

INVITATION TO BID

PROPOSAL

**BID NO. 11-0024-4**

**OGEECHEE FARMS DRAINAGE IMPROVEMENTS AT RIDGELAND ROAD AND  
YEMASSEE ROAD**

**PREBID CONF: 2:00PM, OCTOBER 27, 2011**

**BID OPENING: 2:00PM, NOVEMBER 10, 2011**

THE COMMISSIONERS OF CHATHAM COUNTY, GEORGIA

PETE LIAKAKIS, CHAIRMAN

COMMISSIONER HELEN J. STONE

COMMISSIONER HARRIS ODELL JR.

COMMISSIONER JAMES J. HOLMES

COMMISSIONER DAVID M. GELLATLY

COMMISSIONER PATRICK O. SHAY

COMMISSIONER DEAN KICKLIGHTER

COMMISSIONER PATRICK J. FARRELL

COMMISSIONER PRISCILLA D. THOMAS

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/DRAWINGS - Plans and specifications must be purchased at Clayton Digital Reprographics by logging into [www.cdrepro.com](http://www.cdrepro.com). Login to DFS. New users must register. For technical support contact Roger Oliver at (912) 352-3880, fax (912) 352-3881 or email: [cdrsouth@cdrepro.com](mailto:cdrsouth@cdrepro.com).

  X   BID SCHEDULE

       PERFORMANCE BOND - UPON AWARD OF CONTRACT

       PAYMENT BOND - UPON AWARD OF CONTRACT

       CONTRACT

  X   LEGAL NOTICE

  X   ATTACHMENTS: A. DRUG FREE WORKPLACE; B. NONDISCRIMINATION STATEMENT; C. DISCLOSURE OF RESPONSIBILITY STATEMENT; D. CONTRACTOR/SUBCONTRACTOR AFFIDAVIT & AGREEMENT; E. DEBARMENT CERTIFICATION; F. CAP AGREEMENT; G. M/WBE PARTICIPATION COMPLIANCE REPORT; H. *SAVE* AFFIDAVIT.

       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 female owned businesses. In order to accurately document participation, businesses submitting bids or proposals are encouraged to report ownership status. A minority or female business is defined as a business with 51% or greater minority of female ownership. Please check ownership status as applicable:**

African-American \_\_\_\_\_ Asian American \_\_\_\_\_ Hispanic \_\_\_\_\_

Native American or Alaskan Indian \_\_\_\_\_ Female \_\_\_\_\_

**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 NUMBERS \_\_\_\_\_

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 AGENT  
POST OFFICE BOX 15180  
SAVANNAH, GEORGIA 31416  
(912) 790-1622

Date: October 5, 2011

BID NO. 11-0024-4

**GENERAL INFORMATION FOR INVITATION FOR BID/PROPOSAL**

This is an invitation to submit a bid or proposal to supply Chatham County with construction, equipment, supplies and/or services as indicated herein. Sealed bids or proposals will be received at the Office of the Purchasing Agent, **at The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia, up to 2:00PM, NOVEMBER 10, 2011** at which time they will be opened and publicly read. **The County reserves the right to reject all bids or proposals for any bid or proposal that is non-responsive or not responsible.**

Instructions for preparation and submission of a bid or proposal are contained in this Invitation For Bid/Proposal package. Please note that specific forms for submission of a bid/proposal are required. Bids must be typed or printed in ink. If you do not submit a bid/proposal, return the signed bid invitation sheet and state the reason; otherwise, your name may be removed from our bidders list.

A **pre-bid conference** has been scheduled to be conducted **and held at The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia, at 2:00PM, OCTOBER 27, 2011** 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 Agent 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 Special Purpose Local Option Sales Tax (SPLOST) Project. See paragraph 2.22 for MBE/WBE participation goals.**

## **INSTRUCTIONS TO BIDDERS/PROPOSERS**

1.1 **Purpose:** The purpose of this document is to provide general and specific information for use in submitting a bid or proposal to supply Chatham County with equipment, supplies, and/or services as described herein. All bids/proposals 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 Bid Proposals:** All bid proposals 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 proposal. **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 Bid Proposals:** All bid proposals shall be:

- a. **Submitted in sealed opaque envelopes, 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 Agent on or before the time and date specified above.
  1. **Mailing Address: Purchasing Agent, Post Office Box 15180, Savannah, Georgia 31416.**
  2. **Hand Delivery: Purchasing Agent, Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia.**

**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 Agent 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 **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.
- 1.9 **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.
- 1.10 **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 statute, 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.
- 1.11 **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.
- 1.12 **\*Local Preference:** On 27 March, 1998 the Board of Commissioners adopted a Local Vendor Preference Ordinance. This Ordinance does not apply to construction contracts. However, contractors are encouraged to apply the same method when awarding bids to local and local M/WBE businesses when ever possible in order to promote growth in Chatham County's economy. **NOTE: Local Preference does not apply to Public Works Construction contracts.**

- 1.13 **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. Also, any contractor or subcontractor that has pending litigation with the County will not be considered for contract award.

**\*\*** 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.

- 1.14 **Performance Evaluation:** On April 11, 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.

- 1.15 **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 April 8, 1994.

- 1.16 **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 July 1, 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 ( page 22) for the type of license required for this project.**

## 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 mention 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 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:** Unless otherwise specified by the County, the bidder shall unconditionally guarantee the materials and workmanship 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 (912) 201-4300 for additional information.

**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.

<u>Minimum Limits:</u>	\$1 million per claim/occurrence
<u>Coverage Requirement:</u>	If claims-made, retroactive date must precede or coincide with the contract effective date or the date of the Notice to Proceed. The professional <u>must state</u> 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) 652-7905 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 or contractor 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 County's Rights Concerning Award:

The County reserves the right, and sole and complete discretion to waive technicalities and informalities. The County 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 County 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 sufficient cash flow to undertake the project as evidenced by a Current Ratio of 1.0 or higher;
- (d) 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
- (e) 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.
- (f) Whether the bidder has made a **Good Faith Effort** to meet local participation goals as set forth herein in Paragraph 2.22.

2.22 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/Woman Business Enterprise participation.

**Goals established for this project is 30% MBE/ WBE combined.**

- c. A Minority/Woman Business Enterprise (M/WBE) is a business concern that is at least 51% owned by one or more minority/female individuals (2) and whose daily business operations are managed and directed by one or more of the minority/female owners.

2.23 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 all questions regarding M/WBE participation and Good Faith Effort only**, contact : **Arneja Riley, Chatham County M/WBE Coordinator, 124 Bull Street, Suite 310 Savannah, Ga. 31401. Ph 912-652-7860; fax 912-652-7849; e-mail [alriely@chathamcounty.org](mailto:alriely@chathamcounty.org) or <http://purchasing.chathamcounty.org>**

2.24 **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 IFBs will be read allowed at public bid openings. After Bid Tabulations, the IFB 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.

2.25 **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.

2.26 **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 th three (3) years following completion. Again, this is contract specific to the County contracts only.

**2.27 EXCEPTIONS-**All proceedings, records, contracts and other public records relating to procurement transactions shall be open to the inspection of any citizen, or any interested person, firm or corporation, in accordance with the Georgia Open Records Act except as provided below:

- a. Cost estimates relating to a proposed procurement transaction prepared by or for a public body shall not be open to public inspection.
- b. Any competitive sealed bidding bidder, upon request, shall be afforded the opportunity to inspect bid records within a reasonable time after the opening of all bids but prior to award, except in the event that the County decides not to accept any of the bids and to rebid the contract. Otherwise, bid records shall be open to public inspection only after award of the contract. Any competitive negotiation offeror, upon request, shall be afforded the opportunity to inspect proposal records within a reasonable time after the evaluation and negotiations of proposals are completed but prior to award except in the event that the County decides not to accept any of the proposals and to reopen the contract. Otherwise, proposal records shall be open to the public inspection only after award of the contract except as provided in paragraph "c" below. Any inspection of procurement transaction records under this section shall be subject to reasonable restrictions to ensure the security and integrity of the records.
- c. Trade secrets or proprietary information submitted by a bidder, offeror or contractor in connection with a procurement transaction shall not be subject to public disclosure under the Georgia Open Records Act; however, the bidder, offeror or contractor must invoke the protections of this section prior to or upon submission of the data or other materials, and must identify the data or other materials to be protected and state the reasons why protection is necessary.
- d. Nothing contained in this section shall be construed to require the County, when procuring by "competitive negotiation" (Request for Proposal), to furnish a statement of the reasons why a particular proposal was not deemed to be the most advantageous to the County.

**2.28 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. Contractor shall immediately notify County in the event any subcontractor is added to either Federal or State listing after award of the subcontract.

**2.29 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.

**2.30 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.

- 2.31 **REFERENCES - \$500,000 or more:** On July 25, 2003 the Board of Commissioners directed that all construction projects with a bid of \$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: \_\_\_\_\_  
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.

**\$499,000 and less:** Provide references from owners of at least three (3) projects of various sizes for which contractor was the prime contractor. 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.**

**2.32 CONSTRUCTION APPRENTICE PROGRAM HIRING:**

Chatham County has established a Construction Apprentice Program (CAP) to train area residents in the building trades. Successful Contractor shall be required to make a good faith effort to utilize labor from the CAP Program on this project when feasible. A Good Faith Effort will be demonstrated by documentation of inquiry into CAP labor available and resulting hiring of CAP labor or providing reasons for Contractor not utilizing any CAP labor. Form demonstrating Good Faith Effort is enclosed as Attachment F. Contractor shall complete the form and return with their first pay request. All questions regarding CAP student hiring should be directed to Construction Program Manager, Tara Sinclair at (912) 604-9574.

**2.33 SECURITY AND IMMIGRATION COMPLIANCE ACT AND SYSTEMATIC ALIEN**

**VERIFICATION FOR ENTITLEMENTS (SAVE):** On July 1, 2008, the Georgia Security and Immigration Compliance Act (SB 529, Section 2) became effective. All contractors and subcontractors entering into a contract or performing 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.

O.C.G.A. § 50-36-1, requires 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.

## **ADDITIONAL CONDITIONS**

**3.1 Firm Fixed Price:** Contractor shall provide a firm fixed price which will be valid for acceptance within 90 days of receipt of bid

**3.2. 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.

3.2.1. **FORCE ACCOUNT:** When no agreement is reached for additional work to be done at Lump Sum or Unit Prices, then such additional work shall be done based on the following Cost-Plus-Percentage basis of payment. The Georgia Department of Transportation specifications for the use of a force account will not be used.

a. For work performed by the prime contractor/general contractor, the contractor shall be reimbursed for actual cost incurred in doing the work, and an additional payment of 15% to cover overhead and profit.

b. For work performed by a sub-contractor, the sub-contractor shall be reimbursed for actual cost incurred in doing the work, and an additional payment of 10% to cover overhead and profit. The contractor shall be allowed an overhead and profit mark-up not to exceed 7% on the subcontractor's price. The County shall not recognize subcontractors of subcontractors.

c. The term "Actual Cost" shall include the cost of material and labor as follows:

i. Material cost - Direct cost of material, sales tax, freight and equipment rental.

ii. Labor cost - Man hour cost listed separately by trade, payroll costs including workman's compensation, social security, pension and retirement.

d. The term "Overhead and Profit" shall include bonds (Payment & Performance, Roof & Wall), insurance (Liability, Builders Risk), permits, supervision costs (cost of subcontractor to supervise own work, cost of contractor to supervise work of sub-contractor), proposal preparation and all administrative costs.

3.2.2. **LIQUIDATED DAMAGES:** Failure to complete the work within the duration plus any extension authorized in writing by the County Engineer shall entitle the County to deduct as "Liquidated Damages" from the monies due the Contractor the amount of **\$200** for each calendar day in excess of the authorized construction time.

### 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 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, and;
- 3.4        **Warranty Requirements:** (Check where applicable):
- a.        Provisions of item 2.12 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
- b.        One-time Purchase
- X            c.        Other **ONE TIME CONTRACT**

**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.

## 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* SHEET FILLED OUT (page 23 of ITB)**
- 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” (ON ATTACHMENT G) SHOWING % OF PROJECT THAT IS PROJECTED TO GO TO M/WBE SUBCONTRACTORS / SUPPLIERS MUST BE COMPLETELY FILLED OUT.**
- 6. SECTION 2.28 OF ITB (page 16) 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. COMPLETE AND SUBMIT ALL ATTACHMENTS TO THE ITB (Attachments A thru H).**
- 8. SUBMIT A COPY OF YOUR *STATE OF GEORGIA UTILITY CONTRACTORS LICENSE*.**

\_\_\_\_\_  
NAME / TITLE

\_\_\_\_\_  
COMPANY

\_\_\_\_\_  
ADDRESS

\_\_\_\_\_  
PHONE / FAX NO'S.

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 will 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 as liquidated damages 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 as liquidated damages 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:

### **OGEECHEE FARMS DRAINAGE IMPROVEMENTS AT RIDGELAND ROAD AND YEMASSEE ROAD**

**BID NO. 11-0024-4**

This project is located at Ridgeland Road and Yemassee Road in the Ogeechee Farms Subdivision area located south of US 17 and west of SR 204 in unincorporated Chatham County.

The work consists of Contractor furnishing all labor, materials, tools, equipment and incidentals to replace 36" RCP under Ridgeland Road with 54" RCP; replace 42" CMP with 54" RCP in the drainage ditch downstream of Ridgeland Road; replace existing 24" and 48" RCP under Yemassee Road with an 84" RCP. Associated work for the culvert replacements is included on the construction drawings. This project will replace only the pipes and their associated end treatments. No grading is to be performed in the Ogeechee Canal except at the culvert crossings. Work also includes removing the existing 12'x16' wooden storage building located on the south side of Ridgeland Road.

All work shall be performed as shown on the Drawings and as described in the Technical Specifications.

**Note: This shall be a unit price contract. Quantities are approximate and payment shall be for actual in-place work measurements.**

### **COMMENCEMENT AND COMPLETION:**

**WORK SHALL BEGIN WITHIN 10 DAYS AFTER RECEIPT OF "NOTICE TO PROCEED".  
ALL WORK SHALL BE COMPLETED WITHIN 120 CALENDAR DAYS AFTER THE  
TEN DAY PERIOD.**



**Bid Sheet**  
**Ogeechee Farms Drainage Improvements at Ridgeland Road and Yemassee Road**

Item	Description	Unit	Quantity	Unit Price	Item Total
<b>General</b>					
1.	General Conditions / Mobilization (shall not exceed 10% of the total bid amount)	LS	1		
<b>Earthwork</b>					
2a.	Ridgeland Road Clearing: Includes removal of piping, headwalls, driveways, etc.	LS	1		
2b.	Yemassee Road Clearing: Includes removal of piping, headwalls, driveways, etc.	LS	1		
3a.	Grading, General Ridgeland Road	LS	1		
3b.	Grading, General Yemassee Road	LS	1		
4a.	Remove and Replace Unsuitable Material Ridgeland Road	CY	70		
4b.	Remove and Replace Unsuitable Material Yemassee Road	CY	85		
<b>Roadway</b>					
5a.	Cut and Patch Pavement Ridgeland Road	SY	75		
5b.	Cut and Patch Pavement Yemassee Road	SY	200		
6.	Remove and Replace Gravel Driveways: Yemassee Road	EA	1		
7.	Remove and Replace Concrete Driveways: Yemassee Road	EA	1		
<b>Drainage</b>					
8.	18" RCP w/Stone Bedding	LF	88		
9.	24" RCP w/ Stone Bedding	LF	123		
10.	54" RCP w/Stone Bedding	LF	137		
11.	84" RCP w/Stone bedding	LF	56		
12.	18" Flared End Section	EA	3		
13.	24" Headwall	EA	3		
14.	54" Headwall	EA	2		
15.	Headwalls at Yemassee Road	EA	2		
16a.	Grate Inlets: Ridgeland Road	EA	2		
16b.	Grate Inlets: Yemassee Road	EA	2		
17.	Remove and Replace Fence at Ridgeland Road	LF	250		
18.	Install 20 Ft. wide gate in fence at Ridgeland Road	LS	1		
19.	Handrail for Yemassee Road Headwalls	LF	90		
<b>Erosion Control</b>					
20a.	Construction Exit Ridgeland Road	EA	1		
20b.	Construction Exit Yemassee Road	EA	1		
21a.	Type "C" Silt Fence Ridgeland Road	LF	300		
21b.	Type "C" Silt Fence Yemassee Road	LF	280		
22a.	Rip Rap w/Concrete Ridgeland Road	SY	300		
22b.	Rip Rap w/Concrete Yemassee Road	SY	260		
23a.	Grassing Ridgeland Road	SY	3450		
23b.	Grassing Yemassee Road	SY	2180		
24a.	Check Dams Ridgeland Road	EA	12		
24b.	Check Dams Yemassee Road	EA	3		
25a.	Inlet Sediment Traps Ridgeland Road	EA	2		
25b.	Inlet Sediment Traps Yemassee Road	EA	2		
26a.	Tree Protection Fence Ridgeland Road	LF	1370		
26b.	Tree Protection Fence Yemassee Road	LF	335		
27a.	Erosion Matting Ridgeland Road	SY	1000		
27b.	Erosion Matting Yemassee Road	SY	400		
<b>Traffic</b>					
28a.	Traffic Control Ridgeland Road	LS	1		
28b.	Traffic Control Yemassee Road	LS	1		
<b>Miscellaneous</b>					
29.	Demolition of Existing Wooden Building	LS	1		
30.	Field Condition Allowance				\$15,000.00

NAME / TITLE

TOTAL BID \$

COMPANY

ADDRESS

PHONE / FAX NO'S

## 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:

NAME AND ADDRESS	TYPE OF WORK

SIGNED: \_\_\_\_\_  
CONTRACTOR

**Ogeechee Farms Drainage Improvements at Ridgeland Road and Yemassee Road**  
**EMC Project No. 10-1963**  
**September 2011**  
**SECTION 01600**  
**SPECIAL CONDITIONS**

**PART 1 – PROJECT DESCRIPTION**

**1.01 LOCATION AND DESCRIPTION OF WORK**

- A. The project is located at Ridgeland Road and Yemassee Road in the Ogeechee Farms Subdivision area located south of US 17 and West of SR 204 in unincorporated Chatham County.
- B. The work consists of the following:
  - 1. Replace 36" RCP under Ridgeland Road with a 54" RCP
  - 2. Replace 42" CMP with 54" RCP in the drainage ditch downstream of Ridgeland Road
  - 3. Replace existing 24" and 48" RCP under Yemassee Road with an 84" RCP
  - 4. Associated work for the culvert replacements is included on the construction drawings. The project will replace only the pipes and their associated end treatments. No grading is to be performed in the Ogeechee Canal except at the culvert crossings. The proposed pipes are being placed below finish grade to provide a natural channel inside the pipe. The soil erosion and sediment control plans must be implemented prior to and maintained during the construction of the work.
  - 5. Remove existing 12'x16' wooden storage building located on the south side of Ridgeland Road. Building sits approximately 100 feet from Chevis Road and 150 feet from Ridgeland Road on lot with address 302 Chevis Road.
- C. Access to the site to install the driveway culvert outside of the Ridgeland and Yemassee Road rights of way shall be along the existing access road that is located within the 50-foot easement on the south side of the drainage canal that the new culverts are being placed in. At the completion of the project the Contractor shall restore this area to equal or better than its pre construction condition.

**PART 2 – CONTRACT DOCUMENTS**

**2.01 TECHNICAL SPECIFICATIONS**

- A. 02070 Selective Demolition
- B. 02200 Earthwork
- C. 02270 Erosion and Sedimentation Control
- D. 02400 Storm Drainage
- E. 03300 Cast in Place Concrete

## **2.02 DRAWINGS**

- A. Sheet 01 Cover Sheet, Vicinity Map and Schedule of Drawings
- B. Sheet 02 General Notes and Legend
- C. Sheet 03 Plan and Profile Ridgeland Road
- D. Sheet 04 Plan and Profile Ridgeland Road
- E. Sheet 05 Plan and Profile Yemassee Road
- F. Sheets 06-08 Erosion and Sedimentation Control Plan Ridgeland Road
- G. Sheets 09-11 Erosion and Sedimentation Control Plan Yemassee Road
- H. Sheet 12 Erosion and Sedimentation Control Notes
- I. Sheet 13 Erosion and Sedimentation Control Details
- J. Sheets 14-15 Construction Details

## **PART 3 – PRECONSTRUCTION AND POST-CONSTRUCTION INDPSECTIONS**

### **3.01 PRECONSTRUCTION INSPECTION**

- A. A preconstruction 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 roadway pavements, curbing, sidewalks, 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 professional photographer having experience in similar work and approved by the County. A voice narrative shall identify location and features of the preconstruction video. A typewritten version of the voice narrative shall be provided.

### **3.02 POST-CONSTRUCTION INSPECTION**

- A. The Contractor shall provide and pay all costs of a video inspection record of the completed pipe systems produced by a qualified sewer inspection company or agency (Chatham County or City of Savannah inspection crews are acceptable, however the Contractor shall remain responsible for paying all costs). The video inspection record shall be provided on standard DVD and compatible with County viewing software. All deficiencies identified by the inspection shall be corrected by the Contractor prior to acceptance of the work as substantially complete.

## **PART 4 – STAKING**

### **4.01 CONSTRUCTION STAKING AND CONTROL OF WORK**

- A. The County shall engage a surveyor registered by the State of Georgia to provide initial construction stakeout and demarcation project limits and property lines. Ongoing control of the project work shall be the responsibility of the Contractor. The cost for resurvey work to reestablish initial project controls 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 5 - DOCUMENTATION**

### **5.01 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. Inspection reports of the sediment and erosion control facilities as described in the General Permit No. GAR100002. A copy of the Georgia Soil and Water Conservation Commission certification card(s) of the person(s) completing the reports shall also be submitted. Missing or incomplete documentation of inspection reports may be cause for delay/denial of payment.
  - 2. 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 documents. Missing or incomplete documentation of delivered materials may be cause for delay/denial of payment.
  - 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 6 – EROSION AND SEDIMENTATION CONTROL**

### **6.01 DUTIES**

- A. The Contractor will be responsible for installation, maintenance and repair of the sedimentation and erosion control facilities and for any modifications or adjustments necessary for the project to remain in compliance with the Georgia Erosion and Sedimentation Act during performance of the work. The Contractor will have on site at all times of construction activity a Georgia Soil and Water Conservation Commission Level 1A certified person.
- B. The contractor shall perform sediment and erosion control inspection and reporting requirements, recording daily precipitation amounts, and other duties as described in the contract documents. Inspection reports shall be provided on forms provided by the County or as approved by the County. Signed copies of the Contractor's reports shall be submitted to the County with each Request for Payment. Water quality testing and reporting will be provided by the County.
- C. The total contract amount will be reduced by an amount as specified in the fines section below for each occurrence of failure to conform to the sediment and erosion control requirements of the contract. For the purpose of this paragraph an occurrence shall be defined as each 24-hour period with consecutive 24-hour periods being measured as separate occurrences. 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.

## **PART 7 - FINES AND LIQUIDATED DAMAGES**

### **7.01 FINE**

- A. A \$200 per day fee shall be assessed against the Contractor and withheld from the Lump Sum 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.

### **7.02 LIQUIDATED DAMAGES**

- A. Liquidated Damages shall be assessed at \$200 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 8 - ALLOWANCE**

### **8.01 FIELD CONDITION ALLOWANCE**

- A. The Field Condition Allowance shown on the bid sheet shall belong to Chatham County. 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. Bidders shall include this Field Condition Allowance within their base bid. Any unused allowance shall revert to Chatham County.

## **PART 9 - SPECIAL REQUIREMENTS OF CONSTRUCTION**

### **9.01 REQUIREMENTS**

- A. Work hours shall be limited to 7:00 am to 7:00 pm Monday through Friday and shall exclude holidays unless otherwise approved by Chatham County.
- B. All work is to be performed within the existing right of ways and easements. **The Contractor shall obtain an Encroachment Permit from the Department of Public Works prior to any work within road rights of way.** Permission to use private property outside of these areas shall be obtained by the Contractor in writing in accordance with the notes on Sheet 2 of the construction plans. Copies of such agreements shall be provided to the Chatham County Engineering Department.
- C. The Contractor shall provide temporary sheet pile cofferdams or other approved methods upstream and downstream of the excavation and pumping facilities to control water as needed in any open excavations as described in the contract specifications.
- D. The Contractor shall schedule the replacement of the culverts so that the weather does not prevent each pipe from being installed within as few days as possible. Only one culvert crossing shall be installed at a time unless permission is received by Chatham County to do otherwise. During the installation of a

culvert temporary access shall be provided to all resident's property adjacent to the project.

- E. 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.
- F. There is an existing waterline to be relocated at the Ridgeland Road culvert and the Yemassee Road culvert. The waterlines will be relocated by Water Utility Management. The Contractor shall coordinate the pipe laying work with the water system owner.
- G. The Contractor shall provide traffic control during the construction of the project. No work shall commence until a detailed traffic control plan is reviewed and approved by Chatham County. Neither Ridgeland Road nor Yemassee Road shall be closed to traffic unless Contractor receives permission from Chatham County Engineering Department. One lane shall remain open at all times. When one lane is closed, flagmen shall be posted at each end of the closure to direct traffic for a safe work and travel environment. The Contractor shall notify all emergency services of any road closure as well as the school system for bus routes. All signage regarding closure shall be posted no less than 72 hours prior to any closures.
- H. Unsuitable material shall be removed and replaced with suitable material meeting the requirements of the specifications. Measurement of unsuitable material shall exclude excavation of all materials within the limits of excavation shown on the drawings. Measurements of unsuitable material shall be made by cross section method as approved by Chatham County. Measurement by truck count will not be allowed unless otherwise stated.
- I. The Contractor shall ensure utilities for the building being demolished are disconnected prior to demolition.

## **PART 10 - GEOTECHNICAL INVESTIGATION**

### **10.01 REPORT**

- A. The attached geotechnical report summarizes the results of hand auger borings taken at the culvert locations. This data is offered for the Contactor's information only with no responsibility by the Owner or Engineer for variation in subsoil quality or conditions at the boring locations or at locations other than those shown or at times when the borings were made.
- B. EMC Engineering Services Inc. has completed a subgrade evaluation for the project.
- C. To evaluate the existing subgrade four hand auger borings, designated HA-1 through HA-4, were performed to a depth of 3 to 4 feet below the existing ditch bottom. In addition to the hand augers, the ditch bottom was probed with a 1/2 inch diameter steel rod. The attached Summary of Hand Auger borings is based on the results of both exploratory methods. The approximate boring locations

are shown on the drawings. The soils encountered generally consisted of 1 to 3 feet of loose silt and silty sand containing organic material underlain by suitable bearing sand.

- D. Due to high groundwater levels and surficial organics, utility excavations should be undercut to reveal the suitable bearing sand layer free of organic material. The depth to the suitable sand will generally be 1 to 3 feet below the existing bottom of ditch. The undercut should be lined with filter fabric and backfilled with open graded stone to create a stable stone pipe bed. Excavated soils will likely be wet of optimum and contain organics. Therefore we recommend that the Contractor plan on importing structural fill for the utility backfill. Structural fill should be non-plastic sand, free of organic material and with less than 15% silt and clay (SP, SP-SM). Structural fill should be placed in 8 inch loose lifts and compacted to at least 98% of the standard Proctor maximum dry density. The top 24 inches of backfill should be compacted to at least 100% of the maximum dry density
- E. Due to groundwater levels causing subgrade instability combined with the weight of the 84 inch diameter drainage structures, we recommend that the subgrade be undercut a minimum of 24 inches, lined with filter fabric and backfilled with an open graded stone. Backfill should consist of structural fill placed and compacted as described above.
- F. The following boring log is for this project. This is only a sample of the soils that the Contractor is expected to encounter. The Engineer or Owner assumes no responsibility for actual field conditions.

**TABLE 1: SUMMARY OF AUGER BORINGS**

Boring No.	Depth	Soil Description
HA-1 (bottom of ditch)	0-2'	Soft dark gray sandy SILT with organics (ML/MH)
	2-3'	Gray SAND (SP)
	3'	Boring terminated.
HA-2 (bottom of ditch)	0-1'	Soft dark gray sandy SILT with organics (ML/MH)
	1-4'	Gray SAND (SP)
	4'	Boring terminated.
HA-3 (bottom of ditch)	0-2'	RIP RAP and SAND
	2-4'	Gray SAND (SP)
	4'	Boring terminated.
HA-4 (bottom of ditch)	0-3'	Loose silty SAND with organics (SM)
	3-4'	Gray SAND (SP)
	4'	Boring terminated.



**Ogeechee Farms Drainage Improvements at Ridgeland Road and Yemassee Road  
EMC Project No. 10-1963  
September 2011**

**SECTION 02070  
SELECTIVE DEMOLITION**

**PART 1 - GENERAL**

**1.01 DESCRIPTION OF WORK**

- A. Extent of selective demolition work is indicated on drawings.
- B. Types of Selective Demolition Work: Demolition requires the selective removal and subsequent off-site disposal of the following:
  - 1. Removal of piping and miscellaneous items indicated on plans
  - 2. Removal of asphalt paving and concrete drives
  - 3. Removal of building as indicated on plans

**1.02 SUBMITTALS**

- A. Schedule: Submit schedule indicating proposed methods and sequence of operations for selective demolition work to the Engineer 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.

**1.03 JOB CONDITIONS**

- A. Condition of Structures: Owner assumes no responsibility for actual condition of items or structures to be demolished.
- B. Storage or sale of removed items will not be permitted.
- C. Protections: Provide temporary barricades and other forms of protection as required to protect from injury due to selective demolition work.
- D. Damages: Promptly repair damages caused to adjacent facilities by demolition work at no cost to Owner.
- E. Traffic: Conduct selective demolition operations and debris removal in a manner to ensure minimum interference with roads, and other adjacent occupied or used facilities.
- F. Do not close, block or otherwise obstruct roads, drives, or other occupied or used facilities without written permission from the owner. Provide alternate routes around closed or obstructed traffic ways.
- G. Explosives: Use of explosives will not be permitted.

- H. Utility Services: Maintain existing utilities and protect against damage during demolition operations.

## **PART 2 - PRODUCTS (Not Applicable)**

## **PART 3 - EXECUTION**

### **3.01 INSPECTION**

- A. Prior to commencement of selective demolition work, inspect areas in which work will be performed. Photograph or video existing conditions of structures equipment or surrounding properties which could be misconstrued as damage resulting from selective work; file photos or video with Chatham County prior to starting work.

### **3.02 DEMOLITION**

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

### **3.03. DISPOSAL OF DEMOLISHED MATERIALS**

- A. Remove debris, rubbish and other materials resulting from demolition operations from the project site immediately. Transport and legally dispose of materials off site.
- B. 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.
- C. Burning of removed materials is not permitted on project site.

### **3.04 CLEAN-UP AND REPAIR**

- A. Upon completion of demolition work, remove tools, equipment and demolished materials from site.
- B. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selection demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work.

**\*\* END OF SECTION 02070 \*\***

**Ogeechee Farms Drainage Improvements at Ridgeland Road and Yemassee Road**  
**EMC Project No. 10-1963**  
**September 2011**

**SECTION 02200**  
**EARTHWORK**

**PART 1 - PRODUCTS**

**1.01 MATERIALS**

- A. General: The terms "approved", "suitable", "unsuitable" and similar designations as used in the specifications section pertaining to earthwork mean earth or material designated as being approved, suitable or unsuitable for their intended use by the Engineer.
- B. Suitable Soil Materials are defined as those complying with ASTM D-2487 soil classification groups: GW, GP, GM, SM, SW, and SP.
- C. Unsuitable Soil Materials are defined as those complying with ASTM D-2487 soil classification groups GC, SC, MH, ML, CL, CH, OL, OH, PT. Clays, silts, and organic soils will be considered as unsuitable materials. Excess water in materials will be a basis for establishing unsuitable material regardless of gradation.
- D. Backfill and Fill Materials shall be suitable soil materials, free of clay, rock or gravel larger than 2" in any dimension, debris, waste, frozen materials, vegetable and other deleterious matter. Suitable materials for earth fill shall generally be composed of sands, clay-sand and silt-sand mixtures and shall be approved by the Engineer prior to being incorporated in fills.

**PART 2 - EXECUTION**

**2.01 TOPSOIL**

- A. Contractor shall strip and stockpile topsoil.
- B. Topsoil shall be placed to a depth of 4" over all disturbed areas.
- C. Any remaining topsoil will be hauled off site and disposed of at the Contractor's expense.
- D. Additional topsoil shall meet Georgia Department of Transportation Specification 893. Any additional topsoil which is required to repair disturbed areas and complete the contract shall be provided by the Contractor at his expense.

**2.02 EXCAVATION**

- A. Excavation is unclassified and includes excavation to subgrade elevations indicated, regardless of character of materials and obstructions encountered.

- B. All excavation shall be in conformity with the lines, grades and cross sections shown on the Plans or established by the Engineer. All suitable material removed in the excavation shall be used as far as practicable in formation of embankment, subgrades and shoulders and at such other places as may be indicated on the drawings or directed by the Engineer.
- C. Unauthorized Excavation consists of removal or loosening of materials beyond indicated subgrade elevations or dimensions without specific directions of the Engineer. Unauthorized excavation, as well as remedial work directed by Engineer, and as specified herein shall be at Contractor's expense.

Under footings, foundation bases, or retaining walls, fill unauthorized excavations by extending indicated bottom elevation of footing or base to the bottom of the excavation, without altering required top elevation.

Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations of same classification, unless otherwise directed by the Engineer.

- D. Additional Excavation: When excavation has reached required subgrade elevations and unsuitable materials exist, carry excavations deeper and replace excavated materials as directed by the Engineer. Dispose of unsuitable material as directed by the Engineer.

The Contractor shall dispose of unsuitable and surplus materials except where the Engineer permits the use of such fill slopes, or unless specific disposal areas are shown on the Plans.

- E. Dewatering: Prevent surface water and subsurface or ground water flowing into excavations and from flooding project site and surrounding area. Do not allow water to accumulate in excavations. Remove water to prevent softening of roadway subgrades and foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.

Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations to collecting or run-off areas. Do not use trench excavations as temporary drainage ditches.

The Contractor will be responsible for all damage incurred in handling water conditions.

- F. Material Storage: Stockpile satisfactory excavated materials where directed, until required for backfill or fill. The Contractor shall place, grade, and shape stockpiles for proper drainage and to minimize erosion.

Locate and retain soil materials away from edge of excavations. Do not store within drip-line of trees indicated to remain.

- G. Excavation for Structures: Conform to elevations and dimensions shown within a tolerance of plus or minus 0.10', and extending of sufficient distance from footings and foundations to permit placing and removal of concrete framework, installations to permit placing and removal of concrete framework, installation of services, other constructions, and for inspection.

In excavating for footings and foundations, take care not to disturb bottom of excavation. Excavate by hand to final grade before concrete reinforcement is placed. Trim bottoms to required lines and grades to leave solid base to receive other work.

- H. Proper drainage shall be maintained at all times.

### **2.03 BORROW**

- A. Shall be excavated and hauled by the Contractor from his own sources and shall meet the requirements as specified.
- B. Borrow shall be procured by the Contractor.
- C. Contractor shall bear all expenses in developing borrow sources including drying material, haul roads, excavation and hauling.

### **2.04 GROUND SURFACE PREPARATION FOR FILL**

- A. All vegetation such as roots, brush, sods, grass, decayed vegetation 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, benched or broken up as directed, in such a manner that the fill material will bond with the existing surface.
- C. Surfaces on which fill is to be placed and compacted shall be plowed, wetted or dried as may be required to obtain the specified compaction.

### **2.05 BACKFILL/FILL PLACEMENT OPERATIONS**

- A. During the placement and compaction of backfill, the contractor shall take all necessary measures to place backfill and compact it at the proper moisture content so that there will be no pumping of the backfill during placement. No fill shall be placed on top of any fill material that is found to be pumping even if the fill that is being placed is meeting and passing the compaction requirements. If any fill is found to be pumping, it shall be stabilized by the contractor at no additional cost or time to the Owner

before placing the next lift. Any backfill lifts shall be no more than 12" but shall not exceed the capacity of compaction equipment.

## **2.06 FINISH 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. The finished surface of unpaved areas shall be not more than 0.05' feet above or below the established grade or designed cross-section. Grading shall be done in order that no ponding will occur.
- D. Ditches shall be finished smooth to reduce erosion and permit adequate drainage.

## **2.07 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 the limits of construction shall be legally disposed of by the Contractor.

## **2.08 PROTECTION**

- A. The Contractor shall be responsible for protection of below grade utilities shown on the drawings or indicated to him by the Owner at all times during earthwork operations.
- B. Graded areas shall be protected from traffic, erosion, settlement, or any washing away that may occur from any cause prior to acceptance.
- C. Any repair or reestablishment of grades prior to final acceptance shall be at the Contractors expense.

## **PART 3 - TESTING**

### **3.01 COMPACTION TESTING**

- A. General: Compaction of earth fill and all pavement subgrades shall be performed to the percentage of maximum standard of modified dry densities and to the depths as indicated below:
  - 1. Pipe Backfill: 98% Standard (ASTM Test D-698) Compact top 12" to 100% standard.

2. Fill under all structures, slabs, and backfill behind walls: 98% Standard (ASTM Test D-698).
  3. Unpaved Areas to be grassed, sodded or landscaped: 90% Standard (ASTM Test D-698) full depth.
  4. All other areas not described above: as directed by the Engineer.
- B. Moisture Control: All compaction shall be performed at material moisture contents within 3 percentage points, plus or minus, of optimum. Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade, or layer of soil material, to prevent free water appearing on surface during or subsequent to compaction operations. Remove, and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density. Soil material that has been removed because it is too wet to permit compaction may be stockpiled or spread and allowed to dry. Assist drying by dicing, harrowing or pulverizing until moisture content to a satisfactory value.
- C. Field Density Tests: Tests shall be made in accordance with ASTM Method D-1556 and/or ASTM 2922. Minimum testing frequency shall be based on the most stringent of the following requirements (as applicable). Additional tests may be required by the Engineer in areas he deems critical.
1. One every layer of fill
  2. Areas where degree of compaction is in question

If in opinion of Engineer, based on testing service reports and inspection, subgrade or fills which have been placed are below specified density, additional compaction and testing will be required.

**\*\* END OF SECTION 02200 \*\***

**Ogeechee Farms Drainage Improvements at Ridgeland Road and Yemassee Road  
EMC Project No. 10-1963  
September 2011**

**SECTION 02270  
EROSION AND SEDIMENTATION CONTROL**

**PART 1 - PRODUCTS**

**1.01 CHEMICALS FOR DUST CONTROL**

- A. Calcium Chloride, Anionic Asphalt Emulsion, Latex Emulsion or Resin-in-Water Emulsion may be used for dust control.

**1.02 SILT FENCE FABRIC**

- A. Silt fence fabric shall be a woven fabric certified to meet FHWA's Task Force 25 minimum roll average per ASTM-D-4354. The geotextile fabric shall be a woven sheet of plastic yarn, of a long chain synthetic polymer composed of at least 85% by weight propylene, ethylene, amide, ester, or vinylidene chloride, and shall contain stabilizer 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 should be finished so that the filaments retain their relative position with respect to each other. The fabric shall be free of defects, rips, holes, or flaws.

The fabric shall meet the requirements on the plans.

Silt fencing shall not be placed in waterways or areas of concentrated flow.

**1.03 HAY BALES**

- A. Hay bales rectangular in shape shall be bound with wire or nylon to securely contain the material. Pine straw bales may be used in lieu of hay bales.

**1.04 PLASTIC FILTER FABRIC**

- A. Plastic filter fabric shall be a pervious sheet of plastic yarn, of a long chain synthetic polymer composed of 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 cloth should be finished so that the filaments retain their relative position with respect to each other. The cloth shall be free of defects, rips, holes, or flaws. During shipment and storage, the filter fabric shall be wrapped in a protective material. The fabric shall meet the following requirements. Woven Fabrics:

Tensile Strength (any direction)	315 lbs.
Bursting Strength	600 psi
Elongation before Breaking	15%
Permittivity	4 gal/min/sf

Product shall be equivalent to Mirafi 500X



- B. Seams - Fabric may be sewn together with thread of a material having the same chemical requirements as the material forming the fabric or shall be bonded by cementing or by heat. The strength of the seams shall be equal to that of the unaged fabric. Fabrics to be used under Rip-Rap are allowed to be bonded or sewn together forming sections not less than six feet wide.

#### **1.05 STONE**

- A. Stone shall be hard quarry, granite or field stone and shall be of such quality that the stone will not disintegrate on exposure to water or weather. The stone size, type and weight shall be as shown in conjunction with the structure with which it is associated. The stone shall be accepted by the Engineer prior to delivery.

#### **1.06 RIP RAP**

- A. Rip rap shall meet GDOT Specification 603 and placed as shown on the drawings. The stone pieces shall have a minimum plane dimension of 12 inches. The stone analysis, source and other pertinent data shall be submitted for review by the Engineer prior to delivery. The filter fabric for permanent rip rap shall be Mirafi 500X or equivalent. Rip rap shall not be placed on slopes steeper than 1.5 horizontal to 1.0 vertical.

### **PART 2 - EXECUTION**

#### **2.01 GENERAL**

- A. Every effort shall reasonably be employed by the Contractor to control erosion with the use of, but not limited to, terraces, grassing, and silt fencing during the project. All erosion and sedimentation control measures or facilities, whether temporary or permanent, shall be continuously maintained by the Contractor so as to be effective, or as ordered by the Owner.

#### **2.02 BUFFER ZONE**

- A. Buffer zone is an undisturbed zone or "green belt" surrounding the site, bordering streams or environmentally sensitive areas. Contractors shall not trespass on or in these areas unless he has prior acceptance by the Owner. Trespass in these areas will not be permitted unless there is no alternative method to accomplish the task. Cost shall not come into consideration in the evaluation of this type of request.

#### **2.03 CONSTRUCTION EXIT**

- A. Construction exits shall be located at the exits of the project to remove mud from the tires of all vehicles leaving the site. The construction exit shall consist of a minimum of six (6) inch thick pad of washed stone meeting AASHTO M288-96, Section 7.4, Stabilization Requirements. The aggregate size shall be in accordance with National Stone Association R-2 (2"-3" diameter in size) and of the

necessary length to accomplish the task for which it is intended. The pad may require periodic top dressing with 2" of similar stone. Geotextiles are required and a Separation/Stabilization fabric to keep the aggregate stone from becoming contaminated with subgrade soils. The geotextile shall be based on AASHTO M288-96 Specifications. The entrance area must be excavated to a depth of 3 inches and be cleaned of all vegetation and roots. Geotextile underliner must be placed the full length and width of the entrance.

#### **2.04 DISTURBED AREA STABILIZATION**

- A. Vegetative cover will be placed on completed areas. This vegetative plan will be carried out on road cut and fill slopes, shoulders, and other critical areas created by construction. Plant grass seed as soon as construction in an area is completed. Planting will be made to control erosion, to reduce damage from sediment and runoff to downstream areas and to improve the safety and beauty of the development area.

Due to grading and construction, the areas to be treated are mainly subsoil and substrate. Fertility is low and the physical characteristics of the exposed material are unfavorable to all but the most hardy plants.

Conventional Seeding Equipment - Grade, shape and smooth where needed to provide for safe equipment operation at seeding time and for maintenance purposes. The lime and fertilizer in dry form will be spread uniformly over the area immediately before seedbed preparation. A seedbed will be prepared by scarifying to a depth of 1 to 4 inches as determined on site. The seedbed must be well pulverized, smoothed and firmed. Seeding will be by either a cultipacker-seeder, drill, rotary seeder, mechanical seeder, hand seeder or hydro-seeding. Seed will be distributed uniformly over a freshly prepared seedbed and covered lightly. Within 24 hours after seeding, with exception to hydro-seeding, straw or hay mulch will be spread uniformly over the area, leaving about 25 percent of the ground surface exposed. Mulch will be spread with blower-type mulch equipment or by hand and anchored immediately after it is spread. A disk harrow with the disk set straight or a special packer disk may be used to press the mulch into the soil.

#### **2.05 DUST CONTROL ON DISTURBED AREAS**

- A. Dust raised from vehicular traffic will be controlled by wetting down the access road with water or by the use of a deliquescent chemical, such as calcium chloride, if the relative humidity is over 30%. Chemicals shall be applied in accordance with the manufacturer's recommendations. Calcium chloride, anionic asphalt emulsion, latex emulsion or resin-in-water emulsion may be used for dust control.

#### **2.06 SILT FENCE**

- A. Silt fence shall be placed at the approximate location shown on the plans and installed in accordance with the Georgia Erosion and Sediment Control Manual recommendations. Type C wire-reinforced silt fence shall be used where fill slopes

exceeds 3:1. Silt fence shall not be placed in waterways or areas of concentrated flow.

#### **2.07 STONE PLACEMENT**

- A. The minimum thickness or depth of the stone layer shall be shown on the drawings or the detail with which the device is associated. When used with a plastic filter fabric, the stone placing shall begin in a trench at the bottom of the slope with the filter fabric wrapped in stone. The entire mass of stone shall be placed so as to be in conformance with the lines, grades, and thickness shown on the drawings.

#### **2.08 RIP RAP**

- A. Rip rap shall be placed in accordance with the notes on the drawings. Any rip rap that shall be permanent shall have an underlayment of filter fabric.

#### **2.09 STORM DRAIN OUTLET PROTECTION**

- A. Storm drain outlets shall be paved or have a rock or other energy dispersion device associated with it, as called for on the drawings.
- B. To prevent undermining of the rip-rap apron a separation geotextile shall be used beneath the entire length of apron. The geotextile shall be Mirafi 500X or equal.

#### **2.10 SITE RESTORATION**

- A. The site shall be restored in a manner suitable to accommodate the erosion control device or system of devices for the use which they are intended.

#### **2.11 TOPSOIL**

- A. If topsoil is stripped and stored on site to be used after construction, the stockpile side slopes shall be 2:1 or flatter. Stockpiled topsoil shall not obstruct natural drainage.
- B. Topsoil replacement shall be spread at minimum of 4" thickness.

#### **2.12 SITE SAFETY**

- A. The Contractor shall incorporate and utilize fencing and other safety barriers as necessary, or directed by Owner, to prevent trespassing into potentially dangerous areas of the erosion control area.

**\*\* END OF SECTION 02270 \*\***

**Ogeechee Farms Drainage Improvements at Ridgeland Road and Yemassee Road**  
**EMC Project No. 10-1963**  
**September 2011**

**SECTION 02400**  
**STORM DRAINAGE**

**PART 1 - PRODUCTS**

**1.01 PIPE**

- A. Concrete Pipe – Shall be reinforced Class III and shall conform to ASTM Specification C-76.
  - 1. Joints shall be water tight flexible rubber gasket and shall meet ASTM Specification C-443 and AASHTO M-198.
- B. Filter Fabric – Mirafi 140N or equivalent.
  - 1. All joints shall be wrapped with filter fabric.
- C. Concrete pipe shall be designed with no lifting holes. The lifting holes will jeopardize the structural integrity and hydraulic capacity of the pipe once installed.
- D. A minimum depth of 12 inches cover is required for RCP Class III.

**1.02 DRAINAGE STRUCTURES**

- A. Details - See plans.
- B. Concrete - Reinforced and non-reinforced.
  - 1. Shall have a compressive strength of 4,000 PSI in 28 days. Concrete shall be ready mixed conforming to ASTM C-94.
  - 2. Reinforcing steel shall conform to ASTM A-615, Grade 60. Mesh reinforcing shall conform to ASTM A-185. Reinforcing shall be covered by a minimum 2" of concrete for covers and 2" for walls and flooring and 3" where concrete is deposited directly against the ground.
  - 3. Expansion joint filler materials shall conform to ASTM Specification D-1751, to AASHTO M-90 or shall be resin impregnated fiberboard conforming to the physical requirements of ASTM Specification D-1752.
- C. Mortar
  - 1. Mortar used at connections 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 AASHTO Standard M-45 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 the volume of cement used.

Hydrated lime shall conform to ASTM C-141, Type A. The 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, alkalis and organic impurities. The mortar shall be used within 30 minutes from the time the ingredients are mixed with water.

- D. Precast - Shall be constructed in accordance with ASTM C-478 and conform to the 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 A.S.T.M. C- 443 and mastic shall be "Ram-nek", or equivalent, with primer. The primer shall be applied to all contact surfaces of the manhole joint at the factory in accordance with the manufacturer's instructions.
  - 2. Steps - Shall be polypropylene equivalent to M.A. Industries, Type PS-1 or PS-1-PF. The steps shall be installed at the manhole factory and in accordance with the recommendations of the step manufacturer. Manholes will not be acceptable if steps are not installed accordingly, and properly aligned vertically.
  - 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; the mixing liquid shall be straight bonding agent equivalent to "Acryl 60".
- E. Frames & Covers shall conform to the details shown on the project drawings.

### **1.03 STONE BACKFILL**

- A. All backfill under paved areas shall be #57 Stone.
- B. Backfill under pervious areas shall be either #57 Stone or crushed concrete meeting GDOT Specification 812.2.02 for Type II Foundation Backfill.

### **1.04 SAND BACKFILL**

Shall be free from clay and organic material. Not more than 10% shall pass the No. 100 sieve.

### **1.05 BORROW**

- A. Where it is determined by the Engineer that sufficient suitable material is not available from the site to satisfactorily backfill the pipe to at least 2 feet above the top of the pipe, the Contractor shall furnish suitable sandy borrow material to accomplish the requirements. The material shall have not more than 60% passing the No. 100 sieve, nor more than 20% passing the No. 200 sieve.

## **PART 2 - EXECUTION & TESTING**

### **2.01 LOCATION AND GRADE**

- A. The line and grade of the sewer and ditches and the position of all manholes and other structures are shown on the drawings. The grade line as given on the profile or mentioned in these specifications means the invert or bottom of the inside of the pipe or bottom of ditch. The Contractor shall be responsible for the proper locations and grade of the sewers.

### **2.02 EXCAVATION FOR PIPE**

- A. Excavated material shall be piled a minimum of four feet 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 accepted method.
- E. Sheet piling, bracing or shoring as necessary for the protection of the work and safety of personnel.

### **2.03 TRENCHING FOR PIPE**

- A. Trenching for Pipe shall be as indicated on the drawings.
- B. Removal of Unstable Material - Where wet or otherwise unstable soil, incapable of supporting the pipe, as determined by the Engineer, is encountered in the bottom of the trench, such material shall be removed to the depth required, replaced to the proper grade with select material, and compacted as provided in the paragraph "BACKFILLING PIPE", hereinafter.

### **2.04 BRACING AND SHEETING**

- A. The sides of all trenches shall be securely held by stay bracing, or by skeleton or solid sheet piling and bracing, as required by the soil conditions encountered, to protect the adjoining property and for safety. Where shown on the drawings or where directed by the Engineer, the Contractor must install solid sheet piling to protect adjacent property and utilities. The sheet piling shall be steel or timber and the Contractor shall submit design data, including the section modules of the members and the arrangement for bracing at various depths, to the Engineer for review before installing the sheet piling. It shall penetrate at least 3 feet below the pipe invert. Sheet piling shall be removed in units when the backfilling has reached the elevation necessary to protect the pipe, adjoining property and utilities.

When sheet piling or shoring above the elevation cannot be safely removed, it shall be left in place. Timber left in place shall be cut off at least 2 feet below the

surface. No separate payment shall be made for bracing and sheeting except where shown on the drawings or authorized by the Owner.

## **2.05 BEDDING**

- A. The bedding surface for the pipe shall provide a firm foundation of uniform density throughout the entire length of the pipe. The trench bottom shall be dewatered before laying pipe by the use of well points. Where the nature of the soil is such that well points will not remove the water, the Contractor shall construct sumps and use sump pumps to remove all water from the bedding surface. The pipe shall be carefully bedded in a foundation that has been accurately shaped and rounded to conform to the lowest one-fourth ( $1/4$ ) of the outside portion of circular pipe, or to the lower curved portion of arch pipe for the entire length of the pipe. When necessary, the bedding shall be tamped to compact it to 98% of optimum density. Bell holes and depressions for joints shall be only of such length, depth and width as required for properly making the particular type joint.
- B. Stone Backfill - Where, in the opinion of the Engineer, the subgrade of the pipe trench is unsuitable material, the Contractor shall remove the unsuitable material a minimum of six inches (6") deep and furnish and place stone backfill in the trench to stabilize the subgrade. The stone shall be 3/4-inch graded but variations in the gradation will be permitted upon acceptance by the Engineer. Attention is invited to the fact that the presence of water does not necessarily mean that stone backfill is required. If well points or other types of dewatering will remove the water, the Contractor shall be required to completely dewater the trench in lieu of stone backfill. Stone backfill will be limited to areas where well pointing and other conventional methods of dewatering will not produce a dry bottom. Pipe shall be carefully bedded in the stone as specified above.

## **2.06 PLACING PIPE**

- A. Each pipe shall be carefully examined before being laid. 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 pipes in place shall have been checked before backfilling. When storm drain pipe terminates in a new ditch, the 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. The Contractor will be responsible for maintaining these newly constructed ditches and take immediate action subject to acceptance to keep erosion of the ditch bottom and slopes to a minimum during the life of the contract. No additional compensation will be given to the Contractor for the required diversion of drainage and/or dewatering of trenches.

## **2.07 JOINTS IN PIPES**

- A. Concrete Pipe – Flexible watertight joint shall be made with rubber-type gaskets for concrete pipe. The design of joints and the physical requirements for rubber-type gaskets shall conform to ASTM Specification C-443 or AASHTO Standard M-198. Gaskets and jointing materials shall have not more than one splice, except that two splices of the rubber gaskets type will be permitted if the nominal diameter of the gasket exceeds 54-inches.
- B. Installation of Filter Fabric at Joint – After each joint is joined together; the Contractor shall place two layers of filter fabric around the joint a minimum width of four feet, centered on the joint.

## **2.08 BACKFILLING PIPE**

- A. After the bedding has been prepared and the pipe installed, select material from excavation or borrow, at a moisture content that will facilitate compaction, shall be placed along both sides of the pipe in layers not exceeding six-inches (6") in compacted depth. The backfill shall be brought up evenly on both sides of the pipe for the full length of the pipe. Care shall be taken to insure thorough compaction of the fill under the haunches of the pipe. Each layer shall be thoroughly compacted with mechanical tampers or rammers. This method of filling and compaction shall continue until the fill has reached an elevation of at least 12-inches above the top of the pipe. The remainder of the trench shall be backfilled and compacted by spreading and rolling or compacted by mechanical tampers or rammers in layers not to exceed 8-inches. Soil density relations tests and moisture density relations tests may be performed by a testing firm or laboratory and shall be taken as directed in conformance with the compaction requirements specified in subparagraph "COMPACTION" hereinafter. Deficiencies shall be corrected by the Contractor without additional cost to the Owner. Where it is necessary in the opinion of the Owner, any sheeting and/or portions of bracing used shall be left in place. Untreated sheeting shall not be left in place beneath structures or pavements.
- B. For pipe placed in fill sections, the backfill material and the placement and compaction procedures shall be as specified above and in subparagraph "COMPACTION" hereinafter. The fill material shall be uniformly spread in layers longitudinal on both sides of the pipe, not exceeding six inches (6") in compacted depth, and shall be compacted by rolling parallel with pipe or by mechanical tamping or ramming. Prior to commencing normal filling operations, the crown width of the fill at a height of 12-inches above the top of the pipe shall extend a distance of not less than twice the outside diameter on each side of the pipe or 12 feet, whichever is less. After the backfill has reached at least 12-inches above the top of the pipe, the remainder of the fill shall be placed and thoroughly compacted in layers not exceeding 8-inches.
- C. In compacting by rolling or operating heavy equipment parallel with the pipe, displacement of or injury to the pipe shall be avoided. Movement of construction machinery over a culvert at any stage of the construction shall be at the



Contractor's risk. Any pipe damaged thereby shall be repaired or replaced at the expense of the Contractor.

## **2.09 COMPACTION**

- A. Soil and compaction tests shall be made by a testing laboratory accepted by the Owner and shall be made at the Owner's direction and expense. Failed tests shall be rescheduled at the Engineer's direction and retesting shall be paid for by the Contractor. Laboratory tests of the soil shall be made in accordance with ASTM D-1556 or ASTM 2922. Results of the tests shall be furnished to the Owner, Engineer and Inspector by the testing laboratory.
- B. The minimum number of tests required shall be:
  - 1. Backfill over pipe in traffic areas . . . 1 per lift.
  - 2. Backfill over pipe in non-traffic areas . . . 1 per lift.
- C. The minimum percent of compaction of the backfill material shall be the following:
  - 1. In traffic areas . . . 100%
  - 2. In non-traffic areas . . . 98%

## **2.10 LEAKAGE**

- A. All visible leaks shall be repaired, regardless of the amount of leakage.

## **2.11 CLEANING**

- A. Before acceptance of the sewer system it shall be tested and cleaned to the satisfaction of the Owner. Where any obstruction is met, the Contractor will be required to clean the sewers by means of rods and swabs or other instruments. The pipe line shall be straight and show a uniform grade between each end.

## **2.12 REGRADE EXISTING DITCH**

- A. Designated existing ditches shall be regraded and shaped to provide a bottom with a uniform slope, without depressions that hold water, and that conforms to the plan grades. The side slopes shall be smooth and uniform, dressed by hand if necessary, conforming to the indicated slopes.

## **2.13 CONSTRUCT NEW DITCHES**

- A. New ditches as shown on the construction drawings shall be graded and shaped to provide a bottom with a uniform slope, without depressions that hold water, and that conforms to the plan grades. The side slopes shall be smooth and uniform, dressed by hand if necessary, conforming to the indicated slopes. Ditches with side slope greater than 3:1 (Horizontal: Vertical) shall be stabilized

by means of woven jute fabric engineered for erosion control and soil stabilization, or approved equal.

**\*\* END OF SECTION 02200 \*\***

**Ogeechee Farms Drainage Improvements at Ridgeland Road and Yemassee Road  
EMC Project No. 10-1963  
September 2011**

**SECTION 03300  
CAST-IN-PLACE CONCRETE**

**PART 1 – GENERAL**

**1.01 SUMMARY**

Work under this section includes requirements for materials, mixing, forming, placing, finishing, and curing reinforced cast-in-place concrete for all structural members. The Contractor shall provide all labor, materials, equipment, and incidental items necessary to provide all cast-in-place concrete indicated on the project drawings and as specified herein.

**1.02 REFERENCES**

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

	AMERICAN CONCRETE INSTITUTE (ACI)
ACI 117	(1990; R 2002) Standard Tolerances for Concrete Construction and Materials & Commentary
ACI 211.1	(1991; R 2002) Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete
ACI 301	(1999) Specifications for Structural Concrete for Buildings
ACI 302.1R	(2004) Guide for Concrete Floor and Slab Construction
ACI 304.2R	(1996) Placing Concrete by Pumping Methods
ACI 304R	(2000) Guide for Measuring, Mixing, Transporting, and Placing Concrete
ACI 305R	(1999) Hot Weather Concreting
ACI 306.1	(1990; R 2002) Standard Specification for Cold Weather Concreting
ACI 318M/318RM	(2002) Metric Building Code Requirements for Structural Concrete and Commentary
ACI 347R	(2003) Guide to Formwork for Concrete
ACI SP-66	(2004) ACI Detailing Manual

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION  
OFFICIALS (AASHTO)

AASHTO M 182	(1991; R 2000) Burlap Cloth Made from Jute or Kenaf
AASHTO T 259	(2002) Standard Method of Test for Resistance of Concrete to Chloride Ion Penetration

AMERICAN HARDBOARD ASSOCIATION (AHA)

AHA A135.4	(1995) Basic Hardboard
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ASTM INTERNATIONAL (ASTM)

ASTM A 185	(2002) Steel Welded Wire Reinforcement, Plain, for Concrete
ASTM A 496	(2002) Steel Wire, Deformed, for Concrete Reinforcement
ASTM A 497	(2002) Steel Welded Wire Reinforcement, Deformed, for Concrete
ASTM A 615/A 615M (2004b)	Deformed and Plain Billet-Steel Bars for Concrete Reinforcement

ASTM A 617/A 617M (1996a) Axle-Steel Deformed and Plain Bars for Concrete Reinforcement

ASTM A 82 (2002) Steel Wire, Plain, for Concrete Reinforcement

ASTM C 1017/C 1017M (2003) Chemical Admixtures for Use in Producing Flowing Concrete

ASTM C 1107 (2002) Packaged Dry, Hydraulic-Cement Grout(Nonshrink)

ASTM C 143/C 143M (2003) Slump of Hydraulic Cement Concrete

ASTM C 150 (2004a) Portland Cement

ASTM C 171 (2003) Sheet Materials for Curing Concrete

ASTM C 172 (2004) Sampling Freshly Mixed Concrete

ASTM C 173/C 173M (2001e1) Air Content of Freshly Mixed Concrete by the Volumetric Method

ASTM C 192/C 192M (2002) Making and Curing Concrete Test Specimens in the Laboratory

ASTM C 227 (2003) Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)

ASTM C 231 (2004) Air Content of Freshly Mixed Concrete by the Pressure Method

ASTM C 260 (2001) Air-Entraining Admixtures for Concrete

ASTM C 295 (2003) Petrographic Examination of Aggregates for Concrete

ASTM C 309 (2003) Liquid Membrane-Forming Compounds for Curing Concrete

ASTM C 31/C 31M (2003a) Making and Curing Concrete Test Specimens in the Field

ASTM C 33 (2003) Concrete Aggregates

ASTM C 39 (1993a) Compressive Strength of Cylindrical Concrete Specimens

ASTM C 42/C 42M (2004) Obtaining and Testing Drilled Cores and Sawed Beams of Concrete

ASTM C 494/C 494M (2004) Chemical Admixtures for Concrete

ASTM C 618 (2003) Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete

ASTM C 881 (1999) Epoxy-Resin-Base Bonding Systems for Concrete

ASTM C 920 (2002) Elastomeric Joint Sealants

ASTM C 94/C 94M (2004a) Ready-Mixed Concrete

ASTM C 989 (2004) Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars

ASTM D 1190 (1997) Concrete Joint Sealer, Hot-Applied Elastic Type

ASTM D 1751 (1999) Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)

PS1 U.S. DEPARTMENT OF COMMERCE (DOC)  
(1995) Construction and Industrial Plywood (APA V995)

### 1.03 DEFINITIONS

- A. "Cementitious material" as used herein shall include all Portland cement, pozzolan, fly ash, and ground iron blast-furnace slag.
- B. "Exposed to public view" means situated so that it can be seen from eye level from a public location after completion of the building. A public location is

accessible to persons not responsible for operation or maintenance of the building.

#### **1.04 SUBMITTALS**

The following shall be submitted in accordance with Section 01300, "Submittals."

**A. Shop Drawings**

1. Reinforcing steel - Reproductions of contract drawings are unacceptable. ACI SP-66. Indicate bending diagrams, assembly diagrams, splicing and laps of bars, shapes, dimensions, and details of bar reinforcing, accessories, and concrete cover. Do not scale dimensions from structural drawings to determine lengths of reinforcing bars.

**B. Product Data**

1. Materials for curing concrete
2. Epoxy bonding compound

**C. Design Data**

1. Concrete mix design - Thirty days minimum prior to concrete placement, submit a mix design for each strength and type of concrete. Submit a complete list of materials including type; brand; source and amount of cement, fly ash, pozzolans, ground slag, and admixtures; and applicable reference specifications. Provide mix proportion data using at least three different water-cement ratios for each type of mixture, which will produce a range of strength encompassing those required for each class and type of concrete required. If source material changes, resubmit mix proportion data using revised source material. No material shall be provided unless proven by trial mix studies to meet the requirements of this specification, unless otherwise approved in writing by Chatham County. The submittal shall clearly indicate where each mix design will be used when more than one mix design is submitted. Submit additional data regarding concrete aggregates if the source of aggregate changes. In addition, copies of the fly ash, and pozzolan test results shall be submitted. The approval of fly ash, and pozzolan test results shall have been within 6 months of submittal date. Obtain acknowledgement of receipt prior to concrete placement.

**D. Test Reports**

1. Concrete mix design - Submit copies of laboratory test reports showing that the mix has been successfully tested to produce concrete with the properties specified and that mix will be suitable for the job conditions. The laboratory test reports shall include mill test and all other test for cement, aggregates, and admixtures. Provide maximum nominal aggregate size, gradation analysis, percentage retained and passing

sieve, and a graph of percentage retained verses sieve size. Test reports shall be submitted along with the concrete mix design. Obtain approval prior to concrete placement.

2. Fly ash - Submit test results in accordance with ASTM C 618 for fly ash.
3. Aggregates - ASTM C 227 for potential alkali-silica reactions, ASTM C 295 for petrographic analysis.
4. Compressive strength tests

E. Certificates

1. Testing - Qualifications of the independent testing laboratory for approval.

#### **1.05 MODIFICATION OF REFERENCES**

Accomplish work in accordance with ACI publications except as modified herein. Consider the advisory or recommended provisions to be mandatory, as though the word "shall" had been substituted for the words "should" or "could" or "may," wherever they appear. Interpret reference to the "Building Official," the "Structural Engineer," and the "Architect/Engineer" to mean the Chatham County.

#### **1.06 DELIVERY, STORAGE, AND HANDLING**

Do not deliver concrete until forms, reinforcement, embedded items, and chamfer strips are in place and ready for concrete placement. ACI 301 for job site storage of materials. Protect materials from contaminants such as grease, oil, and dirt. Ensure materials can be accurately identified after bundles are broken and tags removed.

- A. Reinforcement - Store reinforcement of different sizes and shapes in separate piles or racks raised above the ground. Protect from contaminants such as grease, oil, and dirt. Ensure bar sizes can be accurately identified after bundles are broken and tags removed.

### **PART 2 – PRODUCTS**

#### **2.01 MATERIALS FOR FORMS**

Provide wood, plywood, or steel. Use plywood or steel forms where a smooth form finish is required. Lumber shall be square edged or tongue-and-groove boards, free of raised grain, knotholes, or other surface defects. Plywood: PS1, B-B concrete form panels or better or AHA A135.4, hardboard for smooth form lining. Steel form surfaces shall not contain irregularities, dents, or sags.

#### **2.02 FORM TIES AND ACCESSORIES**

The use of wire alone is prohibited. Form ties and accessories shall not reduce the effective cover of the reinforcement.

## 2.03 CONCRETE

### A. Contractor-Furnished Mix Design

ACI 211.1, ACI 301, and ACI 318M/318RM except as otherwise specified. The compressive strength ( $f_c$ ) of the concrete for each portion of the structure(s) shall be as indicated and as specified below.

Location	$f_c$ (Min. 28 Day Comp. Strength) (psi)	ASTM C 33 Maximum Nominal Aggregate (Size No.)	Range of Slump (inches)	Maximum Water- Cement Ratio (by weight)	Air Entr. (percent)	Minimum Cementitious Material (lb/cy)	Minimum Portland Cement (lb/cy)
All areas	5,000	57	4 to 5	0.40	6.0	675	505

Maximum slump shown above may be increased 1 inch for methods of consolidation other than vibration. Slump may be increased to 8 inches when super-plasticizers are used. Provide air entrainment using air-entraining admixture. Air entrainment shall be within plus or minus 1.5 percent of the value specified.

- B. Mix Proportions for Normal Weight Concrete - Trial design batches, mixture proportioning studies, and testing requirements for various classes and types of concrete specified shall be the responsibility of the Contractor. Mixture proportions shall be based on compressive strength as determined by test specimens fabricated in accordance with ASTM C 192/C 192M and tested in accordance with ASTM C 39. Samples of all materials used in mixture proportioning studies shall be representative of those proposed for use in the project and shall be accompanied by the manufacturer's or producer's test report indicating compliance with these specifications. Trial mixtures having proportions, consistencies, and air content suitable for the work shall be made based on methodology described in ACI 211.1. The trial mixture shall use at least three different water-cement ratios for each type of mixture, which will produce a range of strength encompassing those required for each class and type of concrete required on the project. The maximum water-cement ratio required will be based on equivalent water-cement ratio calculations as determined by the conversion from the weight ratio of water to cement plus pozzolan, and ground granulated blast-furnace slag by weight equivalency method. Laboratory trial mixture shall be designed for maximum permitted slump and air content. Each combination of material proposed for use shall have separate trial mixture, except for accelerator or retarder use can be provided without separate trial mixture. The temperature of concrete in each trial batch shall be reported. For each water-cement ratio, at least three test cylinders for each test age shall be made and cured in accordance with ASTM C 192/C 192M and tested in accordance with ASTM C 39 for 7 and 28 days. From these results, a curve shall be plotted showing the relationship between water-cement ratio and strength for each set of trial mix studies. In addition a curve shall be plotted showing the relationship between 7 and 28 day strengths.

- C. Required Average Strength of Mix Design - The selected mixture shall produce an average compressive strength exceeding the specified strength by the amount indicated in ACI 301. When a concrete production facility has a record of at least 15 consecutive tests, the standard deviation shall be calculated and the required average compressive strength shall be determined in accordance with ACI 301. When a concrete production facility does not have a suitable record of tests to establish a standard deviation, the required average strength shall be as 6,200 psi:

## **2.04 MATERIALS**

- A. Cement - ASTM C 150, Type II or ASTM C 595/C595M, Type IP(MS).
- B. Fly Ash and Pozzolan - ASTM C 618, Type N, F, or C, except that the maximum allowable loss on ignition shall be 6 percent for Types N and F. Add with cement.
- C. Ground Iron Blast-Furnace Slag - ASTM C 989, Grade 120.
- D. Water - Water shall be fresh, clean, and potable; free from injurious amounts of oils, acids, alkalis, salts, organic materials, or other substances deleterious to concrete.
- E. Aggregates - ASTM C 33, except as modified herein. Furnish aggregates for exposed concrete surfaces from one source. Aggregates shall not contain any substance which may be deleteriously reactive with the alkalis in the cement.
- F. Nonshrink Grout - Grout should be in accordance with ASTM C 1107. For all non-shrink grout, provide high strength non-shrink grout manufactured by Five Star or an owner approved equal.
- G. Admixtures
  - 1. Air-Entraining - ASTM C 260
  - 2. Accelerating - ASTM C 494, Type C
  - 3. Retarding - ASTM C 494, Type B, D, or G
  - 4. Water Reducing - ASTM C 494, Type A, E, or F
  - 5. High Range Water Reducer (HRWR) (Superplasticizers) - ASTM C 494, Type F and ASTM C 1017
  - 6. Calcium Nitrite Corrosion Inhibitor - ASTM C 494, Type C  
Calcium Nitrite Corrosion Inhibitor shall be added to the concrete mix. The admixture shall consist of a Corrosion Inhibitor at a rate of 3.5 gallons per cubic yard. Any air-entraining, water-reducing, and/or set-controlling admixtures used in the production of concrete mixtures for concrete shall be compatible with calcium nitrite solutions. The Contractor shall strictly adhere to the manufacturer's written recommendations regarding the use of the admixture including storage, transportation, and method of mixing.



The calcium nitrite, which acts as an accelerator, may be used in conjunction with the retarder to control the set of concrete, as per manufacturer's recommendation.

7. Anti-Washout Admixture - When concrete will be cast in water, provide V-MAR 3 anti-washout admixture manufactured by Grace Construction Product or an owner approved equal. Provide an anti-washout admixture dosage to achieve a maximum 5% loss of weight. Calcium chloride shall not be used as an admixture.

H. Materials for Curing Concrete

1. Impervious Sheeting - ASTM C 171; waterproof paper, clear or white polyethylene sheeting, or polyethylene-coated burlap.
2. Pervious Sheeting - AASHTO M 182.
3. Liquid Membrane-Forming Compound - ASTM C 309, white-pigmented, Type 2, Class B.

- I. Liquid Chemical Sealer-Hardener Compound - Compound shall be magnesium fluorosilicate which when mixed with water seals and hardens the surface of the concrete. Do not use on exterior slabs exposed to freezing conditions. Compound shall not reduce the adhesion of waterproofing, or other material applied to concrete.

- J. Epoxy Bonding Compound - ASTM C 881. Provide Type I for bonding hardened concrete to hardened concrete and Type II for bonding freshly mixed concrete to hardened concrete. Provide Grade 1 or 2 for horizontal surfaces and Grade 3 for vertical surfaces. Provide Class A if placement temperature is below 40 degrees F; Class B if placement temperature is between 40 and 60 degrees F; or Class C if placement temperature is above 60 degrees F.

## 2.05 REINFORCEMENT

- A. Reinforcing Bars - ACI 301 unless otherwise specified. ASTM A 615/A 615M and ASTM A 617/A 617M with the bars marked A, S, W, Grade
- B. Mechanical Reinforcing Bar Connectors - ACI 301. Provide 125 percent minimum yield strength of the reinforcement bar.
- C. Wire - ASTM A 82 or ASTM A 496.
- D. Reinforcing Bar Supports - Provide bar ties and supports of coated or non corrodible material.

## **PART 3 – EXECUTION**

### **3.01 FORMS**

ACI 301. Provide forms, shoring, and scaffolding for concrete placement. Set forms mortar-tight and true to line and grade. Chamfer above grade exposed joints, edges, and external corners of concrete 0.75 inch unless otherwise indicated. Provide formwork with clean-out openings to permit inspection and removal of debris. Forms submerged in water shall be watertight.

- A. Coating - Before concrete placement, coat the contact surfaces of forms with a nonstaining mineral oil, nonstaining form coating compound, or two coats of nitrocellulose lacquer. Do not use mineral oil on forms for surfaces to which adhesive, paint, or other finish material is to be applied.
- B. Removal of Forms and Supports - After placing concrete, forms shall remain in place for the time periods specified in ACI 347R. Prevent concrete damage during form removal.
  - 1. Special Requirements for Reduced Time Period - Forms may be removed earlier than specified if ASTM C 39 test results of field-cured samples from a representative portion of the structure indicate that the concrete has reached a minimum of 85 percent of the design strength.
- C. Reshoring - Reshore concrete elements where forms are removed prior to the specified time period. Do not permit elements to deflect or accept loads during form stripping or reshoring. Forms on walls, or other load-bearing members may be stripped after 2 days if loads are not applied to the members. After forms are removed, slabs and beams over 10 feet in span and cantilevers over 4 feet shall be reshored for the remainder of the specified time period in accordance with paragraph entitled "Removal of Forms." Perform reshoring operations to prevent subjecting concrete members to overloads, eccentric loading, or reverse bending. Reshoring elements shall have the same load-carrying capabilities as original shoring and shall be spaced similar to original shoring. Firmly secure and brace reshoring elements to provide solid bearing and support.

### **3.02 FORMED SURFACES**

- A. Tolerances - ACI 347R and as indicated.
- B. As-Cast Form - Provide form facing material producing a smooth, hard, uniform texture on the concrete. Arrange facing material in an orderly and symmetrical manner and keep seams to a practical minimum. Support forms as necessary to meet required tolerances. Material with raised grain, torn surfaces, worn edges, patches, dents, or other defects which will impair the texture of the concrete surface shall not be used.

### **3.03 PLACING REINFORCEMENT AND MISCELLANEOUS MATERIALS**

ACI 301. Provide bars, wire ties, supports, and other devices necessary to install and secure reinforcement. Reinforcement shall not have rust, scale, oil, grease, clay, or

foreign substances that would reduce the bond. Rusting of reinforcement is a basis of rejection if the effective cross-sectional area or the nominal weight per unit length has been reduced. Remove loose rust prior to placing steel. Tack welding is prohibited.

- A. Reinforcement Supports - Place reinforcement and secure with galvanized or non corrodible chairs, spacers, or metal hangers. For supporting reinforcement on the ground, use concrete or other non corrodible material, having a compressive strength equal to or greater than the concrete being placed.
- B. Splicing - As indicated. For splices not indicated ACI 301. Do not splice at points of maximum stress.
- C. Cover - ACI 301 for minimum coverage, unless otherwise indicated.
- D. Construction Joints - Locate joints to least impair strength. Location of construction joints shall be approved by Chatham County. Continue reinforcement across joints unless otherwise indicated.

#### **3.04 BATCHING, MEASURING, MIXING, AND TRANSPORTING CONCRETE**

ASTM C 94/C 94M, ACI 301, ACI 302.1R, and ACI 304R, except as modified herein. Batching equipment shall be such that the concrete ingredients are consistently measured within the following tolerances: 1 percent for cement and water, 2 percent for aggregate, and 3 percent for admixtures. Furnish mandatory batch ticket information for each load of ready mix concrete.

- A. Measuring - Make measurements at intervals as specified in paragraphs entitled "Sampling" and "Testing."
- B. Mixing - ASTM C 94/C 94M and ACI 301. Machine mix concrete. Begin mixing within 30 minutes after the cement has been added to the aggregates. Reduce mixing time and place concrete within 60 minutes if the air temperature is greater than 85 degrees F except as follows: if set retarding admixture is used and slump requirements can be met, limit for placing concrete may remain at 90 minutes. Additional water may be added, provided that both the specified maximum slump and water-cement ratio are not exceeded. When additional water is added, an additional 30 revolutions of the mixer at mixing speed is required. If the entrained air content falls below the specified limit, add a sufficient quantity of admixture to bring the entrained air content within the specified limits. Dissolve admixtures in the mixing water and mix in the drum to uniformly distribute the admixture throughout the batch.
- C. Transporting - Transport concrete from the mixer to the forms as rapidly as practicable. Prevent segregation or loss of ingredients. Clean transporting equipment thoroughly before each batch. Do not use aluminum pipe or chutes. Remove concrete which has segregated in transporting and dispose of as directed.

### 3.05 PLACING CONCRETE

Place concrete as soon as practicable after the forms and the reinforcement have been inspected and approved. Do not place concrete when weather conditions prevent proper placement and consolidation; in uncovered areas during periods of precipitation; or in standing water. Prior to placing concrete, remove dirt, construction debris, water, snow, and ice from within the forms. Deposit concrete as close as practicable to the final position in the forms. Do not exceed a free vertical drop of 3 feet from the point of discharge. Place concrete in one continuous operation from one end of the structure towards the other. Position grade stakes on 10 foot centers maximum in each direction when pouring interior slabs and on 20 foot centers maximum for exterior slabs.

- A. Footing Placement - Concrete for footings may be placed in excavations without forms upon inspection and approval by Chatham County. Excavation width shall be a minimum of 4 inches greater than indicated.
- B. Vibration - ACI 301 Furnish a spare, working, vibrator on the job site whenever concrete is placed. Consolidate concrete slabs greater than 4 inches in depth with high frequency mechanical vibrating equipment supplemented by hand spading and tamping. Consolidate concrete slabs 4 inches or less in depth by wood tampers, spading, and settling with a heavy leveling straightedge. Operate internal vibrators with vibratory element submerged in the concrete, with a minimum frequency of not less than 6000 impulses per minute when submerged. Do not use vibrators to transport the concrete in the forms. Insert and withdraw vibrators approximately 18 inches apart. Penetrate the previously placed lift with the vibrator when more than one lift is required. Place concrete in 18 inch maximum vertical lifts. External vibrators shall be used on the exterior surface of the forms when internal vibrators do not provide adequate consolidation of the concrete.
- C. Application of Epoxy Bonding Compound - Apply a thin coat of compound to dry, clean surfaces. Scrub compound into the surface with a stiff-bristle brush. Place concrete while compound is stringy. Do not permit compound to harden prior to concrete placement. Follow manufacturer's instructions regarding safety and health precautions when working with epoxy resins.
- D. Pumping - ACI 304R and ACI 304.2R. Pumping shall not result in separation or loss of materials nor cause interruptions sufficient to permit loss of plasticity between successive increments. Loss of slump in pumping equipment shall not exceed 2 inches. Concrete shall not be conveyed through pipe made of aluminum or aluminum alloy. Rapid changes in pipe sizes shall be avoided. Maximum size of coarse aggregate shall be limited to 33 percent of the diameter of the pipe. Maximum size of well rounded aggregate shall be limited to 40 percent of the pipe diameter. Samples for testing shall be taken at both the point of delivery to the pump and at the discharge end.
- E. Cold Weather - ACI 306.1. Do not allow concrete temperature to decrease below 50 degrees F Obtain approval prior to placing concrete when the ambient temperature is below 40 degrees F or when concrete is likely to be subjected to freezing temperatures within 24 hours. Cover concrete and provide sufficient heat to maintain 50 degrees F minimum adjacent to both the formwork and the

structure while curing. Limit the rate of cooling to 5 degrees F in any 1 hour and 50 degrees F per 24 hours after heat application.

- F. Hot Weather - ACI 305R. Maintain required concrete temperature using Figure 2.1.5 in ACI 305R to prevent the evaporation rate from exceeding 0.2 pound of water per square foot of exposed concrete per hour. Cool ingredients before mixing or use other suitable means to control concrete temperature and prevent rapid drying of newly placed concrete. Shade the fresh concrete as soon as possible after placing. Start curing when the surface of the fresh concrete is sufficiently hard to permit curing without damage. Provide water hoses, pipes, spraying equipment, and water hauling equipment, where job site is remote to water source, to maintain a moist concrete surface throughout the curing period. Provide burlap cover or other suitable, permeable material with fog spray or continuous wetting of the concrete when weather conditions prevent the use of either liquid membrane curing compound or impervious sheets. For vertical surfaces, protect forms from direct sunlight and add water to top of structure once concrete is set.

### **3.06 SURFACE FINISHES**

- A. Defects - Repair formed surfaces by removing minor honeycombs, pits greater than 1 square inch surface area or 0.25 inch maximum depth, or otherwise defective areas. Provide edges perpendicular to the surface and patch with nonshrink grout. Patch tie holes and defects when the forms are removed. Concrete with extensive honeycomb including exposed steel reinforcement, cold joints, entrapped debris, separated aggregate, or other defects which affect the serviceability or structural strength will be rejected, unless correction of defects is approved. Obtain approval of corrective action prior to repair. The surface of the concrete shall not vary more than the allowable tolerances of ACI 347R. Exposed surfaces shall be uniform in appearance and finished to a smooth form finish unless otherwise specified.
- B. Not Against Forms (Top of Walls) - Surfaces not otherwise specified shall be finished with wood floats to even surfaces. Finish shall match adjacent finishes.
- C. Formed Surfaces
  - 1. Tolerances - ACI 117 and as indicated.
  - 2. As-Cast Rough Form - Provide for surfaces not exposed to public view. Patch holes and defects and level abrupt irregularities. Remove or rub off fins and other projections exceeding 0.25 inch in height.

### **3.07 FLOOR AND SLAB FINISHES AND MISCELLANEOUS CONSTRUCTION**

ACI 302.1R, unless otherwise specified.

- A. Finish - Place, consolidate, and immediately strike off concrete to obtain proper contour, grade, and elevation before bleedwater appears. Permit concrete to attain a set sufficient for floating and supporting the weight of the finisher and equipment. If bleedwater is present prior to floating the surface, drag the excess

water off or remove by absorption with porous materials. Do not use dry cement to absorb bleedwater.

1. Floated - Use for exterior slabs where not otherwise specified. After the concrete has been placed, consolidated, struck off, and leveled, do not work the concrete further, until ready for floating. Whether floating with a wood, magnesium, or composite hand float, with a bladed power trowel equipped with float shoes, or with a powered disc, float shall begin when the surface has stiffened sufficiently to permit the operation. During or after the first floating, surface shall be checked with a 10 foot straightedge applied at no less than two different angles, one of which is perpendicular to the direction of strike off. High spots shall be cut down and low spots filled during this procedure to produce a surface level within 1/4 inch in 10 feet.

### **3.08 CURING AND PROTECTION**

ACI 301 unless otherwise specified. Begin curing immediately following form removal. Avoid damage to concrete from vibration created by blasting, pile driving, movement of equipment in the vicinity, disturbance of formwork or protruding reinforcement, and any other activity resulting in ground vibrations. Protect concrete from injurious action by sun, rain, flowing water, frost, mechanical injury, tire marks, and oil stains. Do not allow concrete to dry out from time of placement until the expiration of the specified curing period. Do not use membrane-forming compound on surfaces where appearance would be objectionable, on any surface to be painted, where coverings are to be bonded to the concrete, or on concrete to which other concrete is to be bonded. If forms are removed prior to the expiration of the curing period, provide another curing procedure specified herein for the remaining portion of the curing period. Provide moist curing for those areas receiving liquid chemical sealer-hardener or epoxy coating.

A. Moist Curing - Remove water without erosion or damage to the structure.

1. Ponding or Immersion - Continually immerse the concrete throughout the curing period. Water shall not be more than 20 degrees F less than the temperature of the concrete. For temperatures between 40 and 50 degrees F, increase the curing period by 50 percent.
2. Fog Spraying or Sprinkling - Apply water uniformly and continuously throughout the curing period. For temperatures between 40 and 50 degrees F, increase the curing period by 50 percent.
3. Pervious Sheeting - Completely cover surface and edges of the concrete with two thicknesses of wet sheeting. Overlap sheeting 6 inches over adjacent sheeting. Sheeting shall be at least as long as the width of the surface to be cured. During application, do not drag the sheeting over the finished concrete nor over sheeting already placed. Wet sheeting thoroughly and keep continuously wet throughout the curing period.
4. Impervious Sheeting - Wet the entire exposed surface of the concrete thoroughly with a fine spray of water and cover with impervious sheeting throughout the curing period. Lay sheeting directly on the concrete

surface and overlap edges 12 inches minimum. Provide sheeting not less than 18 inches wider than the concrete surface to be cured. Secure edges and transverse laps to form closed joints. Repair torn or damaged sheeting or provide new sheeting. Cover or wrap columns, walls, and other vertical structural elements from the top down with impervious sheeting; overlap and continuously tape sheeting joints; and introduce sufficient water to soak the entire surface prior to completely enclosing.

- B. Liquid Membrane-Forming Curing Compound - Seal or cover joint openings prior to application of curing compound. Prevent curing compound from entering the joint. Apply in accordance with the recommendations of the manufacturer immediately after any water sheen which may develop after finishing has disappeared from the concrete surface. Provide and maintain compound on the concrete surface throughout the curing period. Do not use this method of curing where the use of Figure 2.1.5 in ACI 305R indicates that hot weather conditions will cause an evaporation rate exceeding 0.2 pound of water per square foot per hour.
1. Application - Unless the manufacturer recommends otherwise, apply compound immediately after the surface loses its water sheen and has a dull appearance, and before joints are sawed. Mechanically agitate curing compound thoroughly during use. Use approved power-spraying equipment to uniformly apply two coats of compound in a continuous operation. The total coverage for the two coats shall be 200 square feet maximum per gallon of undiluted compound unless otherwise recommended by the manufacturer's written instructions. The compound shall form a uniform, continuous, coherent film that will not check, crack, or peel. Immediately apply an additional coat of compound to areas where the film is defective. Re-spray concrete surfaces subjected to rainfall within 3 hours after the curing compound application.
  2. Protection of Treated Surfaces - Prohibit pedestrian and vehicular traffic and other sources of abrasion at least 72 hours after compound application. Maintain continuity of the coating for the entire curing period and immediately repair any damage.
- C. Liquid Chemical Sealer-Hardener - Apply sealer-hardener to interior floors not receiving floor covering and floors located under access flooring. Apply the sealer-hardener in accordance with manufacturer's recommendations. Seal or cover joints and openings in which joint sealant is to be applied as required by the joint sealant manufacturer. The sealer-hardener shall not be applied until the concrete has been moist cured and has aged for a minimum of 30 days. Apply a minimum of two coats of sealer-hardener.
- D. Curing Periods - ACI 301, 21 days for concrete that will be in full-time or intermittent contact with seawater, salt spray, alkali soil or waters. Begin curing immediately after placement. Protect concrete from premature drying, excessively hot temperatures, and mechanical injury; and maintain minimal moisture loss at a relatively constant temperature for the period necessary for hydration of the cement and hardening of the concrete. The materials and methods of curing shall be subject to approval by Chatham County.

### 3.09 FIELD QUALITY CONTROL

- A. Sampling - ASTM C 172. Collect samples of fresh concrete to perform tests specified. ASTM C 31/C 31M for making test specimens.
- B. Testing - Testing shall be performed by an approved independent testing laboratory subject to approval.
  - 1. Slump Tests - ASTM C 143/C 143M. Take concrete samples during concrete placement. The maximum slump may be increased as specified with the addition of an approved admixture provided that the water-cement ratio is not exceeded. Perform tests at commencement of concrete placement, when test cylinders are made, and for each batch (minimum) or every 20 cubic yards (maximum) of concrete.
  - 2. Temperature Tests - Test the concrete delivered and the concrete in the forms. Perform tests in hot or cold weather conditions (below 50 degrees F and above 80 degrees F) for each batch (minimum) or every 20 cubic yards (maximum) of concrete, until the specified temperature is obtained, and whenever test cylinders and slump tests are made.
  - 3. Compressive Strength Tests - ASTM C 39. Make five test cylinders for each set of tests in accordance with ASTM C 31/C 31M. Precautions shall be taken to prevent evaporation and loss of water from the specimen. Test two cylinders at 7 days, two cylinders at 28 days, and hold one cylinder in reserve. Samples for strength tests of each mix design of concrete placed each day shall be taken not less than once a day, nor less than once for each 50 cubic yards of concrete. For the entire project, take no less than five sets of samples and perform strength tests for each mix design of concrete placed. Each strength test result shall be the average of two cylinders from the same concrete sample tested at 28 days. If the average of any three consecutive strength test results is less than  $f'_c$  or if any strength test result falls below  $f'_c$  by more than 500 psi, take a minimum of three ASTM C 42/C 42M core samples from the in-place work represented by the low test cylinder results and test. Concrete represented by core test shall be considered structurally adequate if the average of three cores is equal to at least 85 percent of  $f'_c$  and if no single core is less than 75 percent of  $f'_c$ . Locations represented by erratic core strengths shall be retested. Remove concrete not meeting strength criteria and provide new acceptable concrete. Repair core holes with nonshrink grout. Match color and finish of adjacent concrete.
  - 4. Air Content - ASTM C 173/C 173M or ASTM C 231 for normal weight concrete. Test air-entrained concrete for air content at the same frequency as specified for slump tests.

\*\*\*End of Section 03300\*\*\*



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 Ogeechee Farms Drainage Improvements at Ridgeland Road & Yemassee Road.  
(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

\_\_\_\_\_, \_\_\_\_\_ (herein after  
"Company"),

Title \_\_\_\_\_ Name of Bidder \_\_\_\_\_

in consideration of the privilege to bid/or propose on the following  
Chatham County project procurement Ogeechee Farms Drainage Improvements at  
Ridgeland Road & Yemassee Road. 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.  

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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.  

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

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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.  

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

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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.  

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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 \_\_\_\_\_

2008 by \_\_\_\_\_ representing him/herself to be

\_\_\_\_\_ of the company named herein.

\_\_\_\_\_  
Notary Public

My Commission expires:

\_\_\_\_\_

Resident State: \_\_\_\_\_

## Attachment D

### CONTRACTOR AFFIDAVIT AND AGREEMENT

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 contracting with (name of public employer) has registered with and is participating in a federal work authorization program\* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with (name of public employer), contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. 13-10-91 on the Subcontractor Affidavit provided in Rule 300-10-01-.08 or a substantially similar form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the (name of the public employer) at the time the subcontractor(s) is retained to perform such service.

\_\_\_\_\_  
EEV / Basic Pilot Program\* User Identification Number

\_\_\_\_\_  
BY: Authorized Officer or Agent  
(Contractor Name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title of Authorized Officer or Agent of Contractor

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN  
BEFORE ME ON THIS THE

\_\_\_\_ DAY OF \_\_\_\_\_, 200\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires:

\* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV / Basic Pilot

Program" operated by the U. S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

## SUBCONTRACTOR AFFIDAVIT

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 (name of public employer) has registered with and is participating in a federal work authorization program\* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603], in accordance with the applicability provisions and deadlines established in O.C.G.A. 13-10-91.

\_\_\_\_\_  
EEV / Basic Pilot Program\* User Identification Number

\_\_\_\_\_  
BY: Authorized Officer or Agent  
(Subcontractor Name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title of Authorized Officer or Agent of Subcontractor

\_\_\_\_\_  
Printed Name of Authorized Officer or Agent

SUBSCRIBED AND SWORN

BEFORE ME ON THIS THE

\_\_\_\_ DAY OF \_\_\_\_\_, 200\_\_

\_\_\_\_\_  
Notary Public

My Commission Expires:

\_\_\_\_\_  
\* As of the effective date of O.C.G.A. 13-10-91, the applicable federal work authorization program is the "EEV / Basic Pilot Program" operated by the U. S. Citizenship and Immigration Services Bureau of the U.S. Department of Homeland Security, in conjunction with the Social Security Administration (SSA).

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 of 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)

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(Signature)

---

(Date)

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

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

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**Attachment F**

**Construction Apprentice Program Documentation**

(must be submitted to Arneja Riley County MWBE Coordinator with 1<sup>st</sup> Pay Request)

Contractor \_\_\_\_\_

Name of Project \_\_\_\_\_

Contract No. \_\_\_\_\_

- 1) Contractor has contacted CAP office to determine availability of specific labor classes which may be utilized for the project:

Date of Inquiry	# of Available Participants
-----------------	-----------------------------

_____	_____
-------	-------

- 2) Anticipated number of CAP students that will be hired and related trade category:

# _____	Trade Category _____
# _____	Trade Category _____
# _____	Trade Category _____

- 3) If CAP students are not anticipated to be hired for this project, the contractor must briefly explain.

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Any questions regarding the Construction Apprentice Program and available participant labor should be directed to Tara Sinclair at (912) 604-9574.



## Attachment G

### Chatham County Minority and Women Business Enterprise Program Proposed MWBE 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 \_\_\_\_\_%      MWBE Combined \_\_\_\_\_%

The undersigned must 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 H

***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 City of Savannah 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\_\_\_\_

Alien Registration number for non-

Notary Public

My Commission Expires:

# # 1

## REFERENCE FORM

**REFERENCES - \$499,999 or less:** 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.

## # 2

### REFERENCE FORM

**REFERENCES - \$499,999 or less:** 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.

### # 3

#### REFERENCE FORM

**REFERENCES - \$499,999 or less:** 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.

LEGAL NOTICE

CC NO. 165075

Invitation to Bid

Sealed Bids will be received until **2:00 P.M.** on **NOVEMBER 10, 2011** and publicly opened in **Chatham County Purchasing & Contracting Department, at The Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia,** for: **BID NO : 11-0024-4 OGEECHEE FARMS DRAINAGE IMPROVEMENTS AT RIDGELAND ROAD AND YEMASSEE ROAD**

**PRE-BID CONFERENCE: 2:00 P.M., OCTOBER 27, 2011. A PreBid Conference will be held at the Chatham County Citizens Service Center, 1117 Eisenhower Drive, Suite C, Savannah, Georgia. You are encouraged to attend.**

Bid Packages and Plan sheets are available and **must be purchased from** Clayton Digital Reprographics (CDR) located at 1000-I Eisenhower Drive, Savannah, Georgia, 31406. CDR phone: 912-352-3880, fax 912-352-3881, e-mail: [cdrsouth@cdrepro.com](mailto:cdrsouth@cdrepro.com)

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>


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

Bid Bond **shall be 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 AGENT

SAVANNAH NEWS/PRESS INSERT: Oct. 10, 2011

Please send affidavit to:

Chatham County Purchasing & Contracting Department

P.O. Box 15180

Savannah, Georgia 31416

(912) 790-1622