

INVITATION TO BID

BID NO. 17-0091-4

GATEWAY / HENDERSON STORM DRAINAGE IMPROVEMENTS – PHASE I

PRE-BID CONFERENCE: 2:00 PM, OCTOBER 10, 2017

BID OPENING: 2:00 PM, OCTOBER 24, 2017

THE COMMISSIONERS OF CHATHAM COUNTY, GEORGIA

ALBERT J. SCOTT, CHAIRMAN

COMMISSIONER HELEN J. STONE

COMMISSIONER JAMES J. HOLMES

COMMISSIONER BOBBY LOCKETT

COMMISSIONER PATRICK J. FARRELL

COMMISSIONER TABITHA ODELL

COMMISSIONER JAMES “JAY” JONES

COMMISSIONER DEAN KICKLIGHTER

COMMISSIONER CHESTER A. ELLIS

R. JONATHAN HART, COUNTY ATTORNEY

CHATHAM COUNTY, GEORGIA

DOCUMENT CHECK LIST

The following documents, when marked, are contained in and made a part of this Bid Package or are required to be submitted with the bid. It is the responsibility of the bidder to read, complete and sign, where indicated, and return these documents with his/her bid. **FAILURE TO DO SO MAY BE CAUSE FOR DISQUALIFYING THE BID.**

 X GENERAL INFORMATION AND INSTRUCTIONS TO BID WITH ATTACHMENTS

 X SURETY REQUIREMENTS - **A Bid Bond of 5% with this ITB.**

 X PROPOSAL

 PLANS/SPECIFICATIONS – Plans must be purchased at Clayton Digital Reprographics by logging into www.cdrepro.com. Login to DFS. New users must register. For technical support contact CDR at (912) 447-5445, fax (912) 233-7020 or email: cdrwest@cdrepro.com.

 X BID SCHEDULE

 PERFORMANCE BOND – **Required at the time of contract.**

 PAYMENT BOND – **Required at the time of contract.**

 CONTRACT

 X LEGAL NOTICE

 X ATTACHMENTS: A. DRUG FREE WORKPLACE; B. NONDISCRIMINATION STATEMENT; C. DISCLOSURE OF RESPONSIBILITY STATEMENT; D. CONTRACTOR & SUBCONTRACTOR AFFIDAVIT AND AGREEMENT, E. BIDDER'S CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION, F. M/WBE PARTICIPATION REPORT, G. SYSTEMATIC ALIEN VERIFICATION FOR ENTITLEMENTS,

 X DOCUMENTATION OF ABILITY TO PERFORM BID REQUIREMENTS. THIS MAY BE REQUIRED OF BIDDERS AFTER SUBMISSION OF BIDS.

COUNTY TAX CERTIFICATE REQUIREMENT - Contractor must supply a copy of their Tax Certificate from their location in the State of Georgia, as proof of payment of the occupational tax where their office is located.

CURRENT TAX CERTIFICATE NUMBER

CITY _____

COUNTY _____

OTHER _____

The Chatham County of Commissioners have established goals to increase participation of minority and woman owned businesses. In order to accurately document participation, businesses submitting bids or proposals are encouraged to report ownership status. A minority or woman owned business is defined as a business with at least 51% ownership by one or more minority/female individuals and whose daily business operations are managed and directed by one (1) or more of the minority/female owners. Please check ownership status as applicable:

African-American _____ **Asian American** _____ **Hispanic** _____

Native American or Alaskan Indian _____ **Woman** _____

In the award of "Competitive Sealed Proposals", minority/female participation may be one of several evaluation criteria used in the award process when specified as such in the Request for Proposal.

RECEIPT IS HEREBY ACKNOWLEDGED OF ADDENDA NUMBER(S) _____

The undersigned bidder certifies that he/she has received the above listed and marked documents and acknowledges that his/her failure to return each, completed and signed as required, may be cause for disqualifying his/her bid.

BY: _____

DATE

SIGNATURE

TITLE: _____

COMPANY: _____

CHATHAM COUNTY, GEORGIA
OFFICE OF THE PURCHASING DIRECTOR
1117 EISENHOWER DRIVE - SUITE C
SAVANNAH, GEORGIA 31406
(912) 790-1622

Date: September 19, 2017

BID NO. 17-0091-4

GENERAL INFORMATION FOR INVITATION FOR BID

This is an invitation to submit a bid to supply Chatham County with construction, equipment, supplies and/or services as indicated herein. Sealed bids will be received at the Office of the Purchasing Agent, at **The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia 31406 up to 2:00PM local time, OCTOBER 24, 2017,** at which time they will be opened and publicly read. **The County reserves the right to reject all bids that are non-responsive or not responsible.**

Instructions for preparation and submission of a bid are contained in this Invitation To Bid package. Please note that specific forms for submission of a bid are required. Bids must be typed or printed in ink.

A **Pre-bid Conference** has been scheduled to be conducted at **The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia , OCTOBER 10, 2017, at 2:00 PM.,** to discuss the specifications and resolve any questions and/or misunderstanding that may arise. **You are encouraged to attend.**

Any changes to the conditions and specifications must be in the form of a written addendum to be valid; therefore, the Purchasing Director will issue a written addendum to document each approved change. Generally when addenda are required, the bid opening date will be changed.

Chatham County has an equal opportunity purchasing policy. Chatham County seeks to ensure that all segments of the business community have access to supplying the goods and services needed by County programs. The County affirmatively works to encourage utilization of disadvantaged and minority business enterprises in our procurement activities. The County provides equal opportunity for all businesses and does not discriminate against any persons or businesses regardless of race, color, religion, age, sex, national origin or handicap. The terms "disadvantaged business," "minority business enterprise," and "minority person" are more specifically defined and explained in the Chatham County Purchasing Ordinance and Procedures Manual, Article VII - Disadvantaged Business Enterprises Program.

This project IS a Special Purpose Local Option Sales Tax (SPLOST) Project. See paragraph 2.25 for MBE/WBE participation goals.

INSTRUCTIONS TO BIDDERS

- 1.1 **Purpose:** The purpose of this document is to provide general and specific information for use in submitting a bid to supply Chatham County with equipment, supplies, and/or services as described herein. All bids are governed by the Code of Chatham County, Chapter 4, Article IV, and the laws of the State of Georgia.

1.2 **How to Prepare Bids:** All bids shall be:

- a. Prepared on the forms enclosed herewith, unless otherwise prescribed, and **all documents must be submitted.**
- b. Typewritten or completed with pen and ink, signed by the business owner or authorized representative, with all erasures or corrections initialed and dated by the official signing the bid. **ALL SIGNATURE SPACES MUST BE SIGNED.**

Bidders are encouraged to review carefully all provisions and attachments of this document prior to submission. Each bid constitutes an offer and may not be withdrawn except as provided herein.

1.3 **How to Submit Bids:** All bids shall be:

- a. **An original and duplicate copy must be submitted in a sealed opaque envelope, plainly marked with the bid number and title, date and time of bid opening, and company name.**
- b. Mailed or delivered as follows in sufficient time to ensure receipt by the Purchasing Director on or before the time and date specified above.
 1. **Mailing Address: Chatham County Purchasing and Contracting, 1117 Eisenhower Drive, Suite C, Savannah, Georgia 31406.**
 2. **Hand Delivery: Purchasing Director, Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia 31406.**

BIDS NOT RECEIVED BY THE TIME AND DATE SPECIFIED WILL NOT BE OPENED OR CONSIDERED.

- 1.4 **How to Submit an Objection:** Objections from bidders to this invitation to bid and/or these specifications should be brought to the attention of the County Purchasing Director in the following manner:

- a. When a pre-bid conference is scheduled, bidders shall either present their oral objections at that time or submit their written objections at least two (2) days prior to the scheduled pre-bid conference.
 - b. When a pre-bid conference is not scheduled, the bidder shall submit any objections he may have in writing not less than five (5) days prior to the opening of the bid.
 - c. The objections contemplated may pertain to form and/or substance of the invitation to bid documents. Failure to object in accordance with the above procedure will constitute a waiver on the part of the business to protest this invitation to bid.
- 1.5 **Failure to Bid:** If a bid is not submitted, the business should return this invitation to bid document, stating reason therefore, and indicate whether the business should be retained or removed from the County's bidders list.
- 1.6 **Errors in Bids:** Bidders or their authorized representatives are expected to fully inform themselves as to the conditions, requirements, and specifications before submitting bids. Failure to do so will be at the bidder's own risk. In case of error in extension of prices in the bid, the unit price will govern.
- 1.7 **Standards for Acceptance of Bid for Contract Award:** The County reserves the right to reject any or all bids and to waive any irregularities or technicalities in bids received whenever such rejection or waiver is in the best interest of the County. The County reserves the right to reject the bid of a bidder who has previously failed to perform properly or complete on time contracts of a similar nature, or a bid from a bidder whom investigation shows is not in a position to perform the contract.
- 1.8 **Bid Tabulation:** Tabulations for all bids will be posted for thirty (30) days after the bid opening in the Office of Purchasing and Contracting, 1117 Eisenhower Drive, Suite C, Savannah, Georgia 31406 or can be reviewed on the Purchasing web site 24/48 hours after opening at <http://purchasing.chathamcounty.org>.
- 1.9 **Bidder:** Whenever the term "bidder" is used it shall encompass the "person," "business," "contractor," "supplier," "vendor," or other party submitting a bid or proposal to Chatham County in such capacity before a contract has been entered into between such party and the County.
- 1.10 **Responsible / Responsive Bidder:** *Responsible Bidder* means a person or entity that has the capability in all respects to perform fully and reliably the contract requirements. *Responsive Bidder* means a person or entity that has submitted a bid or proposal that conforms in all material respects to the requirements set forth in the invitation for bids or request for proposals.

- 1.11 **Compliance with Laws:** The bidder and/or contractor shall obtain and maintain all licenses, permits, liability insurance, workman's compensation insurance and comply with any and all other standards or regulations required by federal, state or County stature, ordinances and rules during the performance of any contract between the contractor and the County. Any such requirement specifically set forth in any contract document between the contractor and the County shall be supplementary to this section and not in substitution thereof.
- 1.12 **Contractor:** Contractor or subcontractor means any person or business having a contract with Chatham County. The Contractor/Vendor of goods, material, equipment or services certifies that they will follow equal employment opportunity practices in connection with the awarded contract as more fully specified in the contract documents.
- 1.13 **Local Preference:** On 27 March 1998, the Board of Commissioners adopted a "**Local Vendor**" Preference Ordinance that gives the lowest Chatham County vendor submitting a responsible bid/quote the opportunity to match the lowest price offered by an out-of-County vendor. If the County vendor confirms in writing to match within 24 hours, the award will be made to the Chatham County vendor. The lowest Chatham County responsive bidder will be afforded the "right to first refusal". "Local Vendor" is defined as a business or supplier which operates and maintains a regular place of business within the geographical boundaries of Chatham County or one of the local Municipalities of the County AND all real and personal property taxes are paid prior to award of a contract or purchase. "**NOT APPLICABLE TO PUBLIC WORKS CONSTRUCTION PROJECTS AND REVENUE PRODUCING BIDS.**" However, contractors are encourage to apply the same method when awarding bids to local M/WBE businesses whenever possible in order to promote growth in Chatham County's economy.
- 1.14 **Debarred Firms and Pending Litigation:** Any potential proposer/firm listed on the Federal or State of Georgia Excluded Parties Listing (Barred from doing business) **will not** be considered for contract award. Proposers **shall disclose** any record of pending criminal violations (Indictment) and/or convictions, pending lawsuits, etc., and any actions that may be a conflict of interest occurring within the past five (5) years. Any proposer/firm previously defaulting or terminating a contract with the County will not be considered.

** All bidders or proposers are to read and complete the Disclosure of Responsibility Statement enclosed as an Attachment to be returned with response. Failure to do so may result in your solicitation response being rejected as non-responsive.

Bidder acknowledges that in performing contract work for the Board, bidder shall not utilize any firms that have been a party to any of the above actions. If bidder has engaged any firm to work on this contract or project that is later debarred, Bidder shall sever its relationship with that firm with respect to Board contract.

- 1.15 **Performance Evaluation:** On 11 April 2008, the Chatham County Board of Commissioners approved a change to the County Purchasing Ordinance requiring Contractor/Consultant Performance Evaluations, as a minimum, annually, prior to contract anniversary date. Should Contractor/Consultant performance be unsatisfactory, the appointed County Project Manager for the contract may prepare a Contractor/Consultant Complaint Form or a Performance Evaluation to the County Purchasing Agent.
- 1.16 **Payment of Taxes:** No contract shall be awarded unless all real and personal property taxes have been paid by the successful contractor and/or subcontractors as adopted by the Board of Commissioners on 8 April 1994.
- 1.17 **State Licensing Board for General Contractors:** Pursuant to Georgia law, the following types of contractors must obtain a license from the State Licensing Board of Residential and General Contractors by 1 July 2008 :

***Residential - Basic Contractor** (Contractor work relative to detached one-family and two-family residences and one-family townhouses not over three stories in height).

***Residential - Light Commercial Contractor** (Contractor work or activity related to multifamily and multiuse light commercial buildings and structures).

***General Contractor** (Contractor work or activity that is unlimited in scope regarding any residential or commercial projects).

See "Checklist for Submitting Bid" for the type of license required for this project.

- 1.18 **Immigration:** On 1 July , the Georgia Security and Immigration Compliance Act (SB 529, Section 2) became effective. All contractors and subcontractors with 100 or more employees entering into a contract or work must sign an affidavit that he/she has used the E-Verify System. E-Verify is a no-cost federal employment verification system to insure employment eligibility. Affidavits are enclosed in this solicitation. You may download M-274 Handbook for Employers at <http://www.dol.state.ga.us/spotlight/employment/rules>. You may go to <http://www.uscis.gov>. to find the E-Verify information.

Systematic Alien Verification for Entitlements (SAVE) Program: O.C.G.A. 50-36-1, required Georgia's counties to comply with the federal **Systematic Alien Verification for Entitlements (SAVE) Program**. SAVE is a federal program used to verify that applicants for certain "public benefits" are legally present in the United States. Contracts with the County are considered "public benefits." Therefore, the successful bidder will be required to provide the Affidavit Verifying Status for Chatham County Benefit Application prior to receiving any County contract. The affidavit is included as part of this bid package but is only required of the successful bidder.

Protection of Resident Workers. Chatham County Board of Commissioners actively supports the Immigration and Nationality Act (INA) which includes provisions addressing employment eligibility, employment verification, and nondiscrimination. Under the INA, employers may hire only persons who may legally work in the United States (i.e., citizens and nationals of the U.S.) and aliens authorized to work in the U.S. The employer must verify the identity and employment eligibility of anyone to be hired, which includes completing the Employment Eligibility Verification Form (I-9). The Contractor shall establish appropriate procedures and controls so no services or products under the Contract Documents will be performed or manufactured by any worker who is not legally eligible to perform such services or employment.

GENERAL CONDITIONS

- 2.1 **Specifications:** Any obvious error or omission in specifications shall not inure to the benefit of the bidder but shall put the bidder on notice to inquire of or identify the same from the County. Whenever herein mentioned is made of any article, material or workmanship to be in accordance with laws, ordinances, building codes, underwriter's codes, A.S.T.M. regulations or similar expressions, the requirements of these laws, ordinances, etc., shall be construed to be the minimum requirements of these specifications.
- 2.2 **Multiple Bids:** No vendor will be allowed to submit more than one (1) bid. Any alternate proposals must be brought to the Purchasing Agent's attention during the Pre-bid Conference or submitted in writing at least five (5) days preceding the bid opening date.
- 2.3 Not Used.
- 2.4 **Prices to be Firm:** Bidder warrants that bid prices, terms and conditions quoted in his bid will be firm for acceptance for a period of sixty (60) days from bid opening date, unless otherwise stated in the bid.
- 2.5 **Completeness:** All information required by Invitation for Bids/Proposals must be completed and submitted to constitute a proper bid or proposal.
- 2.6 **Quality:** All materials, or supplies used for the construction necessary to comply with this proposal shall be of the best quality, and of the highest standard of workmanship. Workmanship employed in any construction, repair, or installation required by this proposal shall be of the highest quality and meet recognized standards within the respective trades, crafts and of the skills employed.
- 2.7 **Guarantee/Warranty:** Unless otherwise specified by the County, the bidder shall unconditionally guarantee the materials and workmanship for one (1) year on all material and/or services. If, within the guarantee period, any defects occur which are due to faulty material and or services, the contractor at his expense, shall repair or adjust the condition,

or replace the material and/or services to the complete satisfaction of the County. These repairs, replacements or adjustments shall be made only at such time as will be designated by the County as being least detrimental to the operation of County business.

- 2.8 **Liability Provisions:** Where bidders are required to enter or go onto Chatham County property to take measurements or gather other information in order to prepare the bid or proposal as requested by the County, the bidder shall be liable for any injury, damage or loss occasioned by negligence of the bidder, his agent, or any person the bidder has designated to prepare the bid and shall indemnify and hold harmless Chatham County from any liability arising therefrom. The contract document specifies the liability provisions required of the successful bidder in order to be awarded a contract with Chatham County.
- 2.9 **Cancellation of Contract:** The contract may be canceled or suspended by Chatham County in whole or in part by written notice of default to the Contractor upon non-performance or violation of contract terms. An award may be made to the next low bidder, for articles and/or services specified or they may be purchased on the open market and the defaulting Contractor (or his surety) shall be liable to Chatham County for costs to the County in excess of the defaulted contract prices. See the contract documents for complete requirements.
- 2.10 **Patent Indemnity:** Except as otherwise provided, the successful bidder agrees to indemnify Chatham County and its officers, agents and employees against liability, including costs and expenses for infringement upon any letters patent of the United States arising out of the performance of this Contract or out of the use or disposal for the account of the County of supplies furnished or construction work performed hereunder.
- 2.11 **Certification of Independent Price Determination:** By submission of this bid, the bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, that in connection with this procurement:
- (1) The prices in this bid have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;
 - (2) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly to any other bidder or to any competitor; and
 - (3) No attempt has been made or will be made by the bidder to induce any other person or firm to submit or not be submit a bid for the purpose or restricting competition.
- 2.12 **Award of Contract:** The contract, if awarded, will be awarded to that responsible bidder whose bid/proposal will be most advantageous to Chatham County, price and other factors

considered. The Board of Commissioners will make the determination as to which bid or proposal that serves as the best value to Chatham County.

- 2.13 **Procurement Protests:** Objections and protests to any portion of the procurement process or actions of the County staff may be filed with the Purchasing Agent for review and resolution. The Chatham County Purchasing Procedures Manual, Article IX - Appeals and Remedies shall govern the review and resolution of all protests.

- 2.14 **Qualification of Business (Responsible Bidder or Proposer):** A responsible bidder or proposer is defined as one who meets, or by the date of the bid acceptance can meet, certifications, all requirements for licensing, insurance, and registrations, or other documentation required by the Design Professional engaged to develop Scope of Work, specifications and plans. These documents will be listed in the Special Conditions further on in this solicitation. Chatham County has the right to require any or all bidders to submit documentation of the ability to perform, provide, or carry out the service or provide the product requested.

Chatham County has the right to disqualify the bid or proposal of any bidder or proposer as being unresponsive or irresponsible whenever such bidder/proposer cannot document the ability to deliver the requested product.

- 2.15 **Chatham County Tax Certificate Requirement:** A current Chatham County Tax Certificate is required unless otherwise specified. Please contact the Building Safety and Regulatory Services at (912) 201-4300 for additional information.

NOTE: No contract shall be awarded unless all real and personal property taxes have been paid by the successful contractor and/or subcontractors as adopted by the Board of Commissioners on 8 April 1994.

- 2.16 **Insurance Provisions, General:** The selected contractor shall be required to procure and maintain for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the Bid.

It is every contractor's responsibility to provide the County Purchasing and Contracting Division current and up-to-date Certificates of Insurance for multiple year contracts before the end of each term. **Failure to do so may be cause for termination of contract.**

2.16.1 General Information that shall appear on a Certificate of Insurance:

- I. Name of the Producer (Contractor's insurance Broker/Agent).
- II. Companies affording coverage (there may be several).
- III. Name and Address of the Insured (this should be the Company or Parent of the firm Chatham County is contracting with).

- IV. A Summary of all current insurance for the insured (includes effective dates of coverage).
- V. A brief description of the operations to be performed, the specific job to be performed, or contract number.
- VI. Certificate Holder (This is to always include Chatham County).

Chatham County as an Additional Insured: Chatham County invokes the defense of sovereign immunity. In order not to jeopardize the use of this defense, the County **is not** to be included as an Additional Insured on insurance contracts.

2.16.2 **Minimum Limits of Insurance** to be maintained for the duration of the contract:

- a. **Commercial General Liability:** Provides protection against bodily injury and property damage claims arising from operations of a Contractor or Tenant. This policy coverage includes: premises and operations, use of independent contractors, products/completed operations, personal injury, contractual, broad form property damage, and underground, explosion and collapse hazards. Minimum limits: \$1,000,000 bodily injury and property damage per occurrence and annual aggregate.
- b. **Worker's Compensation and Employer's Liability:** Provides statutory protection against bodily injury, sickness or disease sustained by employees of the Contractor while performing within the scope of their duties. Employer's Liability coverage is usually included in Worker's Compensation policies, and insures common law claims of injured employees made in lieu of or in addition to a Worker's Compensation claim. Minimum limits: \$500,000 for each accident, disease policy limit, disease each employee and Statutory Worker's Compensation limit.
- c. **Business Automobile Liability:** Coverage insures against liability claims arising out of the Contractor's use of automobiles. Minimum limit: \$1,000,000 combined single limit per accident for bodily injury and property damage. Coverage should be written on an Any Auto basis.

2.16.3 Special Requirements:

- a. **Claims-Made Coverage:** The limits of liability shall remain the same as the occurrence basis, however, the Retroactive date shall be prior to the coincident with the date of any contract, and the Certificate of Insurance shall state the coverage is claims-made. The Retroactive date shall also be specifically stated on the Certificate of Insurance.
- b. **Extended Reporting Periods:** The Contractor shall provide the County with a notice of the election to initiate any Supplemental Extended Reporting Period and the reason(s) for invoking this option.

- c. **Reporting Provisions:** Any failure to comply with reporting provisions of the policies shall not affect coverage provided in relation to this request.
 - d. **Cancellation:** Each insurance policy that applies to this request shall be endorsed to state that it shall not be suspended, voided, or canceled, except after thirty (30) days prior to written notice by certified mail, return receipt requested, has been given to the County.
 - e. **Proof of Insurance:** Chatham County shall be furnished with certificates of insurance and with original endorsements affecting coverage required by this request. The certificates and endorsements are to be signed by a person authorized by the insurer to bind coverage on its behalf. All certificates of insurance are to be submitted prior to, and approved by, the County before services are rendered. The Contractor must ensure Certificate of Insurance are updated for the entire term of the County.
 - f. **Insurer Acceptability:** Insurance is to be placed with an insurer having an A.M. Best's rating of A and a five (5) year average financial rating of not less than V. If an insurer does not qualify for averaging on a five year basis, the current total Best's rating will be used to evaluate insurer acceptability.
 - g. **Lapse in Coverage:** A lapse in coverage shall constitute grounds for contract termination by the Chatham County Board of Commissioners.
 - h. **Deductibles and Self-Insured Retention:** Any deductibles or self-insured retention must be declared to, and approved by, the County. At the option of the County, either: the insurer shall reduce or eliminate such deductibles or self-insured retention as related to the County, its officials, officers, employees, and volunteers; or the Contractor shall procure a bond guaranteeing payment of related suits, losses, claims, and related investigation, claim administration and defense expenses.
- 2.16.4 **Additional Coverage for Specific Procurement Projects:**
- a. **Professional Liability:** Insure errors or omission on behalf of architects, engineers, attorneys, medical professionals, and consultants.

Minimum Limits:

\$1 million per claim/occurrence

Coverage Requirement:

If claims-made, retroactive date must precede or coincide with the contract effective date or the date of the Notice to Proceed. The professional must state if tail coverage has been purchased and the duration of the coverage.

- b. **Builder's Risk: (For Construction or Installation Contracts)** Covers against insured perils while in the course of construction.
Minimum Limits: All-Risk coverage equal 100% of contract value
Coverage Requirements: Occupancy Clause - permits County to use the facility prior to issuance of Notice of Substantial Completion.
- 2.17 **Compliance with Specification - Terms and Conditions:** The Invitation to Bid, Legal Advertisement, General Conditions and Instructions to Bidders, Specifications, Special Conditions, Vendor's Bid, Addendum, and/or any other pertinent documents form a part of the bidders proposal or bid and by reference are made a part hereof.
- 2.18 **Signed Bid Considered Offer:** The signed bid shall be considered an offer on the part of the bidder, which offer shall be deemed accepted upon approval by the Chatham County Board of Commissioners, Purchasing Agent or his designee. In case of a default on the part of the bidder after such acceptance, Chatham County may take such action as it deems appropriate, including legal action for damages or lack of required performance.
- 2.19 **Notice to Proceed:** The successful bidder or proposer shall not commence work under this Invitation to Bid until a written contract is awarded and a Notice to Proceed is issued by the Purchasing Agent or his designee. If the successful bidder does commence any work or deliver items prior to receiving official notification, he does so at his own risk.
- 2.20 **Payment to Contractors:** Instructions for invoicing the County for products delivered to the County are specified in the contract document.
 - a. Questions regarding payment may be directed to the Finance Department at (912) 652-7900 or the County's Project Manager as specified in the contract documents.
 - b. Contractors will be paid the agreed upon compensation upon satisfactory delivery of the products or completion of the work as more fully described in the contract document.
 - c. Upon completion of the work or delivery of the products, the Contractor will provide the County with an affidavit certifying all suppliers, persons or businesses employed by the Contractor for the work performed for the County have been paid in full.
 - d. Chatham County is a tax exempt entity. Every contractor, vendor, business or person under contract with Chatham County is required by Georgia law to pay State sales or use taxes for products purchased in Georgia or transported into Georgia and sold to Chatham County by contract. Please consult the State of Georgia, Department of Revenue, Sales and Use Tax

Unit in Atlanta (404) 656-4065 for additional information.

2.21 **Owner's Rights Concerning Award:** The Owner reserves the right, and sole and complete discretion to waive technicalities and informalities. The Owner further reserves the right, and sole and complete discretion to reject all bids and any bid that is not responsive or that is over the budget, as amended. In judging whether the bidder is responsible, the Owner will consider, but is not limited to consideration of, the following:

- a. Whether the bidder or principals are currently ineligible, debarred, suspended, or otherwise excluded from bidding or contracting by any state or federal agency, department, or authority;
- b. Whether the bidder or principals have been terminated for cause or are currently in default on a public works contract;
- c. Whether the bidder can demonstrate a commitment to safety with regard to Workers' Compensation by having an experience Modification Rate (EMR) over the past three years not having exceeded an average of 1.2; and
- d. Whether the bidder's past work provides evidence of an ability to successfully complete public works projects within the established time, quality, or cost, or to comply with the bidder's contract obligations; and
- e. Whether the bidder has made a Good Faith Effort to meet local participation goals for local economic impact for Disadvantaged Business Enterprises and Small Business Enterprises.

2.22 **Owner's Right to Negotiate with the Lowest Bidder:**

In the event all responsive and responsible bids are in excess of the budget, the Owner, in its sole and absolute discretion and in addition to the rights set forth above, reserves the right either to (i) supplement the budget with additional funds to permit award to the lowest responsive and responsible bid, or (ii) to negotiate with the lowest responsive and responsible bidder (after taking all deductive alternates) only for the purpose of making changes to the Project that will result in a cost to the Owner that is within the budget, as it may be amended.

2.23 **Debarred or Suspended Subcontractors.**

CONTRACTOR shall not subcontract, and shall ensure that no subcontracts are awarded at any tier, to any individual, firm, partnership, joint venture, or any other entity regardless of the form of business organization, that is on the Federal Excluded Parties List System (EPLS) at <https://www.epls.gov> or the State of Georgia, DOAS, State Purchasing Exclusion listing, or other local government entity. This includes pending litigation or claims with

the County or other government entities. Contractor shall immediately notify County in the event any subcontractor is added to a Federal, State or other Government Entity listing after award of the subcontract.

2.24 Cone of Silence:

Lobbying of Procurement Evaluation Committee members, County Government employees, and elected officials regarding this product or service solicitation, Invitation to Bid (ITB) or Request for Proposal (RFP) or contract by any member of a proposer's staff, or those people employed by any legal entity affiliated with an organization that is responding to the solicitation is strictly prohibited. Negative campaigning through the mass media about the current service delivery is strictly prohibited. Such actions may cause your proposal to be rejected.

2.25 The Chatham County Board of Commissioners has adopted an aggressive program that establishes goals for minority/female, small and disadvantaged business participation in construction, professional services, and general procurement.

- a. The Chatham County Board of Commissioners under Georgia law may reject any bid as non-responsive if they feel a bidder did not exercise "Good Faith Effort" in obtaining the goal established for M/WBE participation.
- b. The Chatham County Board of Commissioners adopted a policy establishing goals oriented to increase participation of minority and female owned businesses, through MBE/WBE certification and development. In order to accurately document participation, businesses submitting bids, quotes or proposals are encouraged to report ownership status. A bidder or vendor that is certified by any agency of the Federal Government or State of Georgia may submit a copy of their certification with their bid as proof of qualifications. Bidders that intend to engage in joint ventures or utilize subcontractors must submit to the County Contracts Administrator, a report on Minority/Female Business Enterprise participation.

Goals established for this project is 30% Combined.

- c. A Minority/Female Business Enterprise (M/WBE) is a business concern that is at least 51% owned by one or more minority/female individuals and whose daily business operations are managed and directed by one (1) or more of the minority/female owners.

2.26 LIQUIDATED DAMAGES: Failure to complete all work within 270 calendar days for both Division 1 & 2 combined. (if two contracts are awarded for this project, time of completion shall be 150 calendar days for Division 1 only and time of completion shall be 150 calendar days for Division 2 only) plus any extension authorized in writing by the County shall entitle the County to deduct as "Liquidated Damages" from the monies due the

Contractor the amount of **\$500** for each calendar day in excess of the authorized construction time.

- 2.26 Bidders or proposers are required to make a **Good Faith Effort**, where subcontracting is to be utilized in performing the contract, to subcontract with or purchase supplies from qualified M/WBEs. Bidders or proposers are required to state if they intend to subcontract any part of the work. Goals will be established for each contract at the onset. **Forms** requiring the signatures of bidders or proposers are enclosed as **Attachments** and must be completed and returned with your bid response. If forms are not completed and submitted, the bid may be considered nonresponsive.

Each bidder or proposer is required to maintain records of such efforts in detail adequate to permit a determination of compliance with these requirements. All contracts will reflect **Good Faith Efforts** and reporting requirements for the term of the contract. The County particularly urges general contractors to give emphasis to subcontracting with local area firms. **For information on the program or M/WBE contractors/vendors please contact Connell C. Heyward, Chatham County Minority and Women Business Coordinator, 124 Bull Street, Suite 310, Savannah, Georgia 31401, (912) 652-7828 phone, or (912) 652-7951 fax. Email: cheyward@chathamcounty.org**

- 2.27 **GEORGIA OPEN RECORDS ACT** - The responses will become part of the County's official files without any obligation on the County's part. Ownership of all data, materials and documentation prepared for and submitted to Chatham County in response to a solicitation, regardless of type, shall belong exclusively to Chatham County and will be considered a record prepared and maintained or received in the course of operations of a public office or agency and subject to public inspection in accordance with the Georgia Open Records Act, Official Code of Georgia Annotated, Section 50-18-70, et. Seq., unless otherwise provided by law.

Responses to RFPs shall be held confidential from all parties other than the County until after the contract is awarded by the Board of Commissioners.

The vendor and their bid price in response to ITBs will be read allowed at public bid openings. After Bid Tabulations, the ITB shall be available for public viewing.

Chatham County shall not be held accountable if material from responses is obtained without the written consent of the vendor by parties other than the County, at any time during the solicitation evaluation process.

- 2.28 **GEORGIA TRADE SECRET ACT of 1990** - In the event a Bidder/Proposer submits trade secret information to the County, the information must be clearly labeled as a Trade Secret. The County will maintain the confidentiality of such trade secrets to the extent provided by law.

2.29 **CONTRACTOR RECORDS** -The Georgia Open Records Act is applicable to the records of all contractors and subcontractors under contract with the County. This applies to those specific contracts currently in effect and those which have been completed or closed for up three (3) years following completion.

2.30 **REFERENCES - \$500,000 or more:** For bidders to be responsive each must provide information on the most recent five (5) projects with similar scope of work as well as other information to determine experience and qualifications as follows:

a. Project Name: _____

Location: _____

Owner: _____

Address: _____

City and State: _____

Contact: _____

Phone & Fax: _____

*Architect or Engineer: _____

Contact: _____

Phone & Fax: _____

b. The awarded bid amount and project start date.

Final cost of project and completion date.

Number of change orders.

Contracted project completion in days.

Project completed on time. Yes _____ No _____ Days exceeded _____.

List previous contracts your company performed for Chatham County by Project Title, date and awarded/final cost.

Has contractor ever failed to complete a project? If so, provide explanation.

Have any projects ever performed by contractor been the subject of a claim or lawsuit by or against the contractor? If yes, please identify the nature of such claim or lawsuit, the court in which the case was filed and the details of its resolution.

\$499,000 and less: Provide references from owners of at least three (3) projects of various sizes. Include government owners if possible. If the contractor has performed any work for the Chatham County Board of Commissioners within the last five (5) years, at least one (1) of the three (3) owner references must be from the appropriate party within the Chatham County Government. Provide in the format as in (a) above on the attached form.

Failure to provide the above information may result in your firm's bid being rejected and ruled as non-responsive.

NOTE: FORMS FOR YOU TO FILL OUT FOR YOUR REFERENCES ARE ATTACHED TO THE BACK OF THIS BID PACKAGE.

ADDITIONAL CONDITIONS

- 3.1 **METHOD OF COMPENSATION.** The compensation provided for herein shall include all claims by the CONTRACTOR for all costs incurred by the CONTRACTOR in the conduct of the Project as authorized by the approved Project Compensation Schedule and this amount shall be paid to the CONTRACTOR after receipt of the invoice and approval of the amount by the COUNTY. The COUNTY shall make payments to the CONTRACTOR within thirty (30) days from the date of receipt of the CONTRACTOR's acceptable statement on forms prepared by the CONTRACTOR and approved by the COUNTY.

Should the Project begin within any one month, the first invoice shall cover the partial period from the beginning date of the Project through the last day of the month (or on a mutually agreeable time) in which it began. The invoices shall be submitted each month until the Project is completed. Invoices shall be itemized to reflect actual expenses for each individual task; also refer to the requirements concerning changes, delays and termination of work under Sections I-8, 9, and 10 of the contract. Each invoice shall be accompanied by a summary progress report which outlines the work accomplished during the billing period and any problems that may be inhibiting the Project execution. The terms of this contract are intended to supersede all provisions of the Georgia Prompt Pay Act.

As long as the gross value of completed work is less than 50% of the total contract amount, or if the contractor is not maintaining his construction schedule to the satisfaction of the engineer, the County shall retain 10% of the gross value of the completed work as indicated by the current estimate approved by the engineer.

After the gross value of completed work becomes to or exceed 50% of the total contract amount within a time period satisfactory to the County, then the total amount to be retained may be reduced to 5% of the gross value of the completed work as indicated by the current estimate approved by the engineer, until all pay items are substantially completed.

When all work is completed and time charges have ceased, pending final acceptance and final payment the amount retained may be further reduced at the discretion of the County.

The CONTRACTOR may submit a final invoice to the County for the remaining retainage upon COUNTY'S acceptance of the Certificate of Substantial Completion. Final payment constituting the entire unpaid balance due shall be paid by the COUNTY to the

CONTRACTOR when work has been fully completed and the contract fully performed, except for the responsibilities of the CONTRACTOR which survive final payment. The making of final payment shall constitute a waiver of all claims by Chatham County except

those arising from unsettled liens, faulty or defective work appearing after substantial completion, failure of the work to comply with the requirements of the Contract Documents, or terms of any warranties required by the Contractor Documents or those items previously made in writing and identified by the COUNTY as unsettled at the time of final application for payment. Acceptance of final payment shall constitute a waiver of all claims by the CONTRACTOR, except those previously made in writing and identified by the CONTRACTOR as unsettled at the time of final application for payment.

3.3 SURETY REQUIREMENTS and Bonds: (check where applicable)

- X A. Such bidder shall post a bid bond, certified check or money order made payable to the Chatham County Finance Department in the amount of 5% of the bid price.
- X B. Contractor(s) shall be required at time of contract to shall post a payment/performance bond, certified check or money order made payable to the Chatham County Finance Department in the amount of 100% of the bid price if awarded the purchase. Such bond(s) are due prior to contract execution as a guarantee that goods meet specifications and will be delivered per contract. Such bonds will also guarantee quality performance of services and timely payment of invoices to any subcontractors.
- X C. Whenever a bond is provided, it shall be executed by a surety authorized to do business in the State of Georgia and approved by Chatham County.
- X D. Bidder acknowledges Chatham County's right to require a Performance and Payment Bond of a specific kind and origin. "Performance Bond" means a bond with good and sufficient surety or surities for the faithful performance of the contract and to indemnify the governmental entity for any damages occasioned by a failure to perform the same within the prescribed time. Such bond shall be payable to, in favor of, and for the protection of the governmental entity for which the work is to be done. "Payment Bond" means a bond with good and sufficient surety or sureties payable to the governmental entity for which the work is to be done and intended for the use and protection of all subcontractors and all persons supplying labor, materials, machinery, and equipment in the prosecution of the work provided for in the public works construction contract.
- X E. Forfeit the amount of the Bid Bond if he/she fails to enter into a contract with Chatham County to do and/or furnish everything necessary to provide service and/or accomplish the work stated and/or specified in

this bid proposal for the bid amount.

3.4 WARRANTY REQUIREMENTS:

- a. Provisions of item 2.7 apply.
- b. Warranty required.

- X
- 1. Standard warranty shall be offered with bid.
 - 2. Extended warranty shall be offered with bid. The cost of the extended warranty will be listed separately on the bid sheet.

3.5 TERMS OF CONTRACT: (check where applicable):

- a. Annual Contract (With automatic renewal options for four (4) additional one (1) year terms if all parties agree)
- b. One-time Purchase
- X c. Other **ONE TIME CONTRACT**

3.6 AUDITS AND INSPECTIONS:

At any time during normal business hours and as often as the County may deem necessary, the Contractor and his subcontractors shall make available to the County and/or representatives of the Chatham County Department of Internal Audit for examination of all its records with respect to all matters covered by this Contract. It shall also permit the County and/or representatives of the Department of Internal Audit to audit, inspect, examine and make copies, excerpts or transcripts from such records of personnel, conditions of employment and other data relating to all matters covered by this Contract. All documents to be audited shall be available for inspection at all reasonable times in the main offices of the County or at the offices of the Contractor as requested by the County.

CONVERSATIONS OR CORRESPONDENCE REGARDING THIS SOLICITATION OR REPORT BETWEEN PROSPECTIVE OFFERORS AND PERSONS OUTSIDE THE CHATHAM COUNTY PURCHASING OFFICE WILL NOT BE CONSIDERED OFFICIAL OR BINDING UNLESS OTHERWISE SPECIFICALLY AUTHORIZED WITHIN THIS DOCUMENT.

The undersigned bidder or proposer certifies that he/she has carefully read the preceding list of

instructions to bidders and all other data applicable hereto and made a part of this invitation; and, further certifies that the prices shown in his/her bid/proposal are in accordance with all documents contained in this Invitation for Bids/ Proposals package, and that any exception taken thereto may disqualify his/her bid/proposal.

This is to certify that I, the undersigned bidder, have read the instructions to bidder and agree to be bound by the provisions of the same.

This _____ day of _____ 20 _____.

BY _____

SIGNATURE

TITLE

COMPANY

Phone / Fax No's. / e-mail

CHATHAM COUNTY, GEORGIA

CHATHAM COUNTY, GEORGIA
SURETY REQUIREMENTS

A Bid Bond for five percent (5%) of the amount of the bid is required to be submitted with each bid.

A Performance Bond for one hundred percent (100%) of the bid shall be required of the successful bidder.

The Bidder certifies that he/she has examined all documents contained in this bid package, and is familiar with all aspects of the proposal and understands fully all that is required of the successful bidder. The Bidder further certifies that his/her bid shall not be withdrawn for thirty (30) days from the date on which his bid is publicly opened and read.

The Bidder agrees, if awarded this bid, he/she will:

- A. Furnish, upon receipt of an authorized Chatham County Purchase Order, all items indicated thereon as specified in this bid proposal for the bid amount, or;
- B. Enter a contract with Chatham County to do and/or furnish everything necessary to provide the service and/or accomplish the work as stated and/or specified in this bid proposal for the bid amount, and;
- C. Furnish, if required, a Performance Bond, and acknowledges Chatham County's right to require a Performance Bond of a specific kind and origin, and;
- D. Forfeit the amount of the Bid Bond if he/she fails to enter a contract with Chatham County as stated in (B) above, within fifteen (15) days of the date on which he/she is awarded the bid, and/or;
- E. Forfeit the amount of the Performance Bond if he/she fails to execute and fulfill the terms of the contract entered. The amount of forfeiture shall be:
 - 1. The difference between his/her bid and the next lowest, responsible bid that has not expired or been withdrawn, or;
 - 2. The difference between his/her bid and the amount of the lowest, responsible bid received as a result of rebidding, including all costs related to rebidding.

COMPANY

DATE

SIGNATURE

TITLE

TELEPHONE NUMBER

PROPOSAL

SPECIFICATIONS FOR:

BID NO. 17-0091-4

GATEWAY / HENDERSON STORM DRAINAGE IMPROVEMENTS – PHASE I

The project is located in unincorporated Chatham County near the intersection of Georgia State Route 204 with Interstate 95. There are two separate but similar parts to the total work, defined within the project as Division 1 and Division 2. Division 1 begins near the intersection of Henderson Blvd. frontage road with Henderson Blvd. and extends some 3,800 feet roughly parallel to Henderson Blvd. to the outfall under SR 204. Division 2 begins at a junction point with the Gateway-Henderson canal between Brown Thrush and Little Neck Road and extends some 3,400 feet to a wetland area, with most of the route being parallel to the Georgia Power transmission main.

The work consists of clearing and grubbing the right-of-way and easements, installation of storm drain pipes, construction or modification of open channels, utility adjustments and other associated work as shown on the plans.

NOTE: The County reserves the right to award two separate contracts to two different companies (one for Division 1 and one for Division 2) if it is determined to be in the best interest of the County.

This shall be a Line Item contract.

COMMENCEMENT AND COMPLETION:

WORK SHALL BEGIN WITHIN 10 DAYS AFTER RECEIPT OF "NOTICE TO PROCEED". ALL WORK SHALL BE COMPLETED WITHIN 270 calendar days for both Division 1 & 2 combined. (if two contracts are awarded for this project, time of completion shall be 150 calendar days for Division 1 only and time of completion shall be 150 calendar days for Division 2 only).

**GATEWAY- HENDERSON STORM DRAINAGE IMPROVEMENTS- PHASE 1
SUMMARY**

BID SCHEDULE

TOTAL ALL WORK, DIVISION 1	\$ _____
TOTAL ALL WORK, DIVISION 2	\$ _____
TOTAL PROJECT ADJUSTMENT	\$ _____
TOTAL ALL WORK	\$ _____

NAME /TITLE

COMPANY

ADDRESS

PHONE / FAX NO'S.

E-MAIL

GATEWAY- HENDERSON STORM DRAINAGE IMPROVEMENTS - PHASE 1
DIVISION 1 - AL HENDERSON BOULEVARD
JUNE, 2017
BID SCHEDULE

ITEM NUMBER	DESCRIPTION	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
1	Mobilization	Job	Lump Sum	
2	Clearing and Grubbing	3.3 AC		
3	Remove Pipe, All Sizes	180LF		
4	Remove Tree	4 EA		
5	Channel Excavation	5300 CY		
6	Grading	Job	Lump Sum	
7	Removal of Unsuitable Subgrade Material	200 CY		
8	Foreign Borrow, as directed by owner	500 CY		
9	18" Storm Drain Pipe	64 LF		
10	30" Storm Drain Pipe	80 LF		
11	42" Storm Drain Pipe	368 LF		
12	30" Flared End Section	1 EA		
13	Concrete Flume	1 EA		
14	Connect to Existing Structure	2 EA		
15	Pipe Plug	2 EA		
16	Maintenance of Flow	Job	Lump Sum	
17	Traffic Control	Job	Lump Sum	
18	Utility Coordination	Job	Lump Sum	
19	Lower Water Main	4 EA		
20	10" EZ Valve	7 EA		
21	Lower Sanitary Force Main	1 EA		
22	Air Release/Plug Valve in Manhole	1 EA		
23	Remove and Replace Asphalt Pavement	150 SY		
24	Remove and Replace Curb and Gutter	90 LF		
25	Remove and Replace Sidewalk	22 SY		
26	Tree Protection Fence	200 LF		
27	Type NS Silt Fence	1400 LF		
28	Type S Silt Fence	1800 LF		
29	Construction Exit	2 EA		
30	Inlet Sediment Trap	4 EA		
31	Stone Ditch Check	10 EA		
32	Slope Stabilization Matting	7400 SY		
33	Temporary Grassing	16000 SY		
34	Permanent Grassing	16000 SY		
35	Riprap	145 SY		
36	NPDES Compliance	Job	Lump Sum	
37	Field Condition Allowance	Job	Lump Sum	\$30,000

Total All Work, Division1

\$ _____

GATEWAY- HENDERSON STORM DRAINAGE IMPROVEMENTS- PHASE 1
DIVISION 2- OVERFLOW CHANNEL
JUNE, 2017
BID SCHEDULE

ITEM NUMBER	DESCRIPTION	ESTIMATED QUANTITY	UNIT PRICE	TOTAL COST
1	Mobilization	Job	Lump Sum	
2	Clearing and Grubbing	3 AC		
3	Remove Fence	70 LF		
4	Channel Excavation	8,700 CY		
5	Grading	Job	Lump Sum	
6	Removal of Unsuitable Subgrade Material	100 CY		
7	Foreign Borrow, as directed by owner	200 CY		
8	30" Storm Drain Pipe	32 LF		
9	54" Storm Drain Pipe	40 LF		
10	Maintenance of Flow	Job	Lump Sum	
11	Utility Coordination	Job	Lump Sum	
12	Lower Water Main	1 EA		
13	12" EZ Valve	2 EA		
14	Type NS Silt Fence	5000LF		
15	Type S Silt Fence	2000LF		
16	Construction Exit	1 EA		
17	Stone Ditch Check	8 EA		
18	Slope Stabilization Matting	4400 SY		
19	Temporary Grassing	14,500 SY		
20	Permanent Grassing	14,500 SY		
21	Riprap	30 SY		
22	NPDES Compliance	Job	Lump Sum	
23	Field Condition Allowance	Job	Lump Sum	\$ 20,000.00

Total All Work, Division 2 \$ _____

LIST OF SUBCONTRACTORS

I do _____, do not _____, propose to subcontract some of the work on this project. I propose to subcontract work to the following subcontractors: **NOTE: M/WBE PARTICIPATION.**

[illegible]

SIGNED: _____ **CONTRACTOR**

SPECIAL CONDITIONS

SECTION 01600

PART 1 – PROJECT DESCRIPTION

The project is located in unincorporated Chatham County near the intersection of Georgia State Route 204 with Interstate 95. There are two separate but similar parts to the total work, defined within the project as Division 1 and Division 2. Division 1 begins near the intersection of Henderson Boulevard frontage road with Henderson Boulevard and extends some 3800 feet roughly parallel to Henderson Boulevard to the outfall under SR 204. Division 2 begin at a junction point with the Gateway-Henderson canal between Brown Thrush and Little Neck Roads and extends some 3400 feet to a wetland area, with most of the route being parallel to the Georgia Power transmission main.

The work consists of clearing and grubbing the right-of-way and easements to the extent shown on the plans, installation of storm drain pipes, construction or modification of open channels, utility adjustments and associated work as shown on the plans. Compliance with requirements of the NPDES Georgia general permit, with the exception of stormwater monitoring, is included. Traffic will be impacted but roadway and property access must be maintained at all times. Capacity for stormwater flow must be maintained at all times, although temporary blockages are acceptable. A soil erosion and sedimentation control plan is provided and must be implemented prior to, and maintained during, construction. Coordination with utility providers is included.

PART 2 – CONTRACT DOCUMENTS

2.1 Technical Specifications:

01600	Special Conditions
02 41 13	Selective Site Demolition
31 00 00	Earthwork
31 10 00	Site Clearing
31 25 00	Erosion and Sedimentation Controls (GA)
31 37 00	Rip-Rap
32 92 00	Turf and Grasses
33 40 00	Storm Drainage Utilities

2.2 Drawings:

CO	Cover Sheet
DIV1-G1.1	General Notes and Legend
DIV1-G1.2	Sheet Index
DIV1-V1.1 – DIV1-V1.2	Existing Conditions
DIV1-C1.1 – DIV1-C1.2	Site Layout Plan
DIV1-C2.1	Water and Sewer Plan
DIV1-C2.2	Water and Sewer Details
DIV1-C3.1 – DIV1-C3.2	Paving, Grading and Drainage Plan
DIV1-C4.1	Paving, Grading and Drainage Details
DIV1-C4.2	Paving, Grading and Drainage Sections

DIV1-EC1.1 – DIV1-EC1.3	Erosion, Sedimentation and Pollution Control Notes
DIV1-EC2.1 – DIV1-EC2.2	Erosion, Sedimentation and Pollution Control Plan
DIV1-EC3.1 – DIV1-EC3.2	Erosion, Sedimentation and Pollution Control Details

DIV2-G1.1	General Notes and Legend
DIV2-G1.2	Sheet Index
DIV2-V1.1	Survey Control
DIV2-V1.2 – DIV2-V1.3	Existing Conditions
DIV2-C1.1 – DIV2-C1.2	Site Layout Plan
DIV2-C2.1 – DIV2-C2.3	Paving, Grading and Drainage Plan
DIV2-C3.1	Paving, Grading and Drainage Details and Section
DIV2-C3.2	Paving, Grading and Drainage Details
DIV2-EC1.1 – DIV2-EC1.3	Erosion, Sedimentation and Pollution Control Notes
DIV2-EC2.1 – DIV2-EC2.4	Erosion, Sedimentation and Pollution Control Plan
DIV2-EC3.1 – DIV2-EC3.2	Erosion, Sedimentation and Pollution Control Details

PART 3 – BIDDING AND CONTRACTOR SELECTION

There are two separate parts to the total work which are combined into the project for bidding purposes, and perhaps for construction. In the bid package there are separate bid schedules for Division1 and Division 2, along with a Summary Sheet.

Bidders may bid on Division1 only, Division 2 only, or may enter a combined bid for both Divisions. If both projects are bid, the bidder has the option to provide an adjustment to the combined total of the division bids to come to a bid for both divisions. If the adjustment is zero, then the total project bid will be the sum of the divisional bids.

In selecting the Contractor (or Contractors) for the work, the best interest of Chatham County will control. The bids will be evaluated as to low bidder for each individual division and low bidder for combined work. The responsible bidder or bidders who offer the best value to the County will then be recommended for Contract.

PART 4 – PRE-CONSTRUCTION INSPECTIONS

A pre-construction conditions video (standard DVD format) is required and must be submitted to Chatham County Department of Engineering for approval prior to start of any land disturbing work. Special emphasis shall be given to record pre-disturbance condition of roadways, driveways, buildings, utilities and other improvements located within or within 100 feet of the project limits. This is in addition to other inspections and surveys required of the Contractor or performed by the County. The video shall be prepared by a photographer having experience in similar work and approved by the County. A voice narrative shall identify location and features of the pre-construction video. A typewritten version of the voice narrative shall be provided upon request.

Still photographs with a detailed description log may be substituted for the video provided that level of coverage is similar.

PART 5 - STAKING

The County shall engage a surveyor registered by the State of Georgia to provide initial project control and demarcation of right-of-way and easement lines. Ongoing control of the project work shall be the responsibility of the Contractor. The cost to reestablish initial project controls damaged or lost due to construction activities shall be paid for by the Contractor. The Contractor shall provide access and schedule all work in order to accommodate the survey work by the County's surveyor.

PART 6 – DOCUMENTATION

5.1 Documentation to be provided with requests for payment:

- A. In addition to the documentation described elsewhere in the Contract Documents, the Contractor shall submit with each request for payment the following:
 - 1. Copies of material delivery tickets. The Contractor shall be responsible for collecting these documents at the time of delivery. The delivery tickets shall not relieve the Contractor of his responsibility to ensure the materials are in accordance with the contract with the contract documents. Missing or incomplete documentation of delivered materials may be cause for delay/denial of payment.
 - 2. Copies of soil erosion and sedimentation, including NPDES, reports and forms completed during the pay period.
 - 3. Prior to submitting a request for payment, the Contractor shall review the extent of work completed with the County's representative for accuracy and completeness.

PART 7 – EROSION AND SEDIMENTATION CONTROL

- 6.1 The Contractor shall be fully responsible for compliance with the Georgia Water Quality Control Act and implementing the approved sediment and erosion control plan contained in the contract documents.
 - A. The design engineer shall accomplish shall accomplish the initial inspection of the Best Management Practice (BMP) system installation. The Contractor shall perform no land disturbing activities (other than that which is necessary for installation of the BMPs) until after the design engineer has provided to the Contractor a letter stating approval of the initial BMP installations.

- B. The Contractor shall be responsible for all inspections of the BMP system (Excluding the initial inspections as described above) and for maintaining records at the site for inspection.
- C. The Contractor shall provide the Owner copies of all inspection reports and other records which occur during a pay period with the pay request.
- D. The Contractor shall be responsible for preparation of plans, applying for, and obtaining erosion control permit for any impacted areas, or lay down areas proposed by the contractor that are not included in the current plan documents.

PART 8 – FINES AND LIQUIDATED DAMAGES

7.1 Fine

- A. A \$200 per day fee shall be assessed against the Contractor and withheld from the Contract Price for each and every day that the erosion and sedimentation control plan is not in proper operation. This fee shall be in addition to any penalties or assessments made against the Contractor for non-compliance of the Georgia Water Quality Control Act.

7.2 Liquidated Damages

- A. Liquidated Damages shall be assessed at \$500 per calendar day for work not completed within the Contract period. The full amount of liquidated damages will be deducted from the final payment to the Contractor.

PART 9 – ALLOWANCE

8.1 Field Condition Allowance

- A. The Field Condition Allowances shown on the bid sheets shall belong to Chatham County. The purpose of this Allowance is to allow the County to designate actions associated with completion of the project which are not indicated on the plans, but which are dictated by field conditions. Bidders shall not use this Allowance to assume any Contractor costs known or unknown at the bidding. Chatham County must approve use of the Allowance. All bidders shall include this Field Condition Allowance within their base bid. Any unused allowance shall revert to Chatham County.

Field Condition Allowances are specific to the division for which they are shown on the Bid Schedule. No cross application is permissible.

PART 10 – SPECIAL REQUIREMENTS OF CONSTRUCTION

1. The County will pay for all materials testing as required by the contract. Testing will be performed by an independent testing lab that is hired by the County. The County will not pay for testing in support of contractor operations/schedule. The contractor will be required to pay for failed tests.
2. Clearing debris may not be chipped and spread on the project site.
3. The project sites may be accessed via SR 204 and Henderson Boulevard. Construction exits will be required at the locations shown on the plans or as necessary to prevent soil deposition on pavement.
4. The Contractor shall comply with all local, state and federal regulations as they pertain to construction activities (erosion control, etc.).
5. All efforts have been made to identify every underground and above ground utility; however, the contractor has the ultimate obligation to proceed with caution when a suspected utility line is present in the excavation. Any lines which are not shown to be abandoned shall be repaired immediately if broken during construction.
6. Work hours shall be limited to 7:00 am to 7:00 pm Monday through Friday and shall exclude weekends and holidays unless otherwise approved by Chatham County.
7. **The Contractor shall obtain an Encroachment permit from the Department of Public Works prior to any work within County rights of way.** All work is to be performed within the existing rights of way and easements as shown on the plans unless coordinated with others.
8. Watering past the date of substantial completion of the work shall be provided on seeded areas to achieve full coverage to match existing conditions and as accepted by Chatham County.
9. A detailed construction schedule for the project shall be provided to and approved by Chatham County prior to beginning demolition or construction.
10. It is anticipated that the work across or adjacent to roadways will be completed under traffic. The contractor shall plan to complete the work in a manner which allows one lane of traffic movement at all times. The County will consider contractor requests for road closures if the contractor can show or confirm that this action is in the best interest of the County and the project.

In either case, the contractor is responsible for providing all measures of traffic control including, but not limited to, flagmen, warning and directional signs, channelization devices, and barriers. If a closure is approved, the contractor shall develop the detour plan for County review and implement the detour if accepted.

The contractor shall develop a traffic control plan for review and approval by the County. No work shall commence on the site until the plan has been accepted.

11. Submittals for the following items are required:
 - Storm drain pipe
 - Silt fence
 - Slope stabilization matting
 - Grassing
 - Water and sewer pipe and fittings
12. The contractor shall be responsible for the continued functioning of the storm drainage system throughout the course of the project.
13. The project has impacts to City of Savannah water and sewer facilities. The contractor shall be required to coordinate with the appropriate City personnel during line adjustments to arrange for inspections, valve openings and closings, shutdown of pump station, etc.
14. There are several locations shown where the installation of EZ valves to facilitate the adjustment of water and sewer lines may be required. In these locations, the City of Savannah will assist in the installation and connection to the system, but they will not do the entire item. The City will in actuality only make the tap of the line. The contractor will be responsible for purchasing the valve and transporting it to the site, excavating the pit, installing the valve on the main, and opening and abandoning the valve once the adjustment is complete and back in service.

PART 11 – MEASUREMENT AND PAYMENT

10.1 Measurement

The items listed in the proposal shall be considered as sufficient to complete the work in accordance with the drawings and specifications. Any portion of the work not listed in the bid form shall be deemed to be a part of the item which it is associated with and shall be included in the cost of the unit shown on the bid form. Payment for the unit shown on the bid form shall be considered to cover the cost of all labor, material, equipment and performing all operations necessary to complete the work in place. The unit of measurement shall be the unit shown on the bid form. Payment for unit price items shall be based upon the actual quantity multiplied by the unit prices. Where work is to be performed at a lump sum price, the lump sum shall include all operations and elements necessary to complete the work. No payment will be made for any material wasted, unused, rejected or used for the convenience of the Contractor.

10.2 Payment

A. Mobilization

Mobilization of equipment and commencement of project. This will be paid lump sum price in the Bid Proposal and shall not to exceed 5% of the total bid price for the division for which the item is entered.

B. Clearing and Grubbing

Clearing shall include removal of all vegetative materials such as trees, shrubs and grass as required to complete the work as shown on the plans. Removal of stumps and roots is a part of clearing. Demolition shall also include the removal of all manmade items required to complete the work as shown on the plans, with the exception of items specifically listed in the Bid Schedule. Payment shall be at the unit price in the Bid Proposal. Measurement shall be based on the actual number of acres cleared and grubbed as measured in the field .

C. Remove Existing Pipe, All Sizes

Payment shall be at the unit price in the Bid Proposal and shall include all labor, materials and equipment required to remove existing pipes and dispose of them off-site. Measurement shall be based on the actual linear feet of pipe, of whatever size and type, as shown on the plans or directed by the County.

D. Remove Fence

Payment shall be at the unit price in the Bid Proposal and shall include all labor, materials and equipment required to remove the existing fence and dispose of it off-site. Measurement shall be on the basis of the actual number of linear feet of fence removed as shown on the plans or directed by Chatham County.

E. Remove Tree

Payment shall be at the unit price in the Bid Proposal and shall include all labor, equipment and materials required to remove the tree, including stump, and dispose of the waste material off-site. This shall only apply to specific trees where shown individually on the plans or directed by the County.

F. Channel Excavation

Payment shall be at the unit price in the Bid Proposal and shall include all labor, material and equipment to excavate the channel to the grades and sections in the plans and to dispose of the material off-site. Measurement shall be on the basis of the actual number of cubic yards of material excavated as determined by before

and after cross sections or such other method as may be accepted by the County.

G. Grading

Payment shall be at the lump sum price in the Bid Proposal and shall include all labor, materials and equipment required. The item shall include minor excavation not associated with the channels, filling, and shaping and grading of channels shoulders and access/maintenance roads. The item shall also include construction staking, bonds, insurance and all other work required to complete the project and which is not covered by a separate item.

H. Remove Unsuitable Subgrade Material

Payment shall be at the unit price in the Bid Proposal and shall include all labor, materials and equipment required to remove the material as directed by the owner and dispose of it off-site. Measurement shall be based on before and after cross sections or such other method as may be accepted by the owner.

I. Foreign Borrow

Payment shall be at the unit price in the Bid Proposal and shall include all labor, equipment and materials required to obtain, transport and install borrow material to replace subgrade or soil material determined by the owner to be unsuitable. Measurement shall be by trench sections or such other method as may be accepted by the owner. Foreign borrow shall include fill material required to install pipes or fill above them if the owner determines that the materials removed from the trench or excavated elsewhere on the site are not suitable for use on the project.

J. Storm Drainage

1. Pipe: The length of pipe will be paid for on a linear foot basis, as measured along the centerline, from end of pipe to end of pipe. Payment shall be at the unit price in the Bid Proposal for each size of storm pipe and constitute full compensation for all pipes, joints, filter fabric, bedding, trenching, excavation, backfill, compaction, dewatering, and all incidental labor and material necessary to complete the construction of the pipes as required by the plans and specifications.
2. Structures: Payment shall be made at the unit price in the Bid Proposal for each type of structure. Payment should include all material, equipment and labor required to install the structures in accord with the contract documents. Structures include flared end sections and flumes.
3. Connect to Existing Structure: Payment shall be at the unit price in the Bid

Proposal and shall include all labor, materials and equipment required to connect a new storm drain pipe to an existing structure which is to be retained.

4. Pipe Plug: Payment shall be at the unit price in the Bid Proposal and shall include all labor, materials and equipment required to plug an existing pipe where shown on the plans or directed by the County.

K. Lower Water Main

Payment shall be at the unit price in the Bid Proposal and shall include all labor, materials and equipment required to lower the existing water main to avoid conflict with the proposed storm drain, including connecting to the existing pipe to remain.

M. Lower Sanitary Force Main

Payment shall be at the unit price in the Bid Proposal and shall include all labor materials and equipment required to lower the existing sanitary sewer force main to avoid conflict with the proposed storm drain, including coordinating pump station shutdown and connecting to the existing pipe to remain.

N. EZ Valve

Payment shall be at the unit price for each size in the Bid Proposal and shall include all labor, materials and equipment required to install, maintain and remove/abandon the fixture in coordination with the City of Savannah. See Part 10, Item 14 for more detail.

O. Air Release/ Plug Valve in Manhole

Payment shall be at the unit price in the Bid Proposal and shall include all labor, material and equipment required to install a new valve and manhole on the existing sanitary sewer force main.

P. Remove and Replace Pavement

Payment shall be at the unit price in the Bid Proposal and shall include all labor, materials and equipment required to remove the existing pavement as required for storm drain installation, dispose of it offsite and install the replacement section shown on the plans. The owner will determine whether proposed removal limits are acceptable; excessive pavement removal will not be paid for.

Q. Remove and Replace Curb and Gutter

Payment shall be at the unit price in the Bid Proposal and shall include all labor, equipment required to remove the existing curb and gutter as shown on the plans or directed by the County, dispose of the material off-site, and install new replacement curb and gutter to match the existing. Measurement shall be on the basis of the actual number of linear feet of the item as measured in the field.

R. Remove and Replace Concrete Sidewalk

Payment shall be at the unit price in the Bid Proposal and shall include all labor, materials and equipment required to remove the existing sidewalk, dispose of the material off-site, and install a new 4" thick sidewalk after the storm drain installation is complete. Measurement shall be based on the actual number of square yards of sidewalk installed as shown on the plans or directed by the owner.

S. Traffic Control

Payment shall be at the lump sum price in the Bid Proposal and shall include all materials and labor required to control and maintain traffic movement through the work zone. This includes, but is not limited to, signs, barricades, flagmen, temporary and permanent markings and channelization devices.

T. Utility Coordination

Payment shall be at the lump sum price in the Bid Proposal and shall include all measures associated with coordinating the installation of the new storm drain with existing public and private utilities. This will include arranging for location and adjustments.

U. Maintenance of Flow

Payment shall be at the lump sum price in the Bid Proposal and shall include all materials, labor and equipment necessary to maintain the flow of stormwater, sanitary sewer and water as shown on the plans or directed by the owner.

V. Tree Protection Fence

Payment shall be at the unit price in the Bid Proposal and shall include all labor, materials and equipment required to install the fence as shown on the plans or directed by the County, maintain it during the construction period, and remove it when construction is completed. Measurement shall be on the basis of the actual number of linear feet of fence measured in the field.

W. Silt Fence

Payment shall be at the unit price for each type in the Bid Proposal and shall include all labor, materials, and equipment required to install the silt fence, maintain it during the construction period, remove it when stabilization is completed, and restore the area where the fence was installed. Measurement shall be on the basis of the actual number of linear feet of each type of silt fence installed as shown on the plans or directed by the owner.

X. Riprap

Payment shall be at the unit price in the Bid Proposal and shall include all labor, materials and equipment required to place the filter fabric and stone riprap. Measurement shall be based on the actual number of square yards placed as shown on the plans or directed by the owner.

Y. Construction Exit

Payment shall be at the unit price in the Bid Proposal and shall include all labor, material and equipment required to install the exit where shown on the plans or directed by the County, maintain it during the construction period, and remove it when construction is completed.

Z. Stone Ditch Check

Payment shall be at the unit price in the Bid Proposal and shall include all labor, materials, and equipment required to install the items as shown on the plans or directed by the County, maintain them during the construction period, remove them when construction is completed, and restore the ditch to the design grades with any accumulated sediment removed. Measurement shall be on the basis of the actual number of stone ditch checks installed.

AA. NPDES Compliance

Payment shall be at the unit price in the Bid Proposal and shall include all measures required to comply with the Georgia general permit except for stormwater sampling, testing and reporting. Chatham County will engage a third party for stormwater sampling, testing and reporting.

BB. Grassing

Payment shall be at the unit price in the Bid Proposal for each type of grassing and shall include all labor, materials and equipment required to establish the temporary / permanent vegetation on the disturbed areas. This shall include watering and mowing until acceptance by the County. Measurement shall be based on the actual number of square yards of temporary / permanent grassing in place.

CC. Slope Matting

Payment shall be at the unit price in the Bid Proposal and shall include all labor, material and equipment to place matting on the channel slopes to prevent erosion until vegetation is established. Measurement shall be on the basis of the actual number of square yards of matting installed as shown on the plans or directed by the owner.

DD. Inlet Sediment Trap

Payment shall be at the unit price in the Bid Proposal and shall include all labor, equipment and materials required to install the sediment traps, maintain them during construction, and remove them when work is complete. Measurement shall be based on the actual number of sediment traps installed as shown on the plans or directed by the owner.

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SECTION 02 41 13**SELECTIVE SITE DEMOLITION****PART 1 – GENERAL****1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. Extent of selective demolition work is indicated on drawings.

1.3 SUBMITTALS

- A. Schedule: Submit schedule indicating proposed methods and sequence of operations for selective demolition work to Owner's representative for review prior to commencement of work. Include coordination for shut-off, capping, and continuation of utility services as required, together with details for dust and noise control protection. Include schedule and location for return of items identified on plans to be delivered to Owner of property.

1.4 JOB CONDITIONS

- A. Condition of Structures: Owner assumes no responsibility for actual condition of items to be demolished.
- B. Partial Demolition and Removal: Items indicated to be removed but of value to Contractor may be removed as work progresses. Transport salvaged items from site as they are removed.

Storage or sale of removed items on site will not be permitted.

- C. Protections: Provide temporary barricades and other forms of protection as required to protect Owner's personnel and general public from injury due to selective demolition work.

Protect from damage existing finish work to remain in place and becomes exposed during demolition operations. Remove protections at completion of work.

1.5 DAMAGES

- A. Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner.

1.6 TRAFFIC

- A. Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities.

Do not close, block or otherwise obstruct streets, walks, or other occupied or used facilities without written permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways.

1.7 EXPLOSIVES

- A. Use of explosives will not be permitted.

1.8 UTILITY SERVICES

- A. Maintain existing utilities indicated to remain, keep in service, and protect against damage during demolition operations.

Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to governing authorities.

1.9 ENVIRONMENTAL CONTROLS

- A. Use water sprinkling, temporary enclosures, and other suitable methods to limit dust and dirt rising and scattering in air to lowest practical level. Comply with governing regulations pertaining to environmental protection.

Do not use water when it may create hazardous or objectionable conditions such as ice, flooding, and pollution.

PART 2 – PRODUCTS

None in this section

PART 3 – EXECUTION**3.1 PREPARATION**

- A. Prior to commencement of selective demolition work, check areas in which work will be performed. Photograph or video existing conditions of surfaces, equipment, or surrounding properties that could be misconstrued as damage resulting from selective demolition work. File with Owner's representative prior to starting work.
- B. Cover and protect equipment and fixtures to remain from soiling or damage when demolition work is performed in areas from which such items have not been removed.

3.2 DEMOLITION

- A. Perform selective demolition work in a systematic manner. Use such methods as required to complete work indicated on drawings in accordance with demolition schedule and governing regulations.

Demolish concrete in small sections. Cut concrete at junctures with construction to remain using power-driven masonry saw or hand tools. Do not use power-driven impact tools.

Completely fill below-grade areas and voids resulting from demolition work. Provide fill consisting of approved earth, gravel and sand, free of trash and debris, stones over 2" diameter, roots or other organic matter.

If unanticipated mechanical, electrical, or structural elements, which conflict with intended function or design, are encountered, investigate and measure both nature

and extent of the conflict. Submit report to Owner's representative in written, accurate detail. Pending receipt of directive from Owner's representative, rearrange selective demolition schedule as necessary to continue overall job progress without delay.

3.3 SALVAGE MATERIALS

- A. All equipment and materials to be retained by Owner shall be delivered to a designated location.

Any articles of historic significance will remain the property of the Owner. Notify Owner's representative if such items are encountered and obtain acceptance regarding method of removal and salvage for Owner.

3.4 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove debris, rubbish and other materials resulting from demolition operations from site. Transport and legally dispose of materials off site.

If hazardous materials are encountered during demolition operations, comply with applicable regulations, laws, and ordinances concerning removal, handling, and protection against exposure or environmental pollution.

Burning of removed materials is not permitted on project site.

3.5 CLEAN-UP AND REPAIR

- A. Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave site clean.

Repair demolition performed in excess of required work. Return structures and surfaces to remain to the condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

Fill in all voids created by selective demolition and grade site to drain. Grass all disturbed areas for erosion control.

END OF SECTION

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SECTION 31 00 00

EARTHWORK

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Grading
- B. Excavation
- C. Backfilling
- D. Compaction
- E. Dressing of Shoulders and Banks
- F. Stone Drainage Filter
- G. Water Control
- H. Testing

1.2 RELATED SECTIONS

- A. Section 31 10 00 – Site Clearing

1.3 OMITTED

1.4 REFERENCES (LATEST REVISION)

- A. ASTM D 448 – Sizes of Aggregate for Road and Bridge Construction.
- B. ASTM D 1557 – Laboratory Compaction Characteristics of Soil Using Modified Effort.
- C. ASTM D 2487 – Classification of Soils for Engineering Purposes (Unified Soil Classification System).
- D. ASTM D 6938 – In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- E. ASTM D 3740 – Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- F. ASTM E 329 – Agencies Engaged in Construction Inspection and/or Testing.

1.5 SUBMITTALS

- A. Materials Source: Submit gradation analysis, proctor results, and soil classification for all borrow material.

1.6 QUALITY ASSURANCE

- A. Perform work in accordance with Federal, State of Georgia, and Chatham County standards.

1.7 TESTING

- A. Laboratory tests for moisture density relationship for fill materials shall be in accordance with ASTM D 1557, (Modified Proctor).
- B. In place density tests in accordance with ASTM D 6938.
- C. Testing laboratory shall operate in accordance with ASTM D 3740 and E 329.
- D. The testing laboratory and Project Representative shall be given a minimum of 48 hours notice prior to taking any of the tests.
- E. Chatham County shall select and engage the testing laboratory. Testing laboratory shall be responsible to the Owner. Payment for laboratory and all tests shall be by Owner, except Owner specifically reserves the right to deduct from Contractor's payment, expenses and charges of testing laboratory when:
 - 1. Contractor gives notice work is ready for inspection and testing, and fails to be ready for the test, and/or
 - 2. Testing of the Contractor's work, products, or materials fail, and retesting is required, and/or
 - 3. Contractor abuses the services or interferes with work of testing laboratory in conduct of this work.
- F. Test results shall be furnished to the Owner and Engineer prior to continuing with associated or subsequent work.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Borrow shall consist of sand or sand-clay soils capable of being readily shaped and compacted to the required densities, and shall be reasonably free of roots, trash, rock larger than 2 inches, and other deleterious material.
- B. All soils used for structural fills shall have a PI (plastic index) of less than 10, and a LL (liquid limit) of less than 30. Fill soils shall be dried or wetted to appropriate moisture contents prior to compaction. Additionally, fill soils used for the top 2 feet of fill beneath roads and parking lots shall have no more than 15% passing the # 200 sieve.

- C. Contractor shall furnish all borrow material.

2.2 SOURCE QUALITY CONTROL

- A. If tests indicate materials do not meet specified requirements, change material and retest.

PART 3 – EXECUTION

3.1 OMITTED

3.2 EXCAVATION

- A. Suitable excavation material shall be transported to and placed in fill areas within limits of the work.
- B. Unsuitable material encountered in areas to be paved or directed by the Owner, shall be excavated 2 feet below final grade and replaced with suitable material from site or borrow excavations. Contractor shall notify Owner if more than 2 feet of excavation is needed to replace unsuitable material.
- C. Unsuitable and surplus excavation material not required for fill shall be disposed of off site.
- D. Proper drainage, including sediment and erosion control, shall be maintained at all times. Methods shall be in accordance with the National Pollutant Discharge Elimination System standards and other local, state, and federal regulations.
- E. Unsuitable materials as stated herein are defined as highly plastic clay soils, of the CH and MH designation, border line soils of the SC-CH description, and organic soils of the OL and OH description based on the Unified Soils Classification System. Further, any soils for the top two feet of pavement subbase shall have no more than 15% passing the # 200 sieve.

3.3 GROUND SURFACE PREPARATION FOR FILL

- A. All vegetation, roots, brush, heavy sods, heavy growth of grass, decayed vegetable matter, rubbish, and other unsuitable material within the areas to be filled shall be stripped and removed prior to beginning the fill operation.
- B. Sloped ground surfaces steeper than 1 vertical to 4 horizontal, on which fill is to be placed shall be plowed, stepped, or benched, or broken up as directed, in such a manner where fill material will bond with the existing surface.
- C. Surfaces on which fill is to be placed and compacted shall be wetted or dried as may be required to obtain the specified compaction.

3.4 FILL

- A. Shall be placed in successive horizontal layers 8 inches to 12 inches in loose depth for the full width of the cross-section and compacted as required.

3.5 FINISHED GRADING

- A. All areas covered by the project including excavated and filled sections and adjacent transition areas shall be smooth graded and free from irregular surface changes.
- B. Degree of finish shall be that ordinarily obtainable from either blade-grader or scraper operations, supplemented with hand raking and finishing, except as otherwise specified.
- C. Unpaved areas to within 0.1 feet of elevations shown on the drawings provided such deviation does not create low spots that do not drain.
- D. Paved Areas – Subgrade to within 0.05 feet of the drawing elevations less the compacted thickness of the base and paving.
- E. Ditches and lagoon banks shall be finished graded, dressed, and seeded within 14 calendar days of work to reduce erosion and permit adequate drainage.

3.6 DISPOSAL OF WASTE MATERIAL

- A. All vegetation, roots, brush, sod, broken pavements, curb and gutter, rubbish, and other unsuitable or surplus material stripped or removed from limits of construction shall be disposed of by the Contractor.

3.7 PROTECTION

- A. Graded areas shall be protected from traffic, erosion, settlement, or any washing away occurring from any cause prior to acceptance.
- B. Contractor shall be responsible for protection of below grade utilities shown on the drawings or indicated by the Owner at all times during earthwork operations.
- C. Repair or re-establishment of graded areas prior to final acceptance shall be at the Contractors expense.
- D. Site drainage shall be provided and maintained by Contractor during construction until final acceptance of the project. Drainage may be by supplemental ditching, or pumping if necessary, prior to completion of permanent site drainage.

3.8 DRAINAGE

- A. Contractor shall be responsible for providing surface drainage away from all construction areas. This shall include maintenance of any existing ditches or those constructed in the immediate vicinity of the work. Contractor shall provide proper and effective measures to prevent siltation of wetlands, streams, and ditches on both the Owner's property, and those properties downstream.

3.9 FIELD QUALITY CONTROL

- A. Compaction testing shall be performed in accordance with ASTM D 6938. Where tests indicate the backfill does not meet specified requirements, the backfill shall be reworked or removed and replaced, and then retested at the Contractor's expense.
- B. Unpaved areas – at least 90% of maximum laboratory density within 2% optimum moisture content unless otherwise approved by the Owner.
- C. Paved Areas and Under Structures – top 24 inch layer of subbase to at least 100% of maximum laboratory density within 2% optimum moisture content.
- D. Rolling and compaction equipment and methods shall be subject to acceptance by the Owner. Acceptance in no way relieves Contractor of the responsibility to perform in correct and timely means.
- E. Number of Tests – Under paved areas, no less than one density test per horizontal layer per 5,000 square feet of subbase shall be made. In unpaved areas, no less than one density test per horizontal layer per 10,000 square feet of fill area shall be made. Under curb and gutter, no less than one density test per every 300 linear feet.

END OF SECTION

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SECTION 31 25 00GA – EROSION AND SEDIMENTATION CONTROLS

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SECTION 31 25 00GA**EROSION AND SEDIMENTATION CONTROLS (GA)****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Soil erosion, sediment, and pollution control measures shall include all temporary and permanent means of soil protection, trapping soils and containment of pollutants on the construction site during land disturbing activities. Activities covered in this section are regulated by the Manual for Erosion and Sediment Control in Georgia (latest revision) and Georgia's National Pollutant Discharge Elimination System Permit (NPDES), General Permit No. GAR100002.
- B. Reporting
- C. Sampling

1.2 RELATED SECTIONS

- A. Section 31 00 00 – Earthwork
- B. Section 31 10 00 – Site Clearing
- C. Section 33 40 00 – Storm Drainage Utilities

1.3 PURPOSES

- A. The purpose of this section is to achieve the following goals:
 - 1. Minimize soil exposure by proper timing of clearing grading and construction.
 - 2. Retain existing vegetation whenever feasible.
 - 3. Vegetate and mulch disturbed areas as soon as possible.
 - 4. Divert runoff away from disturbed areas.
 - 5. Minimize length and steepness of slopes when it is practical.
 - 6. Reduce runoff velocities with check dams or surface roughing.
 - 7. Trap sediment on site.
 - 8. Inspect and maintain erosion, sedimentation, and pollution control measures.
 - 9. Report on condition of Best Management Practices (BMPs).
 - 10. Sample site run off per Georgia's NPDES Permit.

1.4 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of soil erosion, sedimentation and pollution control systems products of types, materials, and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.

Codes and Standards: Comply with all applicable Local, State, and Federal Standards pertaining to soil erosion, sedimentation, and pollution control.

1.5 SUBMITTALS

- A. Product Data: Submit manufacturer's technical product data and installation instruction for soil erosion, sedimentation and pollution control materials and products.

PART 2 – PRODUCTS

2.1 VEGETATIVE MATERIALS

- A. Mulch
 - 1. Dry straw or hay.
 - 2. Wood chips, sawdust or bark.
 - 3. Cutback asphalt.
- B. Temporary Seeding
 - 1. Annual Ryegrass
 - 2. Browntop Millet
- C. Permanent Seeding
 - 1. Common Bermuda
 - 2. Centipede
- D. Sod
 - 1. Common Bermuda
 - 2. Centipede
 - 3. St. Augustine
- E. Fertilizer
 - 1. Commercial 6-12-12

2.2 STRUCTURAL MATERIALS

A. Check Dam

1. Stone (2" – 10")
2. Bales of densely baled hay or straw wrapped with synthetic or wire bands (two minimum per bale).

B. Construction Exit

1. Minimum 20' x 50' x 0.5' layer of 1.5" to 3.5" stone with a geotextile underliner.

C. Filter Ring

1. Minimum 2' high stone ring. Stone shall be no smaller than 3" to 5" when utilized at storm drain inlets and pond outlets with pipe diameters less than 12".
2. Minimum 2' high stone ring. Stone shall be no smaller than 10" to 15" when utilized at storm drain inlets and pond outlets with pipe diameters greater than 12".

D. Sediment Barrier

1. Bales of densely baled hay or straw wrapped with synthetic or wire bands (two minimum per bale).
2. Silt Fence – Shall be a woven geotextile fabric sheet of plastic yarn composed of a long chain synthetic polymer with at least 85% by weight propylene, ethylene, amide, ester or vinylidene chloride, and shall contain stabilizers and/or inhibitors added to the base plastic to make the filaments resistant to deterioration due to ultra-violet and/or heat exposure. The fabric shall be finished so the filaments will retain their relative position with respect to each other. The fabric shall be free of defects, rips, holes, or flaws. The manufacturer shall have either an approved color mark yarn in the fabric or label the fabricated silt fence with both the manufacturer and fabric name every 100'.

The fabric shall meet the following requirements:

Grab Strength	90 lbs.
Mullen Burst Strength	150 lbs.
UV Resistance	80 %

E. Inlet Sediment Trap

1. Silt fence (Type C) supported by steel posts.
2. Baffle Box – Constructed of 2" x 4" boards spaced a maximum of 1" apart or plywood with weep holes 2" in diameter (See detail).

3. Sod Inlet Protection – Four – 1 foot wide strips of sod on each side of the inlet (See detail).
 4. Curb Inlet Protection – Gravel bags constructed by wrapping DOT #57 stone with filter fabric, wire, plastic mesh or equivalent material, placed in front of a curb inlet.
- F. Storm Drain Outlet Protection
1. Geotextile fabric equivalent to Mirafi FW700.
 2. Rip-rap (See detail for size).

2.3 CHEMICAL MATERIALS

- A. Dust Control – Calcium Chloride, Anionic Asphalt Emulsion, Latex Emulsion, or Resin-in-Water Emulsion.
- B. Anionic Polyacrylamide (PAM) – Consult state and local laws concerning the regulations of this chemical.

PART 3 – EXECUTION

3.1 GENERAL

- A. All disturbed soil areas except those to support paving shall be graded and protected from erosion with vegetative materials. Sedimentation discharge from the construction site into natural drainage ways and storm drainage systems shall be prevented by means of vegetative measures and temporary structural practices. These vegetative measures and structural practices are known as Best Management Practices (BMPs). Rainfall, pollution control measures, and construction exit condition shall be monitored and reported on each day when construction activities take place. Erosion and sedimentation control measures shall be monitored and reported on every seven days and within 24 hours of a qualifying rainfall event of 0.5 inches or more. Sampling of construction site discharging water shall be conducted within 45 minutes of a qualifying rainfall event and analyzed immediately or no later than 48 hours after collection. The above reports shall be submitted to the Georgia EPD by the fifteenth day of the month following the reporting period.
- B. The Owner is considered the "Primary Permittee" and shall submit a Notice of Intent (NOI) in accordance with General Permit No. GAR100002 at least 14 days prior to the commencement of construction activities. Contractor shall retain a copy of the Erosion, Sedimentation, and Pollution Control Plan and Comprehensive Monitoring Program required by above permit at construction site or be readily available at a designated alternate location from date of project initiation to date of final stabilization. Copies of all Notice of Intent, Notice of Termination, plans, monitoring reports and all other records required by above permit shall be retained by Contractor for a period of at least three years from date the site is finally stabilized.

3.2 ON-SITE OBSERVATION

- A. Engineer is required by General Permit No. GAR100002 to check the installation of Erosion, Sedimentation and Pollution Control measures within one week after initial construction activities commence. The Contractor shall notify Engineer within 24 hours of control measures installation for the above site visit. Engineer, within the above parameters, shall check subsequent installation of control measures.

3.3 VEGETATIVE PRACTICES

A. Mulch

- 1. Dry straw or hay shall be applied at a depth of 2 to 4 inches by hand or mechanical equipment providing complete soil coverage. Straw or hay shall be anchored immediately after application. Straw or hay can be anchored with a disk harrow, packer disk or emulsified asphalt.
- 2. Cutback asphalt shall be applied at 1,200 gallons per acre or 1/4 gallon per square yard.

B. Seeding

- 1. Seed shall be applied uniformly by hand, cyclone seeder, drill, cultipacker seeder, or hydraulic seeder. Drill or cultipacker seeders shall place seed 1/4" to 1/2" deep. Soil shall be raked lightly to cover seed with soil if seeded by hand.
- 2. Water shall be applied at a rate not causing runoff and erosion. The soil shall be thoroughly wetted to depth insuring germination of the seed. Subsequent applications of water shall be made when needed.
- 3. Refer to Section 32 92 00 – Turf and Grasses for additional seeding requirements.

C. Sodding

- 1. Bring soil surface to final grade. Clear surface of trash, woody debris stones, and dirt clods larger than 1". Mix fertilizer into soil surface. Apply sod to soil when surface is not muddy or frozen. Lay sod with tight joints and in straight lines. Do not overlap joints. Stagger joints and do not stretch sod. On slopes steeper than 3:1, sod shall be anchored with pins or other approved methods. Installed sod shall be rolled or tamped to provide good contact between sod and soil. Irrigate sod and soil to a depth of 4" immediately after installation. Irrigation shall be used to supplement rainfall for a minimum of 2–3 weeks.
- 2. Refer to Section 32 92 00 – Turf and Grasses for additional sodding requirements.

3.4 STRUCTURAL MEASURES

A. Check Dam

1. Stone – Shall be constructed of graded size 2–10 inch stone underlaid with a geotextile fabric. Mechanical or hand placement shall be required to insure complete coverage of entire width of ditch or swale and center of dam is lower than edges. Sediment shall be removed when it reaches a depth of one-half the original dam height or before.
2. Haybale – Shall be staked and embedded a minimum of 4" and may be used as temporary check dams in concentrated flow areas while vegetation is becoming established. They should not be used where the drainage area exceeds one acre. Sediment shall be removed when it reaches a depth of one-half the original dam height or before.

B. Construction Exit

1. A stone stabilized pad shall be located at any point where traffic will be leaving the construction site to a public right-of-way, street, alley, sidewalk, parking area or any other area where there is a transition from bare soil to a paved area. The pad shall be constructed of 1.5" to 3.5" stone, having a minimum thickness of 6" and not less than 20' wide and 50' long. The pad shall be underlaid with a geotextile fabric. The pad shall be maintained in a condition, which will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 1.5" to 3.5" stone. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

C. Filter Ring

1. Shall surround all sides of the structure receiving runoff from disturbed areas. It shall be placed a minimum of 4' from the structure. It may also be used below storm drains discharging into detention ponds, creating a centralized area for sediment accumulation. When utilized below a storm drain outlet, it shall be placed such that it does not create a condition causing water to back-up into the storm drain and inhibit the function of the storm drain system. The larger stone can be faced with smaller filter stone on the upstream side for added sediment filtering capabilities. Mechanical or hand placement of stone shall be required to uniformly surround the structure.
2. Filter ring must be kept clear of trash and debris. This requires continuous monitoring and maintenance, which includes sediment removal when one-half full. Filter rings are temporary and should be removed when the site has been stabilized.

D. Sediment Barrier

1. Hay or straw bales may be used in areas of low sheet flow rates. They shall not be use if the project duration is expected to exceed three months. Bales shall be placed in a single row, lengthwise, and embedded in the soil to a

depth of 4". Bales must be securely anchored in place by stakes or bars driven through the bales or by other acceptable means to prevent displacement. Bales shall be placed so the binding wire or twine around the bale will not touch the soil. Sediment shall be removed once it has accumulated to one-half the original height of the barrier. Barriers shall remain in place until disturbed areas have been permanently stabilized. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed. The slope lengths contributing runoff to a bale barrier cannot exceed those listed below.

<u>Land Slope</u> (Percent)	<u>Maximum Slope Length</u> <u>Above Bale</u> (Feet)
< 2	75
2 to 5	50
5 to 10	35
10 to 20	20
> 20	10

2. Silt fence may be used in areas of higher sheet flow rates. The drainage area shall not exceed ¼ acre for every 100' of silt fence. **Silt fence shall not be installed across active streams, ditches, waterways or other concentrated flow areas.** Silt fence shall be installed according to this specification, as shown on the construction drawings or as directed by the Owner. See details on the construction drawings for installation requirements.
 - a. Type A – A 36" wide filter fabric silt fence shall be used on construction sites where the life of the project is greater than or equal to six months.
 - b. Type B – A 22" wide filter fabric silt fence shall be limited to use on minor projects, such as residential home sites or small commercial developments where permanent stabilization will be achieved in less than six months.
 - c. Type C – A 36" wide filter fabric silt fence with wire reinforcement shall be used where runoff flows or velocities are particularly high or where slopes exceed a vertical height of 10'. Along stream buffers and other sensitive areas, two rows of Type C silt fence or one row of Type C silt fence backed by hay bales shall be used.
3. Where all runoff is to be stored behind the silt fence (where no stormwater disposal system is present), the slope lengths contributing runoff to a silt fence barrier cannot exceed those listed below.

<u>Land Slope</u> (Percent)	<u>Maximum Slope Length</u> <u>Above Fence</u> (Feet)
< 2	100
2 to 5	75

5 to 10	50
10 to 20	25
> 20*	15

*In areas where the slope is greater than 20%, a flat area length of 10' between the toe of the slope and the fence shall be provided.

4. Sediment shall be removed once it has accumulated to one-half the original height of the barrier. Filter fabric shall be replaced whenever it has deteriorated to such an extent that the effectiveness of the fabric is reduced (approximately six months). Barriers shall remain in place until disturbed areas have been permanently stabilized at which time the barrier will be removed. All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

E. Inlet Sediment Trap

1. Shall be installed at or around all storm drain inlets receiving runoff from disturbed areas. Sediment traps must be self draining unless they are otherwise protected in an approved manner that will not present a safety hazard. The drainage area entering the inlet sediment trap shall be no greater than one acre. Sediment traps may be constructed on natural ground surface, on an excavated surface or on machine compacted fill provided they have a non-erodible outlet.
2. Type C silt fence supported by steel posts may be used where the inlet drains a relatively flat area (slope no greater than 5%) and shall not apply to inlets receiving concentrated flows, such as in street or highway medians. The stakes shall be spaced evenly around the perimeter of the inlet a maximum of 3' apart and securely driven into the ground, approximately 18" deep. The fabric shall be entrenched 12" and backfilled with crushed stone or compacted soil. Fabric and wire shall be securely fastened to the posts and fabric ends must be overlapped a minimum of 18" or wrapped together around a post to provide a continuous fabric barrier around the inlet. The trap shall be inspected daily and after each rain. Repairs are to be made as needed. Sediment shall be removed once it has accumulated to one-half the height of the trap. **Sediment shall not be washed into the inlet.** It shall be removed from the sediment trap and disposed of and stabilized so it will not enter the inlet again. When the contributing drainage area has been permanently stabilized, all materials and any sediment shall be removed and either salvaged or disposed of properly. The disturbed area shall be brought to proper grade, smoothed and compacted. Appropriately stabilize all disturbed areas around the inlet.
3. Sod Inlet Protection shall be used only at the time of permanent seeding, to protect the inlet from sediment and mulch material until permanent vegetation has become established. The sod shall be place to form a turf mat covering the soil for a distance of 4' from each side of the inlet structure. Sod strips shall be staggered so adjacent strip ends are not aligned. Re-sod areas where an adequate stand of sod is not obtained. New sod should be mowed sparingly. Grass height should not be less than 2" to 3".

4. Curb Inlet Protection shall be used on curb inlets receiving runoff from disturbed areas once pavement has been installed. Place gravel bags constructed by wrapping DOT #57 stone with filter fabric, wire, plastic mesh, or equivalent material, in front of the curb inlet opening. A gap of approximately 4" shall be left between the inlet filter and the inlet to allow for overflow and prevention of hazardous ponding in the roadway. **This method of inlet protection shall be removed if a safety hazard is created.** Sediment shall be removed from curb inlet protection immediately.

F. Storm Drain Outlet Protection

1. Outlet protection aprons shall be constructed at all storm drain outlets, road culverts, paved channel outlets discharging into natural or constructed channels. Apron will extend from end of the conduit, channel, or structure to the point of entry into an existing stream or publicly maintained drainage system. Apron length, width, and stone size shall conform to details on the construction drawings. Apron shall be constructed with no slope along its length. Invert elevation of the downstream end of apron shall be equal to the elevation of the receiving channel invert. There shall be no overfall at the end of apron. Apron shall be located so there are no bends in the horizontal alignment.
2. Subgrade for geotextile fabric and rip-rap shall follow required lines and grades shown on the construction drawings. Compact any subgrade fill required to the density of surrounding undisturbed material. Low areas in subgrade on undisturbed soil may also be filled by increasing rip-rap thickness. Geotextile fabric shall be protected from punching or tearing during installation. Repair any damage by removing rip-rap and placing another piece of fabric over the damaged area. All connecting joints shall overlap a minimum of 1'. If damage is extensive, replace entire geotextile fabric. Rip-rap shall be placed by equipment or hand. Minimum thickness of rip-rap shall be 1.5 times the maximum stone diameter. Immediately after construction, stabilize all disturbed areas around apron with vegetation.
3. Check outlet apron after heavy rains to see if any erosion around or below the rip-rap has occurred or if stones have been dislodged. Immediately make all needed repairs to prevent further damage.

3.5 CHEMICAL MEASURES

A. Dust Control

1. Dust raised from vehicular traffic shall be controlled by wetting down roads with water or by the use of chemicals. Chemicals shall be applied in accordance with the manufacturer's recommendations.

3.6 MONITORING AND REPORTING

- A. Each day, when any type of construction activity takes place on the construction site, Contractor's qualified personnel shall monitor and record rainfall, inspect all areas where petroleum products are stored, used or handled for spills and leaks from vehicles and equipment and check all locations where vehicles enter or exit the site

for evidence of off site sediment tracking. These inspections shall be conducted until a Notice of Termination (NOT) is submitted. For linear construction where a phased activity is conducted, this paragraph applies to the active phase(s) of work.

- B. Once every seven calendar days and within 24 hours of the end of a storm 0.5 inches or greater, Contractor's qualified personnel shall inspect disturbed areas of the construction site that have not undergone final stabilization, areas used for storage of materials that are exposed to precipitation that have not undergone final stabilization and structural control measures (BMPs). Erosion and sediment control measures identified in the Erosion, Sedimentation, and Pollution Control Plan shall be observed to ensure they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). These inspections must be conducted until a Notice of Termination is submitted. For linear construction where a phase activity is conducted, this paragraph applies to the active phase(s) of work.
- C. Contractor's qualified personnel shall inspect at least once per month during the term of the General Permit, areas of the construction site having undergone final stabilization. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and receiving water(s). Erosion and sediment control measure shall be observed to ensure they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measure are effective in preventing significant impacts to receiving water(s). For linear construction, monthly inspections in accordance with this paragraph shall be made for those phases on which final stabilization has been completed.
- D. Contractor shall prepare a report summarizing the scope of inspections, name(s) of qualified personnel making the inspections, date(s) of inspections, major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan and any actions taken. This report shall be retained on the construction site or be readily available at a designated alternate location until the entire site or portion of a construction project that was phased, has undergone final stabilization and a Notice of Termination (NOT) is submitted to EPD. Such reports shall identify any incidents of non-compliance. Where the report does not identify any incidents of non-compliance, the re report shall contain a certification that the facility is in compliance with the Erosion, Sedimentation and Pollution Control Plan and the General Permit. The report shall be signed in accordance with the General Permit.

3.7 SAMPLING AND ANALYSIS

- A. The Owner's authorized representative must manually or automatically sample in accordance with the Comprehensive Monitoring Plan (CMP) at least once for each rainfall event described below. For a qualifying event, samples must be taken within forty-five (45) minutes of:
 - 1. The accumulation of the minimum amount of rainfall, if the storm water discharge to a monitored receiving water or from a monitored outfall has begun at or prior to the accumulation.

2. The beginning of any storm water discharge to a monitored receiving water or from a monitored outfall, if the discharge begins after the accumulation of the minimum amount of rainfall.

However, where manual and automatic sampling are impossible (as defined in the permit), or are beyond the Contractor's control, the Contractor shall take samples as soon as possible, but in no case more than 12 hours after the beginning of the storm water discharge.

B. Sampling shall occur for the following events:

1. For each area of the site discharging to a receiving stream, the first rain event reaching or exceeding 0.5 inch and allows for monitoring during normal business hours* (Monday thru Friday, 8:00 a.m. to 5:00 p.m. and Saturday 8:00 a.m. to 5:00 p.m. when construction activity is being conducted by the Primary permittee) occurring after all clearing and grubbing operations are completed in the drainage area of the location selected as the sampling location;
 2. In addition to (1) above, for each area of the site discharging to a receiving stream, the first rain event reaching or exceeding 0.5 inch and allows for monitoring during normal business hours* occurring either 90 days after the first sampling event or after all mass grading operations are completed in the drainage area of the location selected as the sampling location, whichever comes first.
 3. At the time of the sampling performed pursuant to (1) and (2) above, if BMPs are found to be properly designed, installed, and maintained, no further action is required. If BMPs in any area of the site discharging to a receiving stream are not properly designed, installed, and maintained, corrective action shall be defined and implemented within two business days, and turbidity samples shall be taken from discharges of the same area for each subsequent rain event reaching or exceeding 0.5 inch during normal business hours* until the selected turbidity standard is attained, or until post-storm event inspections determine BMPs are properly designed, installed, and maintained;
 4. Existing construction activities, i.e., those occurring on or before the effective date of this permit, having met the sampling required by (1) above shall sample in accordance with (2). Those existing construction activities having met the sampling required by (2) above shall not be required to conduct additional sampling other than as required by (3) above.
- * Note the Permittee may choose to meet the requirements of (1) and (2) above by collecting turbidity samples from any rain event reaching or exceeding 0.5 inch and allows for monitoring at any time of the day or week.
5. For linear construction, if at any time during the life of the project, BMPs have not been properly designed, installed or maintained for the construction activities that discharge into a receiving water which is not being sampled, the Contractor shall sample that receiving water for the first rainfall event

greater than or equal to 0.5 inches thereafter and for every rainfall event greater than or equal to 0.5 inches until BMPs are properly designed, installed and maintained.

- C. Sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established in the General Permit. Sample containers shall be labeled prior to collecting the samples. Samples shall be well mixed before transferring to a secondary container. Large mouth, well cleaned and rinsed glass or plastic jars shall be used for collecting samples. The jars shall be cleaned thoroughly to avoid contamination. Manual or automatic sampling shall be utilized. Samples required by the General Permit shall be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. Samples are not required to be cooled. Samples taken for the purpose of compliance with the General Permit shall be representative of the monitored activity and representative of the water quality of the receiving water(s) and/or the storm water outfalls using the following minimum guidelines:
1. The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first storm water discharge from the permitted construction site but downstream of any other storm water discharges not associated with the site. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the average turbidity of these samples used for an upstream turbidity value.
 2. The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last storm water discharge from the construction site but upstream of any other storm water discharge not associated with the site. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the average turbidity of these samples used for a downstream turbidity value.
 3. Samples shall be taken from the horizontal and vertical center of the receiving water(s) or the storm water outfall channel(s).
 4. Care shall be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall storm water channel(s).
 5. Sampling container shall be held so the opening faces upstream.
 6. Samples shall be kept from floating debris.
- D. For all construction sites and common developments other than linear construction projects, sample all receiving water(s), or all outfall(s) or a combination of receiving water(s) and outfall(s). For linear construction projects, sample all perennial and intermittent streams and other water bodies shown on an USGS topographic map and all other field verified perennial and intermittent streams and other water bodies, or all outfalls into such streams and other water bodies, or a combination thereof.

End of Section

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SECTION 31 37 00 – RIP–RAP

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SECTION 31 37 00**RIP-RAP****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Material placed as bank protection and erosion control.

1.2 RELATED SECTIONS

- A. Section 33 40 00-1 – Storm Drainage Utilities.

1.3 ALLOWABLE TOLERANCES

- A. Depth of rip-rap blanket as shown on the drawings and in these specifications is a minimum depth.

PART 2 – PRODUCTS**2.1 MATERIALS**

- A. Stone Rip-Rap: Shall be hard quarry or field stone of such quality the pieces will not disintegrate on exposure to water, sunlight, or weather. Stone shall be solid and non-friable and range in weight from a minimum of 25 pounds to a maximum of 150 pounds. At least 50 percent of the stone pieces shall weigh more than 60 pounds. The stone pieces shall have a minimum dimension of 12 inches. Documents indicating stone analysis, source and other pertinent data (i.e. – filter fabric) shall be submitted for review by the Engineer prior to delivery.
- B. Filter Fabric: Shall be a woven fabric of monofilament and multifilament yarn equivalent to Mirafi FW700. Fabric shall be finished so the filaments will retain their relative position with respect to each other. Fabric shall contain stabilizers and/or inhibitors added to make filaments resistant to deterioration due to ultraviolet and/or heat exposure. Fabric shall be free of flaws, rips, holes, or defects.

2.2 PRODUCT REVIEW

- A. Contractor shall provide the Owner with a complete description of all products before ordering. Owner will review all products before they are ordered.

PART 3 – EXECUTION**3.1 PREPARATION**

- A. The surface to receive rip-rap shall be prepared to a relatively smooth condition free of obstruction, depressions, debris, rises, and soft or low density pockets of material.

Contours and elevations on construction drawings are to the surface of rip-rap material.

3.2 PLACEMENT

- A. Filter fabric shall be placed with the long dimension running up slope. The strips shall be placed to provide a minimum width of one foot of overlap for each joint. Fabric shall be anchored in place with securing pins of the type recommended by fabric manufacturer. Pins shall be placed on or within 3 inches of the over-lap. Place fabric so upstream strip will overlap the downstream strip. Fabric shall be placed loosely to give and avoid stretching and tearing during placement of the stones.
- B. Minimum depth or thickness of stone blanket shall be 12 inches with no under tolerance. Stones shall be dropped no more than three feet during construction. Placing shall begin at bottom of slope. Provide a toe trench if required as detailed on the construction drawings. Entire mass of stone shall be placed to conform with lines, grades, and thickness shown on the plans. Rip-rap shall be placed to its full course thickness at one operation and in such a manner as to avoid displacing the underlying material. Placing of rip-rap in layers, or by dumping into chutes, or by similar methods likely to cause segregation, will not be permitted.

Larger stones shall be well distributed and the entire mass of stone shall conform to gradation specified. All material used in rip-rap protection shall be placed and distributed so there will be no large accumulations of either the larger or smaller sizes of stone.

It is the intent of these specifications to produce a fairly compact rip-rap protection in which all sizes of material are placed in their proper proportions. Hand placing or rearranging of individual stones by mechanical equipment may be required to secure the results specified.

END OF SECTION

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SECTION 32 92 00 – TURF AND GRASSES

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SECTION 32 92 00**TURF AND GRASSES****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Seeding, planting grass, and fertilizing graded areas behind the structures, pipeline rights-of-way, roadway shoulders, and other disturbed areas.
- B. Seed protection.
- C. Maintaining seeded areas until final acceptance.

1.2 OMITTED**1.3 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver grass seed in original containers showing analysis of seed mixture, percentage of pure seed, year of production, net weight, date of packaging, and location of packaging. Damaged packages are not acceptable. Store in cool, dry locations away from contaminants.
- B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer. Damaged bags are not acceptable. Store in cool, dry locations away from contaminants.
- C. Deliver sod on pallets.
- D. All material shall be acceptable to Owner prior to use.

1.4 PLANTING DATES

- A. This specification provides for establishment of a permanent grass cover between the dates of March 1 and September 30. If finished earth grades are not completed in time to permit planting and establishment of permanent grass during the favorable season between dates specified above unless otherwise accepted, Contractor will be required to plant a temporary cover to protect new graded areas from erosion and to keep windborne dust to a minimum. The temporary cover shall be planted between October 1 and February 28 unless otherwise permitted.

PART 2 – PRODUCTS

- A. Contractor shall submit source and species certification documents to Owner for review prior to installation. Supply complete information on all analysis/test methodologies and results; laboratory certifications, manufacturer's specifications, and agency approvals to the Owner prior to placement of soil mixtures. In addition, provide the Owner with thoroughly mixed sample of soil mixes for acceptance prior to placement.

2.1 SEED

- A. All seed shall conform to State Laws and requirements and regulations of the State Department of Agriculture.
- B. The varieties of seed, as specified in Section 2.2, shall be individually packaged or bagged, and tagged to show name of seed, net weight, origin, germination, lot number, and other information required by the State Department of Agriculture.
- C. Engineer reserves the right to test, reject, or accept all seed before seeding.

2.2 SEEDING SCHEDULE

Refer to Erosion, Sedimentation and Pollution Control notes.

2.3 FERTILIZER

- A. Commercial fertilizer of accepted type, conforming to State fertilizer laws at the rate as recommended by soils test.

2.4 LIME

- A. Agricultural grade, ground limestone at the rate as recommended by soils test.

2.5 OMITTED**2.6 OMITTED****2.7 SOD**

- A. Sod shall be premium grade, densely rooted, good quality grass of the species and certified variety as shown on the plans, free from noxious weeds with no surface soil being visible. The sod shall be obtained from areas where the soil is reasonably fertile. Sod of specified species shall be grown from seed or sprig with not less than 95 percent germination, 85 percent pure seed, and not more than 0.5 percent weed seed. The sod shall be machine cut to a uniform soil thickness that shall contain practically all of the dense root system and not be less than 1-inch thick.
- B. Before cutting, sod shall be mowed to a height of not less than 1-1/2-inches or more than 2-inches. Sod shall be cut in minimum uniform widths of 12-inches and lengths of 24 inches.
- C. Sod shall be delivered to site in a fresh, moist condition with healthy green foliage. It shall be unloaded from delivery trucks on pallets or in rolls and placed in final position within 24 hours of delivery. Sod shall be protected from wind and sun and shall not be allowed to dry out before planting.
- D. Sod shall be strong enough to support its own weight and retain its size and shape when suspended vertically from a firm grasp on the upper 10 percent of the section.

2.8 ACCESSORIES

- A. Straw Mulch: Oat or wheat straw, reasonably free from weeds, foreign matter detrimental to plant life, and in dry condition.
- B. Excelsior Mulch: Excelsior mulch shall consist of wood fibers cut from sound, green timber. The average length of fibers shall be 4 to 6 inches. Cut shall be made in such a manner as to provide maximum strength of fiber, but at a slight angle to natural grain of the wood to cause splintering of fibers when weathering in order to provide adherence to each other and to soil.
- C. Wood cellulose fiber shall be made from wood chip particles manufactured particularly for discharging uniformly on the ground surface when dispersed by a hydraulic water sprayer. It shall remain in uniform suspension in water under agitation and blend with grass seed and fertilizer to form a homogenous slurry. Mulch fibers shall intertwine physically to form a strong moisture holding mat on the ground surface and allow rainfall to percolate into underlying soil. The mulch shall be heat processed to contain no germination or growth-inhibiting factors. It shall be dyed (non-toxic) an appropriate color to facilitate metering of material.

2.9 PRODUCT REVIEW

- A. Contractor shall provide the Owner with a complete description of all products before ordering. The Owner will review all products before they are ordered.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Areas to be seeded shall be made smooth and uniform and shall conform to the finished grade indicated on plans.
- B. Remove foreign materials, plants, roots, stones, and debris from surfaces to be seeded.
- C. Grassing areas, if not loose, shall be loosened to a minimum depth of 3 inches before fertilizer, seed or sod is applied.
- D. Amendments to soils shall be incorporated into loosened 3-inch top soil layer as recommended by soils tests.

3.2 STAND OF GRASS

- A. Before acceptance of seeding, sodding, or sprigging is performed for the establishment of permanent vegetation, Contractor will be required to produce a satisfactory stand of perennial grass whose root system shall be developed sufficiently to survive dry periods and winter weather and be capable of re-establishment in spring.
- B. Before acceptance of seeding is performed for the establishment of temporary vegetation, Contractor will be required to produce a stand of grass sufficient to control erosion for a given area and length of time before the next phase of construction or establishment of permanent vegetation is to commence.

3.3 SEEDING DATES

- A. Seeding shall be performed during periods and at rates specified in their respective schedules. Seeding work may, at discretion of Contractor, be performed throughout the year using schedule prescribed for given period. Seeding and sprigging work shall not be conducted when the ground is frozen or excessively wet. Contractor will be required to produce a satisfactory stand of grass regardless of the period of year work is performed.

3.4 APPLYING LIME AND FERTILIZER

- A. Following advance preparation and placing selected material for shoulders and slopes, lime and fertilizer, if called for based on soil tests, shall be spread uniformly over the designated areas, and shall be thoroughly mixed with the soil to a depth of approximately 2 inches. Fertilizer and lime shall be applied at the rate recommended by required soils test. Unless otherwise provided, lime will not be applied for temporary seeding. In all cases where practicable, acceptable mechanical spreaders shall be used for spreading fertilizer. On steep slopes subject to slides and inaccessible to power equipment, the slopes shall be adequately scarified. Fertilizer may be applied on steep slopes by hydraulic methods as a mixture of fertilizer and seed. When fertilizer is applied with combination seed and fertilizer drills, no further incorporation will be necessary. The fertilizer and seed shall be applied together when Wood Cellulose Fiber Mulch is used. Any stones larger than 2-1/2 inches in any dimension, larger clods, roots, or other debris brought to the surface shall be removed.

3.5 SEEDING

- A. Seed shall be sown within 24 hours following application of fertilizer and lime and preparation of the seedbed as specified in Section 3.4. Seed shall be uniformly sown at rate specified by the use of acceptable mechanical seed drills. Rotary hand seeders, power sprayers or other satisfactory equipment may be used on steep slopes or on other areas inaccessible to seed drills.
- B. Seeds shall be covered and lightly compacted by means of cultipacker or light roller if the drill does not perform this operation. On slopes inaccessible to compaction equipment, the seed shall be covered by dragging spiked chains, by light harrowing or by other satisfactory methods.
- C. Apply water with fine spray immediately after each area has been sown.
- D. Do not sow seed when ground is too dry, during windy periods or immediately following a rain.

3.6 SEED PROTECTION (STRAW MULCH)

- A. All seeded areas seeded with permanent grasses shall be uniformly mulched in a continuous blanket immediately following seeding and compacting operations, using at least 2 tons of straw per acre.

3.7 OMITTED

3.8 OMITTED**3.9 OMITTED****3.10 SODDING**

- A. Sod shall be placed between March 1st and December 1st. However, if sod is to be placed during periods of temperatures over 90 degrees F., the Contractor shall take extra care for quick placement of sod with adequate, consistent watering necessary to ensure sod thrives as planted.
- B. Sod shall be placed within 24 hours of cutting.
- C. Place top elevation of sod 1/2 inch below adjoining paving or curbs.
- D. All areas to be sodded shall be brought to the proper line grade or cross section as was existing prior to construction. Sod shall be placed so, upon completion, edges of sodded areas will be smooth and will conform to the proposed finished grade. Sod shall be laid smooth, edge to edge, with staggered joints. Sod shall be immediately pressed firmly into contact with the sod bed by tamping or rolling, to eliminate any air pockets. A true and even surface shall be provided, to insure knitting without displacement of the sod or deformation of the sodded areas surfaces. Do not stretch or overlap sod pieces. Following compaction, screened soil of good quality shall be used to fill all cracks. Excess soil shall be worked into the grass with rakes or other suitable equipment. On slopes steeper than 3 to 1, sod shall be fastened in place with suitable wood or metal pins to hold the sod in place. Any damage by erosion or other causes occurring after completion of grading operations shall be repaired, before commencing with the sodding operations.
- E. Immediately before sodding, moisten topsoil with a fine spray to a minimum 1-inch depth. Sod shall not be laid on dry or powdery soil.
- F. Sod shall be moist when laid and placed on moist ground. The sod shall be carefully placed by hand, beginning at the toe of slopes and working upwards. The length of strips shall be at right angles to flow of surface water. All joints shall be tightly butted and end joints shall be staggered at least 12 inches. Sod shall be immediately pressed firmly into the ground by tamping or rolling. Fill all joints between strips with fine screened soil. Sod on slopes shall be pegged with sod pegs to prevent movement.
- G. Within two hours after sod has been placed, thoroughly water to a minimum depth of 4-inches. After sod and soil have dried, roll sodded areas to ensure good bond between sod and soil and to remove depressions and irregularities. Roll sodded areas with a roller not exceeding 150 lbs. per foot of roller width.

PART 4 – MAINTENANCE, WARRANTY AND ACCEPTANCE**4.1 MAINTENANCE**

- A. Maintain grassed surfaces until final acceptance.
- B. Maintenance shall consist of providing protection against traffic, watering to ensure uniform seed germination and to keep surface of soil damp, and repairing any areas

damaged as a result of construction operations or erosion. Maintenance shall also include, but is not limited to, watering, weeding, cultivating, removal of dead material, lawn mowing, fertilizing, and other necessary operations.

- C. The Contractor shall maintain all proposed plantings until the date of substantial completion issued by the Owner.

4.2 WARRANTY

- A. All grassed areas shall be guaranteed by Contractor to be alive and healthy for a one year period from date of substantial completion issued by the Owner. A final walk through with the Owner shall be conducted at end of warranty period to determine if any areas require replanting. At end of warranty period, sod shall show evidence of rooting to underlying soil and shall have no competitive weed growth from either the sod or from between sod joints.
- B. Any grassed area which is dead or not showing satisfactory growth shall be replaced at Contractor's expense at the end of warranty period. All replacement shall be of original quality. Replacement required because of vandalism, excessive use, or other causes beyond the control of Contractor are not part of this contract.

4.3 ACCEPTANCE

- A. Before acceptance of seeding performed for the establishment of permanent vegetation, Contractor will be required to produce a satisfactory stand of perennial grass whose root system shall be developed sufficiently to survive dry periods and winter weather and be capable of reestablishment in spring.
- B. A minimum coverage of 80% density over 100% of the disturbed area is required for seeded areas before project acceptance. Sod areas shall have 95% coverage over 100% of the disturbed area prior project acceptance.

END OF SECTION

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SECTION 33 40 00 – STORM DRAINAGE UTILITIES

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SECTION 33 40 00**STORM DRAINAGE UTILITIES****PART 1 – GENERAL****1.1 SECTION INCLUDES**

- A. Construction of pipes, drainage inlets, manholes, headwalls, and various drainage structures.

1.2 RELATED SECTIONS

- A. Section 03 30 00 – Cast-In-Place Concrete

1.3 OMITTED**1.4 REFERENCES (Latest Revision)**

- A. ASTM D 3740 – Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
- B. ASTM E 329 – Agencies Engaged in Construction Inspection and/or Testing.
- C. ASTM C 76 – Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
- D. ASTM C 443 – Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
- E. ASTM B 745/B 745M – Corrugated Aluminum Pipe for Sewers and Drains.
- F. ASTM D 1056 – Flexible Cellular Materials – Sponge or Expanded Rubber.
- G. ASTM D 1751 – Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types).
- H. ASTM D 1752 – Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction.
- I. ASTM C 150 – Portland Cement.
- J. ASTM C 144 – Aggregate for Masonry Mortar.
- K. ASTM C 207 – Hydrated Lime for Masonry Purposes.
- L. ASTM C 62 – Building Brick (Solid Masonry Units Made From Clay or Shale).
- M. ASTM C 55 – Concrete Brick.
- N. ASTM C 478 – Precast Reinforced Concrete Manhole Sections.

- O. ASTM C 1433 – Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers.
- P. ASTM D 1557 – Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.
- Q. ASTM D 6938 – In Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth).
- R. ASTM F 405 – Corrugated Polyethylene (PE) Tubing and Fittings.
- S. ASTM C 913 – Precast Concrete Water and Wastewater Structures.

1.5 QUALITY ASSURANCE

- A. Material Review – Contractor will furnish the Owner a description of all material before ordering. Owner will review the Contractor's submittals and provide in writing an acceptance or rejection of material.
- B. Manufacturer – Material and equipment shall be standard products of a manufacturer who has manufactured them for a minimum of 2 years and provides published data on their quality and performance.
- C. Subcontractor – A subcontractor for any part of the work must have experience on similar work, and if required, furnish Owner with a list of projects and Owners or Engineers who are familiar with their competence.
- D. Design – Devices, equipment, structures and systems not designed by Engineer and Contractor wishes to furnish, shall be designed by either a Registered Professional Engineer or by someone the Engineer accepts as qualified. If required, complete design calculations and assumptions shall be furnished to the Engineer or Owner before ordering.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Material shall be unloaded in a manner avoiding damage and shall be stored where it will be protected and will not be hazardous to traffic. Contractor shall repair any damage caused by the storage. Material shall be examined before installation. Neither damaged nor deteriorated material shall be used in the work.

1.7 SEQUENCING AND SCHEDULING

- A. Contractor shall arrange work so sections of pipes between structures are backfilled, checked, pavement replaced and the section placed in service as soon as reasonable after installation.

1.8 ALTERNATIVES

- A. The intention of these specifications is to produce the best system for the Owner. If Contractor suggests alternate material, equipment or procedures will improve results at no additional cost, the Owner will examine suggestion, and if accepted, it may be used. The basis upon which acceptance of an alternate will be given is its value to Owner and not for Contractor's convenience.

1.9 GUARANTEE

- A. Contractor shall guarantee quality of materials, equipment and workmanship for a minimum period of 12 months or as required by the local governing agency after acceptance. Defects discovered during this period shall be repaired by Contractor at no cost to the Owner.

1.10 EXISTING UTILITIES

- A. All known utility facilities are shown schematically on the construction drawings, and are not necessarily accurate in location as to plan or elevation. Utilities such as service lines or unknown facilities not shown, will not relieve the Contractor of responsibility under this requirement. "Existing Utilities Facilities" means any utility existing on the project in its original, relocated or newly installed position. Contractor will be held responsible for cost of repairs to damaged underground facilities; even when such facilities are not shown on the drawings.
- B. The Contractor shall call for underground utility locations before starting work. Underground utilities location service can be contacted at 1-800-282-8411 (GA) or 811.

1.11 OMITTED**1.12 TESTING**

- A. Laboratory tests for moisture density relationship for fill materials shall be in accordance with ASTM D 1557, (Modified Proctor).
- B. In place density tests in accordance with ASTM D 1556 or ASTM D 6938.
- C. Testing laboratory shall operate in accordance with ASTM D 3740 and E 329 and be acceptable to the Engineer.
- D. Testing laboratory and Project Engineer/Project Representative shall be given a minimum of 48-hours notice prior to taking any tests.
- E. Owner shall select and engage the testing laboratory. Testing laboratory shall be responsible to the Owner and Owner's Engineer. Payment for laboratory and all tests shall be by Owner, except Owner specifically reserves the right to deduct from Contractor's payment, expenses and charges of testing laboratory when:
 - 1. Contractor gives notice work is ready for inspection and testing, and fails to be ready for the test, and/or
 - 2. testing of the Contractor's work, products, or materials fail, and retesting is required, and/or
 - 3. Contractor abuses the services or interferes with work of testing laboratory in conduct of this work.
- F. Test results shall be furnished to the Engineer prior to continuing with associated or subsequent work.

PART 2 – PRODUCTS

2.1 PIPE

- A. Concrete Pipe – Shall be reinforced Class III, Class IV, or Class V and shall conform to ASTM Specification C-76. Pipe less than 48 inch inside diameter shall be manufactured without lifting holes. Joints shall be either 'O' ring watertight flexible rubber, or tongue and groove as indicated on the plans. Gasketed single offset joints may be used in lieu of 'O' ring joints if acceptable to the Owner.
 - 1. 'O' Ring Joints – Shall be water tight flexible rubber gasket and shall meet ASTM Specification C-443.
 - 2. Gasketed single offset joint shall be soil tight and shall meet ASTM Specification C-443.
 - 3. Tongue and groove joints shall utilize mastic sealant and the exterior shall be wrapped with geotextile material.

2.2 DRAINAGE STRUCTURES

- A. Details – See plans.
- B. Concrete – Reinforced and non-reinforced.
 - 1. Minimum compressive strength = 3,000 p.s.i. at 28 days.
 - 2. Reinforcing shall be covered by a minimum 1 inch of concrete for top slabs and 1-1/2 inches for walls and bases and 3 inches where concrete is deposited directly against the ground.
 - 3. Expansion joint filler materials shall conform to ASTM D 1751 or D 1752.
- C. Mortar – Connection of pipe and drainage structures shall be composed of one part by volume of Portland cement and two parts of sand. The Portland cement shall conform to ASTM C-150, Type I or II. The sand shall conform to ASTM C-144 and shall be of an accepted gradation. Hydrated lime may be added to the mixture of sand and cement in an amount equal to 25% of cement volume used. Hydrated lime shall conform to ASTM C-207, Type S. Quantity of water in the mixture shall be sufficient to produce a workable mortar, but shall in no case exceed 7 gallons of water per sack of cement. Water shall be clean and free of harmful acids, alkalies and organic impurities. The mortar shall be used within 30 minutes from time ingredients are mixed with water.
- D. Brick Masonry – Brick shall conform to ASTM Specification C-62, Grade SW or C-55, Grade S. Mortar for jointing and plastering shall consist of one part Portland cement and two parts fine sand. Lime may be added to the mortar in an amount not more than 25% of the cement volume used. Joints shall be completely filled and shall be smooth and free from surplus mortar on the inside of structure. Brick structures shall be plastered with 1/2 inch of mortar over entire outside surface of the walls. For

square or rectangular structures, brick shall be laid in stretcher courses with a header course every sixth course, and for round structures, brick shall be laid radially with every sixth course a stretcher course.

- E. Precast – Shall be constructed in accordance with ASTM C-478, C-913, or C-1433 and conform to details on the project drawings.
 - 1. Joints – Shall be tongue and groove sealed with flexible gaskets or mastic sealant. Gaskets shall be O-Ring or Type A or B "Tylox" conforming to ASTM C443 and mastic shall be "Ram-nek" or equivalent with primer. Primer shall be applied to all contact surfaces of manhole joints at the factory in accordance with manufacturer's instructions.
 - 2. Steps – Shall be polypropylene equivalent to M.A. Industries, Type PS-1 or PS-1-PF. Steps shall be installed at the manhole factory and in accordance with recommendations of step manufacturer. Manholes will not be acceptable if steps are not installed accordingly.
 - 3. Leaks – No leaks in the manhole will be acceptable. All repairs made from inside the manhole shall be made with mortar composed of one part portland cement and two parts clean sand; mixing liquid shall be straight bonding agent equivalent to "Acryl 60."
- F. Frame, cover & grating shall conform to details shown on the project drawings. Grates in pavement and in other flush-mounted type surfaces shall be of a "bicycle-safe" configuration consisting of 45 degree diagonal bars or slotted grates with a maximum clear opening of 1 inch and a maximum length of 9-inches. In any case, the long dimension of openings should be located transverse to direction of traffic when possible.

2.3 FILTER FABRIC

- A. Shall be a non-woven heat-bonded fiber of polypropylene and nylon filaments equivalent to Mirafi 140 N. The fabric shall be finished so filaments will retain their relative position with respect to each other. Fabric shall contain stabilizers and/or inhibitors added to the base plastic to make filaments resistant to deterioration due to ultraviolet and/or heat exposure. The product shall be free of flaws, rips, holes, or defects.

2.4 TRACING WIRE

- A. Tracing wire shall be #12 gauge insulated single strand copper wire.

2.5 SOILS AND STONE AGGREGATES

- A. Stone aggregate shall be clean crushed granite or concrete meeting the gradation requirements of grade No. 57.
- B. Soils used for bedding, haunching, and initial backfill shall be as shown in the following table and shall meet requirements and classifications of ASTM D2321 and ASTM D2487.

Class	Type	Soil Group Symbol D 2487	Description	Percentage Passing Sieve Sizes		
				1-1/2 inch (40 mm)	No. 4 (4.75 mm)	No. 200 (0.075 mm)
IB	Manufactured, Processed Aggregates; dense-graded, clean.	None	Angular, crushed stone (or other Class 1A materials) and stone/sand mixtures with gradations selected to minimize migration of adjacent soils; contain little or no fines.	100%	≤50%	<5%
II	Coarse – Grained Soils, clean	GW	Well-graded gravels and gravel-sand mixtures; little or no fines.	100%	<50% of "Coarse Fraction "	<5%
		GP	Poorly-graded gravels and gravel-sand mixtures; little or no fines.			
		SW	Well-graded sands and gravelly sands; little or no fines.		>50% of "Coarse Fraction "	
		SP	Poorly-graded sands and gravelly sands; little or no fines.			
	Coarse-Grained Soils; borderline clean to w/fines.	Eg. GW- GC, SP-SM.	Sands and gravels that are borderline between clean and with fines.	100%	Varies	5% to 12%
III	Coarse-Grained Soils with Fines	GM	Silty gravels, gravel-sand-silt mixtures.	100%	<50% of "Coarse Fraction "	5%
		GC	Clayey gravels, gravel- sand-clay mixtures.			
		SM	Silty sands, sand-silt mixtures.		>50% of "Coarse Fraction "	
		SC	Clayey sands, sand-clay mixtures.			
IVA	Fine-grained soils (inorganic)	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, silts with slight plasticity.	100%	100%	>50%
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.			

2.6 PRODUCT REVIEW

- A. Contractor shall provide the Owner with a complete description of all products before ordering. Owner will review all products by the submittal of shop drawings before they are ordered.

PART 3 – EXECUTION

3.1 ON SITE OBSERVATIONS OF WORK

- A. The line, grade, deflection, and infiltration of storm sewers shall be tested by Contractor under direction of Owner's Representative. Owner's Representative will have the right to require any portion of work be completed in their presence and if work is covered up after such instruction, it shall be exposed by Contractor for observation. However, if Contractor notifies Owner's Representative such work is scheduled and the Owner's Representative fails to appear within 48-hours, Contractor may proceed. All work completed and material furnished shall be subject to review by the Project Representative. All improper work shall be reconstructed. All materials not conforming to requirements of specifications shall be removed from the work upon notice being received from Project Representative for rejection of such materials. Project Representative shall have the right to mark rejected materials to distinguish them as such.

Contractor shall give the Project Representative a minimum of 48-hours' notice for all required observations or tests. Storm sewers shall be dry for observation by the Project Representative. Lines under water shall be pumped out by Contractor prior to observation, at no additional cost to the Owner.

It will also be required of Contractor to keep accurate, legible records of the location of all storm sewer lines and appurtenances. These records will be prepared in accordance with paragraph on "Record Data and Drawings" in the Special Conditions. Final payment to the Contractor will be withheld until all such information is received and accepted.

3.2 EXCAVATION FOR PIPE AND STRUCTURES

- A. Excavated material shall be piled a sufficient distance from the trench banks to avoid overloading to prevent slides or cave-ins.
- B. Remove from site all material not required or suitable for backfill.
- C. Grade as necessary to prevent water from flowing into excavations.
- D. Remove all water accumulating in the excavation, from surface flow, seepage, or otherwise, by pumping or other acceptable method.
- E. Sheet piling, bracing or shoring shall be used as necessary for protection of the work and safety of personnel.

3.3 TRENCHING FOR PIPE

- A. Trenching for Pipe – The width of trenches at any point below top of pipe shall be not greater than outside diameter of pipe plus 4 feet to permit satisfactory jointing and thorough bedding, haunching, backfilling and compacting under and around pipes. Sheet piling and bracing where required shall be placed within the trench width as specified. Care shall be taken not to over-excavate. Where trench widths are exceeded, redesign with a resultant increase in cost of stronger pipe or special installation procedures shall be necessary. Cost of this re-design and increased cost

of pipe or installation shall be borne by Contractor without additional cost to the Owner. When installing pipe in a positive projecting embankment installation, the embankment shall be installed to an elevation of at least 1 foot above top of pipe for a width of five pipe diameters on each side of pipe before installation of pipe.

- B. Removal of Unsuitable Material – Where wet or otherwise unstable soil, incapable of supporting the pipe is encountered in bottom of trench, such material shall be removed to depth required and replaced to proper grade with stone or sand foundation as determined by Owner. This foundation shall be compacted to 100% standard proctor.

3.4 PROTECTION OF UTILITY LINES

- A. Existing utility lines shown on drawings or locations of which are made known to the Contractor prior to excavation, and are to be retained, as well as utility lines constructed during excavation operations, shall be protected from damage during excavation and backfilling, and if damaged, shall be repaired at Contractor's expense. If the Contractor damages any existing utility lines not shown on drawings or locations of which are not known to Contractor, report thereof shall be made immediately. If Owner determines repairs shall be made by Contractor, such repairs will be ordered under the clause in GENERAL CONDITIONS of contract entitled "CHANGES." When utility lines to be removed are encountered within the area of operations, Contractor shall notify Owner in ample time for necessary measures taken to prevent interruption of service.

3.5 FOUNDATION AND BEDDING

- A. Stone Foundation – Where the subgrade of pipe is unsuitable material, Contractor shall remove unsuitable material to a depth determined by Owner and furnish and place stone foundation in trench to stabilize subgrade.
- B. Sand Foundation – Where the character of soil is unsuitable, even though dewatered, additional excavation to a depth determined by Owner shall be made and replaced with clean sand furnished by Contractor.
- C. Bedding for pipe shall provide a firm surface of uniform density throughout the entire length of pipe. Before laying pipe, trench bottom shall be de-watered by the Contractor. Pipe shall be carefully bedded in stone accurately shaped and rounded to conform to lowest 1/3 outside portion of circular pipe, or lower curved portion of arch pipe for the entire length of pipe. Bell holes and depressions for joints shall be only of such length, depth, and width as required for properly making the particular type joint.
- D. Concrete Pipe:
 - 1. Materials for bedding concrete pipe shall be either Class II, Class III, or Class IB if processed, to minimize migration of adjacent material.
 - 2. Depth of bedding shall be equal to 1/24 the outer diameter of pipe or 3 inches, whichever is greater.

3. Bedding area under the center of pipe, for a width 1/3 outer diameter of pipe, known as middle bedding, shall be loosely placed. Remainder of bedding for full width of the trench shall be compacted to a minimum density of 85% for Class II bedding and 90% for Class III bedding as determined by ASTM D1557.

3.6 HAUNCHING, INITIAL BACKFILL, AND FINAL BACKFILL

- A. Haunching – After the bedding has been prepared and pipe is installed, Class III soil shall be placed along both sides of pipe, in layers not exceeding 6 inches in compacted depth. Care shall be taken to insure thorough compaction and fill under haunches of the pipe. Each layer shall be thoroughly compacted with mechanical tampers and rammers. Haunching shall extend up to the spring line of pipe and be compacted to following densities:
 1. RCP: Minimum density shall be 95% as determined by ASTM D1557.
- B. Final Backfill – For all pipes, it should extend to the surface and shall be select materials compacted to a minimum of 100% as determined by ASTM D1557 if pipe is under pavement. If pipe is in grassed areas final backfill may be native materials compacted to a minimum density of 95% as determined by ASTM D1557.

3.7 PLACING PIPE

- A. Each pipe shall be carefully examined before being laid, and defective or damaged pipe shall not be used. Pipe lines shall be laid to the grades and alignment indicated. Proper facilities shall be provided for lowering sections of pipe into trenches. Under no circumstances shall pipe be laid in water, and no pipe shall be laid when trench conditions or weather are unsuitable for such work. Diversion of drainage or dewatering of trenches during construction shall be provided as necessary. All pipe in place shall have been checked before backfilling. When storm drain pipe terminates in a new ditch, headwall or end section, together with ditch pavement, if specified, shall be constructed immediately as called for on the plans. Ditch slopes and disturbed earth areas shall be grassed and mulched as required. Contractor will be responsible for maintaining these newly constructed ditches and take immediate action subject to acceptance, keeping erosion of the ditch bottom and slopes to a minimum during life of contract. No additional compensation will be given to Contractor for the required diversion of drainage and/or dewatering of trenches. Grassing the trench backfill shall conform to requirements of Section 32 92 00 – "Turf and Grasses."
- B. Concrete Pipe: Laying shall proceed upgrade with spigot ends of bell and spigot pipe and tongue ends of tongue and groove pipe pointing in the direction of flow. Place pipe in trench with the invert conforming to required elevations, slopes and alignment. Provide bell holes in pipe bedding in order to insure uniform pipe support. Fill all voids under the pipe by working in backfill material.

3.8 JOINTS IN PIPES

- A. Concrete Pipe – Joints in concrete pipe shall be either 'O' ring watertight flexible rubber or tongue and groove as indicated on the plans. Gasketed, single offset joints may be used if accepted by the Owner. Maintain pipe alignment and prevent infiltration of fill material at joints during installation.

1. 'O' ring and single offset joints shall meet the requirements of ASTM C443. They shall utilize either a rubber gasket with a circular cross section or a rectangular cross section. Gaskets shall have no more than one splice, except two splices of the gasket will be permitted if nominal diameter of pipe exceeds 54 inches. Manufacturer's recommendations and requirements shall be followed.
2. Tongue and groove joints shall utilize a bituminous mastic such as Ram-Nek or accepted equivalent. The joint surfaces shall be primed according to manufacturer's recommendations. Care shall be taken to ensure mastic material completely and uniformly seals the joint.
3. All tongue and groove joints shall receive one layer of filter fabric completely around exterior of the joint. Filter fabric shall be a minimum of 2 feet wide, centered on the joint, and overlapped a minimum of 1 foot.

3.9 FIELD QUALITY CONTROL

- A. Soil and density tests shall be made by a testing laboratory employed by the Owner. Laboratory tests of the soil shall be made in accordance with ASTM D 1557. In-place density tests shall be made in accordance with ASTM D 6938. Results of tests shall be furnished to the Owner.

The minimum number of tests required shall be:

Haunching and Initial
Backfill in all areas....

1 per 100-linear feet of pipe, minimum of one per run of pipe for both the haunching and initial backfill zones.

Final Backfill over pipe
in traffic areas.....

1 per 100-linear feet or less for each 4-feet of depth or portion thereof.

Final Backfill over pipe
in non-traffic areas.....

1 per 500-linear feet or less for each 6-feet of depth or portion thereof.

The minimum percent of compaction of the backfill material (in accordance to ASTM D1557) shall be the following:

In traffic Areas. 100% of maximum laboratory density.

In non-traffic Areas . . . 95% of maximum laboratory density, unless otherwise accepted by the Engineer.

- B. It is the Contractor's responsibility to assure backfill is sufficient to limit pipe deflection to no more than 5%.
- C. All pipes under roadways shall be televised and video recorded. The video observation shall include a complete pan view of each joint.

3.10 DRAINAGE STRUCTURES

- A. Drainage structures shall be constructed of materials specified for each type and in accordance with details shown on the drawings.

3.11 OMITTED**3.12 CONNECT PIPE TO EXISTING STRUCTURES**

- A. Contractor shall connect pipe to the existing structure where indicated. For brick or precast structures, a hole not more than 4 inches larger than outside diameter of new pipe shall be cut or cored neatly in the structure, new pipe laid so it is flush with inside face of structure, and annular space around pipe filled with a damp, expanding mortar or grout to make a watertight seal.

END OF SECTION

ATTACHMENT A

DRUG - FREE WORKPLACE CERTIFICATION

THE UNDERSIGNED CERTIFIES THAT THE PROVISIONS OF CODE SECTIONS 50-24-1 THROUGH 50-24-6 OF THE OFFICIAL CODE TO GEORGIA ANNOTATED, RELATED TO THE **DRUG-FREE WORKPLACE**, HAVE BEEN COMPLIED WITH IN FULL. THE UNDERSIGNED FURTHER CERTIFIES THAT:

1. A Drug-Free Workplace will be provided for the employees during the performance of the contract; and
2. Each sub-contractor under the direction of the Contractor shall secure the following written certification:

_____ (CONTRACTOR)
certifies to Chatham County that a Drug-Free Workplace will be provided for the employees during the performance of this contract known as procurement **Gateway / Henderson Drainage Improvements – Phase I** (PROJECT) pursuant to paragraph (7) of subsection (B) of Code Section 50-24-3. Also, the undersigned further certifies that he/she will not engage in the unlawful manufacture, sale, distribution, possession, or use of a controlled substance or marijuana during the performance of the contract.

CONTRACTOR

DATE

NOTARY

DATE

ATTACHMENT B

PROMISE OF NON-DISCRIMINATION STATEMENT

Know All Men By These Presence, that I (We), _____
Name

_____, _____
Title Name of Bidder

(herein after Company) in consideration of the privilege to bid/or propose on the following
Chatham County project procurement **Gateway / Henderson Storm Drainage Improvements –**

Phase I

hereby consent, covenant and agree as follows:

- (1) No person shall be excluded from participation in, denied the benefit of or otherwise discriminated against on the basis of race, color, national origin or gender in connection with the bid submitted to Chatham County or the performance of the contract resulting therefrom;
- (2) That it is and shall be the policy of this Company to provide equal opportunity to all business persons seeking to contract or otherwise interested with the Company, including those companies owned and controlled by racial minorities, and women;
- (3) In connection herewith, I (We) acknowledge and warrant that this Company has been made aware of, understands and agrees to take affirmative action to provide minority and women owned companies with the maximum practicable opportunities to do business with this Company on this contract;
- (4) That the promises of non-discrimination as made and set forth herein shall be continuing throughout the duration of this contract with Chatham County;
- (5) That the promises of non-discrimination as made and set forth herein shall be and are hereby deemed to be made a part of and incorporated by reference in the contract which this Company may be awarded;
- (6) That the failure of this Company to satisfactorily discharge any of the promises of non-discrimination as made and set forth above may constitute a material breach of contract entitling the County to declare the contract in default and to exercise appropriate remedies including but not limited to termination of the contract.

Signature

Date

ATTACHMENT C

DISCLOSURE OF RESPONSIBILITY STATEMENT

Failure to complete and return this information will result in your bid/offer/proposal being disqualified from further competition as non-responsive.

1. List any convictions of any person, subsidiary, or affiliate of the company, arising out of obtaining, or attempting to obtain a public or private contract or subcontract, or in the performance of such contract or subcontract.

2. List any indictments or convictions of any person, subsidiary, or affiliate of this company for offenses such as embezzlement, theft, fraudulent schemes, etc. or any other offenses indicating a lack of business integrity or business honesty which affects the responsibility of the contractor.

3. List any convictions or civil judgments under states or federal antitrust statutes.

4. List any violations of contract provisions such as knowingly (without good cause) to perform, or unsatisfactory performance, in accordance with the specifications of a contract.

5. List any prior suspensions or debarments by any governmental agency.

6. List any contracts not completed on time.

7. List any penalties imposed for time delays and/or quality of materials and workmanship.

8. List any documented violations of federal or any state labor laws, regulations, or standards, occupational safety and health rules.

I, _____, as _____
Name of individual Title & Authority

of _____, declare under oath that

Company Name _____

the above statements, including any supplemental responses attached hereto, are true.

Signature

State of _____

County of _____

Subscribed and sworn to before me on this _____ day of _____

20__ by _____ representing him/herself to be

_____ of the company named herein.

Notary Public

My Commission expires:

Resident State: _____

DPC Form #45

ATTACHMENT D

CONTRACTOR AFFIDAVIT under O.C.G.A. § 13-10-91(b)(1)

By executing this affidavit, the undersigned contractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services on behalf of CHATHAM COUNTY has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned contractor will continue to use the federal work authorization program throughout the contract period and the undersigned contractor will contract for the physical performance of services in satisfaction of such contract only with subcontractors who present an affidavit to the contractor with the information required by O.C.G.A. § 13-10-91(b). Contractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

Name of Project

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ___, 201__ in _____ (city), _____ (state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 201__.

NOTARY PUBLIC

My Commission Expires:

SUBCONTRACTOR AFFIDAVIT under O.C.G.A. § 13-10-91(b)(3)

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with _____ (name of contractor) on behalf of CHATHAM COUNTY has registered with, is authorized to use and uses the federal work authorization program commonly known as E-Verify, or any subsequent replacement program, in accordance with the applicable provisions and deadlines established in O.C.G.A. § 13-10-91. Furthermore, the undersigned subcontractor will continue to use the federal work authorization program throughout the contract period and the undersigned subcontractor will contract for the physical performance of services in satisfaction of such contract only with sub-subcontractors who present an affidavit to the subcontractor with the information required by O.C.G.A. § 13-10-91 (b). Additionally, the undersigned subcontractor will forward notice of the receipt of an affidavit from a sub-subcontractor to the contractor within five (5) business days of receipt. If the undersigned subcontractor receives notice of receipt of an affidavit from any sub-subcontractor that has contracted with a sub-subcontractor to forward, within five (5) business days of receipt, a copy of such notice to the contractor. Subcontractor hereby attests that its federal work authorization user identification number and date of authorization are as follows:

Federal Work Authorization User Identification Number

Date of Authorization

Name of Subcontractor

Name of Project

Name of Public Employer

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed on _____, ____, 201__ in _____(city), _____(state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 201__.

NOTARY PUBLIC
My Commission Expires: _____

ATTACHMENT E

CHATHAM COUNTY, GEORGIA

**BIDDER'S CERTIFICATION REGARDING DEBARMENT, SUSPENSION,
INELIGIBILITY AND VOLUNTARY EXCLUSION**

The undersigned certifies, by submission of this proposal or acceptance of this contract, that neither Contractor nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency, State of Georgia, City of Savannah, Board of Education or local municipality. Bidder agrees that by submitting this proposal that Bidder will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts and subcontracts. Where the Bidder or any lower tier participant is unable to certify to this statement, that participant shall attach an explanation to this document.

Bidder must verify Sub-Tier Contractors and Suppliers are not debarred, suspended, ineligible, pending County litigation or pending actions from any of the above government entities.

Certification - the above information is true and complete to the best of my knowledge and belief.

(Printed or typed Name of Signatory)

(Signature)

(Date)

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001

END OF DOCUMENT Mod. CC P & C 6/2005

ATTACHMENT F

**Chatham County
Minority and Women Business Enterprise Program
M/WBE Participation Report**

Name of Bidder: _____

Name of Project: _____

Bid No: _____

M/WBE Firm	Type of Work	Contact Person/ Phone #	City, State	%	MBE or WBE

MBE Total _____

WBE Total _____%

M/WBE Combined _____%

The undersigned should enter into a formal agreement with M/WBE Contractor identified herein for work listed in this schedule conditioned upon execution of contract with the Chatham County Board of Commissioners.

Signature _____ Print _____

Phone () _____

Fax () _____

ATTACHMENT G

Systematic Alien Verification for Entitlements (SAVE) Affidavit Verifying Status for Chatham County Benefit Application

By executing this affidavit under oath, as an applicant for a Chatham County, Georgia Business License or Occupation Tax Certificate, Alcohol License, Taxi Permit, Contract or other public benefit as reference in O.C.G.A. Section 50-36-1, I am stating the following with respect to my bid for a Chatham County contract for _____. [Name of natural person applying on behalf of individual, business, corporation, partnership, or other private entity]

1.) _____ I am a citizen of the United States.

OR

2.) _____ I am a legal permanent resident 18 years of age or older.

OR

3.) _____ I am an otherwise qualified alien (8 § USC 1641) or non-immigrant under the Federal Immigration and Nationality Act (8 USC 1101 et seq.) 18 years of age or older and lawfully present in the United States.*

In making the above representation under oath, I understand that any person who knowingly and willfully makes a false, fictitious, or fraudulent statement or representation in an affidavit shall be guilty of a violation of Code Section 16-10-20 of the Official Code of Georgia.

Signature of Applicant: _____

Date _____

Printed Name: _____

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
____ DAY OF _____, 20____

Notary Public
My Commission Expires:

* _____

Alien Registration number for non-citizens.

CHECKLIST FOR SUBMITTING BID

Sign below and submit this sheet with Bid

NOTE: All of the following items must be submitted with your Bid to be considered "responsive".

1. ACKNOWLEDGMENT OF ANY/ALL ADDENDUMS (Page 3 of ITB).
2. **ORIGINAL SURETY BOND (5% OF BID) ALONG WITH SURETY REQUIREMENTS SHEETS FILLED OUT.**
3. **BID SHEET COMPLETELY FILLED OUT AND SIGNED.**
4. **"LIST OF SUBCONTRACTORS" SHEET FILLED OUT WITH ALL SUBCONTRACTORS AND SUPPLIERS.**
5. **"% TO MBE SUBCONTRACTORS/SUPPLIERS' SHEET COMPLETELY FILLED OUT SHOWING \$ AMOUNT AS WELL AS % OF PROJECT THAT IS PROJECTED TO GO TO MBE/WBE SUBCONTRACTORS/SUPPLIERS.**
6. SECTION 2.31 OF ITB - **REFERENCES:** Read this section and submit the correct number of "References" (based on total dollar amount of project) Note: Supply ALL the information that is requested for each Reference. *NOTE: Forms for Reference Information are attached to this Bid Package.*
7. **ALL FIRMS REQUESTING TO DO BUSINESS WITH CHATHAM COUNTY MUST REGISTER ON-LINE AT [HTTP://PURCHASING.CHATHAMCOUNTY.ORG](http://PURCHASING.CHATHAMCOUNTY.ORG).**
8. **COMPLETE AND SUBMIT ALL ATTACHMENTS TO THE ITB (Attachments A thru H). D-2 IS TO BE FILLED OUT FOR EACH SUBCONTRACTOR.**

NAME/TITLE

COMPANY NAME

ADDRESS

CITY/STATE/ZIP

PHONE NUMBER

FAX NUMBER

1

REFERENCE FORM

REFERENCES - \$499,999 or more: On July 25, 2003 the Board of Commissioners directed that all construction projects with a bid of \$499,999 or less, for bidders to be responsive each must provide information on the most recent three (3) projects with similar scope of work as well as other information to determine experience and qualifications as follows. If the contractor has performed any work for the Chatham County Board of Commissioners within the last five (5) years, at least one (1) of the three (3) owner references must be from the appropriate party within the Chatham County Government

- a. Project Name: _____
Location: _____
Owner: _____
Address: _____
City and State: _____
Contact: _____
Phone & Fax: _____
*Architect or Engineer: _____
Contact: _____
Phone & Fax: _____
Email: _____
- b. The awarded bid amount and project start date. _____
- c. Final cost of project and completion date. _____
- d. Number of change orders. _____
- e. Contracted project completion in days. _____
- f. Project completed on time. Yes _____ No _____ Days exceeded _____
- g. List previous contracts your company performed for Chatham County by Project Title, date and awarded/final cost. _____
- h. Has contractor ever failed to complete a project? _____ If so, provide explanation. _____
- i. Have any projects ever performed by contractor been the subject of a claim or lawsuit by or against the contractor? _____ If yes, please identify the nature of such claim or lawsuit, the court in which the case was filed and the details of its resolution. _____

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LEGAL NOTICE

CC NO. 166972

Invitation to Bid

Sealed Bids will be received until **2:00 P.M.** on **OCTOBER 24, 2017** and publicly opened in **Chatham County Purchasing & Contracting Department, at The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia 31406**, for:
BID NO : 17-0091-4 GATEWAY / HENDERSON STORM DRAINAGE IMPROVEMENTS – PHASE I.

PRE-BID CONFERENCE: Conference will be held at the Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia on OCTOBER 10, 2017, at 2:00 P.M. You are encouraged to attend.

The Bid Package can be downloaded and printed from the County website <http://purchasing.chathamcounty.org> Also, all firms requesting to do business with Chatham County must also register on-line at website: <http://purchasing.chathamcounty.org>

Plans must be purchased at Clayton Digital Reprographics by logging into www.cdrepro.com. Login to DFS. New users must register. For technical support contact CDR at (912) 447-5445, fax (912) 233-7020 or email: cdwest@cdrepro.com.

For any additional questions regarding this bid , please contact Robert Marshall, Senior Procurement Specialist, at 912-790-1622.or rmarshall@chathamcounty.org

Bid Bond is required at the time of bid. (5% of total bid)
Payment and Performance Bonds (100% of bid) will be required for this project at the time of contract award.

CHATHAM COUNTY HAS THE AUTHORITY TO REJECT ALL BIDS AND WAIVE MINOR FORMALITIES.

"CHATHAM COUNTY IS AN EQUAL OPPORTUNITY EMPLOYER, M/F/H, ALL BIDDERS ARE TO BE EQUAL OPPORTUNITY EMPLOYERS"


MARGARET H. JOYNER, PURCHASING DIRECTOR

SAVANNAH NEWS/PRESS INSERT: Sept. 25, 2017
Please send affidavit to:
Chatham County Purchasing & Contracting Department
1117 Eisenhower Drive, Suite C
Savannah, Georgia 31406
(912) 790-1622