
5. Provide conduit and grounding wire connection per NEC, IBC, and any local applicable electrical code.
6. Install horizontally unless otherwise shown on the plans or Engineer's approval is obtained.

3.9 HYDROSTATIC TESTING

**KAMINSKI & HEYWARD STREETS
WATER IMPROVEMENTS PROJECT**

**CITY OF GEORGETOWN
SOUTH CAROLINA**

A. General:

1. Pressure and leakage testing must be conducted in accordance with AWWA Standards C600.
2. Clean and flush line of air, dirt and foreign material.
3. Do not perform hydrostatic tests until at least five days after installation of concrete thrust blocking.
4. Test pump, pipe connection, pressure gauges, measuring devices and all other necessary appurtenances to conduct tests are to be provided by the Contractor.
5. Install brass corporation cocks at all high points that do not have permanent air vents. Corporation cocks are to be left in place and all costs for providing such cocks are to be borne by the Contractor.
6. Conduct tests on each line or valved section of line.
7. Test pressures to be 150 psi, or 1.5 times the maximum working pressure, whichever is greater, based on the elevation of the lowest point of the section under test and corrected to the elevation of the test gauge.
8. Do not test pipe at pressures exceeding manufacturer's recommendations.
9. The Contractor must provide documentation of the pressure and leakage tests. Documentation must include length of lines, diameter of pipe(s), amount of water required to fill line after test was performed, and amount of allowable leakage.
10. The witness to the hydrostatic testing is to be someone other than the Contractor or the utility installing the lines.

B. Pressure tests:

1. After the pipe is laid, the joints completed, and the trench backfilled, subject the newly laid piping and valved sections of the piping to the test pressure specified in Part A above.
2. Open and close each valve within the section being tested several times during the test period.
3. Conduct the pressure test using a 4" dia. glycerin filled gauge w/ a snubber attached prior to the gauge to remove pulsations.
 - a. Obtain prior approval of the testing gauge approved by the Engineer prior to its use.
 - b. Provide a range of no greater than twice the test pressure and not less than 50% greater than the test pressure.
 - c. Calibrate with cal sticker on gauge face or provide appropriate supporting paper work.
4. Replace or remake joints showing leakage.
 - a. Remove cracked pipe, defective pipe, and cracked or defective joints, fittings and valves. Replace with sound material and repeat the test until results are satisfactory.
 - b. Make repair and replacement without additional cost to the Owner.

C. Leakage test:

1. Conduct leakage test after the pressure test has been completed satisfactorily.
2. Duration of each leakage test: At least two hours.
3. During the test, subject water lines to the test pressure specified in Part A above.
4. Leakage is defined as the quantity of water to be supplied into the newly laid pipe, or any valved or approved section thereof, necessary to maintain the specified leakage test pressure after the pipe has been filled with water and the air expelled.
 - a. No piping installation will be accepted until the leakage is less than the number of gallons per hour as determined by the formula(s):

$$L = S \times D \times \sqrt{P} / 148,000; \text{ where}$$

L = allowable leakage in gallons per hour;

S = length of pipe tested in feet;

D = nominal diameter of pipe in inches; and

P = average test pressure psi gauge.

- b. When testing against closed metal-seated valves, an additional leakage per closed valve of 0.0078 gallons per hour per inch of nominal valve size will be allowed.
 - 1) Should any test of pipe disclose leakage greater than that specified above, locate and repair the defective joint or joints until the leakage is within the specified allowance, and at no additional cost to the Owner.
 - 2) Repair all visible leaks regardless of test results.

3.10 DISINFECTION OF POTABLE WATER MAINS

- A. Disinfect per Section 02675 in these specification, and per the requirements of SCDHEC and City of Georgetown Public Works.

3.11 DECHLORINATION OF CHLORINATED STERILIZATION WATER

- A. Dechlorinate per Section 02675 in these specification, and the requirements of SCDHEC and City of Georgetown Public Works

3.12 NEW CONSTRUCTION WATER USAGE

- A. See Section 02676 of these specifications.

(END OF SECTION)

APPENDIX A

**SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
Encroachment Permit**

Permit No : 211273

Permit Decision Date :
3/30/2018

Expiration Date : 3/30/2019

Type Permit : WATER

Location:

<u>District</u>	<u>Work County</u>	<u>Type</u>	<u>Route</u>	<u>Aux</u>	<u>Begin MP</u>	<u>End MP</u>
5	Georgetown, SC	S-	321	None	0.000	0.085
5	Georgetown, SC	S-	386	None	0.300	0.579

Contact Information

Applicant: TheCityofGeorgetown

Phone:

Contact: Josh Bauer

Address: 2377 Anthuan Maybank Drive,

City: Georgetown

State: SC

Zip: 29440

Comments

The Heyward St. site is located in Georgetown, SC approx. 1000-feet south of the intersection of N. Fraser St. with Black River. Rd. The S. Kaminski St. site is located in Georgetown, SC approx. 1000-feet west of US-17 and runs parallel to US-17 along S. Kaminski St. from Hawkins St. to Emanuel St.

Special Provisions:

0004 - SCDOT SHALL BE NOTIFIED WHEN WORK DEFINED IN THE PERMIT STARTS AS WELL AS WHEN THE WORK IS COMPLETED. REFERENCE SHALL BE MADE BY PERMIT NUMBER.

0101 - SHOULDER SOD DESTROYED BY THIS INSTALLATION TO BE REPLACED FOR THE ENTIRE AREA. THE AREA SHALL BE RE-SHAPED AND ROLLED TO THE CROSS SECTION EXISTING PRIOR TO THIS WORK.

0102 - BORE PITS SHALL BE CLOSED IMMEDIATELY AFTER INSTALLATION.

0103 - THE PROPOSED ENCROACHMENT SHALL BE TRENCHED TO A MINIMUM DEPTH OF 42" BELOW THE CROSS SECTION AS ORIGINALLY CONSTRUCTED.

0107 - TRENCH TO BE PROPERLY BACK-FILLED AND THOROUGHLY TAMPED. THE ENTIRE DISTURBED AREA SHALL BE RE-SHAPED AND DRESSED OUT IN A WORKMANSHIP LIKE MANNER.

0109 - THE BORE SHALL BE MADE BY THE DRY BORE METHOD IN SUCH A MANNER AS NOT TO DISTURB THE PAVEMENT. THE BORE PIT MUST NOT BE CLOSER THAN FIVE (5) FEET FROM THE EDGE OF PAVEMENT. THE BORE DEPTH SHALL BE NOT LESS THAN 48" DEEP AT ANY POINT IN THE BORE. NOTICE SHALL BE GIVEN TO THE DEPARTMENT IMMEDIATELY IF THE BORE

URNS AND DAMANGES THE ROAD.

0112 - ALL WATER METERS, AIR VALVES, ELECTRIC TRANSFORMERS, CATV CONNECTION BOXES, TELEPHONE PEDESTALS, AND/OR OTHER UTILITY/SPLICE BOXES SHALL BE PLACED AT THE RIGHT-OF-WAY LINE.

0120 - RESTORATION OF PAVEMENT, SHOULDERS, DITCHES, ETC., TO BE PERFORMED AS SOON AS POSSIBLE AFTER CONSTRUCTION, OR SCHEDULED SO THAT THE CONSTRUCTION IS NO FURTHER THAN 2,000 L.F. AHEAD OF COMPLETE RESTORATION.

0123 - ALL WORK PERFORMED IN CONNECTION WITH THIS PERMIT SHALL CONFORM TO THE SCDOT "A POLICY FOR ACCOMODATING UTILITIES ON HIGHWAY RIGHT-OF-WAY" MOST CURRENT EDITION.

0125 - ALL CROSSLINE PIPES ARE TO BE LOCATED AND FLAGGED PRIOR TO BEGINNING OPERATION.

0209 - DISTURBED VEGETATION SHALL BE RESEDED ACCORDING TO THE SPECIFICAION FOR HIGHWAY CONSTRUCTION.

0301 - THE DITCHES AND/OR SHOULDERS DISTURBED DURING THE INSTALLATION SHALL BE RE-ESTABLISHED TO PROPER GRADE, ORIGINAL CROSS SECTION, STABILIZED, AND ALL DRAIN PIPES CLEARED.

0302 - NO EXCAVATION SHALL BE LEFT OPEN ALONG HIGHWAY.

0306 - TRAFFIC CONTROL, LIGHTS, SIGNS AND FLAG-MEN WILL BE FURNISHED BY APPLICANT AND WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

0310 - FIELD CHANGES, IF NECESSARY, MUST BE APPROVED IN WRITING BEFORE ACTUAL CONSTRUCTION OF PROPOSED CHANGES.

0311 - SEDIMENT AND EROSION CONTROL DEVICES SHALL BE USED TO MINIMIZE THE MOVEMENT OF SEDIMENT.

0312 - THE PERMITTEE SHALL HOLD THE DEPARTMENT HARMLESS FOR DAMAGES TO BOTH UPSTREAM AND DOWNSTREAM PROPERTIES.

0318 - THE APPLICANT SHALL BE RESPONSIBLE FOR IMMEDIATE REMOVAL OF SUCH TRAFFIC HAZARDS AS MUD, DEBRIS, LOOSE STONE, AND TRASH AS MAY BE WASHED OR SPILLED ON THE TRAVELED ROADWAY AS A RESULT OF THE PROPOSED WORK.

App # 200052924

Application for Encroachment Permit Per # 211273

S.C. Department of Transportation
Form 637 (Rev 09/2015)

Contact Information

Applicant: The City of Georgetown
Street: 2377 Anthuan Maybank Drive

City: Georgetown
State: SC Zip Code: 29440
Phone: (843)352-6414 **Fax:**
Email: bauerj@wseinc.com
Contact: Josh Bauer

Project Location

Primary County: Georgetown

County	Road Name
Georgetown	Heyward St (S-321)
Georgetown	S Kaminski St (S-386) - 6/30/18 P.ID 2028395
Georgetown	Hawkins St (S-113)
Georgetown	Butts St (S-167)
Georgetown	Gilbert St (S-168)

1. Type of Encroachment: WATER

The City of Georgetown proposes to install new 6" water mains along two roads in Georgetown, SC.

The first will be installed in the shoulder along Heyward St. for its entire length from the intersection of N. Fraser St. to Black River Rd. This main will cross Black River Rd. by method of jack-and-bore to tie to an existing water main.

The second line will be installed under the existing sidewalk which runs along S. Kaminski (CONTINUED ON ADDENDUM)

2. Description of Location:

The Heyward St. site is located in Georgetown, SC approximately 1000-feet south of the intersection of N. Fraser St. with Black River Rd.

The S. Kaminski St. site is located in Georgetown, SC approximately 1000-feet west of US-17 and runs parallel to US-17 along S. Kaminski St. from Hawkins St. to Emanuel St (CONTINUED ON ADDENDUM)

(Attach sketch indicating roadway features such as: pavement width, shoulder width, sidewalk and curb and gutter location, significant drainage structure, north arrow, right of way width, and location of the proposed encroachment with respect to the roadway centerline and the nearest intersecting road on the State system.)

Customer Agreement

3. The undersigned applicant hereby requests the SCDOT to permit encroachment on the SCDOT right of way as described herein. It is expressly understood that the encroachment, if and when constructed, shall be installed in accordance with the sketch attached hereto and made a part hereof. The applicant agrees to comply with and be bound by the SCDOT's "A Policy for Accommodating Utilities on Highways Rights of way", "Standard Specifications for Highway Construction", the "General Provisions" and "Special Provisions", attached hereto or made a part hereof by reference, during the installation, operation and maintenance of said encroachment within the SCDOT's Right of Way. **DISCHARGES OF STORM WATER AND NON-STORM WATER:** Work within State Highway right-of-way shall be conducted in compliance with all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) permit(s) issued to the Department of Transportation (Department), to govern the discharge of storm water and non-storm water from its properties. Work shall also be in compliance with all other applicable Federal, State and Local laws and regulations, and with the Department's Encroachment Permits Manual and encroachment permit. The encroachment permit will not be issued until the applicant has received an NPDES construction permit from SC Department of Health and Environmental Control.

The applicant agrees to comply with all current SCDOT Standards Specifications for Highway Construction including all Supplemental Technical Specifications. The applicant hereby further agrees, and binds his/her/its heirs, personal representatives, successors, assigns, to assume any and all liability for accidents or injuries to persons, or damage to property, including the highway, that may be caused by the construction, maintenance, use, moving or removing of the physical appurtenances contemplated herein.

Applicant's Name: Orlando Arteaga Date: 2/26/18
 (Please print or type)
 Applicant's Sig: *[Signature]* Title: City Engineer

For Office Use Only

For Office Use Only

In accordance with your request and subject to all the provisions, terms, conditions, and restrictions stated in the application and the general and special provisions attached hereto, the SCDOT hereby approves your application for an encroachment permit. This permit shall become null and void unless the work contemplated herein shall have been completed prior to:

- See Attached Special Provision and/or Permit Requirements

	NPDES Permit Nbr:	
<input type="text"/>	<i>[Signature]</i>	<input type="text"/>
(Date received by res. Maint. Engr.)	(SCDOT Approval)	3/30/18 (Date)

General Provisions

Application for Encroachment Permit
General Provisions

1. **DEFINITIONS:** The word "Permittee" used herein shall mean the name of the person, firm, or corporation to whom this permit is addressed, his, her, its, heirs, personal representatives, successors and assigns. The word "DEPARTMENT" shall mean the South Carolina Department of Transportation.
2. **NOTICE PRIOR TO STARTING WORK:** Before starting the work contemplated herein within the limits of the highway right of way, the Department's Resident Maintenance Engineer in the county in which the proposed work is located shall be notified 24 hours in advance so that he may be present while the work is under way.
3. **PERMIT SUBJECT TO INSPECTION:** This permit shall be kept at the site of the work at all times while said work is under way and must be shown to any representative of the Department or law enforcement officer on demand.
4. **PROTECTION OF HIGHWAY TRAFFIC:** The applicant shall be responsible for the protection of the highway traffic at all times during the construction, maintenance, removing or moving of the encroachment permitted herein. Detours, barricades, warning signs and flagmen, as necessary, shall be provided by and at the expense of the Permittee and shall be in accordance with the "Manual on Uniform Traffic Control Devices" (MUTCD). The work shall be planned and carried out so that there will be the least possible inconvenience to the motoring public. The Permittee agrees to observe all rules and regulations of the Department while carrying on the work contemplated herein and take all other precautions that circumstances warrant.
5. **STANDARDS OF CONSTRUCTION:** All work shall conform to the Department's standards of construction and shall be performed in a workman-like manner. The applicant shall make adequate provisions for maintaining the proper drainage of the highway as it may be affected by the encroachment permitted herein. All work shall be subject to the supervision and satisfaction of the Department.
6. **FUTURE MOVING OF PHYSICAL APPURTENANCES:** If, in the opinion of the State Highway Engineer, it should ever become necessary to move or remove the physical appurtenances, or any part thereof contemplated herein, on account of change in location of the highway, widening of the highway, or for any other sufficient reason, such moving shall be done on demand of the Department at the expense of the Permittee.
7. **RESTORATION OF HIGHWAY FACILITIES UPON MOVING OR REMOVING OF PHYSICAL APPURTENANCES:** If, and when, the physical appurtenances contemplated herein shall be moved or removed, either on the demand of the Department or at the option of the Permittee, the highway and facilities shall immediately be restored to their original condition at the expense of the Permittee.
8. **COSTS:** All work in connection with the construction, maintenance, moving or removing of the physical appurtenances contemplated herein shall be done by and at the expense of the Permittee.
9. **ADDITIONAL PERMISSIONS:**
 - (a) It is distinctly understood that this permit does not in any way grant or release any rights lawfully possessed by the abutting property owners. The Permittee shall secure any such rights, as necessary, from said abutting property owners.
 - (b) The Permittee shall be responsible for obtaining all other approvals or permits necessary for installation of the encroachment from other government entities.

- (c) There shall be no excavation of soil nearer than two feet to any public utility line or appurtenant facility except with the consent of the owner thereof, or except upon special permission of this Department after an opportunity to be heard is given the owner of such line or appurtenant facility.
10. **ADDITIONAL WORK PERFORMANCE:**
- (a) All crossings over the highway shall be constructed in accordance with "Specifications for Overhead Crossings of Light and Power Transmission Lines and Telegraph Lines over each other and over Highway Rights of Way in South Carolina," as approved by the Public Service Commission of South Carolina and effective as of date of this permit.
- (b) All tunneling, boring, or jacking shall be done in such a way as not to disturb the highway surfacing.
- (c) No pavement shall be cut unless specifically authorized herein.
- (d) No excavation shall be nearer than three feet to the edge of pavement unless specifically authorized herein.
- (e) Underground facilities will be located at minimum depths as defined in the "Utility Accommodations Manual" for the transmittant, generally as follows: 4 feet minimum for hazardous or dangerous transmittant, 3 feet minimum for other lines. The Department may approve shallower depths if adequate protection is provided. Such approval must be obtained in writing.
- (f) Service and other small diameter pipes shall be jacked, driven, or otherwise forced underneath the pavements on any surfaced road without disturbing the pavement. The section under the highway pavement and within a distance of three (3) feet on either side shall be continuous without joints.
11. **ACCESS:**
- (a) Permittee is responsible for maintaining reasonable access to private driveways during construction.
- (b) It is expressly provided that, with respect to any limited access highway, the Permittee shall not have or gain access from the main traveled way of the highway, or the on or off ramps to such facility, except upon approval by the Department.
12. **DRIVEWAYS:**
- (a) The existing crown of the highway shall be continued to the outside shoulder line of the highway.
- (b) If the driveway or approach is concrete pavement, the pavement shall be constructed at least 6 inches thick and with a minimum of class 2500 concrete. There shall be a bituminous expansion joint, not less than 3/4 inches in thickness, placed between the highway paving and the paving of the approach for the full width of the approach.
13. **BEAUTIFICATION:**
- (a) All trees, plants, flowers, etc. shall be placed in accordance with the provisions specifically stipulated herein.
- (b) All trees, plants, flowers, etc. shall be maintained by, and at the expense of, the Permittee and the provisions of this permit shall become null and void, if and when said Permittee ceases to maintain aid trees, plants, flowers, etc.
14. **AS-BUILT PLANS:**
- (a) The applicant shall provide the Department with survey-quality as-built plans in accordance with the requirements set forth in the Department's "A Policy for Accommodating Utilities on Highway Rights of Way".

Project Location/Type of Encroachment/Description of Location, addendum

1. Project Location:

County	Road Name
Georgetown	Emanuel St (S-89)
Georgetown	Black River Rd (S-82)
Georgetown	N Fraser St (US 701)

2. Type of Encroachment:

ki St. n the western side of the street from Hawkins St. to Emanuel St. This line will require the existing sidewalk to be removed and replaced. It will require crossing 4 SCDOT roads by saw cutting and patching the pavement at the intersections of Hawkins St., Butts St., Gilbert St. and Emanuel St.

3. Description of Location:

City of Georgetown
 Kaminski Street (Project No. 1511) and Heyward Street (Project No. 1509) Water Improvements

Submittal Description: Design Development Review

Submittal Review Comments

Submittal	Ref. Dwg./ Spec Sec	Comments	Designer Response	By	Date	Cross Chkd By
SCDOT Engr. Per.	1	A Please up load your DHEC permit to the application file.	NO. 3 This will be updated to EFRPS once the permit is approved by DHEC.	BJG	3/13/2018	WRL
SCDOT Engr. Per.	2	A All open cut asphalt driveway's need to be overlaid from the edge of pavement to the right of way.	1 This has been incorporated. All asphalt driveways now show the overlay occurring from existing edge of pavement to the right-of-way.	BJG	3/13/2018	WRL
SCDOT Engr. Per.	3	B Sheet 4 of 10, C-200, station 4+75, the water main tap is made under Black River Rd. (S-82), north bound travel lane. How do you propose to reach proper compaction?	1 GABC to be added up to the springline of the pipe. Above that will be compacted in 6" lifts. See detail on C-301, and note on C-200.	BJG	3/13/2018	WRL
SCDOT Engr. Per.	4	B Sheet 4 of 10, C-200, station 4+75, "The referenced note (C-300) for the tap at station 4+75 states that "Tapping Saddles are not allowed for main-on-main taps". Please Advise?"	3 The standard detail has been corrected, and City of Georgetown is ok with using a tapping sleeve to connect to a main on this project. See page C-300 for corrections.	BJG	3/13/2018	WRL
SCDOT Engr. Per.	5	A Please include the safety plan for securing the areas of demolished concrete sidewalk along Kaminski Street.	1 See sheet C-104 for Pedestrian Safety Plan.	BJG	3/13/2018	WRL
SCDOT Engr. Per.	6	A All storm drain crossings should be inspected by SCDOT inspectors before they are covered up. SCDOT-Georgetown Maintenance reserves the right to request any exposed joints ressealed before they can be covered.	1 See general note No. 6 on page C-100.	BJG	3/13/2018	WRL
SCDOT Engr. Per.	7	A The following intersections need to be bored, SCDOT Georgetown Maintenance request no roads be open cut: A. Hawkins Street (S-113), station 0+19, B. Butts St. (S-167), station 5+25..... C. Gilbert St. (S-158), station 10+35..... D. Emanuel St. (S-89), station 15+50	1, 5 The City of Georgetown (specifically Orlando Arteaga, City Engineer) has been coordinating their efforts with local SCDOT Maintenance and Construction Offices (specifically Timmy Britt and Chris Bourque) in quarterly "Partnership Meetings". In the last meetings (occurring on 2/16/2018 and 10/27/2017), they discussed the timeline of resurfacing in the historic district. SCDOT planned on allowing the City of Georgetown to open-cut these four streets and install their water lines, being that resurfacing was planned to follow. The City of Georgetown would like to formally request for the SCDOT to delay the asphalt overlaying on South Kaminski Street until the installation of this water main is complete.	BJG	3/13/2018	WRL
SCDOT Engr. Per.	8	A All abandoned utility lines, running under the travel lanes, should be capped and filled with a no shrink material.	1 See general note No. 8 on page C-100, as well as notes and labels on sheets C-200 to C-202.	BJG	3/13/2018	WRL

- COMMENTS
 A. Incorporate
 B. Confirm
 C. Consider
 D. Note

- RESPONSE
 1. Incorporated
 2. Confirmed
 3. Noted
 4. No Change, Designer Pref
 5. Need addtl clarification/direct
 6. Req further invest, next design Submit
 7. Not in scope

Buried Utility Special Provisions

Construction Notes:

1. Applicant will make a continuous effort to keep all utilities, existing and new installs, as close to the right of way as possible.
2. All utilities will be placed a minimum of 48" deep under the roadway, 42" deep between the edge of pavement and ditch line, 36" below designed ditch/swale depth, 36" deep below drainage lines and 36" deep between the ditch line and right of way.
3. Utilities running parallel to the paved roadway should be installed a minimum 5' from edge of pavement.
4. All bore pits will be a minimum of 5' from edge of pavement.
5. No meters, valves, junction boxes or manholes will be allowed in the ditch line.
6. All meters and valves will be flush with existing grade of the shoulder.
7. No utility installation will be allowed to continue past 1000' without completing shoulder and ditch line grading.
8. All road signs and mailboxes, removed as a result of this installation, will be replaced without delay.
9. All open cut intersections will be overlaid from the lip of the curbing back 25'. See

NOTE: Any maintenance agreements between SCDOT - Georgetown Construction and the City of Georgetown will be the responsibility of the City Of Georgetown.

General Notes:

1. The applicant is responsible for obtaining all necessary permits for this project.
2. This permit is only applicable for SCDOT Right of Ways within Georgetown County.
3. The applicant is responsible for issuing a work schedule and negotiating any and all scheduling conflicts due to additional projects in the area.

A-9



4. Any field changes shall be submitted in writing to the Department for review/approval prior to any work being done.
5. The applicant/contractor is responsible for any damages incurred to roadway, shoulder, ditches, existing drainage, pavement markings, etc. due to the project under this permit. All repairs, if needed, shall be required prior to the release of this permit at no cost to the Department.
6. Applicant/contractor is responsible for installing any swales or slopes in right of way to ensure proper storm water runoff. No ponding in roadway, shoulder or apron permitted.
7. Applicant is responsible for requesting a final inspection to the Department. Please allow for a minimum of 2 business weeks to receive a punch list or release documents.
8. Traffic control, lights, signs and flag-men will be furnished by the applicant and will conform to part VI of the Manual on Uniform Traffic Control Devices.
9. Sediment and erosion control devices shall be used to minimize the movement of sediment.
10. All work performed in connection with this permit shall conform to the SCDOT "A Policy for Accommodating Utilities on Highway Right of Way" most current edition.
11. No excavation shall be left open along the highway.
12. There should be a disposal plan for Drilling Fluids.
13. Grass seeding shall follow the attached seeding tables.
14. 70% grass re-growth, 100% shoulder/ditch line stabilization to any area disturbed and no more than a 2" drop-off/or a 3:1 ditch slope is required within the Right of Way prior to the release of this permit.
15. If the site is within 1200' (feet) of a signalized intersection, you must call in advance for a signal line location. SCDOT is not on PUPS. You must call Glenn Collins at 843-661-4812 to schedule a signal line location before you begin any excavation in the SCDOT right-of-way.

A-10

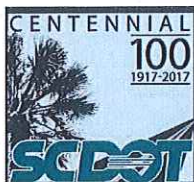


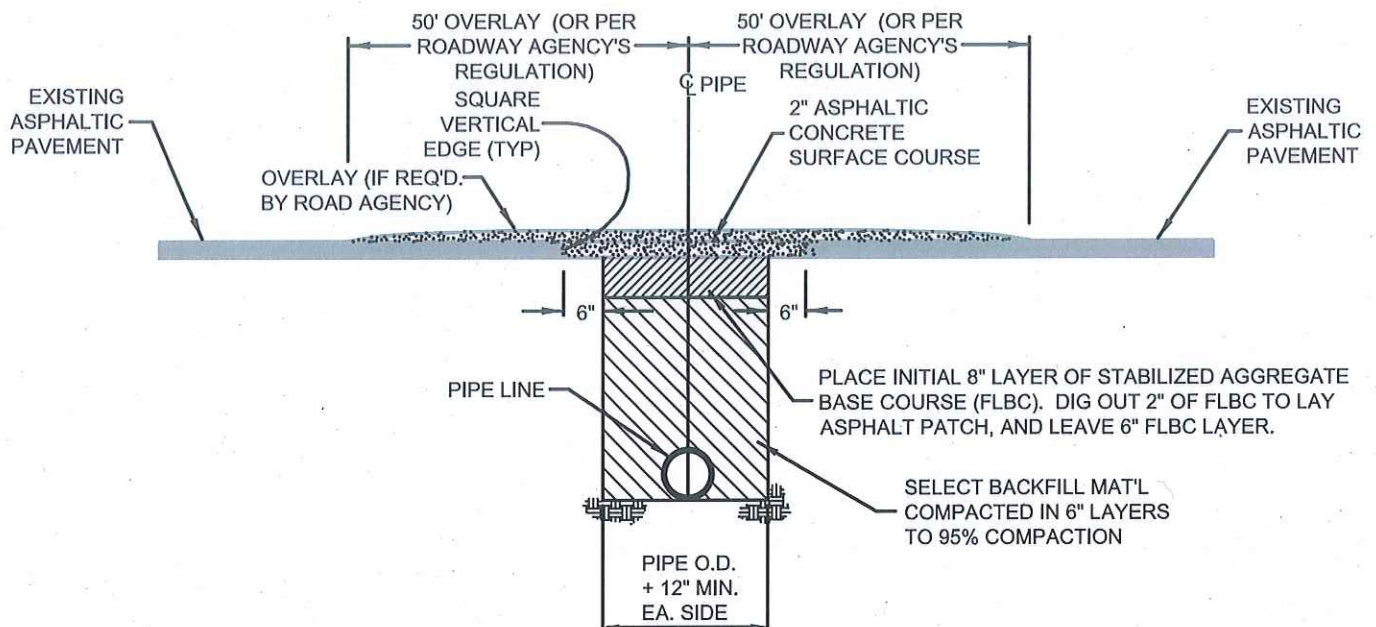
Traffic Control:

- a. Notify SCDOT three days before setting up any lane closures.
- b. When working within 1 foot of the nearby travel lane, a full lane closure is required. See SCDOT Standard Drawings attached for lane closure and shoulder closure.
- c. Proper traffic control is required to be set up and taken down daily.
- d. 5 foot vertical sign clearance required under each temporary traffic control sign.
- e. Lane closure restrictions: See attached if any. Contact your inspector if you have any questions or require clarification.

The applicant may write or email the Department regarding the special provisions of this permit application as noted herein prior to starting construction. The Department assumes all work shall be completed to these conditions.

A-11





NOTES:

1. PAVEMENT CUT TO EXTEND 6" BEYOND EDGES OF TRENCH AS SHOWN. PAVEMENT SHALL BE CUT TO TRUE LINE AND REMOVED BEFORE TRENCH IS CUT. ALL PAVEMENT REPAIRS TO BE IN ACCORDANCE WITH ROAD AGENCY SPECS.
2. ROAD AGENCY MAY REQUIRE A CUT & PATCH OF TRENCH AREA AND AN OVERLAY OF ENTIRE APRON OR ENTRANCE FROM THE EDGE OF THE MAIN ROAD TO THE EDGE OF THE ROAD RIGHT-OF-WAY (SEE ENCROACHMENT PERMIT).
3. WHERE EXISTING PAVEMENT IS INSUFFICIENT THICKNESS TO DEVELOP TIGHT SEAL WITH NEW SURFACE, NEW PAVEMENT SHALL LAP EXISTING SURFACE WITH AT LEAST A 10' OVERLAP ON BOTH SIDES FOR SMOOTH TRANSITION OR AS PER SPEC'S. OF ROAD AGENCY.

OPEN CUT REPAIR FOR LOW VOLUME ASPHALT PAVEMENT

**FLAGGING OPERATIONS
MULTIPLE FLAGGERS
TWO-LANE TWO-WAY ROADWAYS
PRIMARY & SECONDARY ROUTES
WORK ACTIVITY AREA
TERMINATING at an
INTERSECTION with a
TWO-LANE TWO-WAY ROADWAY
APPROACH LANE**

1. See "Work Zone Traffic Control Procedures, Flagging Operations" for standard requirements regarding all flagging operations.
2. Install, maintain and conduct multiple flagger flagging operations for a work zone that begins at an intersection and is present within the travel lane of a two-lane two-way roadway departing from the intersection as illustrated by this standard drawing. Install and maintain all advance warning signs and traffic control devices as illustrated.
3. Convert a standard multiple flagger flagging operation setup installed per Drawing No. 405-01-A for a Work Activity Area located in the Approach Lane of a two-lane two-way road intersecting an adjacent two-lane two-way road to this traffic control setup when the Limits of the Work Activity Area nearest the intersection encroach upon a specific location that will not permit the required distances for the traffic to queue, proper installation of the advance warning signs, the Open Lane Flagger station and the Downstream Taper. The minimum distances that determine when conversion to this traffic control setup is required are found in *Table 13, Approach Lane to the Intersection Minimum Distance Intervals from Intersection Required for Conversion from a Standard Multiple Flagger Flagging Operation Installation per Drawing No. 405-01-D(2)*. See *Table 13*. The Limits of the Work Activity Area nearest the intersection should not encroach upon a specific location point no less than the cumulative distance from the intersection as specified by the "Total Distance Required for Conversion", in *Table 13*. The distance figures specified in the "Total Distance Required for Conversion" are calculated based upon the posted regulatory speed limit of the road prior to beginning the work.

Table 13

**Approach Lane to the Intersection
Minimum Distance Intervals from Intersection Required for Conversion from a Standard
Multiple Flagger Flagging Operation Installation per Drawing No. 405-01-D(2)**

	Low Speed 35 MPH or Less	Intermediate Speed 40 - 50 MPH	High Speed 55 MPH or Greater
DAYTIME	Space for Stopped Traffic to Queue (100 feet Minimum)	Space for Stopped Traffic to Queue (100 feet Minimum)	Space for Stopped Traffic to Queue (100 feet Minimum)
	Advance Warning Sign Placement Intervals (Interval / Total) (200 feet / 600 feet)	Advance Warning Sign Placement Intervals (Interval / Total) (350 feet / 1050 feet)	Advance Warning Sign Placement Intervals (Interval / Total) (500 feet / 1500 feet)
	Downstream Taper (100 feet)	Downstream Taper (100 feet)	Downstream Taper (100 feet)
	Interval Between End of Downstream Taper And Open Lane Flagger (100 feet)	Interval Between End of Downstream Taper And Open Lane Flagger (100 feet)	Interval Between End of Downstream Taper And Open Lane Flagger (100 feet)
	Total Distance Required for Conversion 900 feet	Total Distance Required for Conversion 1350 feet	Total Distance Required for Conversion 1800 feet
	NIGHTTIME	Changeable Message Sign Placement Interval 200 feet	Changeable Message Sign Placement Interval 350 feet
Total Distance Required for Conversion 1100 feet		Total Distance Required for Conversion 1700 feet	Total Distance Required for Conversion 2300 feet

Notes: The distance intervals required for a downstream taper vary from 50 feet to 100 feet. The maximum distance of 100 feet is utilized for these scenarios.
The total distances for nighttime operations are increased due to the requirement for inclusion of a trailer mounted changeable message sign.

5. On each roadway approach intersecting the roadway where the work activities are being conducted, install multiple flagger flagging operations to control all traffic approaching the intersection from those roads. Station the flaggers controlling traffic from these roads immediately adjacent to the intersection as illustrated. No less than one (1) flagger is required on each approach to control traffic flow.

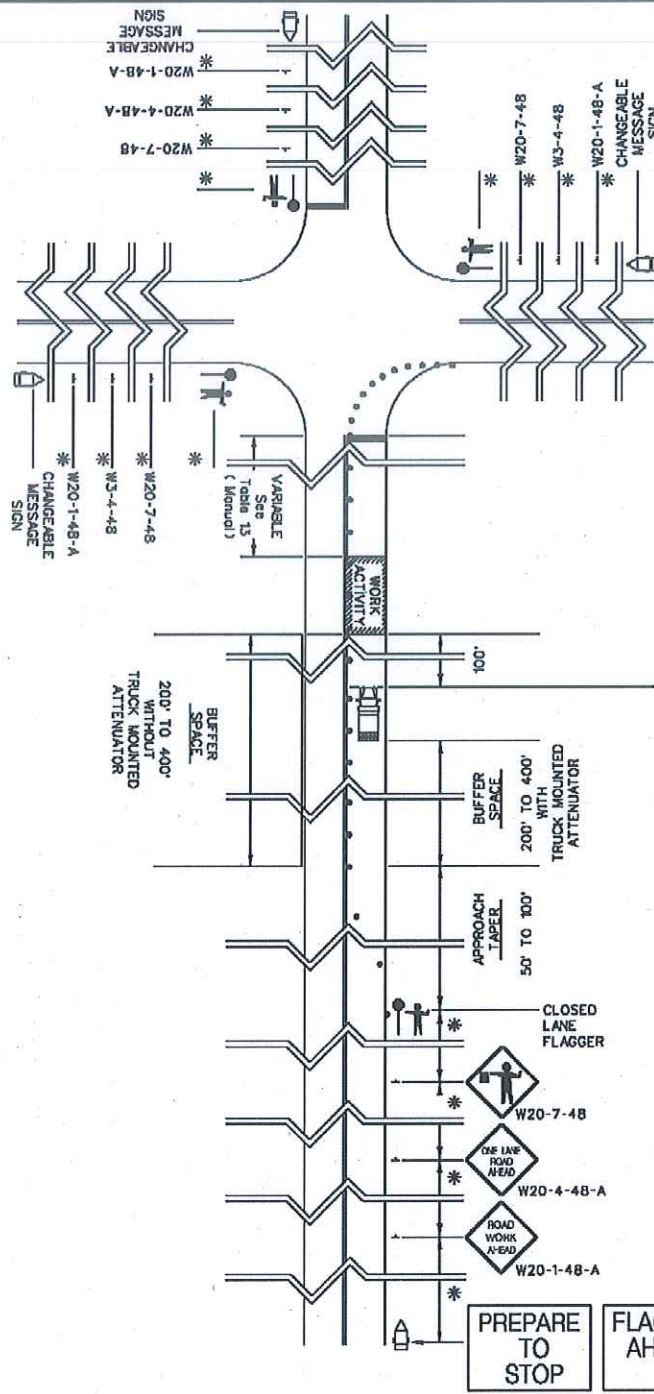
On the roadway where the work is being conducted, station the Closed Lane Flagger controlling traffic approaching the Work Activity Area and the intersection, adjacent to the first traffic control device in the approach taper as illustrated.

6. On each roadway approach intersecting the roadway where the work activities are being conducted, measure the advance warning sign locations from each flagger station at the intersection.

On the roadway where the work is being conducted, measure the advance warning sign locations from the Closed Lane Flagger station located 100 feet beyond the last traffic control device in the downstream taper.

7. When conducting nighttime flagging operations in accordance with this standard drawing, supplement each advance sign array on each approach to the intersection with a trailer mounted changeable message sign. During a nighttime flagging operation scenario where the Work Activity Area ends at an intersection as illustrated by this standard drawing, utilization of a trailer mounted changeable message sign to supplement each array of advance warning signs on each leg of the intersection are required. Install, operate and maintain these trailer mounted changeable message signs as illustrated.

DRAWING 405-01-D(2)
 FLAGGING OPERATIONS
 MULTIPLE FLAGGERS
 TWO-LANE TWO-WAY ROADWAYS
 PRIMARY & SECONDARY ROUTES
 WORK ACTIVITY AREA
 TERMINATING at an
 INTERSECTION with a
 TWO-LANE TWO-WAY ROADWAY
 APPROACH LANE



TRUCK MOUNTED ATTENUATOR (OPTIONAL)

WHEN A TRUCK MOUNTED ATTENUATOR IS UTILIZED, OPERATE AS FOLLOWS:

THE TRUCK MOUNTED ATTENUATOR SHALL REMAIN APPROXIMATELY 100' IN ADVANCE OF THE WORK ACTIVITY (INCLUDING PERSONNEL AND MACHINERY) AT ALL TIMES.

AN ADVANCE WARNING ARROW PANEL IS OPTIONAL ON THIS VEHICLE. AN ADVANCE WARNING ARROW PANEL ON THIS VEHICLE SHALL OPERATE IN THE "FOUR CORNER" CAUTION MODE DISPLAYING FOUR LAMPS WITH ONE LAMP IN EACH CORNER.



SPECIAL NOTE:
 DURING UNPLANNED NIGHTTIME EMERGENCY OPERATIONS, THE CHANGEABLE MESSAGE SIGNS MAY BE OMITTED. THE REQUIREMENT FOR THE CHANGEABLE MESSAGE SIGNS SHALL BE MAINTAINED FOR ALL PLANNED NIGHTTIME WORK ACTIVITIES THAT REQUIRE FLAGGING OPERATIONS.

*** UTILIZE A TRAILER MOUNTED CHANGEABLE MESSAGE SIGN DURING NIGHTTIME FLAGGING OPERATIONS ***

NIGHTTIME FLAGGING OPERATIONS
 ALL FLAGGERS SHALL WEAR CLASS 3 HIGH VISIBILITY SAFETY APPAREL MEETING ANSI/ISEA 107 REQUIREMENTS.
 UTILIZE CHANGEABLE MESSAGE SIGNS ON EACH ROADWAY APPROACH DURING ALL PLANNED NIGHTTIME WORK ACTIVITIES THAT REQUIRE FLAGGING OPERATIONS.
 ILLUMINATE EACH FLAGGER STATION.
 UTILIZE PORTABLE PLASTIC DRUMS OR 42" OVERSIZED CONES INSTEAD OF STANDARD TRAFFIC CONES.

Table A

TRAFFIC CONTROL DEVICE SPACING INTERVALS WORK ACTIVITY AREA	
SPEED LIMIT	SPACING INTERVALS
≤ 35 MPH	25 FEET
40 - 55 MPH	50 FEET

Table B

SIGN PLACEMENT INTERVALS			
SPEED LIMIT	*	*	*
LOW SPEED ≤ 35 MPH	200	200	200
INTERMEDIATE SPEED 40 - 50 MPH	350	350	350
HIGH SPEED 55 MPH	500	500	500

NOTE: THESE SIGN PLACEMENT INTERVALS ARE BASED UPON THE POSTED REGULATORY SPEED LIMIT OF THE ROADWAY PRIOR TO BEGINNING ANY WORK.

Table C

BUFFER SPACE DISTANCES	
SPEED LIMIT	DISTANCES
LOW SPEED ≤ 35 MPH	200
INTERMEDIATE SPEED 40 - 50 MPH	300
HIGH SPEED 55 MPH	400

NOTE: ADJUSTMENTS TO THE BUFFER SPACE DISTANCES MAY BE REQUIRED DUE TO FIELD CONDITIONS.

APPENDIX B

Graham, Brian

From: Horner, Robert
Sent: Monday, March 19, 2018 12:31 PM
To: Clarke, Bridget
Cc: Gearhart, Kipling; Lagarenne, Jr, Walter; Graham, Brian
Subject: RE: KAMINSKI STREET AND HEYWARD STREET WATER IMPROVEMENTS

Thanks Bridget.

**Thank You,
Bob**

**Robert L. Horner, PE
SC Program Manager**



Weston & Sampson
672 Marina Drive, Suite 204 | Charleston, SC 29492
O: 843-881-9804
M: 843-452-9076
westonandsampson.com

[Facebook](#) | [Twitter](#) | [LinkedIn](#) | [vCard](#)

From: Clarke, Bridget [mailto:CLARKEBM@dhec.sc.gov]
Sent: Thursday, March 15, 2018 2:39 PM
To: Horner, Robert <Hornerr@wseinc.com>
Subject: KAMINSKI STREET AND HEYWARD STREET WATER IMPROVEMENTS

Dear Mr. Horner:

This Department has completed the review of the above referenced project. Please consider this your approval for the above referenced project. Since this is a replacement, the department is considering this maintenance and a permit to construct is not required. Should you have any questions, feel free to let me know.

Bridget Clarke, PE

Environmental Engineer

S.C. Dept. of Health & Environmental Control

Office: (803) 898-4239

Connect: www.scdhec.gov [Facebook](#) [Twitter](#)





APPENDIX C

March 28, 2018

ORLANDO ARTEAGA
CITY OF GEORGETOWN
2377 ANTHUAN MAYBANK DRIVE
GEORGETOWN, SC 29440

RE: **Stormwater Construction – Coastal Automatic Permit Coverage Notification**
KAMINSKI STREET AND HEYWARD STREET WATER IMPROVEMENTS, Georgetown County
Notification No.: HNC-MR40-HKMQ5

Dear ORLANDO ARTEAGA:

Based on your Notification to the Department and certification that this project will disturb 0.5 acres or less, is not part of a Larger Common Plan (LCP) for development or sale, and is located within ½ mile of a coastal receiving water, this project qualifies for automatic coverage under the NPDES General Permit for Storm Water Discharges from Large and Small Construction Activities. As indicated in your Notification disturbed area for this site is **.4 acres**.

Please note the following requirements of this notification:

- 1. This notification is only for the activity identified in Notification No. HNC-MR40-HKMQ5;**
- 2. This notification does not constitute DHEC's approval of the stormwater management and sediment control plan. You are responsible for ensuring appropriate Best Management Practices are being used during construction activities.**
- 3. You are responsible for ensuring your contractor complies with the site development plan prepared for this project.**
- 4. You must obtain federal, state, or local permits that may be required for this project. In particular, if this project is located in an area of the state where a local government implements a stormwater program, such as an MS4, a permit may be required for this activity.**
- 5. The Department does not regulate the placement of fill in floodplains. You must contact your local city or county official for such approvals; and**
- 6. You are responsible for overall compliance with the Storm Water Management and Sediment Reduction Act of 1991, South Carolina Pollution Control Act and the Federal Clean Water Act.**

This project is subject to a Coastal Zone Consistency (CZC) determination from the Department's CZC Section and automatic permit coverage is not effective until this project has been determined consistent with the Coastal Zone Management Program (CZMP). This project may qualify for General Coastal Zone Consistency (GCZC). If needed, please visit www.scdhec.gov/environment/ocrm/czc for the GCZC and the GCZC request form to submit to the CZC Coordinator. If the project does not qualify for the GCZC the CZC Coordinator will inform you of other CZC process requirements.

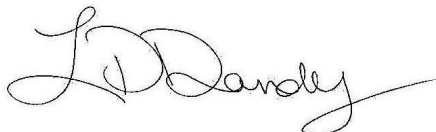
Please note that the Department does not send a copy of this letter to any county or city building official. You must provide a copy of this letter to these agencies, as appropriate. Any future submittals to the Department for this project and/or this site, should reference this project/site name (as listed on the notification form), county, and assigned notification number **(Notification No.HNC-MR40-HKMQ5)**.

The Department may conduct periodic inspections of this site to ensure compliance with all related requirements, including LCP status. Failure to comply with the site plan resulting in discharge of sediment to Waters of the State and/or adjacent properties may subject you to applicable penalties under the S. C.

Pollution Control Act. Additional construction activities beyond the scope of this notification may require permit coverage.

If you have any questions, please call me at (843) 953-7809.

Sincerely,

A handwritten signature in black ink that reads "L. Devay Dandy". The signature is written in a cursive style with a long, sweeping tail on the final letter.

L. Devay Dandy, Permit Coordinator
Coastal Stormwater Permitting Section

ec: Shauna Stevens — EQC Region - **Pee Dee EA Myrtle Beach**

South Carolina Board of Health and Environmental Control
Guide to Board Review
Pursuant to S.C. Code Ann. § 44-1-60

The decision of the South Carolina Department of Health and Environmental Control (Department) becomes the final agency decision fifteen (15) calendar days after notice of the decision has been mailed to the applicant, permittee, licensee and affected persons who have requested in writing to be notified, unless a written request for final review accompanied by a filing fee in the amount of \$100 is filed with Department by the applicant, permittee, licensee or affected person.

Applicants, permittees, licensees, and affected parties are encouraged to engage in mediation or settlement discussions during the final review process.

If the Board declines in writing to schedule a final review conference, the Department's decision becomes the final agency decision and an applicant, permittee, licensee, or affected person may request a contested case hearing before the Administrative Law Court within thirty (30) calendar days after notice is mailed that the Board declined to hold a final review conference. In matters pertaining to decisions under the South Carolina Mining Act, appeals should be made to the South Carolina Mining Council.

I. Filing of Request for Final Review

1. A written Request for Final Review (RFR) and the required filing fee of one hundred dollars (\$100) must be received by Clerk of the Board within fifteen (15) calendar days after notice of the staff decision has been mailed to the applicant, permittee, licensee, or affected persons. If the 15th day occurs on a weekend or State holiday, the RFR must be received by the Clerk on the next working day. RFRs will not be accepted after 5:00 p.m.
2. RFRs shall be in writing and should include, at a minimum, the following information:
 - The grounds for amending, modifying, or rescinding the staff decision;
 - a statement of any significant issues or factors the Board should consider in deciding how to handle the matter;
 - the relief requested;
 - a copy of the decision for which review is requested; and
 - mailing address, email address, if applicable, and phone number(s) at which the requestor can be contacted.
3. RFRs should be filed in person or by mail at the following address:

South Carolina Board of Health and Environmental Control

Attention: Clerk of the Board
2600 Bull Street
Columbia, South Carolina 29201
- Alternatively, RFR's may be filed with the Clerk by facsimile (803-898-3393) or by electronic mail (boardclerk@dhec.sc.gov).
4. The filing fee may be paid by cash, check or credit card and must be received by the 15th day.
5. If there is any perceived discrepancy in compliance with this RFR filing procedure, the Clerk should consult with the Chairman or, if the Chairman is unavailable, the Vice-Chairman. The Chairman or the Vice-Chairman will determine whether the RFR is timely and properly filed and direct the Clerk to (1) process the RFR for consideration by the Board or (2) return the RFR and filing fee to the requestor with a cover letter explaining why the RFR was not timely or properly filed. Processing an RFR for consideration by the Board shall not be interpreted as a waiver of any claim or defense by the agency in subsequent proceedings concerning the RFR.
6. If the RFR will be processed for Board consideration, the Clerk will send an Acknowledgement of RFR to the Requestor and the applicant, permittee, or licensee, if other than the Requestor. All personal and financial identifying information will be redacted from the RFR and accompanying documentation before the RFR is released to the Board, Department staff or the public.
7. If an RFR pertains to an emergency order, the Clerk will, upon receipt, immediately provide a copy of the RFR to all Board members. The Chairman, or in his or her absence, the Vice-Chairman shall based on the circumstances, decide whether to refer the RFR to the RFR Committee for expedited review or to decline in writing to schedule a Final Review Conference. If the Chairman or Vice-Chairman determines review by the RFR Committee is appropriate, the Clerk will forward a copy of the RFR to Department staff and Office of General Counsel. A Department response and RFR Committee review will be provided on an expedited schedule defined by the Chairman or Vice-Chairman.
8. The Clerk will email the RFR to staff and Office of General Counsel and request a Department Response within eight (8) working days. Upon receipt of the Department Response, the Clerk will forward the RFR and Department Response to all Board members for review, and all Board members will confirm receipt of the RFR to the Clerk by email. If a Board member does not confirm receipt of the RFR within a twenty-four (24) hour period, the Clerk will contact the Board member and confirm receipt. If a Board member believes the RFR should be considered by the RFR Committee, he or she will respond to the Clerk's email within forty-eight (48) hours and will request further review. If no Board member requests further review of the RFR within the forty-eight (48) hour period, the Clerk will send a letter by certified mail to the Requestor, with copy by

regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Final Review Conference. Contested case guidance will be included within the letter.

NOTE: If the time periods described above end on a weekend or State holiday, the time is automatically extended to 5:00 p.m. on the next business day.

9. If the RFR is to be considered by the RFR Committee, the Clerk will notify the Presiding Member of the RFR Committee and the Chairman that further review is requested by the Board. RFR Committee meetings are open to the public and will be public noticed at least 24 hours in advance.
10. Following RFR Committee or Board consideration of the RFR, if it is determined no Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, stating the Board will not hold a Conference. Contested case guidance will be included within the letter.

II. Final Review Conference Scheduling

1. If a Conference will be held, the Clerk will send a letter by certified mail to the Requestor, with copy by regular mail to the applicant, permittee, or licensee, if not the Requestor, informing the Requestor of the determination.
2. The Clerk will request Department staff provide the Administrative Record.
3. The Clerk will send Notice of Final Review Conference to the parties at least ten (10) days before the Conference. The Conference will be publically noticed and should:
 - include the place, date and time of the Conference;
 - state the presentation times allowed in the Conference;
 - state evidence may be presented at the Conference;
 - if the conference will be held by committee, include a copy of the Chairman's order appointing the committee; and
 - inform the Requestor of his or her right to request a transcript of the proceedings of the Conference prepared at Requestor's expense.
4. If a party requests a transcript of the proceedings of the Conference and agrees to pay all related costs in writing, including costs for the transcript, the Clerk will schedule a court reporter for the Conference.

III. Final Review Conference and Decision

1. The order of presentation in the Conference will, subject to the presiding officer's discretion, be as follows:
 - Department staff will provide an overview of the staff decision and the applicable law to include [10 minutes]:
 - Type of decision (permit, enforcement, etc.) and description of the program.
 - Parties
 - Description of facility/site
 - Applicable statutes and regulations
 - Decision and materials relied upon in the administrative record to support the staff decision.
 - Requestor(s) will state the reasons for protesting the staff decision and may provide evidence to support amending, modifying, or rescinding the staff decision. [15 minutes] *NOTE: The burden of proof is on the Requestor(s)*
 - Rebuttal by Department staff [15 minutes]
 - Rebuttal by Requestor(s) [10 minutes]

Note: Times noted in brackets are for information only and are superseded by times stated in the Notice of Final Review Conference or by the presiding officer.
2. Parties may present evidence during the conference; however, the rules of evidence do not apply.
3. At any time during the conference, the officers conducting the Conference may request additional information and may question the Requestor, the staff, and anyone else providing information at the Conference.
4. The presiding officer, in his or her sole discretion, may allow additional time for presentations and may impose time limits on the Conference.
5. All Conferences are open to the public.
6. The officers may deliberate in closed session.
7. The officers may announce the decision at the conclusion of the Conference or it may be reserved for consideration.
8. The Clerk will mail the written final agency decision (FAD) to parties within 30 days after the Conference. The written decision must explain the basis for the decision and inform the parties of their right to request a contested case hearing before the Administrative Law Court or in matters pertaining to decisions under the South Carolina Mining Act, to request a hearing before the South Carolina Mining Council.. The FAD will be sent by certified mail, return receipt requested.
9. Communications may also be sent by electronic mail, in addition to the forms stated herein, when electronic mail addresses are provided to the Clerk.

The above information is provided as a courtesy; parties are responsible for complying with all applicable legal requirements.



General Coastal Zone Consistency Determination

To: Orlando Arteaga, Georgetown City of
From: Holli Dawn Martin, OCRM Coastal Zone Consistency Section *Ham*
Project Name: Kaminski Street and Heyward Street Water Improvements
Site Location: South Kaminski Street and Heyward Street, Georgetown, SC, Georgetown County
Ref #: HNC-84J2-G0Q5C; GCZC-2017-002
Date: March 12, 2018

The staff of the Office of Ocean and Coastal Resource Management (OCRM) reviewed the above referenced Coastal Zone Consistency project request for replacement of water mains along South Kaminski Street and Heyward Street. Existing water mains will be abandoned in place.

We hereby certify the above referenced project meets the minimum standards for General Coastal Zone Consistency for Individual Residential Lots and Small Projects under GCZC-2017-002 subject to the following conditions and the policies of the South Carolina Coastal Zone Management Program provided the provided the following conditions are included in the permit and adhered to by the applicant.

Conditions for Minor Impact Projects

1. This GCZC does not preclude the applicant from obtaining necessary local, state and/or federal approvals for the development prior to work beginning.
2. This GCZC is conditioned upon the proper use of Best Management Practices (BMPs), which must be installed, inspected and maintained to retain sediment onsite and to protect any adjacent or downstream critical area, wetlands and waters through the life of the project. Upon completion of construction activities, all disturbed (includes undeveloped) areas, including those impacted for access, must be immediately stabilized. Once stabilization has occurred, all temporary construction BMPs must be properly removed and discarded.
3. Projects that are part of a LCP are authorized/granted coverage provided the consistency determination review for the development including its stormwater management drainage system has been approved under a previously authorized NPDES CGP Land Disturbance Permit (clearing and grading or site development). The development infrastructure, and site layout deemed consistent under the referenced NPDES Land Disturbance Permit's Stormwater Pollution Prevention Plan (SWPPP) remains unchanged from the time of approval as referenced under Section 2.2.2.A of the current NPDES General Permit For Stormwater Discharges From Construction Activities, as well as, compliant with the S.C. Stormwater

Management and Sediment Reduction Regulations (26 S.C. Code Ann. Regs. 72-300) and Chapter III, Section XIII, A, E, and D of the SCCZMP.

4. The project, as applicable, must be compliant with any MOA or Restrictive Covenants/Recorded plats for the project associated with previous Coastal Zone Consistency Determinations of any respective Bureau Permit. Proof of compliance must be included with the request narrative and shown on the lot construction plan sheet.
5. In the event that any historic or cultural resources and/or archaeological materials are found during the course of work, the applicant must notify the State Historic Preservation Office (SHPO) and the South Carolina Institute of Archaeology and Anthropology. Historic or cultural resources consist of those sites listed in the National Register of Historic Places and those sites that are eligible for the National Register. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal and glass objects, and human skeletal materials.
6. The applicant must continue to adhere to all conditions of any Coastal Zone Consistency Determinations of respective Bureau permits.
7. Project development must not result in adverse impacts through nonpoint stormwater runoff and/or point source water discharge on adjacent lands.
8. For land disturbance stabilization, the applicant is strongly encouraged to utilize ground cover, shrub and canopy species native to the coast of South Carolina in any landscaping plans to recover some of the lost ecosystem functions such as water and air quality protection, mitigation of heat island effects and restoration of coastal zone habitat. Low Impact Development and green infrastructure practices are also strongly recommended.
9. Sediment, erosion and water quality controls required by the current NPDES General Permit for Stormwater Discharges from Large and Small Construction Activities and the S.C. Stormwater Management and Sediment Reduction Regulations (26 S.C. Code Ann. Regs. 72-300, as amended, are satisfied by the project design and are correctly installed and maintained. Additional water quality measures specific to the eight coastal counties, as established in Chapter III, Section XIII, A, E, and D of the SCCZMP, as refined, being satisfied by the project design are applicable. Storage for these activities must be appropriate for the specific site
- 10) Sewage treatment facilities and transmission systems in the coastal zone must meet applicable Federal, State and local construction and water quality standards.
- 11) For Sewage Treatment, the project must be consistent with designated 208 Areawide Waste Treatment Management implementation agencies and other agencies with responsibility for implementing comprehensive plans affecting sewage treatment, to ensure that proposed projects are compatible with growth and development plans and that alternative locations for sewage treatment facilities are considered.
12. Minor Project Impacts are not authorized/granted coverage in these instances:

a. When the proposed construction activity is located in any areas identified as “Areas of Special Resource Significance” as detailed in Chapter III, Section XII of the SCCZMP, as refined, unless the area has been previously developed or concerns are negated by on-site characteristics. Areas of Special Resource Significance include (1) Barrier Islands, (2) Dune Areas (outside of the critical area), (3) Navigation Channels, (4) Public Open Spaces (5) Wetlands or areas known to be subject to hazards, including but not limited flooding and contaminated sites. Barrier Islands identified in this condition include undeveloped areas of barrier islands only. The development or redevelopment of single family residential lots are not included in this definition and are exempt. Public Open Spaces identified in this condition include recreationally open areas such as local parks. State Parks are currently identified as Geographic Areas of Particular Concern (GAPC) and are covered therein.

b. When the proposed project may impacts areas identified as GAPCs as detailed in Chapter IV of the SCCZMP: Areas of Unique Natural Resource Value (1) Heritage Trust Sites (2) State Wildlife Preserves (3) State Parks (4) Scenic Rivers (5) Marine and Estuarine Sanctuaries (6) Shellfish Areas (7) Groundwater Resources (8) and Threatened and Endangered Species); Activities or Facilities Dependent on Coastal Location (1) State Ports (2) Navigation Channels (3) and Mining Operations; Areas of Special Historic, Archaeological or Cultural Significance (1) special historic (2) archaeological, or (3) culturally significant sites.