



FULTON COUNTY PURCHASING DEPARTMENT

Winner 2000- 2005 Achievement of Excellence in
Procurement Award
National Purchasing Institute



Jerome Noble, Director

March 17, 2006

RE: # 06RFB48856K-RS, BUTTERFIELD LANE SEWER REPLACEMENT (S225)

Dear Bidders:

Attached is one (1) copy of Addendum 2, hereby made a part of the above referenced Invitation to Bid (ITB).

Except as provided herein, all terms and conditions in the bid referenced above remain unchanged and in full force and effect.

Sincerely,

Rholanda M. Stanberry

Chief Assistant Purchasing Agent



FULTON COUNTY PURCHASING DEPARTMENT
Winner 2000- 2005 Achievement of Excellence in Procurement Award
National Purchasing Institute

Jerome Noble, Director



March 18, 2006

ADDENDUM NUMBER 2
INVITATION TO BID # 06RFB48856K-RS

S225 - BUTTERFIELD LANE SEWER REPLACEMENT

Dear Vendors:

This Addendum No. 2 is in reference to **Invitation to Bid # 06RFB48856K-RS – S225 – Butterfield Lane Sewer Replacement Project** in support of the Fulton County Public Works Department. This Addendum provides additional information, requirements, terms and clarifications about this project. Included in this Addendum are comments and questions from bidders, with responses from Fulton County.

A. The BID DUE TIME AND DATE is hereby changed to: 11:00 A.M. Monday, April 10, 2006

B. The following are responses to bidder comments:

Comment 1. *The following items are missing in the specs:*

- a. Technical Section and Material Requirements for Pipebursting, Manhole Lining, Service Connections, CCTV, and trench stabilization.
- b. Standard details for pavement patches, manholes, service laterals, cleanouts and overlay.
- c. Minimum experience requirements for pipebursting and manhole lining.
- d. Explanation of Measurement and Payment for Pipebursting, Manhole Lining, Asphalt Patch, Overlay, and CCTV.

Responses:

- a. Included in this Addendum (No. 2).
- b. Fulton County Transportation uses Georgia Department Of Transportation (GDOT) standards and specifications as guidelines for paving and patching. Patching to be performed prior to curb-to-curb paving following completion of the sewer replacement work will be based on existing pavement conditions and subject to approval by Fulton County Transportation. Standard for manholes, service laterals, cleanouts and overlay are referenced in the original ITB, items included in this Addendum, or can be found in the FULTON COUNTY GEORGIA STANDARD SPECIFICATIONS FOR SANITARY SEWER CONSTRUCTION, available from Fulton County Public Works.
- c. Included in this Addendum (No. 2).
- d. Use the pipebursting specification provided in this Addendum (No. 2) and the bid sheet as provided and changed in previous Addendum No. 1.



FULTON COUNTY PURCHASING DEPARTMENT

Winner 2000- 2005 Achievement of Excellence in Procurement Award
National Purchasing Institute

Jerome Noble, Director



C. The following are responses to bidder questions:

Q1. What section of the Project is to receive open cut?

A1. Open cut will be used in the wetland area, and may also be required in some section(s) of the residential area.

Q2. Are Pipe Bursting Pits paid for under the Open Cut item?

A2. No.

Q3. What manholes are to be lined, raised and reconnected?

A3. Addendum No. 3, to be issued, will provide direction regarding manholes.

Q4. What permits are to be obtained by Contractor?

A4. Permitting for the traffic control and pavement work will be required from Fulton County Transportation. Other permitting may be required as the work progresses. The Contractor will be required to obtain any necessary permits except as specifically noted in the ITB and subsequent Addenda.

Q5. What is the minimum width of clearing required on easements?

A5. The Contractor will perform easement clearing as necessary to complete the scope of work, within the 20-foot easement area.

Q6. What type(s) of erosion control are required?

A6. Erosion and Sediment Control per SECTION 02125 is attached to this Addendum No. 2. The Contractor is required to provide erosion control as necessary to conform to the requirements of the Georgia Soil and Water Conservation Commission Manual for Erosion and Sediment Control in Georgia, Georgia EPD rules and regulations, and all other applicable rules, regulations, laws and ordinances.

Q7. Is the entire road to be overlaid? If so, do we pour the concrete cap back flush to the pavement?

A7. Yes to both questions.

Q8. Will concrete cap be paid under a separate Bid Item?

A8. No.

Q9. What is the type and thickness for the overlay?

A9. Refer to GDOT Standards and Specifications and obtain approval of overlay submittal from Fulton County Transportation.

Q10. Will milling be required?

A10. Yes.

Q11. Are the laterals to be connected at the main or the Right Of Way? If the R.O.W., then do we need to replace the service line and/or install the cleanouts?

A11. At the R.O.W. Replace the service line and install cleanouts.



FULTON COUNTY PURCHASING DEPARTMENT

Winner 2000- 2005 Achievement of Excellence in Procurement Award
National Purchasing Institute

Jerome Noble, Director



- Q12. Will the County consider paying for rock excavation by the Cubic Yard rather than Lump Sum? (This would result in a better value for the County).
- A12. Measurement and Payment for Rock Excavation was changed to be based on Cubic Yards in Addendum Number 1.
- Q13. What type of material is the existing line to be burst?
- A13. The existing line is believed to be mostly Vitrified Clay. The Contractor will inspect the existing line via CCTV and determine what materials are actually present.
- Q14. Did the CCTV show any areas that had been repaired with DIP?
- A14. CCTV has not been performed yet. Contractor will perform CCTV per ITB and Addenda.
- Q15. If DIP or steel case is encountered we assume the open cut required to remove it will be paid under the Open Cut Item. Is this correct?
- A15. Yes.
- Q16. IS the HDPE to be IPS or DIPS? What SDR Rating is required?
- A16. Refer to Section 02720 attached to this Addendum No. 2. DIPS.

D. The following changes are hereby made:

1. **Replace SECTION # 00100; INSTRUCTIONS TO BIDDERS**
With attached SECTION # 00100-R; INSTRUCTIONS TO BIDDERS
2. **Replace SECTION # 00500; INSURANCE REQUIREMENTS**
With attached SECTION # 00500-R; INSURANCE REQUIREMENTS
3. **Replace SECTION # 00600; SAMPLE CONTRACT AGREEMENT**
With attached SECTION # 00600-R; SAMPLE CONTRACT AGREEMENT
4. **Replace SECTION # 00700; GENERAL CONDITIONS**
With attached SECTION # 00700-R; GENERAL CONDITIONS
5. **Insert the following attached Sections:**
SECTION NO. 02125; EROSION AND SEDIMENTATION CONTROL
SECTION NO. 02225; TRENCH EXCAVATION AND BACKFILL
SECTION NO. 02575; REMOVING AND REPLACING PAVEMENT
SECTION NO. 02710; REHABILITATION OF SANITARY SEWER MANHOLES
SECTION NO. 02720; PIPEBURSTING METHOD



FULTON COUNTY PURCHASING DEPARTMENT

**Winner 2000- 2005 Achievement of Excellence in Procurement Award
National Purchasing Institute**

Jerome Noble, Director



The undersigned Bidder acknowledges receipt of this Addendum No. 2 by returning one (1) copy with the proposal by the bid due date and time. Failure to include a signed copy of this Addendum No. 2 with the proposal documents may render the Bid non-responsive.

Except as provided herein, all terms and conditions in the ITB referenced above shall remain unchanged and in full force and effect.

Sincerely,

Rholanda M Stanberry
Chief Assistant Purchasing Agent

ACKNOWLEDGMENT OF RECEIPT OF ADDENDUM NUMBER 2

COMPANY NAME: _____SIGNATURE: _____

NAME: _____TITLE: _____DATE: _____

S225 – BUTTERFIELD LANE SEWER REPLACEMENT**SECTION # 00100-R****INSTRUCTIONS TO BIDDERS****A. Contract Documents**

The Contract Documents include the Invitation to Bid, Instructions to Bidders, Contractor's Bid (including all documentation accompanying the Bid and any post-Bid documentation required by the County prior to the Notice of Award), Bonds, all Special Conditions, General Conditions, Supplementary Conditions, Specifications, Drawings and addenda, together with written amendments, change orders, field orders and the Construction Manager's written interpretations and clarifications issued in accordance with the General Conditions on or after the date of the Contract Agreement. Shop drawing submittals reviewed in accordance with the General Conditions, geotechnical investigations and soils report and drawings of physical conditions in or relating to existing surface structures at or contiguous to the site are not Contract Documents. The Contract Documents shall define and describe the complete work to which they relate.

B. Definitions: Where the following words or the pronouns used in their stead occur herein, they shall have the following meaning. If a conflict exists as to the meaning of a word, the definition existing in the General Conditions, if present, shall govern.

1. "**Contractor or Design/Builder or Design-Builder**" shall mean the party to the second part of the Contract Agreement or the authorized and legal representative of such party.
2. "**Contract Term**" shall mean the time specified in the contract for completion of the work.
3. "**County**" shall mean Fulton County, Georgia, a political subdivision of the State of Georgia, acting by and through the Chairman of its Board of Commissioners.
4. "**Change Order**" shall mean as is provided in the General Conditions.
5. "**Day**" shall mean a calendar day of twenty-four hours lasting from midnight of one day to midnight the next day.
6. "**Drawings**" shall mean, all of the drawings pertaining to the Contract and made part thereof, and also such Not For Construction drawings provided as part of this Contract. In the event of conflicting provisions, the Contract Documents will take precedence over the Drawings.
7. "**Liquidated Damages**" shall mean the amount per day specified in the Agreement, which amount shall be paid by the Contractor to the County for each act of non-compliance and/or non-performance by the Contractor in the execution of the contract.

8. **“Notice to Proceed”** shall mean a written communication issued by the County to the Contractor authorizing it to proceed with the work, establishing the date of commencement and completion of the work, and providing other direction to the Contractor.
 9. **"Products"** shall mean materials or equipment permanently incorporated into the work.
 10. **“Program Manager or Project Manager or Construction Manager”** shall mean the person or entity identified in writing by the County. The term shall be synonymous and shall mean Program Management/Construction Management Joint Venture. The County has contracted with the Parsons PM Team to provide program planning that establishes direction and performance goals for the implementation of numerous projects contained in the County's Capital Improvements Program. The Program Manager has oversight responsibility for the execution of this Program. The Project Manager has oversight responsibility for the administration of this Project. The Construction Manager is the County's agent for purposes of administering this Contract, and the sole point of contact for the Contractor between the Contractor and the County or its designated agents or representatives.
 11. **"Provide"** shall mean to furnish and install.
 12. **“Work”** shall mean all of the services specified, indicated, shown or contemplated by the contract documents, and furnishing by the Contractor of all materials, equipment, labor, methods, processes, construction and manufacturing materials and equipment, tools, plans, supplies, power, water, transportation and other things necessary to complete such services in accordance with the contract documents to insure a functional and complete facility.
- C. Bidder's Modification and Withdrawal of Bids:** A Bidder may modify or withdraw its bid by written request, provided that the request is received by the County prior to the bid due date and time at the address to which bids are to be submitted. Provided further, that in case of an electronic request (i.e. facsimile, e-mail, etc.) a written confirmation thereof over the authorized signature of the Bidder must be received by the County at the address to which original Bids are to be submitted within three (3) calendar days after issue of the electronic message. Following withdrawal of its bid, the Bidder may submit a new, providing delivery is affected prior to the established bid opening date and time. **No bid may be withdrawn after bid due date for sixty (60) calendar days.**
- D. Addenda and Interpretations:** No interpretations of the meaning of the Drawings, Specifications or other pre-bid documents will be made to any Bidder orally. Bidders requiring clarification or interpretation of the Bidding Documents shall make a request to Rholanda M. Stanberry, Chief Assistant Purchasing Agent no later than 2:00 PM Monday March 13, 2006. Written requests for clarification or interpretation may be mailed, hand delivered, e-mailed, or faxed to the Assistant Purchasing Agent at the address below, e-mail address or fax number. Telephone inquiries will not be accepted.

Rholanda M. Stanberry, Chief Assistant Purchasing Agent,
Department of Purchasing
Fulton County Public Safety Building
130 Peachtree Street, S.W., 1168
Atlanta, GA 30303
Fax: 404-335-9419
rholanda.stanberry@co.fulton.ga.us

Only communications from firms that are in writing and signed will be recognized by the County as duly authorized expressions on behalf of bidders. Any and all such interpretations and any supplemental instructions will be in the form of written Addenda to the Specifications which, and if any addenda are issued to this Invitation to Bid.

Site Examination: There will be no site visit for this project. However, bidders are encouraged to visit the route of the sewer line to be replaced on their own.

Bid: All Bids must be made on the Bid forms contained herein. The Bid shall be enclosed in a sealed envelope, addressed to Department of Purchasing, Fulton County Public Safety Building, 130 Peachtree Street, S.W., Suite 1168 Atlanta, Georgia 30303 and labeled "Bid for ITB-06RFB48856K-RS, Butterfield Lane Sewer Replacement.

THE BIDDER IS ALSO REQUIRED TO DISPLAY THE GEORGIA UTILITY CONTRACTOR LICENSE NUMBER ON THE OUTSIDE OF THE SEALED BID ENVELOPE.

REQUIRED SUBMITTALS: The bidder **must complete and execute** the following:

- Bid Form
- Bid Schedule
- Bid Bond
- Certification of Acceptance of Bid/Proposal Requirements
- Corporate or Partnership Certificate
- Non-Collusion Affidavit of Prime Bidder
- Non-Collusion Affidavit of Subcontractor
- Contract Compliance Forms, fully executed
 - Promise of Non-Discrimination (Exhibit A)
 - Employment Report (Exhibit B)
 - Schedule of Intended Subcontractor Utilization (Exhibit C)
 - Letter of Intent to Perform As a Subcontractor or Provide Materials or Services (Exhibit D)
 - Declaration Regarding subcontractor Practices (Exhibit E)
 - Joint Venture Disclosure Affidavit (Exhibit F)
 - Equal Business Opportunity (EBO) Plan

Any bids received after the stated time and date shall not be considered. It shall be the sole responsibility of the bidder to have his/her bid delivered to the Fulton County Department of Purchasing for receipt on or before the stated time and

date (section 00020). If a bid is sent by U.S. Mail, the bidder shall be responsible for its timely delivery to the Purchasing Department. Bids delayed by mail will not be considered, shall not be opened, and arrangements shall be made for their return at the bidder's request and expense.

The original signed bid with three (3) copies shall be submitted in a sealed package, clearly marked on the outside "Bid for the **06RFB48856K-RS, Butterfield Lane Sewer Replacement – S225.**

UTILITY CONTRACTORS. All Bidders shall comply with the requirements of O.C.G.A. § 43-14-8.2(h) which states:

After June 30, 1994, it shall be unlawful for any contracting body to open or consider any bid for utility contracting unless the bidder has obtained the license required by this Code section or intends to have the utility contracting work performed by another person who has obtained such license. The utility contractor's license number of the person who will perform the utility work shall be written on the face of the bid envelope, unless otherwise provided. If 50 percent or more of any multifaceted project being proposed is utility work, the bidder must have obtained a utility license and his or her number must be written on the face of the bid. (Code 198, § 43-14-8.2, enacted by Ga. L. 1989, P.175, §7; Ga. L. 1993, p.123, § 31; Ga. L. 1993, p.1339, §7; Ga. L. 1994, p.1, §1; Ga. L. 1994, p. 383, §4.)

ANY BIDDER FAILING TO COMPLY WITH THE REQUIREMENTS OF PLACING ITS UTILITY CONTRACTOR'S LICENSE NUMBER ON THE FACE OF THE BID ENVELOPE SHALL BE DEEMED NON-RESPONSIVE AND ITS BID SHALL NOT BE OPENED.

Bid shall be publicly opened, with only the names and total bid price of the bidders disclosed at the opening.

- E. **Bid and Contract Security:** A Bid Bond for an amount equal to five percent (5%) of the bid amount must accompany each Proposal. The bid bond shall be submitted in a separate, sealed envelope marked "Bid Bond".

Bids must be accompanied by a bid bond or certified check in an amount of five percent (5%) of the TOTAL AMOUNT of the base bid. The bid bond or certified check shall apply ONLY TO THIS BID. The bid name and contract number must appear on the security instrument. The bond must remain in full force and effect until the Bidder executes the final Contract. Bids not satisfying the bonding requirements of this project will be declared non-responsive.

Any bid bond, performance bond, payment bond, or security deposit required for public works construction contract shall be approved and filed with purchasing agent. At the option of the County, if the surety named in the bond is other than a surety company authorized by law to do business in this state pursuant to a current certificate of authority to transact surety business by the Commissioner of Insurance, such bond shall not be approved and filed unless such surety is on the United States Department of Treasury's list of approved bond sureties.

A Purchasing Agent shall approve as to form and as to the solvency of the surety any bid bond, performance bond, or payment bond required by this. In the case of a bid bond, such approval shall be obtained prior to acceptance of the bid or proposal. In the case of payment bonds and performance bonds, such approval shall be obtained prior to the execution of the contract.

Whenever, in the judgment of the County:

- (1) Any surety on a bid, performance, or payment bond has become insolvent;
- (2) Any corporation surety is not longer certified or approved by the Commissioner of Insurance to do business in the state; or
- (3) For any cause there are no longer proper or sufficient sureties on any or all the bonds

The County may require the contractor to strengthen any or all of the bonds or to furnish a new or additional bond or bonds within ten days. Thereupon, if so ordered by the County, all work on the contract shall cease unless such new or additional bond or bonds are furnished. If such bond or bonds are not furnished within such time, the County may terminate the contract and complete the same as the agent of and at the expense of the contractor and his or her sureties.

As a condition of responsiveness the bidder must contain a Bid Bond for an amount equal to 5% of the bid amount. The Bid Bond shall be included in a separate envelope marked on the outside "Bid Bond". Checks or letters of credit of any type will not be accepted. A certified cashier's check will be acceptable. Provide a completed and fully executed Bid Bond. When the bidder's package is opened, a purchasing agent will verify the presence of the Bid Bond and remove it from the Proposal Package.

If the bidder withdraws its bid from the competition after the selection of its bid for a reason not authorized by Georgia law, the County will proceed on the Bid Bond, along with any other available remedies.

The Surety of the Bid Bond shall be from a surety company authorized to do business in the State of Georgia, shall be listed in the Department of Treasury Circular 570, and shall have an underwriting limitation in excess of 100% of the bid amount. The Bonds and Surety shall be subject to approval by the County Attorney.

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

- F. **Right to Reject Bids:** The County reserves the right to reject any or all bids and to waive informalities. No bids will be received after the time set for opening bids. Any unauthorized conditions, limitations or provisions attached to the Bid, except as provided herein, will render it informal and may cause its rejection. Unbalanced bids will be subject to rejection. Any bidder may withdraw his/her bid, either personally or by telegraphic or written request, at any time prior to the scheduled closing time for receipt of bids. Telegraphic or written requests for withdrawal must be in the possession of the County prior to the closing time for receipt of bids.

- G. **Applicable Laws:** All applicable laws and regulations of the State of Georgia and ordinances and regulations of Fulton County shall apply. Protestors shall seek resolution of their complaints in the manner provided in the Fulton County Code of Laws §2-324, which is incorporated by reference herein.
- H. **Examination of Contract Documents:** Prospective bidders shall examine the contract documents and before submitting a bid, shall make a written request to the County for an interpretation or correction of any ambiguity, in consistency or error therein which could be discovered by a bidder. At the bid opening each bidder shall be presumed to have read and be familiar with the contract documents.
- I. **Termination:** The County may terminate the contract resulting from this solicitation at any time the vendor fails to carry out the contract provisions, if in the opinion of the County, the performance of the contract is unreasonably delayed, or the vendor is in direct violation of the contract conditions. The County shall provide the vendor with notice of any conditions which violate or endanger the performance of the contract and, if after such notice the contractor fails to remedy such conditions within thirty (30) days, to the satisfaction of the County, the County may exercise their option in writing to terminate the Contract without further notice to the Contractor and order the Contractor to stop work immediately and vacate the premises. Vendor agrees by its bid submission that the County's decision is final and valid.
- J. **Indemnification and Hold Harmless Agreement:** The successful contractor will agree to indemnify, save harmless and defend the County, its agents, servants, and employees from all lawsuits, claims, demands, liabilities, losses and expenses for or on account of any injury or loss in connection with the work performed under this contract: Provided, however the Contractor shall not be liable for any damages resulting for the sole negligent or intentional acts or omission of the County and its employees, agents or representatives.
- K. **Bid Opening:** Bids will be opened in public and read aloud. All bidders are requested to be present at the opening.
- L. **Determination of Successful Bidder:** Fulton County desires to complete this work in a timely manner. The Contract will be awarded to the lowest responsive, responsible bidder(s), if awarded.
- 1) **Responsibility:** The determination of the bidder's responsibility will be made by the County based on whether the bidder meets the following minimum requirements:
 - a) The County reserves the right to reject any bid if the evidence submitted by, or investigation of, the bidder fails to satisfy the County that he/she is properly qualified to carry out the obligations of the Contract.
 - b) Is properly licensed to perform this type of work in Fulton County. Bidders must have a utility contractors license to perform this work. O.C.G.A. §43-14-8.3 (h)

- c) Maintains a permanent place of business individually or in conjunction with the prime contractor.
 - d) Has the appropriate and adequate technical experience. Designated Project Manager must be proficient in all aspects of contracted work.
 - e) Has adequate personnel and equipment to do the work expeditiously.
 - f) Has suitable financial means to meet obligations incidental to the work.
- 2) **Responsiveness:** The determination of responsiveness will be made by the County based on a consideration of whether the bidder has submitted a complete Bid form without irregularities, excisions, special conditions, or alternative bids for any item unless specifically requested in the Bid form.
- M. **Wage Clause:** Pursuant to 102-391, Each Contractor shall agree that in the performance of the Contract he will comply with all lawful agreements, if any, which the Contractor had made with any association, union, or other entity, with respect to wages, salaries, and working conditions, so as not to cause inconvenience, picketing, or work stoppage.
- N. **Notice of Award of Contract:** As soon as possible, and within ninety (90) days after receipt of bids, the County shall notify the successful Bidder of the Award of Contract.

The award shall be made by the Board of Commissioners of Fulton County to the lowest responsive, responsible bidder(s) as soon as possible after receipt of bids, taking into consideration price and the responsiveness to the requirements set forth in the Invitation for Bid. In such case, no claim shall be made by the selected Contractor(s) for loss of profit if the contract is not awarded or awarded for less work than is indicated and for less than the amount of his bid. The total of the awarded contract shall not exceed the available funds allocated for this project.

Should the County require additional time to award the contract, the time may be extended by mutual agreement between the County and the successful bidder. If an Award of Contract has not been made within ninety (90) days from the bid date or within the extension mutually agreed upon, the Bidder may withdraw the Bid without further liability on the part of either party.

Any award made by the Board of Commissioners as a result of this bid will begin from the date of the notice to proceed. The Bidder agrees hereby to commence work under this Contract, with adequate personnel and equipment, on a date to be specified in a written order of the Program Manager. The contract shall become effective on the Contract Date and shall continue in effect until the end of the term of the contract or until the project has been closed-out by the Program Manager unless earlier terminated pursuant to the termination provisions of the contract.

- O. **Execution of Contract Documents:** Upon notification of Award of Contract, the County shall furnish the Contractor the conformed copies of Contract Documents for execution by the Contractor and Contractor's surety.

Within ten (10) days after receipt the Contractor shall return all the documents properly executed by the Contractor and the Contractor's surety. Attached to each document shall be an original power-of-attorney for the person executing the bonds for the surety and certificates of insurance for the required insurance coverage.

After receipt of the documents executed by the Contractor and his surety with the power-of-attorney and certificates of insurance, the County shall complete the execution of the documents. Distribution of the completed documents will be made upon completion.

Should the contractor and/or surety fail to execute the documents within the time specified, the County shall have the right to proceed on the Bid Bond accompanying the bid.

If the County fails to execute the documents within the time limit specified, the Contractor shall have the right to withdraw the Contractor's bid without penalty.

Should an extension of any of the time limits stated above be required, this shall be done only by mutual agreement between both parties.

Any agreement or contract resulting from the acceptance of a bid shall be on a County approved document form. The County reserves the right to reject any agreement that does not conform to the Invitation for Bid and any County requirements for agreements and contracts. The County reserves the right to modify the agreement resulting from this bid upon the recommendation of the County Attorney.

- P. **Joint Venture** Any Bidder intending to respond to this solicitation as a joint venture must submit an executed joint venture agreement with its offer. The agreement must designate those persons or entities authorized to execute documents or otherwise bind the joint venture in all transactions with Fulton County, or be accompanied by a document, binding upon the joint venture and its constituent members, making such designation. Offers from joint ventures that do not include these documents will be rejected as being non-responsive.

- Q. **Contractors Compliance With All Assurances And/Or Promises Made In Response To Procurement:** Should any Bidder submit a response to the County promising to provide a certain level of service for either the scope of work, MFBE participation, or any other matter, including where such promise or assurance is greater than what is required by the procurement documents, and should this response containing the promise or assurance be accepted by the County and made a part of the Contract Documents, then this degree or level of service promised by the bidder relating to the scope of work, MFBE participation, or other matter shall be considered to be a material part of the Agreement between the bidder and the County, such that the bidder's failure to provide the agreed upon degree or level of service or participation shall be a material breach

of the Agreement giving the County just cause to terminate the Agreement for cause, pursuant to the General Conditions of the Agreement.

- R. **Availability Of Funding:** Any award of work, contract, or service for any portion of the S225, Butterfield Lane Sewer Replacement will be conditional and subject to Fulton County obtaining financing through the issuance of water and sewer revenue bonds where the proceeds from such bonds are in an amount sufficient to fund the S225, Butterfield Lane Sewer Replacement. This conditional award will not be in effect until Fulton County has been successful in raising the required funds for payment of the S225, Butterfield Lane Sewer Replacement. If it proves impossible for Fulton County to raise the required funds, the conditional award will be cancelled by Fulton County without any recourse by the responding entity. The submittal of a bid in response to any phase of the procurement for the S225, Butterfield Lane Sewer Replacement serves as acceptance of this condition by the entity responding to the procurement. Without waiving any of the conditions contained herein, and solely for informational purposes, please be aware that the Fulton County Board of Commissioners has taken legislative action authorizing the Fulton County Director of Finance to procure the services of the various professionals that will assist in obtaining the bond proceeds, and it is anticipated that the funding will be in place by the second or third quarter of 2006.

FULTON COUNTY PURCHASING DEPARTMENT
BID GENERAL REQUIREMENTS
06RFB48856K-RS - S225, BUTTERFIELD LANE SEWER REPLACEMENT

The following information pertains to the submission of a Bid to Fulton County, and contains instructions on how Bids must be presented in order to be considered. Listed below are the requirements for all Bidders interested in doing business with Fulton County.

1. The Bid sheets included in this Invitation to Bid (“Bid”) must be fully completed and returned with the Bid unless otherwise specified in writing by the Purchasing Department. Type or neatly print the date, company name, and the full legal name and title of the person(s) signing the Bid in the place provided at the bottom of each Bid sheet. Any additional sheets submitted must contain the same signature and Bidder information.
2. Original signature(s) must appear on each page of the Bid document. All signatures must be executed by person(s) having contracting authority for the Bidder.
3. Absolutely no fax Bids or reproduction Bids will be accepted, except that photocopies may be submitted in addition to the original when multiple copies of the Bid are specifically requested in the solicitation.
4. The envelope in which the Bid response is submitted must be sealed and clearly labeled with the Bid number, project title, due date and time, and the name of the company or individual submitting the proposal. Bids must be received by the opening date and time shown on this Bid in order to be considered. The Purchasing Agent has no obligation to consider Bids which are not in properly marked envelopes. Contract Compliance submittals shall be submitted in a separate sealed envelope or package.
5. The original and the required number of copies of the Bid must be returned to:

Rholanda M. Stanberry
Chief Assistant Purchasing Agent
Fulton County Purchasing Department
130 Peachtree Street, S.W., Suite 1168
Atlanta, Georgia 30303

Any inquiries, questions, clarifications or suggestions regarding this solicitation should be submitted in writing to the Purchasing Contact Person. Contact with any other County personnel in regard to a current solicitation is strictly prohibited in accordance with Fulton County “No Contact” policy outlined in Section 35.

6. Show information and prices in the format requested. Prices are to be quoted F.O.B. Destination, and must include all costs chargeable to the Contractor executing the Contract, including taxes. Unless otherwise provided in the

Contract, Fulton County shall have no liability for any cost not included in the price. The Contractor shall provide Fulton County the benefit through a reduction in price of any decrease in the Contractor's costs by reason of any tax exemption based upon Fulton County's status as a tax-exempt entity.

7. All prices Bid must be audited by the Bidder to ensure correctness before the Bid is submitted. The Bidder is solely responsible for the accuracy of information placed on a Bid sheet, including prices. Clerical or mathematical error is insufficient to void a successful Bid but a Bidder may withdraw a sealed Bid prior to opening without a penalty.
8. All prices must be submitted in the format requested and less all trade discounts. When multiple items are being Bid, Bidder must show both the unit price and the total extended price for each item. When applicable, the Bidder must include an additional lump sum Bid for groups or items. In the event a Bidder is offering an additional discount on groups of items, Bidder must indicate the total lump sum Bid for the particular group of items before any extra discount, the amount of extra discount, and the net total for the particular group. In the event of an extension error, unit pricing shall prevail.
9. By submitting a signed Bid, Bidder agrees to accept an award made as a result of that Bid under the terms and conditions spelled out in the Bid documents. In the event of a conflict between the different Bid documents, the County's cover Contract (if used) shall have precedence, followed in order by the Invitation to Bid, Purchase Order, Bid, Contractor's Warranty Agreement, Maintenance Agreement, and/or other Contractor provided agreements.
10. A Bidder may submit only one (1) Bid response for each specific Bid solicitation unless otherwise authorized in the specifications.
11. All prices submitted by the Bidder to Fulton County must be guaranteed by the authorized person(s) against any price increase for the time period designated in the Bid specifications, and Fulton County must be given the benefit of any price decrease occurring during such designated time period.
12. All items Bid must be new. Used, rebuilt and refurbished items will not be considered unless specifically authorized by Fulton County in the written specifications.
13. All Bidders must specify in the Bid response the earliest actual delivery date for each item unless otherwise specified in writing by Fulton County. The delivery date may be a factor in deciding the Bidder's capability to perform.
14. A successful Bidder's delivery ticket(s) and invoice(s) must list each item separately and must show Fulton County's purchase order number as well as the proper department and address to which delivery was made, as listed on the purchase order or in the Bidder's contract with Fulton County.
15. Unless clearly shown as "no substitute" or words to that effect, any items in this invitation to Bid which have been identified, described or referenced by a brand name or trade name are for reference only. Such identification is intended to be descriptive but not restrictive, and is to indicate the general

quality and characteristics of products that may be offered. Each item Bid must be individually identified as to whether it is a specified item or an equivalent item by typing or printing after the item(s): The brand name; model or manufacturer's number, or identification regularly used in the trade. Deviations from the specifications must be clearly and fully listed on the Bid sheet, including photographs or cuts, specifications, and dimensions of the proposed "alternate". Fulton County is the sole judge of "exact equivalent", or "alternate". The factors to be considered are: function, design, materials, construction, workmanship, finishes, operating features, overall quality, local service facilities, warranty terms and service, and other relevant features of item(s) Bid.

16. For all Bids, Fulton County reserves the right to request representative samples. If requested, samples must be delivered at the Bidder's cost within three (3) business days. Samples are submitted at the risk of the Bidder and may be subjected to destructive tests by Fulton County. Samples must be plainly tagged with Fulton County's Bid number, item name, manufacturer, and the name of the Bidder.
17. Item(s) Bid must be complete and ready to operate. No obvious omissions of components or necessary parts shall be made even though the specifications may not detail or mention them. Unit(s) must be furnished with factory installed equipment and must be comparable with the basic form, fit, and functional requirements which are all to be included in the base price as well as any other equipment included as standard by the manufacturer or generally provided to the buying public.
18. All successful Bidders must assume full responsibility for all item(s) damaged prior to F.O.B. Destination delivery and agree to hold harmless Fulton County of all responsibility for prosecuting damage claims.
19. All successful Bidders must assume full responsibility for replacement of all defective or damaged goods within thirty (30) days of notice by Fulton County of such defect or damage.
20. All successful Bidders must assume full responsibility for providing or ensuring warranty service on any and all items including goods, materials, or equipment provided to the County with warranty coverage. If a successful Bidder is not the manufacturer, all manufacturers' warranties must be passed through to Fulton County. The Bidder and not Fulton County is responsible for contacting the manufacturer of the warranty service provided during the warranty period and supervising the completion of the warranty service to the satisfaction of Fulton County.
21. As a successful Bidder providing any equipment which requires fitting and assembly, the Bidder shall be solely responsible for such installation being performed by a manufacturer's authorized or approved servicer or an experienced worker, utilizing workmanship of the highest caliber. The Bidder must verify all dimensions at the site, shall be responsible for their correctness, and shall be responsible for the availability of replacement parts when

- specified in writing by Fulton County in the specifications, purchase order, or other contract.
22. A successful Bidder is solely responsible for disposing of all wrappings, crating, and other disposable material upon deliver of item(s).
 23. All Bidders are required to be authorized distributors or regularly engaged in the sale or distribution of the type of goods, materials, equipment or services for which the Bidder is submitting a Bid response in addition, all Bidders are required to provide Fulton County with three (3) written references documenting the successful completion of Bids or contracts for the types of items including goods, materials, equipment, or services for which the Bidder is submitting a Bid response. In instances where a Bidder has never supplied such goods, material, equipment, or services before, the Bidder must submit with the Bid response a statement and supporting documentation demonstrating such expertise, knowledge, or experience to establish the Bidder as a responsible Bidder, capable of meeting the Bid requirements should an award be made. No exceptions to this provision will be made unless authorized in the Bid specifications.
 24. Bidders may be required to furnish evidence that they maintain permanent places of business of a type and nature compatible with their Bid proposal, and are in all respects competent and eligible vendors to fulfill the terms of the specifications. Fulton County may make such investigations as it deems necessary to determine the ability of the Bidder to perform such work, and reserves the right to reject any Bidder if evidence fails to indicate that the Bidder is qualified to carry out the obligation of the Contract and to complete the work satisfactorily.
 25. All Bidders must comply with all Fulton County Purchasing laws, policies, and procedures, non-discrimination in contracting and procurement ordinances, and relevant state and federal laws including but not limited to compliance with EEOC hiring guidelines and requirements under the Americans with Disabilities Act. Successful Bidder must obtain all permits, licenses, and inspections as required and furnish all labor, materials, insurance, equipment, tools, supervision, and incidentals necessary to accomplish the work in these specifications.
 26. If a successful Bidder is unable or unwilling to enter into a Contract with Fulton County subsequent to being granted an award, or who fails to perform in accordance with the Bid specifications the Bidder will be subject to damages and all other relief allowed by law.
 27. Successful Bidders contract directly with Fulton County and are the party or parties obligated to perform. Contracts may not be assigned and any failure to perform the Contract in accordance with the specifications will constitute a breach of Contract and may result in a Bidder being found to be “non-responsive” in the future.

28. In case of default by the successful Bidder, Fulton County may procure the articles for services from another source and hold the successful Bidder responsible for any resulting excess cost.
29. The County may award any Bid in whole or in part to one or more vendors or reject all Bids and/or waive any technicalities if it is in the best interests of the County to do so. In the event that all Bids are not rejected, Bids for items including goods, materials, equipment, and services will be awarded to the lowest “responsible” Bidder(s) as determined by Fulton County. Submitting the lowest Bid, as published at the Bid opening, does not constitute an award or the mutual expectation of an award of a Contract and purchase order. For purposes of this notice and the attached Bid sheets, a purchase order is a Contract to provide items including goods, materials, equipment, and services and is intended to have the full force and effect of a Contract. A breach of the terms and conditions of a purchase order constitutes a breach of Contract.
30. Bids for projects that are solicited pursuant to the Georgia Local Government Public Works Construction Law (O.C.G.A. § 36-91-1 et seq.) may withdrawn as follows:

Competitive sealed Bids (“Bid”) may not be revoked or withdrawn until 60 days after the time set by the governmental entity for opening of Bids. At the end of this time period, the Bid will cease to be valid, unless the Bidder provides written notice to the County prior to the scheduled expiration date that the Bid will be extended for a time period specified by the County.
31. In the evaluation of the Bids, any award will be subject to the Bid being:
 - Compliant to the specification – meets form, fit, and function requirements stated or implied in the specification.
 - Lowest cost to the County over projected useful life.
 - Administratively Compliant – Including all required bonds, insurance, established quality of work and general reputation, financial responsibility, relevant experience, and related criteria.
32. All proposals and Bids submitted to Fulton County are subject to the Georgia “Open Records Act”, Official Code of Georgia, Annotated (O.C.G.A.) §50-18-70 et seq.
33. All proposals and Bids submitted to Fulton County involving Utility Contracting are subject to the Georgia law governing licensing of Utility Contractors, O.C.G.A. §43-14-8.2(h). The Utility Contractor License number of the person who will perform the utility work shall be written on the face of the Bid envelope.
34. The apparent silence of this specification, and any supplement thereto, as to details, of the omission from it of a detailed description concerning any point, will be regarded as meaning only the best commercial practices are to prevail. Only materials of the highest quality, correct type, size, and design are to be

- used. All interpretations of this specification will be made upon the basis of this statement, with Fulton County interpretation to prevail.
35. It is the policy of Fulton County that the evaluation and award process for County contracts shall be free from both actual and perceived impropriety, and that contacts between potential vendors and County officials, elected officials and staff regarding pending awards of County contracts shall be prohibited.
- A. No person, firm, or business entity, however situated or composed, obtaining a copy of or responding to this solicitation, shall initiate or continue any verbal or written communication regarding this solicitation with any County officer, elected official, employee, or designated County representative, between the date of the issuance of this solicitation and the date of the County Manager's recommendation to the Board of Commissioners for award of the subject contract, except as may otherwise be specifically authorized and permitted by the terms and conditions of this solicitation.
 - B. All verbal and written communications initiated by such person, firm, or entity regarding this solicitation, if same are authorized and permitted by the terms and conditions of this solicitation, shall be directed to the Purchasing Agent.
 - C. Any violation of this prohibition of the initiation or continuation of verbal or written communications with County officers, elected officials, employees, or designated County representatives shall result in a written finding by the Purchasing Agent that the submitted Bid or proposal of the person, firm, or entity in violation is "non-responsive", and same shall not be considered for award.
36. Any Bidder intending to respond to this solicitation as a Joint Venture must submit an executed Joint Venture Agreement with this Bid. This agreement must designate those persons or entities authorized to execute documents or otherwise bind the Joint Venture in all transactions with Fulton County, or are accompanied by a document, binding upon the Joint Venture and its constituent members, making such designation. Bids from Joint Ventures that do not include these documents will be rejected as being "non-responsive".
37. Any Bidder intending to respond to this solicitation must complete all of the Procurement Affidavit Forms provided in this solicitation. Bids that do not include these completed documents will be rejected as being "non-responsive".

END OF SECTION # 00100-R

S225 – BUTTERFIELD LANE SEWER REPLACEMENT
SECTION # 00500-R
INSURANCE REQUIREMENTS

1.1 OWNER-CONTROLLED INSURANCE PROGRAM

1.1.1 INTRODUCTION

Fulton County has implemented an Owner-Controlled Insurance Program ("OCIP") that covers this Project. Certain relevant provisions of the County's OCIP are outlined below. This OCIP does not affect Fulton County Government's statutory immunity. Under the OCIP, the County shall **furnish certain portions** of the Workers' Compensation, General Liability, and Builder's Risk insurance associated with the County's construction projects. Insurance furnished under the OCIP covers the County, the Contractor and its Sub-Contractors of all tiers (with some exceptions, as described below), and other persons or interests as the County may designate in connection with the performance of the Work. As detailed below, the **Contractor** still provides certain other portions of insurance coverage not included in the OCIP.

1.1.2 DEFINITIONS SPECIFIC TO SECTION

1.1.2.1 "Owner-Controlled Insurance Program" (OCIP) means an insurance delivery method that assures the Contractor, and its Sub-Contractors of all tiers, and other persons or interests as the County may designate in connection with the performance of the work are insured for certain prescribed Statutory Workers' Compensation, Employers Liability and Commercial General Liability, and such other coverages as the County may in writing specifically add or delete for the Project.

1.1.2.2 "OCIP Administrator" means the administrator retained by the County to implement and administer the OCIP. The OCIP Administrator is Resurgens Risk Management/Willis.

1.1.2.3 The term “enrolled” applies to the entities covered under the OCIP. The Contractor is enrolled in the OCIP. The Contractor’s Sub-Contractors of all tiers shall be enrolled in the OCIP, provided in general that they are performing construction work at the Project site and that the work being performed is not temporary to the project and is an elemental component of the completed project. The Contractor shall assure that all enrolled Sub-Contractors of all tiers satisfy all safety program obligations, claim management and applicable insurance requirements relative to the OCIP. The Contractor understands that all Contractor obligations set forth in the County’s OCIP, whether performed directly by the Contractor or indirectly by its enrolled Sub-Contractors, are the responsibility of the Contractor. Whenever this Agreement establishes obligations for Contractor with respect to the OCIP, it shall also be deemed to establish obligations for enrolled Sub-Contractors. Certain exceptions apply to enrolled entities, as described below.

1.1.2.4 The term “non-enrolled” applies to the entities not covered under the OCIP. In general vendors, suppliers, fabricators, material dealers, drivers and others who merely transport, pick up, deliver or carry materials, personnel, parts or equipment or any other items or persons to or from the Project site shall be considered non-enrolled entities for the purpose of insurance coverage under the County’s OCIP. This non-enrolled OCIP Contractor status also applies to those contractors whose only work is temporary to the site and who are not involved in any project construction that is part of the work on the finished project. The Contractor shall assure that all non-enrolled Sub-Contractors of all tiers satisfy all safety program obligations, claim management and applicable insurance requirements relative to the OCIP.

1.1.2.5 “Agent” means the Fulton County’s designated Representative, as defined within this Agreement. For purposes of the OCIP, the County’s designated Representative shall serve as the County’s primary contact for communication with the Contractor related to the OCIP.

1.1.3 INSURANCE OBLIGATIONS OF THE COUNTY AND CONTRACTOR

1.1.3.1 INSURANCE PROVIDED BY THE COUNTY UNDER ITS OCIP.

(a) The County shall secure and thereafter maintain, except as otherwise provided herein, the insurance coverages described in Subparagraphs 1.1.3.2, 1.1.3.3, and 1.1.3.4 below, covering as insured parties the County, the Contractor and its Sub-Contractors of all tiers (except as detailed below), and such other persons or interests as the County may designate in connection with the performance of the Work, and with limits not less than those specified for each coverage (“OCIP insurance coverage”).

(b) No insurance coverage provided by the County's OCIP shall extend to the activities or products of the following:

(i) Any person and/or organization that fabricates and/or manufactures products, materials, and/or supplies away from the Project site(s).

(ii) Any non-enrolled architect, engineer or surveyor and their consultants except where required by the Contract Documents.

(iii) Truckers, material-delivery, vendors, suppliers, and operators (as independent contractors), whose operation(s) and/or employee(s) is/are engaged solely in the loading, hauling and/or unloading of material, supplies and/or equipment to or from the Project site(s).

(iv) Any employee(s) of the Contractor or an enrolled or non-enrolled Sub-Contractor of any tier, including employee(s) of truckers, material-delivery, vendors, suppliers, and operators (as independent contractors), which is/are engaged solely in the loading, hauling and/or unloading of material, supplies and/or equipment to or from the Project site(s).

(v) Any employee(s) of the Contractor or an enrolled Sub-Contractor of any tier that does not work and/or generate payroll at the Project site(s).

(vi) Any employee(s) of the Contractor or an enrolled Sub-Contractor of any tier, not specifically required to perform Work at the Project site(s), that occasionally visits the Project site(s) to make deliveries, pick up supplies and/or personnel, to perform supervisory and/or progress inspections, or for any other reason.

Any other entity specifically to be determined by the County to be excluded.

(viii) Any leased or temporary laborers.

(c) Unless herein otherwise specifically indicated, the policies set forth in Subparagraphs 1.1.3.2, 1.1.3.3 and 1.1.3.4 below shall cover only those operations of the insured parties performed at the Project site or sites incidental to the Work called for in this Owner-Contractor Agreement.

(d) The County assumes no obligation to provide insurance other than that evidenced by the policies referred to in Subparagraphs 1.1.3.2, 1.1.3.3 and 1.1.3.4. Furthermore, any obligation of the County to provide insurance under its OCIP is expressly limited to the insurance referred to in Subparagraphs 1.1.3.2, 1.1.3.3 and 1.1.3.4. The County, however, reserves the right to furnish insurance coverage of various types and limits, provided that such coverage shall not be less than that specified below (so long as such insurance and limits are reasonably available in the insurance market) and provided that the costs of such insurance shall be borne by the County.

1.1.3.2 WORKERS' COMPENSATION INSURANCE

Workers' Compensation insurance in statutory limits of the Workers' Compensation laws of the State of Georgia, with Coverage B - Employer's Liability, to limits of not less than one million dollars (\$1,000,000) covering operations of the insured parties at the Project site. Coverage under the Broad Form All States extension is also included. This insurance is primary for all occurrences at the Project site.

1.1.3.3 LIABILITY INSURANCE (EXCLUDING MOTOR VEHICLE LIABILITY)

Liability insurance (excluding Motor Vehicle Liability) under a Commercial General Liability insurance policy and covering the insured parties in connection with the performance of the Work at the Project site, including hazards of operations (explosion, collapse and underground exposures), independent contractors, employees as additional insureds, completed operations (for 5 years after final completion of the Work), contractual liability coverage (for contracts related to the Work), personal injury liability coverage, and excess Employer's Liability coverage for claims arising out of the Work hereunder, for personal injury, bodily injury, and property damage, in policies of insurance such that the total available limits to all insureds combined will not be less than twenty-five million dollars (\$25,000,000) combined single limits for each occurrence and aggregates, as applicable.

Notwithstanding the actual policy deductible, the Contractor shall be liable for a deductible not to exceed five thousand dollars (\$5,000) each occurrence, to the extent losses payable are attributable to, involve, or relate to the performance, actions, errors, omissions, or negligence of the Contractor or its Sub-Contractors, uninsured parties, or any other entity or person for whom it may be responsible. The Contractor's deductible shall include the costs of defense, including court costs and attorneys' fees of a covered OCIP claim and shall not be construed to affect the Contractor rights to indemnify the County under the contract. All such deductibles shall be collected as part of the Contract close-out process and final payment.

The insurance provided under the OCIP will not extend coverage for products liability to any insured party or uninsured party. However, Products/Completed Operations liability arising from manufacturing or assembly of items manufactured or assembled at the Project site, as required by the contract, is covered.

1.1.3.4 ALL RISK BUILDER'S RISK, INCLUDING TRANSIT

All Risk Builder's Risk, including transit and installation risks, insuring the interest of the County, the Contractor and its Sub-Contractors, providing coverage on an All Risk basis, including, but not limited to, coverage against

flood, fire, lightning, wind damage, hail, explosion, riot or civil commotion, aircraft and other vehicles, and collapse.

The policies for such insurance will be secured and maintained by the County in a form and amount as determined by Fulton County. The amount may be amended depending on the amount of a specific project.

Coverage will include materials, supplies and equipment that are intended for specific installation in the Work while such materials, supplies and equipment are located at the Project site, in transit or while temporarily located away from the Project site for the purpose of repair, adjustment or storage at the risk of one of the insured parties.

Except as otherwise provided in Subparagraph 1.1.3.4(c), this insurance will not include coverage for tools or clothing of workers, or tools, equipment, protective fencing, scaffolding, temporary structures, coffer damming, pipe stulling or bracing, or forms owned, rented or used by the Contractor, its Sub-Contractors, or uninsured parties and used in the performance of the Work, unless such items are specifically identified in this Agreement and their values declared under the Builder's Risk insurance policy.

The County, its officers, agents, employees and consultants rendering services at the Project site, and the OCIP Administrator will not be liable or responsible for loss or damage to the items excluded in Subparagraph 1.1.3.4(d), and the Contractor shall indemnify and hold harmless the County, its officers, agents, employees, its consultants rendering services at the Project site, the OCIP Administrator, and other Project contractors and their Sub-Contractors from claims or causes of action brought by any person or parties as a result of loss or damage to such excluded items.

The Builder's Risk policy will be endorsed waiving the carrier's rights of recovery under subrogation against the County, its officers, agents, employees and consultants rendering services at the Project site, the OCIP Administrator, and the Contractor and its Sub-Contractors, whose respective interests are insured under such policy.

Notwithstanding the actual policy deductible, the Contractor shall be liable for a deductible not to exceed five thousand dollars (\$5,000) each occurrence for all perils excluding theft and mysterious disappearance, and twenty-five thousand dollars (\$25,000) each occurrence for theft and mysterious disappearance. All such deductibles shall be collected as part of the Contract close-out process and final payment.

1.1.3.5 CONTRACTOR RETAINS VARIOUS OBLIGATIONS

Nothing contained herein, or in any document referenced herein, shall relieve, limit or be construed to relieve or limit the Contractor, its Sub-Contractors or uninsured parties of responsibility or obligations otherwise imposed by the Contract. The OCIP shall not be construed as limiting, among other things:

- (a) The extent to which the Contractor may be held legally responsible for damages to persons or property.
- (b) The Contractor's indemnity obligations under this Agreement.

1.1.3.6 CONTRACTOR RESPONSIBILITY TO REPAIR DEFECTIVE OR DAMAGED WORK

- (a) Notwithstanding the provisions of this Agreement, and until final acceptance of the Work by the County, the Contractor shall have full and complete charge and care of the Work or any portion thereof (including the Owner-furnished supplies, material, equipment or other items to be utilized or incorporated in the Work).
- (b) The Contractor shall rebuild, repair, restore and make good losses of, and injuries or damages to, the Work or any portion thereof (including the Owner-furnished supplies, material, equipment or other items to be utilized with, or incorporated in, the Work and which are in the Project site) before final acceptance of the Work. Such rebuilding, repair or restoration shall be at the Contractor's sole cost and expense provided, however, the County will make available applicable proceeds from the Builder's Risk policy provided by the County, as specified in Section 1.1.3.4.

1.1.3.7 ADDITIONAL INSURED

The Additional Insured on the County's OCIP policies shall include Fulton County; the County's officers, agents, employees, and consultants; the OCIP Administrator; and Contractors, including their Sub-Contractors of any tier (but excluding suppliers, vendors, material-delivery, truckers or haulers) whom Fulton County has contracted with and for whom the County has agreed to furnish coverage under the OCIP.

1.1.3.8 OWNER'S RIGHT TO AUDIT

- (a) The Contractor hereby warrants to the County the accuracy of the information provided on the OCIP Insurance Information Form submitted with its bid, and agrees that the County, its officers, agents, insurance carriers and the OCIP Administrator may audit the records of the Contractor and its Sub-Contractors to confirm the accuracy of the information provided, including, but not limited to, the accuracy of all estimated payrolls, and to ascertain any effect on insurance resulting from changes in the Work. The

audit will be held during the Contractor's normal business hours at the office of the Contractor or at another mutually agreeable location.

- (b) The County shall be entitled to credits in OCIP insurance premiums that may accrue as a result of the audit.
- (c) The Contractor shall maintain or cause to be maintained sufficient records as may be necessary to audit its compliance and its Sub-Contractors' compliance with the requirements of the OCIP.

1.1.3.9 ASSIGNMENT

The Contractor and each of its Sub-Contractors of any tier shall assign to the County all return premiums, premium refunds, dividends and other monies due or to become due in connection with the insurance provided by the County. The Contractor and its Sub-Contractors of any tier shall execute such other further documentation as may be required by the County to effectuate this assignment.

1.1.3.10 OCIP CLAIMS

The Contractor, its Sub-Contractors and uninsured parties shall assist the County, its agents, and the OCIP Administrator and provide the utmost cooperation in the adjustment of claims arising out of the operations conducted under, or in connection with, the Work and shall cooperate with the County's insurance carriers in claims and demands that arise out of the Work and that the insurance carriers are called upon to adjust or resist.

1.1.3.11 LIMITATIONS ON OCIP COVERAGES

Although the scope of coverages afforded under this program may provide coverage beyond the scope required by the Owner-Contractor Agreement in the absence of an OCIP, the County makes no warranty or representation that such broad coverage will remain in effect throughout the duration of the Work. The County further does not warrant or represent that the OCIP coverages constitute an insurance portfolio, which adequately addresses all the risk faced by the Contractor or its Sub-Contractor(s). The Contractor and Sub-Contractors of every tier shall satisfy themselves as to the existence, extent and adequacy of the OCIP coverages prior to the commencement of the Work. The cost to obtain any "extra" coverages shall be the responsibility of the Contractor. The County shall not assume any responsibility for the premium cost of any "extra" insurance. The County shall issue Certificates of Insurance and make available copies of specimen insurance policies at the time of the Notice to Proceed.

1.1.3.12 ALTERNATIVE INSURANCE

In the event the County, after commencement of the Work, is unable to furnish, or elects not to furnish or to continue to furnish, the insurance coverage herein described, and upon 30 days written notice from the County, the following shall be required:

- (a) The Contractor shall secure and maintain all, or as much of the insurance herein described, as the County designates, at the County's expense, and the County will thereafter no longer be obligated to furnish such insurance.
- (b) All insurance secured by the Contractor or its Sub-Contractors pursuant to this subparagraph shall be in policies subject to the prior written approval of the County as to form, content, limits of liability, cost and issuing company as outlined in the "Base Bid" version of this Section 00500-R, i.e., as if the OCIP had not been implemented for the Project.

1.1.3.13 PROCEDURES AND SERVICES

The Contractor shall fully comply with, and shall require its Sub-Contractors of any tier to fully comply with, all of said plans, procedures and services, including but not limited to, completion of all necessary applications for coverage, prompt and full compliance with all audit requests and claim reporting procedures, and full compliance with the safety, loss prevention and loss control programs implemented by, or at the request of the County.

1.1.3.14 INSURANCE NECESSARY FOR THE WORK, BUT COVERING OPERATIONS OUTSIDE THE OCIP

- (a) The Contractor shall, for the duration of this Agreement, provide and maintain insurance and shall require each Sub-Contractor to provide and maintain insurance of the type and in the limits as described in Paragraph 1.2, which is intended to cover employee injury, personal injury, bodily injury and property damage liability for ongoing operations work performed away from the Project site.
- (b) The insurance described in Subparagraphs 1.2.1.2.B (Motor Vehicle Liability) and 1.2.1.2.D (Professional Liability) shall apply to Work performed by both enrolled and non-enrolled entities both at and away from the Project site, and shall be provided and maintained for the duration of this Agreement. Such insurance shall name the parties required to secure same as insureds and shall be in a form and through issuing companies acceptable to the County. Such insurance shall contain a defense of suits provision.
- (c) The Contractor shall assure that all non-enrolled entities provide and maintain, for the duration of this Agreement, insurance of the type and in the limits as described in Paragraph 1.2, which shall cover those entities for

employee injury, personal injury, bodily injury, and property damage liability for any Work performed at the Project site.

1.1.3.15 CONTRACTOR OCIP OBLIGATIONS

- (a) The Contractor and each of its Sub-Contractors shall:
- (i) Furnish to Fulton County's designated Representative all information and documentation that the County may require from time to time, in connection with the issuance of policies under this Agreement, in such form and substance as the OCIP Administrator may prescribe.
 - (ii) Furnish to the County's designated Representative monthly certified payroll and accident summary reports on forms provided by the OCIP Administrator, and payroll records, as required.
 - (iii) Segregate their respective reports relating to the Work for which OCIP coverage is herein provided, from their records relating to other work for which such coverage is not provided.
 - (iv) Promptly comply with the recommendations of the OCIP insurance carriers, as submitted through the County's designated Representative.
- (b) The Contractor shall not violate or knowingly permit to be violated any conditions of the policies of insurance provided by the County under the terms of this Agreement, and shall at all times satisfy the requirements of the issuing insurance companies.
- (c) The Contractor shall assure that all OCIP requirements imposed upon and to be performed by the Contractor shall likewise be imposed upon, assumed and performed by each of its Sub-Contractors and uninsured parties with whom it or its Sub-Contractors have a contractual relationship and are performing work under the Contract.
- (d) The Contractor shall furnish each bidding and negotiating Sub-Contractor, vendor, supplier, material dealer or other person or business entity that may provide goods or services in connection with the Work, a copy of this document describing the insurance requirements for the Contractor, and its Sub-Contractors shall require each to impose the same requirement in their subcontracting and procurement procedures.
- (e) If the Contractor or any of its Sub-Contractors should fail to comply with the requirements of this document, the County may withhold payments due to the Contractor or suspend the Work until such time as the Contractor and its Sub-Contractors have performed such obligations to the reasonable satisfaction of the County.

- (f) The Contractor agrees that the Contract Sum includes all costs of complying with the OCIP, as herein described.

1.1.3.16 NOTICES, COSTS AND LOSSES

- (a) All policies of insurance that either the Contractor, its Sub-Contractors, or the County is required to secure and maintain, shall be endorsed to provide that the insurance company shall notify the County, the Contractor, and each Named Insured at least thirty (30) days prior to the effective date of any cancellation or modification of such policies.

The Contractor shall furnish to the County's designated Representative certificates of insurance for insurance required to be maintained by the Contractor and its Sub-Contractors, as provided herein. Prior to the issuance of the Notice to Proceed, the Contractor shall not be permitted on the Project site.

- (c) The County will pay the cost of the premiums for the insurance described above as being provided by the County, and the County will receive and pay, as the case may be, all adjustments in such costs, whether by way of dividends or otherwise. The Contractor shall execute such instruments of assignment as may be necessary to permit the County's receipt of such adjustments and shall cause all Sub-Contractors covered by such insurance to do the same.
- (d) The Contractor shall be responsible for the payment of the deductible amounts indicated in Subparagraphs 1.1.3.3 and 1.1.3.4. If the actual County-provided OCIP policies have deductible amounts greater than those indicated in Subparagraphs 1.1.3.3 and 1.1.3.4, such excess amounts will be paid by the Contractor.
- (e) The Contractor shall be responsible for all losses greater than OCIP policy limits.
- (f) Payments by the insurer for all losses covered under the All Risk Builder's Risk policy, as specified in Section 1.1.3.4, will be made to the County. The County will make proceeds from the Builder's Risk policy available to the Contractor for rebuilding work damaged by covered perils.

1.1.3.17 SUBROGATION AND WAIVER

- (a) The Contractor shall require all policies of insurance that are related to the Work and that are secured and maintained by the Contractor and its Sub-Contractors to include clauses providing that each underwriter and carrier shall waive all of their respective rights of recovery, under subrogation or

otherwise, against the County, its officers, agents, employees and consultants rendering services at the Project site, the OCIP Administrator, the Contractor and its Sub-Contractors, regardless of tier, and all other Project contractors and their Sub-Contractors, regardless of tier.

- (b) The Contractor waives all rights of recovery against its Sub-Contractors, the County, its officers, agents, employees and consultants rendering services at the Project site, the OCIP Administrator, and other Project contractors and their Sub-Contractors, regardless of tier, that the Contractor may have or acquire because of deductible clauses in or inadequacy of limits of policies of insurance that are in any way related to the Work and that are secured and maintained by the Contractor.
- (c) The Contractor shall require its Sub-Contractors of every tier to waive the rights of recovery in the same manner (as waived in the preceding paragraph by the Contractor) against the County, its officers, agents, employees and consultants rendering services at the Project site, the OCIP Administrator, the Contractor, and other Project contractors and their Sub-Contractors, regardless of tier.

1.1.3.18 COVERAGE DETERMINED BY POLICY

The coverages referred to above are set forth in full in the respective policy forms, and the foregoing descriptions of such policies are not intended to be complete, or to alter or amend any provision of the actual policies, and in matters, if any, in which the said description may be conflicting with such instruments, the provisions of the policies of the insurance shall govern.

1.2 CONTRACTOR'S LIABILITY INSURANCE

- 1.2.1 Pursuant to the exclusions of the Owner-Controlled Insurance Program (OCIP) described in Paragraph 1.1 above, the Contractor shall purchase and maintain during the life of this Agreement, from a company or companies licensed to do business in its agents and acceptable to the County, such insurance as shall fully protect him, the County, any other Professional Consultant or Architect or Engineer hired by the County, and any parties, consultants, or Sub-Contractors performing work covered by this Agreement from any and all claims, including those resulting from bodily injury (including accidental death), professional liability of the property damage (other than to the work itself) or personal injury which may arise or result from the Contractor's operations under this Agreement **which are not covered under the OCIP**, whether such operations be by himself or by any Sub-Contractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

- (a) Said insurance shall specifically provide coverage during the life of this Agreement to the County, its agents, any Professional Consultant or Architect or Engineer hired by the County, and any Sub-Contractor performing work covered by this Agreement for claims made by any persons,

including the employees and parties in privity of the contract with the Contractor, claiming injury as a result of the performance of the Project.

- (b) At a minimum, such insurance must include but not necessarily be limited to:
 - (i) Worker's Compensation and Employer's Liability insurance (**for all operations away from the Project site**);
 - (ii) Motor Vehicle Liability insurance, covering all motor vehicles, whether owned, non-owned, or hired (**for all operations both at and away from the Project site**);
 - (iii) Comprehensive (or Commercial) General Liability insurance, with Broad Form Liability endorsement. Comprehensive (or Commercial) General Liability policy with Broad Form Liability endorsement shall be further endorsed naming County, Program Manager, Construction Manager, and County's Professional Consultants as additional insured (**for all operations away from the Project site**).
 - (iv) Professional Liability insurance, specifying that the Contractor shall be responsible to the County for acts, errors and omissions of the Contractor's directors, officers, employees and parties in privity of the contract with the Contractor to perform a portion of the work, including their agents and employees (**for all operations both at and away from the Project site**). The Contractor shall require the architects and the engineers that are responsible for the design and engineering to purchase and maintain liability insurance with no less coverage than \$1,000,000.00 or 10% of the construction value of the Work, whichever is greater, throughout the duration of the project and for two years following the Date of Substantial Completion.

11.2.2 The insurance required by Subparagraph 1.2.1 above shall be written for not less than the following liability limits, or greater if required by law. Evidence of such insurance shall be provided PRIOR to the day of actual work being performed (refer to OCIP Enrollment procedures provided by the OCIP Administrator for more assistance, or contact Fulton County's designated Representative.)

(a) Worker's Compensation

Each Accident	GA Statutory Limits
Disease – Policy Limit	\$500,000
Disease – Each Employee	\$100,000
Employers Liability	\$1,000,000

General Liability

Bodily Injury/Property Damage	\$1,000,000
Personal Injury	\$1,000,000
General Aggregate	\$2,000,000

S225 – BUTTERFIELD LANE SEWER REPLACEMENT
SECTION # 00600-R
SAMPLE CONTRACT AGREEMENT

Contractor: _____ Project No. _____

Address: _____ Telephone: _____

Contact: _____ Facsimile: _____

THIS AGREEMENT is effective as of the _____ day of _____, 2006, by and between Fulton County, a political subdivision of the State of Georgia (hereinafter called the “County”), and the above named CONTRACTOR in accordance with all provisions of this Construction agreement, including the following Contract Documents:

- General Conditions
- Special Conditions
- Unique Requirements
- Bid Form
- Quantities and Pricing
- Scope of Work and Technical Specifications
- Drawings and Specifications
- Exhibits
- Insurance Forms
- Purchasing Forms
- Office of Contract Compliance Forms

WITNESSETH: That the said Contractor has agreed, and by these presents does agree with the said County, for an in consideration of a Contract Price of _____ (\$_____) and other good and valuable consideration, and under the penalty expressed on Bonds hereto attached, to furnish all equipment, tools, materials, skill, and labor of every description necessary to carry out and complete in good, firm, and substantial, and workmanlike manner, the Work specified, in strict conformity with the Drawings and the Specifications hereinafter set forth, which Drawings and Specifications together with the bid submittals made by the Contractor, General Conditions, Special Provisions, Detailed Specifications, Exhibits, and this Agreement, shall all form essential parts of this Contract. The Work covered by this Contract includes all Work indicated on Plans and Specifications and listed in the Bid entitled:

Project Number: **S225**

Project Name: **BUTTERFIELD LANE SEWER REPLACEMENT**

The Contractor shall commence the Work with adequate force and equipment within 10 days from receipt of Notice to Proceed from the County, and shall complete the work within 200 calendar days from the Notice to Proceed or the date work begins, whichever comes first. The Contractor shall remain responsible for performing, in accordance with the terms of the contract, all work assigned prior to the expiration of the said calendar days allowed for completion of the work even if the work is not completed until after the expiration of such days.

For each calendar day that any work remains uncompleted after the time allowed for completion of the work, the Contractor shall pay the County the sum of \$500.00 not as a penalty but as liquidated damages, which liquidated damages the County may deduct from any money due the contractor. At the County's convenience and not to its prejudice the County may provide written notice of the commencement of the assessment of liquidated damages.

As full compensation for the faithful performance of this Contract, the County shall pay the Contractor in accordance with the General Conditions and the prices stipulated in the Bid, hereto attached.

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

The Contractor hereby assumes the entire responsibility and liability for any and all injury to or death of any and all persons, including the Contractor's agents, servants, and employees, and in addition thereto, for any and all damages to property caused by or resulting from or arising out of any act or omission in connection with this contract or the prosecution of work hereunder, whether caused by the Contractor or the Contractor's agents, Servants, or employees, or by any of the Contractor's subcontractors or suppliers, and the Contractor shall indemnify and hold harmless the County, the Construction Manager, or any of their subcontractors from and against any and all loss and/or expense which they or any of them may suffer or pay as a result of claims or suits due to, because of, or arising out of any and all such injuries, deaths and/or damage, irrespective of County or Construction Manager negligence (except that no party shall be indemnified for their own sole negligence). The Contractor, if requested, shall assume and defend at the Contractor's own expense, any suit, action or other legal proceedings arising there from, and the Contractor hereby agrees to satisfy, pay, and cause to be discharged of record any judgment which may be rendered against the County and the Construction Manager arising there from.

In the event of any such loss, expense, damage, or injury, or if any claim or demand for damages as heretofore set forth is made against the County or the Construction Manager, the County may withhold from any payment due or thereafter to become due to the Contractor under the terms of this Contract, an amount sufficient in its judgment to protect and indemnify it and the Construction Manager from any and all claims, expense, loss, damages, or injury; and the County, in its discretion, may require the Contractor to furnish a surety bond satisfactory to the County providing for such protection and indemnity, which bond shall be furnished by the Contractor within five (5) days after written demand has been made therefore. The expense of said Bond shall be borne by the Contractor. **[See General Conditions for similar provisions]**

This Contract constitutes the full agreement between the parties, and the Contractor shall not sublet, assign, transfer, pledge, convey, sell or otherwise dispose of the whole or any part of this Contract or his right, title, or interest therein to any person, firm or corporation without the previous consent of the County in writing. Subject to applicable provisions of law, this Contract shall be in full force and effect as a Contract, from the date on which a fully executed and approved counterpart hereof is delivered to the Contractor and shall remain and continue in full force and effect until after the expiration of any guarantee period and the Contractor and his sureties are finally released by the County.

This agreement was approved by the Fulton County Board of Commissioner on [Insert approval date and item number].

[SIGNATURES NEXT PAGE]

Attest: _____ NAME OF CONTRACTOR
By: _____

Title: _____

Seal (Affix)

Attest: FULTON COUNTY, GEORGIA

By: _____ By: _____
Mark Massey, Clerk to the Commission Karen Handel, Chair
Board of Commissioners

APPROVED AS TO FORM:

APPROVED AS TO CONTENT:

By: _____ By: _____
County Attorney Angela Parker, Director
Department of Public Works

END OF SECTION 00600-R

S225 – BUTTERFIELD LANE SEWER REPLACEMENT
SECTION # 00700-R
GENERAL CONDITIONS

FOR FULTON COUNTY

PUBLIC UTILITIES SEWER/WATER CONSTRUCTION CONTRACTS

00700-1 FAMILIARITY WITH SITE

Execution of this agreement by the Contractor is a representation that the Contractor has visited the site, has become familiar with the local conditions under which the work is to be performed, and has correlated personal observations with the requirements of this agreement.

00700-2 CONTRACT DOCUMENTS

This agreement consists of Owner's invitation for bid, instructions to bidders, bid form, performance bond, payment bond, acknowledgments, the contract, general conditions, special conditions, specifications, plans, drawings, exhibits, addenda, and written change orders.

A. Notice of Award of Contract:

B. Execution of Contract Documents

Upon notification of Award of Contract, the Owner shall furnish the Contractor the conformed copies of Contract Documents for execution by the Contractor and the Contractor's surety.

Within ten (10) days after receipt the Contractor shall return all the documents properly executed by the Contractor and the Contractor's surety. Attached to each document shall be an original power-of-attorney for the person executing the bonds for the surety and certificates of insurance for the required insurance coverage.

After receipt of the documents executed by the Contractor and his surety with the power-of-attorney and certificates of insurance, the Owner shall complete the execution of the documents. Distribution of the completed documents will be made upon completion.

Should the Contractor and/or Surety fail to execute the documents within the time specified, the Owner shall have the right to proceed on the Bid Bond accompanying the bid.

If the Owner fails to execute the documents within the time limit specified, the Contractor shall have the right to withdraw the Contractor's bid without penalty.

Drawings and Specifications:

The Drawings, Specifications, Contract Documents, and all supplemental documents, are considered essential parts of the Contract, and requirements occurring in one are as

binding as though occurring in all. They are intended to define, describe and provide for all Work necessary to complete the Project in an acceptable manner, ready for use, occupancy, or operation by the Owner.

In case of conflict between the Drawings and Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions, and detailed Drawings shall govern over general Drawings.

In cases where products or quantities are omitted from the Specifications, the description and quantities shown on the Drawings shall govern.

Any ambiguities or need for clarification of the Drawings or Specifications shall be immediately reported to the Construction Manager in writing. Any such ambiguity or need for clarification shall be handled by the Construction Manager in writing. No clarification of the Drawings and Specifications hereunder by the Construction Manager shall entitle the Contractor to any additional monies unless a Change Order has been processed as provided by "Changes in the Contract" hereof.

Any work done by the Contractor following a discovery of such differing site condition or ambiguity or need for clarification in the Contract Drawings and Specifications prior to a written report to the Construction Manager shall not entitle the Contractor to additional monies and shall be done at the Contractor's risk.

The Construction Manager will furnish the Contractor five (5) copies of the Contract Drawings and the Specifications, one copy of which the Contractor shall have available at all times on the Project site.

00700-3 DEFINITIONS

The following terms as used in this agreement are defined as follows to the extent the definitions herein differ or conflict with those in the Instructions for Bidders, Section 00100, the definitions herein shall control.

Change Order - A written order to the Contractor issued by the County pursuant to Fulton County Policy and Procedures 800-6 for changes in the work within the general scope of the contract documents, adjustment of the contract price, extension of the contract time, or reservation of determination of a time extension.

Construction Manager - The Construction Manager is the person or entity identified as such in writing by the County. The term "Construction Manager" means the Construction Manager or the Construction Manager's authorized representative. The Construction Manager is the County's agent for purposes of administering this contract, and the sole point of contact for the Contractor between the Contractor and the County or its designated agents or representatives.

Contract Price - The sum specified in the Agreement to be paid to the Contractor in consideration of the Work.

County - Fulton County, Georgia, a political subdivision of the State of Georgia, acting by and through the Chairman of its Board of Commissioners; Owner.

Day - A calendar day of twenty-four hours lasting from midnight of one day to midnight the next day.

Director - Director of the Department of Public Works of Fulton County, Georgia or the designee thereof.

Engineer – Shall be the Director of Public Works or his duly authorized representative.

Notice to Proceed - A written communication issued by the County to the Contractor authorizing it to proceed with the work, establishing the date of commencement and completion of the work, and providing other direction to the Contractor.

Program Manager - The Program Manager is the person or entity identified in writing by the County. The County has contracted with the Parsons PM Team to provide program planning that establishes direction and performance goals for the implementation of numerous projects contained in the County's Capital Improvements Program. The Program Manager has oversight responsibility for the execution of this program. The term "Program Manager" means the Program Manager or the Program Manager's authorized representative.

Project Manager - The Project Manager is the person or entity identified in writing by the County. The County has contracted with the Parsons PM Team to provide program planning that establishes direction and performance goals for the implementation of numerous projects contained in the County's Capital Improvements Program. The Project Manager has oversight responsibility for the execution of this project within that program. The term "Project Manager" means the Project Manager or the Project Manager's authorized representative.

OCIP – "Owner-Controlled Insurance Program" is an insurance delivery method that assures the Contractor, and its subcontractors of all tiers, and other persons or interests as the County may designate in connection with the performance of the work are insured for certain prescribed Statutory Workers' Compensation, Employers Liability and Commercial General Liability, and such other coverages as the County may in writing specifically add or delete for the Project. The OCIP and contractor's insurance requirements are set out in Exhibit C – *Insurance*, attached hereto.

Project Manual - The Contract Documents.

Substantial Completion - The date certified by the Construction Manager when all or a part of the work, as established pursuant to General Condition 0700-81, is sufficiently completed in accordance with the requirements of the contract documents so that the identified portion of the work can be utilized for the purposes for which it is intended.

Work - All of the services specified, indicated, shown or contemplated by the contract documents, and furnishing by the Contractor of all materials, equipment, labor, methods, processes, construction and manufacturing materials and equipment, tools, plans, supplies, power, water, transportation and other things necessary to complete such services in accordance with the contract documents to insure a functional and complete facility.

00700-4 CODES

All codes, specifications, and standards referenced in the contract documents shall be the latest editions, amendments and revisions of such referenced standards in effect as of the date of the request for proposals for this contract.

00700-5 REVIEW OF CONTRACT DOCUMENTS

Before making its proposal to the County, and continuously after the execution of the agreement, the Contractor shall carefully study and compare the contract documents and shall at once report to the Construction Manager any error, ambiguity, inconsistency or omission that may be discovered, including any requirement which may be contrary to any law, ordinance, rule, or regulation of any public authority bearing on the performance of the work. By submitting its proposal, the Contractor agrees that the contract documents, along with any supplementary written instructions issued by or through the Construction Manager that have become a part of the contract documents, appear accurate, consistent and complete insofar as can be reasonably determined. If the Contractor has timely reported in writing any error, inconsistency, or omission to the Construction Manager, has properly stopped the affected work until instructed to proceed, and has otherwise followed the instructions of the Construction Manager, the Contractor shall not be liable to the County for any damage resulting from any such error, inconsistency, or omission in the contract documents. The Contractor shall not perform any portion of the work without the contract documents, approved plans, specifications, products and data, or samples for such portion of the work. For purposes of this section “timely” is defined as the time period in which the contractor discovers, or should have discovered, the error, inconsistency, or omission, with the exercise of reasonable diligence.

00700-6 STRICT COMPLIANCE

No observation, inspection, test or approval of the County or Construction Manager shall relieve the Contractor from its obligation to perform the work in strict conformity with the contract documents except as provided in General Condition 00700-48.

00700-7 APPLICABLE LAW

All applicable State laws, County ordinances, codes, and rules and regulations of all authorities having jurisdiction over the construction of the project shall apply to this agreement. The Contractor shall comply with the requirements of any Fulton County program concerning non-discrimination in contracting, hereto, and the Fulton County Safety Management Program, as set out in the Contractor Safety and Health Management Process, attached hereto as Exhibit “B”, and the Owner Controlled Insurance Program and contractor’s insurance requirements, as set out in Exhibit “C” hereto. All work performed within the right of way of the Georgia Department of Transportation and any railroad crossing shall be in accordance with Georgia Department of Transportation regulations, policies and procedures and, where applicable, those of any affected railroad. The Contractor shall comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work as specified and the Contractor agrees to indemnify and hold harmless the County, its officers, agents and employees, as well as the Construction Manager and the Program Manager against any claim or liability arising from or based on the violation of any law, ordinance,

regulation, order or decree affecting the conduct of the work, whether occasioned by the Contractor, his agents or employees.

00700-8 PERMITS, LICENSES AND BONDS

All permits and licenses necessary for the work shall be secured and paid for by the Contractor. If any permit, license or certificate expires or is revoked, terminated, or suspended as a result of any action on the part of the Contractor, the Contractor shall not be entitled to additional compensation or time. The Contractor shall obtain and keep in force at all times performance and payment bonds payable to Fulton County in penal amounts equal to 100% of the Contract price.

00700-9 TAXES

The Contractor shall pay all sales, retail, occupational, service, excise, old age benefit and unemployment compensation taxes, consumer, use and other similar taxes, as well as any other taxes or duties on the materials, equipment, and labor for the work provided by the Contractor which are legally enacted by any municipal, county, state or federal authority, department or agency at the time bids are received, whether or not yet effective. The Contractor shall maintain records pertaining to such taxes and levies as well as payment thereof and shall make the same available to the County at all reasonable times for inspection and copying. The Contractor shall apply for any and all tax exemptions which may be applicable and shall timely request from the County such documents and information as may be necessary to obtain such tax exemptions. The County shall have no liability to the Contractor for payment of any tax from which it is exempt.

The Contractor is obligated to comply with all local and State Sales and Use Tax laws. The Contractor shall provide the Owner with documentation to assist the Owner in obtaining sales and/or use tax refunds for eligible machinery and equipment used for the primary purpose of reducing or eliminating air or water pollution as provided for in Chapter 48-8-3 (36) and (37) of the Official Code of Georgia. All taxes shall be paid by the Contractor. All refunds will accrue to the Owner.

Acceptance of the project as complete and final payment will not be made by the Owner until the Contractor has fully complied with this requirement.

00700-10 DELINQUENT CONTRACTORS

The County shall not pay any claim, debt, demand or account whatsoever to any person firm or corporation who is in arrears to the County for taxes. The County shall be entitled to a counterclaim, backcharge, and offset for any such debt in the amount of taxes in arrears, and no assignment or transfer of such debt after the taxes become due shall affect the right of the County to offset any taxes owed against said debt.

00700-11 LIEN WAIVERS

The Contractor shall furnish the County with evidence that all persons who have performed work or furnished materials pursuant to this agreement have been paid in full prior to submitting its demand for final payment pursuant to this agreement. A final

affidavit, Exhibit D, must be completed, and submitted to comply with requirements of 00700-11. In the event that such evidence is not furnished, the County may retain sufficient sums necessary to meet all lawful claims of such laborers and materialmen. The County assumes no obligation nor in any way undertakes to pay such lawful claims from any funds due or that may become due to the Contractor.

00700-12 MEASUREMENT

All items of work to be paid for per unit of measurement shall be subject to inspection, measurement, and confirmation by the Construction Manager.

00700-13 ASSIGNMENT

The Contractor shall not assign any portion of this agreement or moneys due therefrom (include factoring of receivables) without the prior written consent of the County. The Contractor shall retain personal control and shall provide personal attention to the fulfillment of its obligations pursuant to this agreement. Any assignment without the express written consent of the County shall render this contract voidable at the sole option of the County.

00700-14 FOREIGN CONTRACTORS

In the event that the Contractor is a foreign corporation, partnership, or sole proprietorship, the Contractor hereby irrevocably appoints the Secretary of State of Georgia as its agent for service of all legal process for the purpose of this contract only.

00700-15 INDEMNIFICATION [there are two indemnification clauses, the other is in the Contract Cover Sheet]

The Contractor hereby assumes the entire responsibility and liability for any and all injury to or death of any and all persons, including the Contractor's agents, servants, and employees, and in addition thereto, for any and all damages to property caused by or resulting from or arising out of any act or omission in connection with this contract or the prosecution of work hereunder, whether caused by the Contractor or the Contractor's agents, servants, or employees, or by any of the Contractor's subcontractors or suppliers, and the Contractor shall indemnify and hold harmless the County, the Construction Manager and the Program Manager, or any of their subcontractors from and against any and all loss and/or expense which they or any of them may suffer or pay as a result of claims or suits due to, because of, or arising out of any and all such injuries, deaths and/or damage, irrespective of County or Construction Manager or Program Manager negligence (except that no party shall be indemnified for their own sole negligence). The Contractor, if requested, shall assume and defend at the Contractor's own expense, any suit, action or other legal proceedings arising therefrom, and the Contractor hereby agrees to satisfy, pay, and cause to be discharged of record any judgment which may be rendered against the County, the Construction Manager and the Program Manager arising therefrom.

In the event of any such loss, expense, damage, or injury, or if any claim or demand for damages as heretofore set forth is made against the County or the Construction Manager or the Program Manager, the County may withhold from any payment due

or thereafter to become due to the Contractor under the terms of this Contract, an amount sufficient in its judgment to protect and indemnify it and the Construction Manager and the Program Manager from any and all claims, expense, loss, damages, or injury; and the County, in its discretion, may require the Contractor to furnish a surety bond satisfactory to the County providing for such protection and indemnity, which bond shall be furnished by the Contractor within five (5) days after written demand has been made therefore. The expense of said Bond shall be borne by the Contractor.

00700-16 SUPERVISION OF WORK AND COORDINATION WITH OTHERS

The Contractor shall supervise and direct the work using the Contractor's best skill and attention. The Contractor shall be solely responsible for all construction methods and procedures and shall coordinate all portions of the work pursuant to the contract subject to the overall coordination of the Construction Manager. All work pursuant to this agreement shall be performed in a skillful and workmanlike manner.

The County reserves the right to perform work related to the Project with the County's own forces and to award separate contracts in connection with other portions of the project, other work on the site under these or similar conditions of the contract, or work which has been extracted from the Contractor's work by the County.

When separate contracts are awarded for different portions of the project or other work on the site, the term "separate contractor" in the Contract Documents in each case shall mean the contractor who executes each separate County Agreement.

The Contractor shall cooperate with the County and separate contractors in arranging the introduction and storage of materials and equipment and execution of their work, and shall cooperate in coordinating connection of its work with theirs as required by the Contract Documents.

If any part of the Contractor's Work depends for proper execution or results upon the work of the County or any separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Construction Manager any apparent discrepancies or defects in such other work that render it unsuitable for such proper execution and results **within fourteen (14) days** of discovery of such discrepancy or defect. Failure of the Contractor to so report in writing shall constitute an acceptance of the County's or separate contractor's work as fit and proper to receive the Work, except as to any defects which may subsequently become apparent in such work by others.

Any costs caused by defective or untimely work shall be borne by the party responsible therefore.

Should the Contractor wrongfully cause damage to the work or property of the County, or to other work or property on the site, including the work of separate contractors, the Contractor shall promptly remedy such damage at the Contractor's expense.

Should the Contractor be caused damage by any other contractor on the Project, by reason of such other contractor's failure to perform properly his contract with the County, no action shall lie against the County or the Construction Manager inasmuch as the parties to this agreement are the only beneficiaries hereof and there are no third party beneficiaries and neither the County nor the Construction Manager shall have liabilities

therefore, but the Contractor may assert his claim for damages solely against such other contractor. The Contractor shall not be excused from performance of the contract by reason of any dispute as to damages with any other contractor or third party.

Where the Work of this Contract shall be performed concurrently in the same areas as other construction work, the Contractor shall coordinate with the Construction Manager and the separate contractors in establishing mutually acceptable schedules and procedures that shall permit all jobs to proceed with minimum interference.

If a dispute arises between the Contractor and separate contractors as to their responsibility for cleaning up, the County may clean up and charge the cost thereof to the Contractor or contractors responsible therefore as the County shall determine to be just.

00700-17 ADMINISTRATION OF CONTRACT

The Program Manager and the Construction Manager shall provide administration services as hereinafter described.

For the administration of this Contract, the Construction Manager shall serve as the County's primary representative during design and construction and until final payment to the Contractor is due. The Construction Manager shall advise and consult with the County and the Program Manager. The primary point of contact for the Contractor shall be the Construction Manager. All correspondence from the Contractor to the County shall be forwarded through the Construction Manager. Likewise, all correspondence and instructions to the Contractor shall be forwarded through the Construction Manager.

The Construction Manager will determine in general that the construction is being performed in accordance with design and engineering requirements, and will endeavor to guard the County against defects and deficiencies in the Work.

The Construction Manager will not be responsible for or have control or charge of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs in connection with the Work, nor will it be responsible for the Contractor's failure to carry out the Work in accordance with the Contract Documents. The Construction Manager will not be responsible for or have control or charge over the acts or omissions of the Contractor, its engineers, consultants, subcontractors, or any of their agents or employees, or any other persons performing the Work.

Based on the Construction Manager's observations regarding the Contractor's Applications for Payment, the Construction Manager shall determine the amounts owing to the Contractor, in accordance with the payment terms of the Contract, and shall issue Certificates for Payment in such amount to the County.

The Construction Manager shall render interpretations necessary for the proper execution or progress of the Work. Either party to the Contract may make written requests to the Construction Manager for such interpretations.

Claims, disputes and other matters in question between the Contractor and the County relating to the progress of the Work or the interpretation of the Contract Documents shall be referred to the Construction Manager for interpretation.

All interpretations of the Construction Manager shall be consistent with the intent of and reasonably inferable from the Contract Documents and shall be in writing or in graphic form.

Except as otherwise provided in this Contract, the Construction Manager shall issue a decision on any disagreement concerning a question of fact arising under this Contract. The Construction Manager shall reduce the decision to writing and mail or otherwise furnish a copy thereof to the Contractor. The decision of the Construction Manager shall be final and conclusive unless, within thirty (30) days from the date of receipt of such copy, the Contractor files a written appeal with the Director of Public Works and mails or otherwise furnishes the Construction Manager a copy of such appeal. The decision of the Director of Public Works or the Director's duly authorized representative for the determination of such appeals shall be final and conclusive. Such final decision shall not be pleaded in any suit involving a question of fact arising under this Contract, provided such is not fraudulent, capricious, arbitrary, so grossly erroneous as necessarily implying bad faith, or is not supported by substantial evidence. In connection with any appeal proceeding under this Article, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of Contractor's appeal. Pending any final decision of a dispute hereunder, the Contractor shall proceed diligently with the performance of the Contract as directed by the Construction Manager.

The Construction Manager shall have authority to reject Work which does not conform to the Contract Documents. Whenever, in the Construction Manager's opinion, it is considered necessary or advisable for the implementation of the intent of the Contract Documents, the County shall have authority to require special inspection or testing of the Work whether or not such Work be then fabricated, installed or completed. The Contractor shall pay for such special inspection or testing if the Work so inspected or tested is found not to comply with the requirements of the contract; the County shall pay for special inspection and testing if the Work is found to comply with the contract. Neither the Construction Manager's authority to act under this Subparagraph, nor any decision made by the Construction Manager in good faith either to exercise or not to exercise such authority, shall give rise to any duty or responsibility of the Construction Manager to the Contractor, any subcontractor, any of their agents or employees, or any other person performing any of the Work.

The Contractor shall provide such shop drawings, product data, and samples as may be required by the Construction Manager and/or as required by these Contract Documents.

The Construction Manager shall conduct inspections to determine Substantial Completion and Final Completion, and shall receive and forward to the County for review written warranties and related documents required by the Contract Documents and assembled by the Contractor. The Construction Manager shall approve and issue Certificates for Payment upon compliance with Substantial and Final Completion requirements indicated in General Conditions 00700-81, 00700-82, 00700-84 and 00700-85 of this Agreement.

Except as provided in General Condition 00700-48, the Contractor shall not be relieved from the Contractor's obligations to perform the work in accordance with the contract documents by the activities or duties of the County or any of its officers, employees, or

agents, including inspections, tests or approvals, required or performed pursuant to this agreement.

00700-18 RESPONSIBILITY FOR ACTS OF EMPLOYEES

The Contractor shall employ only competent and skilled personnel. The Contractor shall, upon demand from the Construction Manager, immediately remove any superintendent, foreman or workman whom the Construction Manager may consider incompetent or undesirable.

The Contractor shall be responsible to the County for the acts and omissions of the Contractor's employees, subcontractors, and agents as well as any other persons performing work pursuant to this agreement for the Contractor.

00700-19 LABOR, MATERIALS, SUPPLIES, AND EQUIPMENT

Unless otherwise provided in this agreement, the Contractor shall make all arrangements with necessary support agencies and utility companies, provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the execution and completion of the work.

00700-20 DISCIPLINE ON WORK SITE

The Contractor shall enforce strict discipline and good order among its employees and subcontractors at all times during the performance of the work, to include compliance with the Fulton County Drug Free Work Place Policy. The Contractor shall not employ any subcontractor who is not skilled in the task assigned to it. The Construction Manager may, by written notice, require the Contractor to remove from the work any subcontractor or employee deemed by the Construction Manager to be incompetent.

00700-21 HOURS OF OPERATION

All work at the construction site shall be performed during regular business hours of the FULTON County government, except upon the Construction Manager's prior written consent to other work hours. It is further understood that the Contractor's construction schedule is based on a normal 40 hours, five day work week, less Fulton County-recognized holidays. Contractors work schedule shall not violate Fulton County Noise Ordinance by working hours inconsistent with the Fulton County Noise Ordinance. The County's current noise ordinance or other applicable ordinance shall govern. If the Contractor desires to work in excess of this limit, the Contractor shall submit a written request to the Construction Manager, a minimum of five days prior to the desired work date. The Contractor shall be responsible for any additional expenses incurred by the Owner as a result of the extended work hours, including resident inspection overtime. The cost associated with resident inspector overtime shall be deducted from the Contractor monthly payment request.

00700-22 FAMILIARITY WITH WORK CONDITIONS

The Contractor shall take all steps necessary to ascertain the nature and location of the work and the general and local conditions which may affect the work or the cost thereof. The Contractor's failure to fully acquaint itself with the conditions which may affect the work, including, but not limited to conditions relating to transportation, handling, storage

of materials, availability of utilities, labor, water, roads, weather, topographic and subsurface conditions, other separate contracts to be entered into by the County relating to the project which may affect the work of the Contractor, applicable provisions of law, and the character and availability of equipment and facilities necessary prior to and during the performance of the work shall not relieve the Contractor of its responsibilities pursuant to this agreement and shall not constitute a basis for an equitable adjustment of the contract terms. The County reserves the right to perform with its own forces or to contract with other entities for other portions of the project work, in which case the Contractor's responsibility to assure its familiarity with work conditions hereunder shall include all coordination with such other contractors and the County necessary to insure that there is no interference between contractors as will delay or hinder any contractor in its prosecution of work on the project. The County assumes no responsibility for any understandings or representations concerning conditions of the work made by any of its officers, agents, or employees prior to the execution of this agreement.

00700-23 RIGHT OF ENTRY

The County reserves the right to enter the site of the work by such agent, including the Construction Manager, as it may elect for the purpose of inspecting the work or installing such collateral work as the County may desire. The Contractor shall provide safe facilities for such access so that the County and its agents may perform their functions.

00700-24 NOTICES

Any notice, order, instruction, claim or other written communication required pursuant to this agreement shall be deemed to have been delivered or received as follows:

1. Upon personal delivery to the Contractor, its authorized representative, or the Construction Manager on behalf of the County. Personal delivery may be accomplished by in-person hand delivery or bona fide overnight express service.
2. Three days after depositing in the United States mail a certified letter addressed to the Contractor or the Construction Manager for the County. For purposes of mailed notices, the County's mailing address shall be 141 Pryor Street, 6th Floor, Atlanta, Georgia 30303, or as the County shall have otherwise notified the Contractor. The Contractor's mailing address shall be the address stated in its proposal or as it shall have most recently notified the Construction Manager in writing.

00700-25 SAFETY

A.COUNTY-CONTRACTOR SAFETY, HEALTH AND LOSS PREVENTION PROGRAM

- (1) The Contractor shall be responsible for designing and implementing a comprehensive project-specific safety, health and loss prevention process and/or program and employee substance abuse program for this project. All Sub-Contractors must either implement their own program that meets these requirements or follow the Contractor's

- safety, health and loss prevention process and/or employee substance abuse program.
- (2) Safety, health and loss prevention process and/or employee substance abuse program must meet or exceed all governmental regulations (OSHA, EPA, DOT, State, local), comply and other specific Fulton County or Owner Controlled Insurance Program (OCIP) requirements, and with any other safety, health and loss prevention requirements detailed in the contract documents including the requirements of the Contractor Safety and Health Management Process which is attached hereto and incorporated herein.
- (3) Within ten (10) business days of receipt of the Notice of Award (NOA), the Contractor shall submit in writing to the County's designated Representative, the Contractor's written Safety, Health and Loss Prevention Process and/or Program and Employee Substance Abuse Program and those of Sub-Contractors that meet or exceed the requirements referenced in the contract documents. Included in this submittal will be the name and qualifications of the site safety representative.
- a) Prior to issuing the Notice to Proceed (NTP), a meeting will be held with the Contractor and all Sub-Contractors to review the safety, health and loss prevention process and/or program requirements, submittals to be provided by the Contractor, OCIP requirements and procedures, and the OCIP accident prevention process.

These program submittals must be reviewed and accepted by the County's designated Representative as meeting or exceeding safety, health, and loss prevention process and/or program requirements. A Notice To Proceed (NTP) with the work may not be issued until these submittals have been accepted.

B. DESIGNATION OF SAFETY REPRESENTATIVE

- a. The Contractor will designate an employee by (name, phone number, pager number) as Site Safety Representative. This employee will have sufficient training and knowledge of safety and health principles, regulations, and procedures to report to the Contractor's Project Manager and/or Superintendent. Sub-Contractors must also designate a similar employee responsible for safety and health. The Sub-Contractor's safety designee will coordinate safety activities with the general contractor's safety designee.
- b. For projects with significant risk or hazard potential or for any project for which the Contractor and its Sub-Contractors of any tier have 50 total employees or greater on site, Contractor must designate a qualified employee to be the full time Site Safety Representative. This person should address safety, health and loss prevention activities for the complete project including Sub-Contractors.

C. COUNTY'S SAFETY, HEALTH, AND LOSS PREVENTION PROCESS GUIDELINES AND REQUIREMENTS

- 1 The County and its agents reserve the right, but assume no duty, to establish and enforce safety, health, and loss prevention guidelines and to make the appropriate changes in the guidelines, for the protection of persons and property and to review the efficiency of all protective measures taken by the Contractor. The Contractor shall comply with all safety, health, and loss prevention process guidelines and requirements and changes made by the County or its agent(s). The issuance of any such guidelines or changes by the County or its agent(s) shall not relieve the Contractor of its duties and responsibilities under this Agreement, and the County or its agent(s) shall not thereby assume, nor be deemed to have assumed, any such duties or responsibilities of the Contractor.

D. COMPLIANCE OF WORK, EQUIPMENT, AND PROCEDURES WITH ALL APPLICABLE LAWS and REGULATIONS

- 2 All Work, whether performed by the Contractor or its Sub-Contractors of any tier, or anyone directly or indirectly employed by any of them, and all equipment, appliances, machinery, materials, tools and like items incorporated or used in the Work, shall be in compliance with and conform to:
 - (a) All applicable laws, ordinances, rules, regulations and orders of any public, quasi-public or other governmental authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, the Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to said Act.
 - (b) All rules, regulations, and requirements of the County or its agent(s) and its insurance carriers relating there to. In the event of a conflict or differing requirements the more stringent shall govern.

E. PROTECTION OF THE WORK

- (1) The Contractor shall, throughout the performance of the Work, maintain adequate and continuous protection of all Work and temporary facilities against loss or damage from whatever cause, shall protect the property of the County and third parties from loss or damage from whatever cause arising out of the performance of the Work, and shall comply with the requirements of the County or its agent(s) and its insurance carriers, and with all applicable laws, codes, rules and regulations, (as same may be amended) with respect to the prevention of loss or damage to property as a result of fire or other hazards.
- (2) The County or its agent(s) may, but shall not be required to, make periodic inspections of the Project work area. In such event, however, the Contractor shall not be relieved of its aforesaid responsibilities and the County or its agent(s) shall not assume, nor shall it be deemed to

have assumed, any responsibility otherwise imposed upon the assurance of Contractor by this Agreement.

F. SAFETY EQUIPMENT

1. The Contractor shall provide to each worker on the Project work area the proper safety equipment for the duties being performed by that worker and will not permit any worker on the Project work area who fails or refuses to use the same. The County or its agent shall have the right, but not the obligation, to order the removal of a worker from the Project work site for his/her failure to comply with safe practices or substance abuse policies, and the Contractor shall promptly comply with the Safety Program or Substance Abuse Program and all such orders.

G. EMERGENCIES

1. In any emergency affecting the safety of persons or property, or in the event of a claimed violation of any federal or state safety or health law or regulation, arising out of or in any way connected with the Work or its performance, the Contractor shall act immediately to prevent threatened damage, injury or loss and to remedy said violation. Failing such action the County or its agent(s) may immediately take whatever steps it deems necessary including, but not limited to, suspending the Work as provided in this Agreement.
2. The County or its agent(s) may offset any and all costs or expenses of whatever nature, including attorneys' fees, paid or incurred by the County or its agent(s) (whether such fees are for in-house counsel or counsel retained by the County or its agent), in taking the steps authorized by Section 00700-25(G)(1) above against any sums then or thereafter due to the Contractor. The Contractor shall defend, indemnify and hold the County, its officers, agents, employees and the County's O.C.I.P. Administrator harmless against any and all costs or expenses caused by or arising from the exercise by the County of its authority to act in an emergency as set out herein. If the Contractor shall be entitled to any additional compensation or extension of time change order on account of emergency work not due to the fault or neglect of the Contractor or its Sub-Contractors, such additional compensation or extension of time shall be determined in accordance with General Condition 00700-52 and General Condition 00700-87 of this Agreement.

H. SUSPENSION OF THE WORK

1. Should, in the judgment of the County or its agent(s), the Contractor or any Sub-Contractor fail to provide a safe and healthy work place or fail to follow the safety requirements defined in the contract

documents and approvals, the County or its agent shall have the right, but not the obligation, to suspend work in the unsafe areas until deficiencies are corrected. All costs of any nature (including, without limitation, overtime pay, liquidated damages or other costs arising out of delays) resulting from the suspension, by whomsoever incurred, shall be borne by the Contractor.

2. Should the Contractor or any Sub-Contractor fail to provide a safe and healthy work place or fail to follow the safety requirements defined in the contract documents and approvals after being formally notified in writing by the County or its agents of such non-compliance, the contract may be terminated following the termination provision of the contract.

I. CONTRACTOR'S INDEMNITY OF THE COUNTY FOR CONTRACTOR'S NON-COMPLIANCE WITH SAFETY PROGRAM

1. The Contractor recognizes that it has sole responsibility to assure its Safety Program is implemented and to assure its construction services are safely provided. The Contractor shall indemnify, defend and hold the County and its agents harmless, from and against any and all liability (whether public or private), penalties (contractual or otherwise), losses, damages, costs, attorneys' fees, expenses, causes of action, claims or judgments resulting, either in whole or in part, from any failure of the Contractor, its Sub-Contractors of any tier or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, to comply with the safety requirements of the contract. The Contractor shall not be relieved of its responsibilities under the safety requirements of the Contract should the County or its agent(s) act or fail to act pursuant to its rights hereunder. The County, its agents, and the County's O.C.I.P. Administrator shall not assume, nor be deemed to have assumed, any responsibilities otherwise imposed upon the Contractor by this Agreement, by virtue of providing the Safety Program Guidelines.
2. The Contractor shall not raise as a defense to its obligation to indemnify under this Subparagraph I any failure of those indemnified hereunder to assure Contractor operates safely, it being understood and agreed that no such failure shall relieve the Contractor from its obligation to assure safe operations or from its obligation to so indemnify. The Contractor also hereby waives any rights it may have to seek contribution, either directly or indirectly, from those indemnified hereunder.
3. In any and all claims against those indemnified hereunder by any employee of the Contractor, any Sub-Contractor of any tier or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation

under this Subparagraph I shall not be limited in any way as to the amount or type of damages, compensation or benefits payable by or for the Contractor or any Sub-Contractor of any tier under any workers' compensation act, disability benefit or other employee benefit acts.

00700-26 BLASTING AND EXCAVATION

The Contractor acknowledges that it is fully aware of the contents and requirements of O.C.G.A. § 25-9-1 through 25-9-12 concerning blasting and excavation near underground gas pipes and facilities and shall fully comply therewith.

00700-27 HIGH VOLTAGE LINES

The Contractor acknowledges that it is fully aware of the contents and requirements O.C.G.A. § 46-3-30 through 46-3-39 concerning safeguards against contact with high voltage lines, and the Contractor shall fully comply with said provisions.

00700-28 SCAFFOLDING AND STAGING

The Contractor acknowledges that it is the person responsible for employing and directing others to perform labor within the meaning of O.C.G.A. § 34-1-1 and agrees to comply with said provisions.

00700-29 CLEAN-UP

The Contractor shall clean up all refuse, rubbish, scrap materials, and debris caused by its operations to the end that the site of the work shall present a neat, orderly and workmanlike appearance at all times.

00700-30 PROTECTION OF WORK

The Contractor shall be responsible for maintenance and protection of the work, which shall include any County-furnished supplies, material, equipment, until final completion of this agreement and acceptance of the work as defined herein. Any portion of the work suffering injury, damage or loss shall be considered defective and shall be corrected or replaced by the Contractor without additional cost to the County.

00700-31 REJECTED WORK

The Contractor shall promptly remove from the project all work rejected by the Construction Manager for failure to comply with the contract documents and the Contractor shall promptly replace and re-execute the work in accordance with the contract documents and without expense to the County. The Contractor shall also bear the expense of making good all work of other Contractors destroyed or damaged by such removal or replacement.

00700-32 DEFECTIVE WORK

If the Contractor defaults or neglects to carry out any portion of the work in accordance with the contract documents, and fails within three days after receipt of written notice from the Construction Manager to commence and continue correction of such default or neglect with diligence and promptness, the County may, after three days following receipt by the Contractor of an additional written notice and without prejudice to any

other remedy the County may have, make good such deficiencies and complete all or any portion of any work through such means as the County may select, including the use of a separate Contractor. In such case, an appropriate change order shall be issued deducting from the payments then or thereafter due the Contractor the cost of correcting such deficiencies. In the event the payments then or thereafter due the Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the County on demand.

The County may, at its option, accept defective or nonconforming work instead of requiring its removal or correction. In such case, a change order shall be issued reducing the price due the contractor to the extent appropriate and equitable. Such contract price adjustment shall be effected whether or not final payment has been made.

00700-33 WARRANTY OF NEW MATERIALS

The Contractor warrants to the County that all materials and equipment furnished under this contract will be new unless otherwise specified, and the Contractor further warrants that all work will be of good quality, free from faults and defects, and in conformance with the contract documents. The warranty set forth in this paragraph shall survive final acceptance of the work.

00700-34 CONTRACTOR'S WARRANTY OF THE WORK

If within one year after the date of issuance of the certificate of final payment pursuant to General Condition 84, or within such longer period of time as may be prescribed by law or by the term of any applicable special warranty required by the contract documents, any of the work is found to be defective or not in accordance with the contract documents, the Contractor shall correct such work promptly after receipt of written notice from the Construction Manager to do so. This obligation shall survive both final payment for the work and termination of the contract.

00700-35 ASSIGNMENT OF MANUFACTURERS' WARRANTIES

Without limiting the responsibility or liability of the Contractor pursuant to this agreement, all warranties given by manufacturers on materials or equipment incorporated in the work are hereby assigned by the Contractor to the County. If requested, the Contractor shall execute formal assignments of said manufacturer's warranties to the County. All such warranties shall be directly enforceable by the County.

00700-36 WARRANTIES IMPLIED BY LAW

The warranties contained in this agreement, as well as those warranties implied by law, shall be deemed cumulative and shall not be deemed alternative or exclusive. No one or more of the warranties contained herein shall be deemed to alter or limit any other.

00700-37 STOP WORK ORDERS

In the event that the Contractor fails to correct defective work as required by the contract documents or fails to carry out the work in accordance with contract documents, the Construction Manager, in writing, may order the Contractor to stop work until the cause for such order has been eliminated. This right of the County to stop work shall not give rise to any duty on the part of the County or the Construction Manager to execute this right for the benefit of the Contractor or for any other person or entity.

00700-38 TERMINATION FOR CAUSE

If the Contractor is adjudged bankrupt, makes a general assignment for the benefit of creditors, suffers the appointment of a receiver on account of its insolvency, fails to supply sufficient properly skilled workers or materials, fails to make prompt payment to subcontractors or materialmen, disregards laws, ordinances, rules, regulations, or orders of any public authority having jurisdiction, fails to diligently prosecute the work, or is otherwise guilty of a material violation of this agreement and fails within seven days after receipt of written notice to commence and continue correction of such default, neglect, or violation with diligence and promptness, the County may, after seven days following receipt by the Contractor of an additional written notice and without prejudice to any other remedy the County may have, terminate the employment of the Contractor and take possession of the site as well as all materials, equipment, tools, construction equipment and machinery thereon. The County may finish the work by whatever methods the County deems expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is completed. If the unpaid balance of the contract price exceeds the cost of completing the work, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the County on demand. This obligation for payment shall survive the termination of the contract. Termination of this agreement pursuant to this paragraph may result in disqualification of the Contractor from bidding on future County contracts.

00700-39 TERMINATION FOR CONVENIENCE

The County may, at any time upon written notice to the Contractor, terminate the whole or any portion of the work for the convenience of the County. The effective date of the terminations shall be provided in the written notice. Said termination shall be without prejudice to any right or remedy of the County provided herein. In addition, in the event this agreement has been terminated due to the default of the Contractor, and if it is later determined that the Contractor was not in default pursuant to the provisions of this agreement at the time of termination, then such termination shall be considered a termination for convenience pursuant to this paragraph.

00700-40 TERMINATION FOR CONVENIENCE - PAYMENT

If the Contract is terminated for convenience by the Owner as provided in this article, Contractor will be paid compensation for those services actually performed as approved by the Owner or his representative. Partially completed tasks will be compensated for based on a signed statement of completion prepared by the Project Manager and submitted to the Contractor which shall itemize each task element and briefly state what work has been completed and what work remains to be done. Contractor shall also be paid for reasonable costs for the orderly filing and closing of the project.

00700-41 TERMINATION FOR CONVENIENCE - PAYMENT LIMITATIONS

Except for normal spoilage, and except to the extent that the County shall have otherwise expressly assumed the risk of loss, there shall be excluded from the amounts payable to the Contractor the fair value, as determined by the Construction Manager, of property which is destroyed, lost, stolen or damaged so as to become undeliverable to the County or to another buyer.

00700-42 COST TO CURE

If the County terminates for cause the whole or any part of the work pursuant to this agreement, then the County may procure upon such terms and in such manner as the Construction Manager may deem appropriate, supplies or services similar to those so terminated, and the Contractor shall be liable to the County for any excess costs for such similar supplies or services. The Contractor shall continue the performance of this agreement to the extent not terminated hereunder.

00700-43 ATTORNEY'S FEES

Should the Contractor default pursuant to any of the provisions of this agreement, the Contractor and its surety shall pay to the County such reasonable attorney's fees as the County may expend as a result thereof and all costs, expenses, and filing fees incidental thereto.

00700-44 CONTRACTOR'S RESPONSIBILITIES UPON TERMINATION

After receipt of a notice of termination from the County, and except as otherwise directed by the Construction Manager, the Contractor shall:

1. Stop work under the contract on the date and to the extent specified in the notice of termination;
2. Place no further orders or subcontracts for materials, services or facilities, except as may be necessary for completion of such portion of the work under the agreement as is not terminated;
3. Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the notice of termination;
4. Assign to the County in the manner, at the times, and to the extent directed by the Construction Manager, all of the rights, title and interest of the Contractor under the orders and subcontracts so terminated, in which case the County shall have the right, at its discretion, to settle or pay any and all claims arising out of the termination of such orders or subcontracts;
5. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts with the approval or ratification of the Construction Manager, to the extent the Construction Manager may require, which approval or ratification shall be final for all purposes;
6. Transfer title and deliver to the entity or entities designated by the Construction Manager, in the manner, at the times, and to the extent, if any, directed by the Construction Manager, and to the extent specifically produced or specifically acquired by the Contractor for the performance of such portion of the work as has been terminated:

The fabricated or un-fabricated parts, work, and progress, partially completed supplies, and equipment, materials, parts, tools, dyes, jigs, and other fixtures, completed work, supplies, and other material produced as a part of or acquired in connection with the performance of the work terminated by the notice of termination; and

- b. The completed or partially completed plans, drawings, information, and other property to the work.
7. Use its best efforts to sell in the manner, at the times, to the extent, and at the prices directed or authorized by the Construction Manager, any property described in Section 6 of this paragraph, provided, however, that the Contractor shall not be required to extend credit to any buyer and further provided that the proceeds of any such transfer or disposition shall be applied in reduction of any payments to be made by the County to the Contractor pursuant to this agreement.
8. Complete performance of such part of the work as shall not have been terminated by the notice of termination; and
9. Take such action as may be necessary, or as the Construction Manager may direct, for the protection and preservation of the property related to the agreement which is in the possession of the Contractor and in which the County has or may acquire an interest.

00700-45 RECORDS

The Contractor shall preserve and make available to the County all of its records, books, documents and other evidence bearing on the costs and expenses of the Contractor and any subcontractor pursuant to this agreement upon three days advance notice to the Contractor.

00700-46 DEDUCTIONS

In arriving at any amount due the Contractor pursuant to the terms of this agreement, there shall be deducted all liquidated damages, advance payments made to the Contractor applicable to the termination portion of the contract, the amount of any claim which the County may have against the Contractor, the amount determined

By the Construction Manager to be necessary to protect the County against loss due to outstanding potential liens or claims, and the agreed price of any materials acquired or sold by the Contractor and not otherwise recovered by or credited to the County.

00700-47 REIMBURSEMENT OF THE COUNTY

In the event of termination, the Contractor shall refund to the County any amount paid by the County to the Contractor in excess of the costs properly reimbursable to the Contractor.

00700-48 SUSPENSION, INTERRUPTION, DELAY, DAMAGES

The Contractor shall be entitled to only those damages and that relief from termination by the County as specifically set forth in this agreement. The Construction Manager may issue a written order requiring the Contractor to suspend, delay or interrupt all or any part of the work for such period of time as the County may determine to be appropriate for the convenience of the County. If the performance of the work is interrupted for an unreasonable period of time by an act of the County or any of its officers, agents, employees, contractors, or consultants in the administration of this agreement, an equitable adjustment shall be made for any increase in the Contractor's costs of

performance and any increase in the time required for performance of the work necessarily caused by the unreasonable suspension, delay, or interruption. Any equitable adjustment shall be reduced to writing and shall constitute a modification to this agreement. In no event, however, shall an equitable adjustment be made to the extent that performance of this agreement would have been suspended, delayed or interrupted by any other cause, including the fault or negligence of the Contractor. No claim for an equitable adjustment pursuant to this paragraph shall be permitted before the Contractor shall have notified the Construction Manager in writing of the act or failure to act involved, and no claim shall be allowed unless asserted in writing to the Construction Manager within ten days after the termination of such suspension, delay or interruption.

00700-49 COMMENCEMENT AND DURATION OF WORK

The County may issue a Notice to Proceed at any time within 120 days following execution of the contract by the County. The Contractor shall commence work pursuant to this agreement within ten days of mailing or delivery of written notice to proceed. The Contractor shall diligently prosecute the work to completion within the time specified therefore in the Agreement. The capacity of the Contractor's construction and manufacturing equipment and plan, sequence and method of operation and forces employed, including management and supervisory personnel, shall be such as to insure completion of the work within the time specified in the Agreement. The Contractor and County hereby agree that the contract time for completion of the work is reasonable taking into consideration the average climatic conditions prevailing in the locality of the work and anticipated work schedules of other contractors whose activities are in conjunction with or may affect the work under this contract.

00700-50 TIME OF THE ESSENCE

All time limits stated in this agreement are of the essence of this contract.

00700-51 IMPACT DAMAGES

Except as specifically provided pursuant to a stop work order or change order, the Contractor shall not be entitled to payment or compensation of any kind from the County for direct or indirect or impact damages including, but not limited to, costs of acceleration arising because of delay, disruption, interference or hindrance from any cause whatsoever whether such delay, disruption, interference or hindrance is reasonable or unreasonable, foreseeable or unforeseeable, or avoidable, provided, however, that this provision shall not preclude the recovery of damages by the Contractor for hindrances or delays due solely to fraud or bad faith on the part of the County, its agents, or employees. The Contractor shall be entitled only to extensions in the time required for performance of the work as specifically provided in the contract.

00700-52 DELAY

The Contractor may be entitled to an extension of the contract time, but not an increase in the contract price or damages, for delays arising from unforeseeable causes beyond the control and without the fault or negligence of the Contractor or its subcontractors for labor strikes, acts of God, acts of the public enemy, acts of the state, federal or local government in its sovereign capacity, by acts of another separate contractor, or by an act or neglect of the County.

00700-53 INCLEMENT WEATHER

The Contractor shall not be entitled to an extension of the contract time due to normal inclement weather. Unless the Contractor can substantiate to the satisfaction of the Construction Manager that there was greater than normal inclement weather and that such greater than normal inclement weather actually delayed the work, the Contractor shall not be entitled to an extension of time therefore. The following shall be considered the normal inclement weather days for each month listed, and extensions of time shall be granted in increments of not less than one half day only for inclement weather in excess of the days set out.

January	10 days
February	10 days
March	7 days
April	6 days
May	4 days
June	3 days
July	4 days
August	2 days
September	2 days
October	3 days
November	6 days
December	9 days

00700-54 DELAY - NOTICE AND CLAIM

The Contractor shall not receive an extension of time unless a Notice of Delay is filed with the Construction Manager within ten days of the first instance of such delay, disruption, interference or hindrance and a written Statement of the Claim is filed with the Construction Manager within 20 days of the first such instance. In the event that the

Contractor fails to comply with this provision, it waives any claim which it may have for an extension of time pursuant to this agreement.

00700-55 STATEMENT OF CLAIM - CONTENTS

The Statement of Claim referenced in the preceding 00700-54 shall include specific information concerning the nature of the delay, the date of commencement of the delay, the construction activities affected by the delay, the person or organization responsible for the delay, the anticipated extent of the delay, and any recommended action to avoid or minimize the delay.

00700-56 WORK BEHIND SCHEDULE, REMEDY BY CONTRACTOR

If the work actually in place falls behind the currently updated and approved schedule, and it becomes apparent from the current schedule that work will not be completed within the contract time, the Contractor agrees that it will, as necessary, or as directed by the Construction Manager, take action at no additional cost to the County to improve the progress of the work, including increasing manpower, increasing the number of working hours per shift or shifts per working day, increasing the amount of equipment at the site, and any other measure reasonably required to complete the work in a timely fashion.

00700-57 DILIGENCE

The Contractor's failure to substantially comply with the requirements of the preceding paragraph may be grounds for determination by the County that the Contractor is failing to prosecute the work with such diligence as will insure its completion within the time specified. In such event, the County shall have the right to furnish, from its own forces or by contract, such additional labor and materials as may be required to comply with the schedule after 48 hours written notice to the Contractor, and the Contractor shall be liable for such costs incurred by the County.

00700-58 SET-OFFS

Any monies due to the Contractor pursuant to the preceding paragraph of this agreement may be deducted by the County against monies due from the County to the Contractor.

00700-59 REMEDIES CUMULATIVE

The remedies of the County under General Condition 56, 57, and 58 are in addition to and without prejudice to all of the rights and remedies of the County at law, in equity, or contained in this agreement.

00700-60 TITLE TO MATERIALS

No materials or supplies shall be purchased by the Contractor or by any Subcontractor subject to any chattel mortgage or under a conditional sales contract or other agreement by which any interest is retained by the seller. The Contractor hereby warrants that it has good and marketable title to all materials and supplies used by it in the work, and the Contractor further warrants that all materials and supplies shall be free from all liens, claims, or encumbrances at the time of incorporation in the work.

00700-61 INSPECTION OF MATERIALS

All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with accepted standards and in accordance with the requirements of the contract documents. Additional tests performed after the rejection of materials or equipment shall be at the Contractor's expense.

00700-62 CONSTRUCTION MANAGER'S PRESENCE DURING TESTING

All tests performed by the Contractor shall be witnessed by the Construction Manager unless the requirement therefore is waived in writing. The Construction Manager may perform additional tests on materials previously tested by the Contractor, and the Contractor shall furnish samples for this purpose as requested.

00700-63 MATERIALS INCORPORATED IN WORK

The Contractor shall furnish all materials and equipment to be incorporated in the work. All such materials or equipment shall be new and of the highest quality available. Manufactured materials and equipment shall be obtained from sources which are currently manufacturing such materials, except as otherwise specifically approved by the Construction Manager.

00700-64 STORAGE OF MATERIALS

Materials and equipment to be incorporated in the work shall be stored in such a manner as to preserve their quality and fitness for the work and to facilitate inspection.

00700-65 PAYROLL REPORTS

The Contractor may be required to furnish payroll reports to the Construction Manager as required by the Owner Controlled Insurance Program.

00700-66 CONTRACTORS' REPRESENTATIVE

Before beginning work, the Contractor shall notify the Construction Manager in writing of one person within its organization who shall have complete authority to supervise the work, receive orders from the Construction Manager, and represent the Contractor in all matters arising pursuant to this agreement. The Contractor shall not remove its representative without first designating in writing a new representative. The Contractor's representative shall normally be present at or about the site of work while the work is in progress. When neither the Contractor nor its representative is present at the work site, the superintendent, foreman, or other of the Contractor's employee in charge of the work shall be an authorized representative of the Contractor.

00700-67 SPECIALTY SUB-CONTRACTORS

The Contractor may utilize the services of specialty subcontractors on those parts of the project which, under normal contracting practices, are performed by specialty subcontractors. The Contractor shall not award more than seventy-five percent of the work to subcontractors.

00700-68 INSPECTION BY THE CONSTRUCTION MANAGER

All work pursuant to this agreement shall be subject to inspection by the Construction Manager for conformity with contract drawings and specifications. The Contractor shall give the Construction Manager reasonable advance notice of operations requiring special inspection of a portion of the work.

00700-69 WORK COVERED PRIOR TO CONSTRUCTION MANAGER'S INSPECTION

In the event that work is covered or completed without the approval of the Construction Manager, and such approval is required by the specifications or required in advance by the Construction Manager, the Contractor shall bear all costs involved in inspection notwithstanding conformance of such portion of the work to the contract drawings and specifications.

00700-70 SCHEDULING OF THE WORK

- A. The work of this contract shall be planned, scheduled, executed, and reported using the critical path method (CPM) as established in Section 01320 of these Contract Documents.
- B. With ten (10) calendar days after the Notice to Proceed, the Contractor shall submit a Detailed Construction Schedule according to the requirements established herein. (Section 01 310)

00700-71 PROGRESS ESTIMATES

The Contractor shall prepare a written report for the Construction Manager's approval, on County forms, of the total value of work performed and materials and equipment obtained to the date of submission. Such a report must accompany each request for a progress payment and is subject to review and approval by the Construction Manager. Approval of a progress estimate or tendering of a progress payment shall not be considered an approval or acceptance of any work performed, and all estimates and payments shall be subject to correction in subsequent estimates. Progress payments shall be made for all completed activities and for materials suitably stored on-site.

00700-72 PROGRESS PAYMENTS

Upon approval of each monthly estimate of work performed and materials furnished, the Construction Manager shall approve payment to the Contractor for the estimated value of such work, materials, and equipment, less the amount of all prior payments and any liquidated damages. The Contractor will be paid 100 percent, less retainage, of the cost of materials received and properly stored on-site but not incorporated into the work. Payments for materials or equipment stored on the site shall be conditioned upon submission by the Contractor of bills of sale to establish the County's title to such materials or equipment. The Contractor's request for payment shall provide sufficient detail as to the work completed or materials purchased for which payment is requested to permit meaningful review by the Construction Manager.

00700-73 TIME OF PAYMENT

The Contractor will be paid within 30 days following receipt of an approved Progress Estimate. The Contractor expressly agrees that the payment provisions within this Contract shall supersede the rates of interest, payment periods, and contract and subcontract terms provided for under the Georgia Prompt Pay Act, O.C.G.A. Section 13-11-1 et seq., and that the rates of interest, payment periods, and contract and subcontract terms provided for under the Prompt Pay Act shall have no application to this Contract. The County shall not be liable for any late payment interest or penalty.

00700-74 RETAINAGE

The County shall retain from each progress payment ten percent of the estimated value of the work performed until the progress payments, including retainage, total 50 percent of the contract price. If a contract includes two or more projects or assignments that have been separately priced and have separate budgets, and the performances of such projects or assignments are not related to or dependent upon the performance of any other, the 50 per cent limit shall be based upon the price for each individual project or assignment. Thereafter, no further retainage shall be withheld so long as the Contractor is making satisfactory progress to insure completion of the work within the time specified therefore. The County may reinstate the ten percent retainage in the event the Construction Manager determines that the Contractor is not making satisfactory progress to complete the work within the time specified in this agreement or in the event that the Construction Manager provides a specific cause for such withholding. The County may also withhold retainage upon substantial completion of the work as provided in O.C.G.A. §13-10-81(c). Interest may be paid upon the retainage in accordance with Georgia law.

00700-75 PAYMENT OF SUBCONTRACTORS

The Contractor shall promptly pay each subcontractor upon the receipt of payment from the County. Such payment shall be made from the amount paid to the Contractor pursuant to the subcontractor's work. The Contractor shall also maintain the records of the percentage retained from payments to the Contractor pursuant to such subcontractor's work. The Contractor shall procure agreements from each subcontractor requiring each subcontractor to pay their subcontractors, agents and employees in a similar manner. The County reserves the right to inquire of any subcontractor, supplier, materialman, or subconsultant, the status of any indebtedness of the Contractor. The County further reserves the right to require the Contractor to designate on each instrument of payment exceeding \$400.00 to subcontractors, suppliers, materialmen, and subconsultants that such payment is on account of the work under this Contract.

00700-76 COUNTY'S RESPONSIBILITIES TO SUBCONTRACTORS

Neither the County nor the Construction Manager shall have any obligation to pay any subcontractor except as otherwise required by law.

00700-77 PROGRESS PAYMENTS - ACCEPTANCE OF WORK

Certification of progress payments, as well as the actual payment thereof, shall not constitute the County's acceptance of work performed pursuant to this agreement.

00700-78 PAYMENTS IN TRUST

All sums paid to the Contractor pursuant to this agreement are hereby declared to constitute trust funds in the hands of the contractor to be applied first to the payment of claims of subcontractors, laborers, and suppliers arising out of the work, to claims for utilities furnished and taxes imposed, and to the payment of premiums on surety and other bonds and on insurance for any other application.

00700-79 JOINT PAYMENTS

The County reserves the right to issue any progress payment or final payment by check jointly to the Contractor and any subcontractor or supplier.

00700-80 RIGHT TO WITHHOLD PAYMENT

The Construction Manager may decline to approve payment and may withhold payment in whole or in part to the extent reasonable and necessary to protect the County against loss due to defective work, probable or actual third party claims, the Contractor's failure to pay subcontractors or materialmen, reasonable evidence that the work will not be completed within the contract time or contract price or damage to the County or any other contractor on the project.

00700-81 CERTIFICATE OF SUBSTANTIAL COMPLETION

Upon the Contractor's submission of a request for a certificate of Substantial Completion, the Construction Manager shall inspect the work and determine whether the work is Substantially Complete. If the work is Substantially Complete, the Construction Manager shall issue a certificate of Substantial Completion of the work which shall establish the date of Substantial Completion, shall state the responsibilities of the County and the Contractor for security, maintenance, heat, utilities, damage to the work and insurance, and shall fix the time within which the Contractor shall complete the items submitted by the Contractor as requiring correction or further work. The certificate of substantial completion of the work shall be submitted to the County and the Contractor for their written acceptance of the responsibilities assigned to them pursuant to such certificate.

If in the sole opinion of the Construction Manager, the work is not substantially complete, the Construction Manager shall notify the Contractor of such, in writing, and outline requirements to be met to achieve Substantial Completion.

00700-82 PAYMENT UPON SUBSTANTIAL COMPLETION

Upon Substantial Completion of the work and upon application by the Contractor and approval by the Construction Manager, the County shall make payment reflecting 100% work completed, less value of work remaining as determined by Construction Manager and any authorized retainage.

00700-83 COMMENCEMENT OF WARRANTIES

Warranties required by this agreement shall commence on the date of final completion of the project as determined under General Condition 00700-84 unless otherwise provided in the certificate of Substantial Completion.

00700-84 FINAL PAYMENT - WAIVER OF CLAIMS, DISPUTE OF FINAL PAYMENT

The acceptance of the Substantial Completion 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 application for payment at Substantial Completion and except for the retainage sums due at final acceptance. Following the Construction Manager's issuance of the certificate of Substantial Completion and the Contractor's completion of the work pursuant to this agreement, the Contractor shall forward to the Construction Manager a written notice that the work is ready for final inspection and

acceptance. If after inspection the Construction Manager certifies that the work is complete and issues written notification of such to the Contractor, the Contractor shall forward to the Construction Manager a final application for payment. The Construction Manager shall issue a certificate for payment, which shall approve final payment to the Contractor and shall establish the date of final completion.

In the event the Contractor timely disputes the amount of the final payment, the amount due the CONTRACTOR shall be deemed by the CONTRACTOR and the COUNTY to be an unliquidated sum and no interest shall accrue or be payable on the sum finally determined to be due to the CONTRACTOR for any period prior to final determination of such sum, whether such determination be by agreement of the CONTRACTOR and the COUNTY or by final judgment of the proper court in the event of litigation between the COUNTY and the CONTRACTOR. The CONTRACTOR specifically waives and renounces any and all rights it may have under Section 13-6-13 of the Official Code of Georgia and agrees that in the event suit is brought by the CONTRACTOR against the COUNTY for any sum claimed by the CONTRACTOR under the Contract or for any extra or additional work, no interest shall be awarded on any sum found to be due from the COUNTY to the CONTRACTOR in the final judgment entered in such suit. All final judgments shall draw interest at the legal rate, as specified by law.

00700-85 DOCUMENTATION OF COMPLETION OF WORK

Neither the final payment nor the remaining retainage shall become due until the Contractor submits the following documents to the Construction Manager:

- A. An affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the work have been paid other otherwise satisfied;
- B. The surety's consent to final payment; and
- C. Any other data reasonably required by the County or Construction Manager establishing payment or satisfaction of all such obligations, including releases, waivers of liens, and documents of satisfaction of debts.

In the event that a subcontractor refuses to furnish a release or waiver as required by the County or Construction Manager, the Contractor may furnish a bond satisfactory to the County to indemnify the County against such loss. In the event that any lien or indebtedness remains unsatisfied after all payments are made, the contractor shall refund to the County all moneys that the County may become compelled to pay in discharging such lien or other indebtedness, including all costs and reasonable attorney's fees.

00700-86 GOVERNING LAW

Each and every provision of this agreement shall be construed in accordance with and governed by Georgia law. The parties acknowledge that this contract is executed in FULTON County, Georgia and that the contract is to be performed in FULTON County, Georgia. Each party hereby consents to the FULTON Superior Court's sole jurisdiction over any dispute which arises as a result of the execution or performance of this agreement, and each party hereby waives any and all objections to venue in the FULTON Superior Court.

00700-87 CHANGES IN THE WORK

A. CHANGE ORDERS

1. A Change Order is a written order to the Contractor signed to show the approval and the authorization of the County, issued after execution of the Contract, authorizing a change in the Work and/or an adjustment in the Contract Sum or the Contract Time. Change Orders shall be written using forms designated by the County with Contractor providing supporting documentation as required by the Construction Manager. The Contract Sum and the Contract Time may be changed only by approved Change Order pursuant to Fulton County Procedure 800-6. The amount payable by the Change Order is payment in full for all direct and indirect costs incurred and related to the work under said Change Order, including but not limited to delays, imports, acceleration, disruption and extended overhead. A Change Order signed by the Contractor indicates the Contractor's agreement therewith, including the adjustment in either or both of the Contract Sum or the Contract Time.
2. The County, without invalidating the Contract, may order changes in the Work within the general scope of the Contract as defined in General Condition 2. The time allowed for performance of the work and the contract price to be paid to the Contractor may be adjusted accordingly.
3. The cost or credit to the County resulting from a change in the Work shall be determined in one or more of the following ways:
 - a. By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
 - b. By unit prices stated in the Contract Documents or subsequently agreed upon;
 - c. By cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
 - d. By the method provided in Subparagraph A4 below.
4. If none of the methods set forth in Subparagraphs 3a, 3b, or 3c above is agreed upon, the Contractor, provided a written order signed by the Construction Manager is received, shall promptly proceed with the Work involved. The cost of such Work shall then be determined by the Construction Manager on basis of the reasonable expenditures and savings of those performing the Work attributable to the change. The cost of the change shall include only the items listed in Subparagraph 5a below, and in the case of either a decrease or an increase in the Contract Sum, an allowance for overhead and profit in accordance with the schedules set forth in Subparagraphs 5b and 6 below shall be applied to the cost or credit.

- a. In such case, and also under Subparagraph 3a above, the Contractor shall keep and present, in such form as the Construction Manager may prescribe, an itemized accounting of all actual costs expended, together with appropriate supporting data for inclusion in a Change Order.
 - b. All hourly rate charges shall be submitted to the Construction Manager for prior review and approval. All hourly rate charges shall be properly supported as required by the Construction Manager with certified payrolls, or their acceptable equivalent. When authorized to proceed for a given change and actual expenditures have been made prior to execution of a Change Order for the entire change, such actual expenditures may be summarized monthly, and if approved, incorporated into a Change Order. When both additions and credits covering related Work or substitutions are involved in any one change, the allowance for overhead and profit shall be figured on the basis of the net increase or decrease, if any, with respect to that change.
5. In Subparagraphs 3 and 4 above, the items included in “Cost and “Overhead” shall be based on the following schedule:
- a. Unless otherwise provided in the Contract Documents, “Cost” shall be limited to the following: cost of materials incorporated into the Work, including sales tax and cost of delivery; cost of direct labor (labor cost may include a pro rata share of foreman’s account of the change) including social security, old age and unemployment insurance, and fringe benefits required by agreement or custom; workers’ or workmen’s compensation insurance; rental value of equipment and machinery; costs for preparing Shop Drawings.
 - b. Unless otherwise provided in the Contract Documents, “Overhead” shall include the following: bond and insurance premiums including increase and decreases from change in the Work, supervision, superintendence, construction parking, wages of timekeepers, watchmen and clerks, small tools, consumable supplies, expendables, incidentals, general office expense, the cost of additional reproduction for the Contractor’s subcontractors beyond that agreed upon in the Contract Documents, construction parking, any additional costs of craft supervision by the Contractor’s or subcontractors’ superintendents, and overhead charges which would be customary and expended regardless of the change in the Work due to other overlapping activities which are included as part of the original Contract, and all other expenses not included in “Cost” above.

- c. In the event that a change is issued by the County which would require the expenditure of substantial amounts of special supervision (beyond the foreman level) by the Contractor, the Contractor may, at the sole direction of the Construction Manager, be allowed to incorporate these charges into the agreement cost for the change.
 6. In Subparagraphs 3 and 4 above, the allowance for overhead and profit combined, included in the total cost or credit to the County, shall be based on the following schedule:
 - a. For the Contractor, for any work performed by the Contractor's own forces, ten (10) percent of the cost.
 - b. For the Contractor, for any work performed by a Contractor's subcontractor, five (5) percent of the amount due the subcontractor.
 - c. For each subcontractor or sub-subcontractor involved, for any work performed by that subcontractor's or sub-subcontractor's own forces, ten (10) percent of the cost.
 - d. For each subcontractor, for work performed by a sub-subcontractor, five (5) percent of the amount due to the sub-subcontractor.
 - e. Cost to which overhead and profit is to be applied shall be determined in accordance with Subparagraph 5 above unless modified otherwise.
 7. In order to facilitate checking of quotations for extras or credits, all proposals or bids, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs, including labor cost, materials and subcontracts. Labor and materials shall be itemized in the manner defined in Subparagraph 4 above. Where major cost items are subcontracts, they shall be itemized also. In no case shall a change be approved without such itemization.
 8. No payment shall be made for any changes to the contract that are not included in a fully executed Change Order.
- B. CONCEALED, UNKNOWN AND DIFFERING CONDITIONS
- a. Should concealed conditions be encountered in the performance of the Work below the surface of the ground, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the Contract Documents, or should unknown physical conditions below the surface of the ground or concealed or unknown conditions in an existing structure of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract, be

encountered, the Contract Sum and Contract Time shall be equitably adjusted by Change Order upon request by either party made **within twenty (20) days after the first observance** of the conditions. No such request for equitable adjustment shall be valid unless the Contractor complies with this (20) days notice and Subparagraph C.1. below.

- b. The Contractor shall promptly, and before such conditions are disturbed, notify the Construction Manager in writing of any claim of concealed, unknown or differing conditions pursuant to this paragraph. The Construction Manager shall authorize the Engineer to investigate the conditions, and if it is found that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the Work under this Contract, whether or not changed as a result of such conditions, an equitable adjustment shall be recommended to the Construction Manager.
- c. No claim of the Contractor under this clause shall be allowed unless the Contractor has given the notice required in (a) above, prior to disturbing the condition.
- d. No claim by the Contractor for an equitable adjustment shall be allowed if asserted after final payment under this Contract.
- e. Any materially differing site condition as between what is shown on the Drawings and Specifications and actually found on site shall be immediately reported to the Construction Manager in writing prior to the commencement of Work at the site. Failure of the Contractor to notify the Construction Manager in writing of the differing site condition prior to performance of Work at the site shall constitute a waiver of any claim for additional monies. Any Change Order necessitated by the differing site condition shall be processed as provided under "Changes in the Contract".

C. REQUESTS FOR ADDITIONAL COST

- a. If the Contractor wishes to request an increase in the Contract Sum, the Contractor shall give the Construction Manager written notice thereof within twenty (20) days after the occurrence of the event, or identification of the conditions, giving rise to such request. This notice shall be give by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property in which case the Contractor shall proceed in accordance with Paragraph 10.7 of this Agreement, and Subparagraph A.4 above. No such request shall be valid unless so made within the twenty (20) days specified above. If the County and the Contractor cannot agree on the amount of the adjustment in the Contract Sum, it shall be determined by the Construction Manager. Any change in the Contract Sum resulting from such claim shall be documented by Change Order.

- b. If the Contractor claims that addition cost is involved because of, but not limited to (1) any written interpretation pursuant to General Condition 00700-17 of this Agreement, (2) any order by the County to stop the Work pursuant to General Conditions 00700-25 and 00700-37 of this Agreement where the Contractor was not at fault, or any such order by the Construction Manager as the County's agent, or (3) any written order for a minor change in the Work issued pursuant to Paragraph D below, the Contractor shall submit a request for an increase in the Contract Sum as provided in Subparagraph C.1 above. No such claim shall be valid unless the Contractor complies with Subparagraph C.1 above and approved by the County pursuant to Change Order Policy 800-6.

D. MINOR CHANGES IN THE WORK

- f. The Construction Manager may order minor changes in the Work not involving an adjustment in the Contract Price, extension of the time allowed for performance of the work and not inconsistent with the intent of the Contract Documents. Such changes shall be effected by a written Change Directive issued by the Construction Manager, and shall be binding on the County and the Contractor. The Contractor shall carry out such written orders promptly.

E. BONDS

- a. If any change order results in an increase in the contract price, the contractor shall increase the penal sum of the performance and payment bonds to equal the increased price.

00700-88 DISAGREEMENT WITH ORDERS FOR CHANGE

Contractor's written acceptance of a Change Order or other order for changes shall constitute his final and binding agreement to the provisions thereof and a waiver of all claims in connection therewith, whether direct or consequential in nature. Should Contractor disagree with any order for changes, he may submit a notice of potential claim to the Construction Manager, at such time as the order is set forth in the form of a Change Order. Disagreement with the provisions of an order for changes shall not relieve Contractor of his obligation under Clause 00700-87, Change Orders.

00700-89 NO WAIVER OF REMEDIES

Exercise by the County of any remedy is not exclusive of any other remedy available to County and shall not constitute a waiver of any such other remedies. Failure of the County to exercise any remedy, including breach of contract remedies, shall not preclude the County from exercising such remedies in similar circumstances in the future.

00700-90 LAND AND RIGHTS-OF-WAY

The owner will provide, as indicated in the Contract Documents and prior to Notice to Proceed, the lands upon which the work is to be done, right-of-way for access thereto, and such other lands which are designated for the use of the Contractor. The Contractor shall confine the Contractor's work and all associated activities to the easements and other areas designated for the Contractor's use. The Contractor shall comply with any

limits on construction methods and practices which may be required by easement agreements. If, due to some unforeseen reason, the necessary easements are not obtained, the Contractor shall receive an equitable extension of contract time dependent upon the effect on the critical path of the project schedule or the County may terminate the Contract for its convenience.

00700-91 COORDINATION WITH STATE DEPARTMENT OF TRANSPORTATION

- a. No clearing or grading shall be completed by Contractor within the State Department of Transportation (DOT) area under construction. The Contractor must coordinate his construction scheduling with DOT.
- b. If the Contractor begins work before DOT's completion date, he must obtain the approval of DOT before starting work in the area. The state DOT has the right to stop the Contractor's work the DOT area.
- c. The Contractor shall receive no additional compensation or damages resulting from delay or work stoppage from DOT actions or scheduling.
- d. Contractor shall obtain DOT drawings of the DOT, project area for verification of road geometry, storm drains, etc. from Georgia Department of Transportation or Fulton County. The Contractor is responsible for obtaining any pertinent DOT revisions.

I N D E X

SUBJECT

GENERAL CONDITION

Administration of Contract	17
Applicable Law	7
Assignment	13
Blasting and Excavation	26
Changes	87, 88
Clean Site	29
Codes	4
Commencement of Work	49
Contract Documents	2
Contractor's Representative	66
Defective Work	31, 32
Definitions	3
Delay	51, 52, 54, 55
Extension of Time	52, 53, 54
Familiarity of Time	1, 22
Final Payment	84
Governing Law	86
High Voltage Lines	27
Inclement Weather	53
Indemnification	15
Inspections	23, 61, 62, 68, 69
Interruption	48

Licenses	8
Liquidated Damages	46
New Materials	33, 63
Notices	24
Payment	72, 73, 75
Payment of Subcontractors	75, 76
Payment Upon Substantial Completion	82, 84
Payroll Reports	65
Permits	8
Progress Payments	72, 73, 77, 78, 79, 80
Protection of Work	30, 64
Records Inspection	45
Retainage	11, 74
Safety	25
Scaffolding and Staging	28
Scheduling	70
Service of Process	14
Stop Work Order	37
Subcontractors	67, 76
Substantial Completion	81
Suspension	48
Supervision of Work	16, 66
Surety's Responsibility	17
Taxes	9, 10
Termination for Cause	38, 44, 47
Termination for Convenience	39, 40, 41
Time of the Essence	50
Warranties	33, 34, 35, 36
Work Behind Schedule	56

END OF SECTION # 00700-R

SECTION 02125 EROSION AND SEDIMENTATION CONTROL

PART 1 GENERAL

1.01 SCOPE

- A. The work specified in this Section consists of providing, maintaining and removing temporary erosion and sedimentation controls.
- B. Temporary erosion controls, include, but are not limited to, grassing, mulching, watering and reseeding on-site surfaces and spoil and borrow area surfaces, and providing interceptor ditches at ends of berms and at those locations which will ensure that erosion during construction will be either eliminated or maintained within acceptable limits as established by the Georgia Erosion and Sedimentation Act of 1975, as amended, Section 402 of the Federal Clean Water Act, and applicable codes, ordinances, rules, regulations and laws of local and municipal authorities having jurisdiction.
- C. Temporary sedimentation controls include, but are not limited to, silt dams, traps, barriers, filter stone and appurtenances at the foot of sloped surfaces which will ensure that sedimentation pollution will be either eliminated or maintained within acceptable limits as established by the Federal Clean Water Act of 1987, as amended.
- D. Land disturbance activity shall not commence until the Building Permit has been issued, which authorizes land disturbance activities.
- E. Basic Principles
 - 1. Conduct the earthwork and excavation activities in such a manner to fit the topography, soil type and condition.
 - 2. Minimize the disturbed area and the duration of exposure to erosion elements.
 - 3. Stabilize disturbed areas immediately.
 - 4. Safely convey run-off from the site to an outlet such that erosion will not be increased off site.
 - 5. Retain sediment on site that was generated on site.
 - 6. Minimize encroachment upon watercourses.

- F. Temporary Erosion and Sedimentation Control: In general, temporary erosion and sedimentation control procedures shall be directed toward:
 - 1. Preventing soil erosion at the source.
 - 2. Preventing silt and sediment from entering any waterway if soil erosion cannot be prevented.
 - 3. Preventing silt and sediment from migrating downstream in the event it cannot be prevented from entering the waterway.
- G. Permanent Erosion Control: Permanent erosion control measures shall be implemented to prevent sedimentation of the waterways and to prevent erosion of the Project site.

1.02 QUALITY ASSURANCE

- A. General: Perform all work under this Section in accordance with all pertinent rules and regulations including, but not necessarily limited to, those stated herein and these Specifications.
- B. Conflicts: Where provisions of pertinent rules and regulations conflict with these Specifications, the more stringent provisions shall govern.

PART 2 PRODUCTS

2.01 TEMPORARY EROSION AND SEDIMENTATION CONTROL MATERIALS

- A. Silt Fence: Silt fence shall meet the requirements of Section 171 - Temporary Silt Fence of the Department of Transportation, State of Georgia, Standard Specification, latest edition. Silt fence fabric must be on the Georgia DOT Qualified Product List.
- B. Hay bales shall be clean, seedfree cereal hay type.
- C. Netting shall be 1/2-inch, galvanized steel, chicken wire mesh.
- D. Filter stone shall be crushed stone conforming to Georgia Department of Transportation Table 800.01H, Size Number 3.
- E. Concrete block shall be hollow, non-load-bearing type.
- F. Plywood shall be 3/4-inch thick exterior type.

2.02 RIP RAP

- A. Use sound, tough, durable stones resistant to the action of air and water. Slabby or shaley pieces will not be acceptable. Specific gravity shall be 2.0 or greater. Rip rap shall have less than 66 percent wear when tested in accordance with AASHTO T-96. Unless shown or specified otherwise, stone rip rap shall be Type 1 rip rap.
- B. Type 1 Rip Rap: The largest pieces shall have a maximum volume of two cubic feet. At least 35 percent of the mass shall be comprised of pieces which weigh 125 pounds or more. The remainder shall be well graded down to the finest sizes. Rock fines shall comprise a maximum of 10 percent of the total mass. Rock fines are defined as material passing a No. 4 sieve. Rip rap size shall conform to Georgia Department of Transportation Section 805.01 Stone Dumped Rip Rap, Type 1.
- C. Type 3 Rip Rap: The largest pieces shall have a maximum approximate volume of one cubic foot. At least 35 percent of the mass shall be comprised of pieces which weigh 15 pounds or more. The remainder shall be well graded down to the finest sizes. Rock fines shall comprise a maximum of 10 percent of the total mass. Rock fines are defined as material passing a No. 4 sieve. Rip rap size shall conform to Georgia Department of Transportation Section 805.01 Stone Dumped Rip Rap, Type 3.
- D. 200 Pound Rip Rap: Minimum weight of individual stones shall be 200 pounds.

2.03 FILTER FABRIC

- A. The filter fabric for use under rip rap shall be a monofilament, polypropylene woven fabric or a non-woven fabric meeting the specifications as established by Task Force 25 for the Federal Highway Administration. The filter fabric shall have an equivalent opening size (EOS) of 70.
- B. Filter fabric under rip rap shall be equal to Mirafi, Amoco or Exxon.

2.04 CONCRETE

Concrete shall have a compressive strength of not less than 3,000 psi, with not less than 5.5 bags of cement per cubic yard and a slump between 3 and 5-inches. Ready-mixed concrete shall be mixed and transported in accordance with ASTM C 94. Reinforcing steel shall conform to the requirements of ASTM A 615, Grade 60.

PART 3 EXECUTION

3.01 GENERAL

Provide all materials and promptly take all actions necessary to achieve effective erosion and sedimentation control in accordance with the Georgia Erosion and Sedimentation Act of 1975, as amended, local enforcing agency guidelines, and these Specifications.

3.02 TEMPORARY EROSION AND SEDIMENTATION CONTROL

- A. Temporary erosion and sedimentation control procedures should be initially directed toward preventing silt and sediment from entering the creeks. The preferred method is to provide an undisturbed natural buffer, extending a minimal 25 feet from the top of the bank, to filter the run-off. Should this buffer prove infeasible due to construction activities being too close to the creek, or if the amount of sediment overwhelms the buffer, the Contractor shall place silt fences to filter the run-off and, if necessary, place permanent rip rap to stabilize the creek banks. When excavation activities disturb the previously stated preventative measures, or if they are not maintained, or whenever the construction activities cross the creeks, the check dams shall be installed downstream and within 200 feet of the affected area.
- B. Silt dams, silt fences, traps, barriers, check dams, appurtenances and other temporary measures and devices shall be installed as indicated on the approved plans and working drawings, shall be maintained until no longer needed, and shall then be removed. Deteriorated hay bales and dislodged filter stone shall be replaced with new materials. Detention ponds, if constructed, shall be maintained in a condition ensuring that unfiltered water will not leave the pond.
- C. Where permanent grassing is not appropriate, and where the Contractor's temporary erosion and sedimentation control practices are inadequate, the Engineer may direct the Contractor to provide temporary vegetative cover with fast growing seedings. Such temporary vegetative cover shall be provided by the Contractor in compliance with the Manual for Erosion and Sedimentation Control in Georgia, specifically in the selection of species, planting dates and application rates for seedings, fertilizer and mulching, with the exception that kudzu shall not be permitted.
- D. All erosion and sedimentation control devices, including check dams, shall be inspected by the Contractor at least weekly and after each rainfall occurrence and cleaned out and repaired by the Contractor as necessary.
- E. Temporary erosion and sedimentation control devices shall be installed and maintained from the initial land disturbance activity until the satisfactory

completion and establishment of permanent erosion control measures. At that time, temporary devices

shall be removed.

3.03 PERMANENT EROSION CONTROL

A. Permanent erosion control shall include:

1. Restoring the work site to its original contours, unless shown otherwise on the Drawings or directed by the Engineer.
2. Permanent vegetative cover shall be performed in accordance with Article 3.04 of this Section.
3. Permanent stabilization of steep slopes and creeks shall be performed in accordance with Article 3.05 of this Section.

B. Permanent erosion control measures shall be implemented as soon as practical after the completion of pipe installation or land disturbance for each segment of the Project. In no event shall implementation be postponed when no further construction activities will impact that portion or segment of the Project. Partial payment requests may be withheld for those portions of the Project not complying with this requirement.

3.04 GRASSING

A. General

1. All references to grassing, unless noted otherwise, shall relate to establishing permanent vegetative cover as specified herein for seeding, fertilizing, mulching, etc.
2. When final grade has been established, all bare soil, unless otherwise required by the Contract Documents, shall be seeded, fertilized and mulched in an effort to restore to a protected condition. Critical areas shall be sodded as approved or directed by the Engineer.
3. Specified permanent grassing shall be performed at the first appropriate season following establishment of final grading in each section of the site.
4. Permanent grassing shall be of a perennial species.

B. Replant grass removed or damaged in residential areas using the same variety of grass and at the first appropriate season. Where sod is removed or damaged, replant such areas using sod of the same species of grass at the first

appropriate season. Outside of residential or landscaped areas, grass the entire area disturbed by the work on completion of work in any area. In all areas, promptly establish successful stands of grass.

- C. Grassing activities shall comply with the Manual for Erosion and Sediment Control in Georgia, specifically for the selection of species, with the exception that kudzu shall not be permitted, planting dates and application rates for seeding, fertilizer and mulching. Where permanent vegetative cover (grassing) cannot be immediately established (due to season or other circumstances) the Contractor shall provide temporary vegetative cover. The Contractor must return to the site (at the appropriate season) to install permanent vegetation in areas that have received temporary vegetative cover.

3.05 RIP RAP

- A. Unless shown otherwise on the Drawings, rip rap shall be placed where ordered by the Engineer, at all points where banks of streams or drainage ditches are disturbed by excavation, or at all points where natural vegetation is removed from banks of the streams or drainage ditches. Carefully compact backfill and place rip rap to prevent subsequent settlement and erosion. This requirement applies equally to construction along side a stream or drainage ditch as well as crossing a stream or drainage ditch.
- B. When trenching across a creek, place rip rap a distance of 10 feet upstream and 10 feet downstream from the top of the trench excavation. Place rip rap across creek bottom, across creek banks and extend rip rap placement five feet beyond the top of each creek bank.
- C. Preparation of Foundations: The ground surface upon which the rip rap is to be placed shall be brought in reasonably close conformity to the correct lines and grades before placement is commenced. Where filling of depressions is required, the new material shall be compacted with hand or mechanical tampers. Unless at creek banks or otherwise shown or specified, rip rap shall begin in a toe ditch constructed in original ground around the toe of the fill or the cut slope. The toe ditch shall be two feet deep in original ground, and the side next to the fill or cut shall have that same slope. After the rip rap is placed, the toe ditch shall be backfilled and the excess dirt spread neatly within the construction easement.
- D. Placement of Filter Fabric: The surface to receive fabric shall be prepared to a relatively smooth condition free from obstructions, depressions and debris. The fabric shall be placed with the long dimension running up the slope and shall be placed to provide a minimum number of overlaps. The strips shall be placed to provide a minimum width of one foot of overlap for each joint. The filter fabric shall be anchored in place with securing pins of the type recommended by the fabric manufacturer. Pins shall be placed on or within 3-inches of the centerline

of the overlap. The fabric shall be placed so that the upstream strip overlaps the downstream strip. The fabric shall be placed loosely so as to give and therefore avoid stretching and tearing during placement of the stones. The stones shall be dropped no more than three feet during construction. The fabric shall be protected at all times during construction from clogging due to clay, silts, chemicals or other contaminants. Any contaminated fabric or any fabric damaged during its installation or during placement of rip rap shall be removed and replaced with uncontaminated and undamaged fabric at no expense to the County.

E. Placement of Rip Rap

1. Rip rap shall be placed on a 6-inch layer of soil, crushed stone or sand overlaying the filter fabric. This 6-inch layer shall be placed to maximize the contact between the soil beneath the filter fabric and the filter fabric. Rip rap shall be placed with its top elevation conforming with the finished grade or the natural slope of the stream bank and stream bottom.
2. Stone rip rap shall be dumped into place to form a uniform surface and to the thickness specified on the Drawings. The thickness tolerance for the course shall be -6-inches and +12-inches. If the Drawings or the Bid do not specify a thickness, the course shall be placed to a thickness of not less than 18-inches.

END OF SECTION 02125

SECTION NO. 02225**TRENCH EXCAVATION AND BACKFILL****PART 1 - GENERAL****3 SCOPE**

- D. The work under this Section consists of furnishing all labor, equipment and materials and performing all operations in connection with the trench excavation and backfill required to install the pipelines shown on the Drawings and as specified.

- D. Excavation shall include the removal of any trees, stumps, brush, debris or other obstacles which remain after the clearing and grubbing operations, which may obstruct the work, and the excavation and removal of all earth, rock or other materials to the extent necessary to install the pipe and appurtenances in conformance with the lines and grades shown on the Drawings and as specified.

- A. Backfill shall include the refilling and compaction of the fill in the trenches and excavations up to the surrounding ground surface or road grade at crossing.

- B. The trench is divided into five specific areas:
 - 5. Foundation: The area beneath the bedding, sometimes also referenced to as trench stabilization.

 - 1. Bedding: The area above the trench bottom (or foundation) and below the bottom of the barrel of the pipe.

 - 2. Haunching: The area above the bottom of the barrel of the pipe up to a specified height above the bottom of the barrel of the pipe.

 - 1. Initial Backfill: The area above the haunching material and below a plane 12-inches above the top of the barrel of the pipe.

 - 1. Final Backfill: The area above a plane 12-inches above the top of the barrel of the pipe.

- B. The choice of method, means, techniques and equipment rests with the Contractor. The Contractor shall select the method and equipment for trench excavation and backfill depending upon the type of material to be excavated and backfilled, the depth of excavation, the amount of space available for operation of equipment, storage of excavated material, proximity of man-made

improvements to be protected, available easement or right-of-way and prevailing practice in the area.

1.02 QUALITY ASSURANCE

- . Density: All references to “maximum dry density” shall mean the maximum dry density defined by ASTM D 698, except that for cohesionless, free draining soils “maximum dry density” shall mean the maximum index density as determined by ASTM D 4253. Determination of the density of foundation, bedding, haunching, or backfill materials in place shall meet with the requirements of ASTM D 1556, ASTM D 2922 or ASTM D 2937.
- A. Sources and Evaluation Testing: Testing of materials to certify conformance with the Specifications shall be performed by an independent testing laboratory.

1.03 SAFETY

Perform all trench excavation and backfilling activities in accordance with the Occupational Safety and Health Act of 1970 (PL 91-596), as amended. The Contractor shall pay particular attention to the Safety and Health Regulations Part 1926, Subpart P “Excavation, Trenching & Shoring” as described in OSHA publication 2226.

PART 2 PRODUCTS

2.01 TRENCH FOUNDATION MATERIALS

Crushed stone shall be utilized for trench foundation (trench stabilization) and shall meet the requirements of the Georgia Department of Transportation Specification 800.01, Group I (limestone, marble or dolomite) or Group II (quartzite, granite or gneiss). Stone size shall be between No. 57 and No. 4, inclusive.

2.02 BEDDING AND HAUNCHING MATERIALS

- . Unless specified otherwise, bedding and haunching materials shall be earth material as specified below.
- A. Crushed stone utilized for bedding and haunching shall meet the requirements of the Georgia Department of Transportation Specification 800.01, Group I (limestone, marble or dolomite) or Group II (quartzite, granite or gneiss). Stone size shall be between No. 57 and No. 4, inclusive.

2.03 INITIAL BACKFILL

- . Initial backfill material shall be earth materials or crushed stone as specified for bedding and haunching materials.
- A. Earth materials utilized for initial backfill shall be suitable materials selected from materials excavated from the trench. Suitable materials shall be clean and free of rock larger than 2-inches at its largest dimension, organics, cinders, stumps, limbs, frozen earth or mud, man-made wastes and other unsuitable materials. Should the material excavated from the trench be saturated, the saturated material may be used as earth material, provided it is allowed to dry properly and it is capable of meeting the specified compaction requirements. When necessary, initial backfill materials shall be moistened to facilitate compaction by tamping. If materials excavated from the trench are not suitable for use as initial backfill material, provide select material conforming to the requirements of this Section.

2.04 FINAL BACKFILL

Final backfill material shall be general excavated earth materials, shall not contain rock larger than 2-inches at its greatest diameter, cinders, stumps, limbs, man-made wastes and other unsuitable materials. If materials excavated from the trench are not suitable for use as final backfill material, provide select material conforming to the requirements of this Section.

2.05 SELECT BACKFILL

Select backfill shall be materials which meet the requirements as specified for bedding, haunching, initial backfill or final backfill materials, including compaction requirements.

2.06 CONCRETE

Concrete for bedding, haunching, initial backfill or encasement shall have a compressive strength of not less than 3,000 psi, with not less than 5.5 bags of cement per cubic yard and a slump between 3 and 5-inches. Ready-mixed concrete shall be mixed and transported in accordance with ASTM C 94. Reinforcing steel shall conform to the requirements of ASTM A 615, Grade 60.

2.07 FLOWABLE FILL

Flowable fill, where required for trench backfill, shall meet the requirements of Georgia Department of Transportation Standard Specifications, Section 600 for Excavatable or Non-Excavatable type.

2.08 GRANULAR MATERIAL

Granular material, where required for trench backfill, shall be sand, river sand, crushed stone or aggregate, pond screenings, crusher run, recycled concrete, or other angular material. Granular material shall meet gradation requirements for Size No. 57 or finer.

PART 3 EXECUTION

3.01 TRENCH EXCAVATION

- E. Topsoil and grass shall be stripped a minimum of 6-inches over the trench excavation site and stockpiled separately for replacement over the finished grading areas.
- F. Trenches shall be excavated to the lines and grades shown on the Drawings with the centerlines of the trenches on the centerlines of the pipes and to the dimensions which provide the proper support and protection of the pipe and other structures and accessories.
- G. Trench Width for Pipelines
 - 1. The sides of all trenches shall be vertical, as much as possible, to a minimum of one foot above the top of the pipe. Unless otherwise indicated on the Drawings, the maximum trench width shall be equal to the sum of the outside diameter of the pipe plus two feet. The minimum trench width shall be that which allows the proper consolidation of the haunching and initial backfill material.
 - 2. Excavate the top portion of the trench to any width within the construction easement or right-of-way which will not cause unnecessary damage to adjoining structures, roadways, pavement, utilities, trees or private property. Where necessary to accomplish this, provide sheeting and shoring.
 - 3. Where rock is encountered in trenches, excavate to remove boulders and stones to provide a minimum of 6-inches clearance between the rock and any part of the pipe or manhole. The maximum allowable width of rock excavation for payment shall be based on a trench width equal to the outside diameter of the pipe barrel plus 18-inches, but the total allowable rock excavation width for payment will not be less than 36-inches.
 - 4. Wherever the prescribed maximum trench width is exceeded, the Contractor shall use the next higher Class or Type of bedding and

haunching as shown on the Drawings for the full trench width as actually cut. The excessive trench width may be due to unstable trench walls, inadequate or improperly placed bracing and sheeting which caused sloughing, accidental over-excavation, intentional over-excavation necessitated by the size of the Contractor's tamping and compaction equipment, intentional over-excavation due to the size of the Contractor's excavation equipment, or other reasons beyond the control of the Engineer or the County.

D. Depth

1. The trenches shall be excavated to the required depth or elevation which allow for the placement of the pipe and bedding to the dimensions shown on the Drawings.
2. Where rock is encountered in trenches for pipelines, excavate to the minimum depth which will provide clearance below the pipe barrel of 8-inches for pipe 21-inches in diameter and smaller and 12-inches for larger pipe and manholes. Remove boulders and stones to provide a minimum of 6-inches clearance between the rock and any part of the pipe, manhole or accessory.

E. Excavated Materials

1. Excavated materials shall be placed adjacent to the work to be used for backfilling as required. Top soil shall be carefully separated and lastly placed in its original location.
2. Excavated material shall be placed sufficiently back from the edge of the excavation to prevent caving of the trench wall, to permit safe access along the trench and not cause any drainage problems. Excavated material shall be placed so as not to damage existing landscape features or man-made improvements.

3.02 SHEETING, BRACING AND SHORING

A. Sheeting, bracing and shoring shall be performed in the following instances:

1. Where sloping of the trench walls does not adequately protect persons within the trench from slides or cave-ins.
2. In caving ground.
3. In wet, saturated, flowing or otherwise unstable materials. The sides of all trenches and excavations shall be adequately sheeted, braced and shored.

4. Where necessary to prevent damage to adjoining buildings, structures, roadways, pavement, utilities, trees or private properties which are required to remain.
 1. Where necessary to maintain the top of the trench within the available construction easement or right-of-way.
- B. In all cases, excavation protection shall strictly conform to the requirements of the Occupational Safety and Health Act of 1970, as amended.
- C. Timber: Timber for shoring, sheeting, or bracing shall be sound and free of large or loose knots and in good, serviceable condition. Size and spacing shall be in accordance with OSHA regulations.
- D. Steel Sheeting and Sheet Piling: Steel sheet piling shall be the continuous interlock type. The weight, depth and section modulus of the sheet piling shall be sufficient to restrain the loads of earth pressure and surcharge from existing foundations and live loads. Procedure for installation and bracing shall be so scheduled and coordinated with the removal of the earth that the ground under existing structures shall be protected against lateral movement at all times. The Contractor shall provide closure and sealing between sheet piling and existing facilities.
- E. Trench Shield: A trench shield or box may be used to support the trench walls. The use of a trench shield does not necessarily preclude the additional use of bracing and sheeting. When trench shields are used, care must be taken to avoid disturbing the alignment and grade of the pipe or disrupting the haunching of the pipe as the shield is moved. When the bottom of the trench shield extends below the top of the pipe, the trench shield shall be raised in 6-inch increments with specified backfilling occurring simultaneously. At no time shall the trench shield be “dragged” with the bottom of the shield extending below the top of the pipe.
- F. Remove bracing and sheeting in units when backfill reaches the point necessary to protect the pipe and adjacent property. Leave sheeting in place when in the opinion of the Engineer it cannot be safely removed or is within three feet of an existing structure, utility, or pipeline. Cut off any sheeting left in place at least two feet below the surface.
- G. Sheet piling within three feet of an existing structure or pipeline shall remain in place, unless otherwise directed by the Engineer.

3.03 TRENCH ROCK EXCAVATION

- A. Definition of Trench Rock: Any material which cannot be excavated with conventional excavating equipment, and is removed by drilling and blasting, and occupies an original volume of at least one cubic yard.
- B. Blasting: Exhaust other practical means of excavating prior to utilizing blasting as a means of excavation. Provide licensed, experienced workmen to perform blasting. Conduct blasting operations in accordance with all existing ordinances and regulations. Protect all buildings and structures from the effects of the blast. Repair any resulting damage. If the Contractor repeatedly uses excessive blasting charges or blasts in an unsafe or improper manner, the Engineer may direct the Contractor to employ an independent blasting consultant to supervise the preparation for each blast and approve the quantity of each charge.
- C. Removal of Rock: Dispose of rock off site that is surplus or not suitable for use as rip rap or backfill.
- D. The Contractor shall notify the Engineer prior to any blasting. Additionally, the Contractor shall notify the Engineer and local fire department before any charge is set.
- E. Following review by the Engineer regarding the proximity of permanent buildings and structures to the blasting site, the Engineer may direct the Contractor to employ an independent, qualified specialty sub-contractor, approved by the Engineer, to monitor the blasting by use of a seismograph, identify the areas where light charges must be used, conduct pre-blast and post-blast inspections of structures, including photographs or videos, and maintain a detailed written log.

3.04 DEWATERING EXCAVATIONS

- A. Dewater excavation continuously to maintain a water level two feet below the bottom of the trench.
- B. Control drainage in the vicinity of excavation so the ground surface is properly pitched to prevent water running into the excavation.
- C. There shall be sufficient pumping equipment, in good working order, available at all times, to remove any water that accumulates in excavations. Where the utility crosses natural drainage channels, the work shall be conducted in such a manner that unnecessary damage or delays in the prosecution of the work will be prevented. Provision shall be made for the satisfactory disposal of surface water to prevent damage to public or private property.
- D. In all cases, accumulated water in the trench shall be removed before placing bedding or haunching, laying pipe, placing concrete or backfilling.

- E. Where dewatering is performed by pumping the water from a sump, crushed stone shall be used as the medium for conducting the water to the sump. Sump depth shall be at least two feet below the bottom of the trench, Pumping equipment shall be of sufficient quantity and/or capacity to maintain the water level in the sump two feet below the bottom of the trench. Pumps shall be a type such that intermittent flows can be discharged. A standby pump shall be required in the event the operating pump or pumps clog or otherwise stop operation.
- F. Dewater by use of a well point system when pumping from sumps does not lower the water level two feet below the trench bottom. Where soil conditions dictate, the Contractor shall construct well points cased in sand wicks. The casing, 6 to 10-inches in diameter, shall be jetted into the ground, followed by the installation of the well point, filling casing with sand and withdrawing the casing.

3.05 TRENCH FOUNDATION AND STABILIZATION

- A. The bottom of the trench shall provide a foundation to support the pipe and its specified bedding. The trench bottom shall be graded to support the pipe and bedding uniformly throughout its length and width.
- B. If, after dewatering as specified above, the trench bottom is spongy, or if the trench bottom does not provide firm, stable footing and the material at the bottom of the trench will still not adequately support the pipe, the trench will be determined to be unsuitable and the Engineer shall then order trench stabilization by directing the Contractor to over excavate trench bottom and fill with crushed stone.
- C. Where the replacement of unsuitable material with crushed stone does not provide an adequate trench foundation, the trench bottom shall be excavated to a depth of at least two feet below the specified trench bottom. Place filter fabric in the bottom of the trench and support the fabric along the trench walls until the trench stabilization, bedding, haunching and pipe have been placed at the proper grade. The ends of the filter fabric shall be overlapped above the pipe.
- D. Where trench stabilization is provided, the trench stabilization material shall be compacted to at least 90 percent of the maximum dry density, unless shown or specified otherwise.

3.06 BEDDING AND HAUNCHING

- A. Prior to placement of bedding material, the trench bottom shall be free of any water, loose rocks, boulders or large dirt clods.

- B. Bedding material shall be placed to provide uniform support along the bottom of the pipe and to place and maintain the pipe at the proper elevation. The initial layer of bedding placed to receive the pipe shall be brought to the grade and dimensions indicated on the Drawings. All bedding shall extend the full width of the trench bottom. The pipe shall be placed and brought to grade by tamping the bedding material or by removal of the excess amount of the bedding material under the pipe. Adjustment to grade line shall be made by scraping away or filling with bedding material. Wedging or blocking up of pipe shall not be permitted. Applying pressure to the top of the pipe, such as with a backhoe bucket, to lower the pipe to the proper elevation or grade shall not be permitted. Each pipe section shall have a uniform bearing on the bedding for the length of the pipe, except immediately at the joint.
- C. At each joint, excavate bell holes of ample depth and width to permit the joint to be assembled properly and to relieve the pipe bell of any load.
- D. After the pipe section is properly placed, add the haunching material to the specified depth. The haunching material shall be shovel sliced, tamped, vigorously chinked or otherwise consolidated to provide uniform support for the pipe barrel and to fill completely the voids under the pipe, including the bell hole. Prior to placement of the haunching material, the bedding shall be clean and free of any water, loose rocks, boulders or dirt clods.
- E. Gravity Sewers and Accessories: Lay PVC pipe with minimum Class "B" bedding. Lay all other pipe with Class "C" bedding, unless shown or specified otherwise.
1. Class "A" (Bedding Factor - 2.8): Excavate the bottom of the trench flat at a minimum depth as shown on the Drawings, below the bottom of the pipe barrel. Lay pipe to line and grade on concrete block. Place concrete to the full width of the trench and to a height of one-fourth of the outside diameter of the pipe above the invert.
 2. Class "B" (Bedding Factor - 1.9): Excavate the bottom of the trench flat at a minimum depth as shown on the Drawings, below the bottom of the pipe barrel. Place and compact bedding material to the proper grade. Haunching material shall then be carefully placed by hand and compacted to provide full support under and up to the centerline of the pipe.
 3. Class "C" (Bedding Factor - 1.5): Excavate the bottom of the trench flat at a minimum depth as shown on the Drawings, below the bottom of the pipe barrel. Place and compact bedding material to the proper grade. Haunching material shall then be carefully placed by hand and compacted to provide full

support under and up to a height of one-fourth the outside diameter of the pipe above the bottom of the pipe barrel.

4. HDPE Pipe: Excavate the bottom of the trench flat at a minimum depth as shown on the Drawings, below the bottom of the pipe barrel. Place and compact bedding material to the proper grade. Haunching material shall be carefully placed by hand and compacted to provide full support under and up to 18-inches over the top of the pipe for pipe 42-inches in diameter and larger, and 12-inches over the top of the pipe for pipe 36-inches in diameter and smaller.

5. Type 5: Excavate the bottom of the trench flat at a minimum depth as shown on the Drawings, below the bottom of the pipe barrel. Place and compact bedding material to the proper grade before installing pipe. After the pipe has been brought to the proper grade, haunching material shall be carefully placed by hand and compacted to the top of the pipe.

F. Manholes: Excavate to a minimum of 12-inches below the planned elevation of the base of the manhole. Place and compact crushed stone bedding material to the required grade before constructing the manhole.

G. Excessive Width and Depth

1. Water Mains: If the trench is excavated to excess width, provide the next higher type or class of pipe bedding, but a minimum of Type 4, as detailed on the Drawings.

2. If the trench is excavated to excessive depth, provide crushed stone to place the bedding at the proper elevation or grade.

H. Compaction: Bedding and haunching materials under pipe, manholes and accessories shall be compacted to a minimum of 90 percent of the maximum dry density, unless shown or specified otherwise.

3.07 INITIAL BACKFILL

A. Initial backfill shall be placed to anchor the pipe, protect the pipe from damage by subsequent backfill and ensure the uniform distribution of the loads over the top of the pipe.

B. Place initial backfill material carefully around the pipe in uniform layers to a depth of at least 12-inches above the pipe barrel. Layer depths shall be a maximum of 6-inches for pipe 18-inches in diameter and smaller and a maximum of 12-inches for pipe larger than 18-inches in diameter.

C. Backfill on both sides of the pipe simultaneously to prevent side pressures.

- B. Compact each layer thoroughly with suitable hand tools or tamping equipment.
- C. Initial backfill shall be compacted to a minimum 90 percent of the maximum dry density, unless shown or specified otherwise.
- D. If materials excavated from the trench are not suitable for use as backfill materials, provide select backfill material conforming to the requirements of this Section for initial backfill.

3.08 CONCRETE ENCASEMENT FOR PIPELINES

Where concrete encasement is shown on the Drawings for pipelines, excavate the trench to provide a minimum of 12-inches clearance from the barrel of the pipe. Lay the pipe to line and grade on solid concrete blocks or solid bricks. In lieu of bedding, haunching and initial backfill, place concrete to the full width of the trench and to a height of not less than 12-inches above the pipe bell. Do not backfill the trench for a period of at least 24 hours after concrete is placed.

3.09 FINAL BACKFILL

- C. Backfill carefully to restore the ground surface to its original condition.
- A. The top 6-inches shall be topsoil obtained as specified in “Trench Excavation” of this Section.
- B. Excavated material which is unsuitable for backfilling, and excess material, shall be disposed of in a manner approved by the Engineer. Surplus soil may be neatly distributed and spread over the site, if approved by the Engineer, except that surplus soil shall not be distributed and spread over the site in areas under Corps of Engineers jurisdiction. If such spreading is allowed, the site shall be left in a clean and slightly condition and shall not affect pre-construction drainage patterns. Surplus rock from the trenching operations shall be removed from the site.
- D. If materials excavated from the trench are not suitable for use as backfill materials, provide select backfill material conforming to the requirements of this Section.
- B. After initial backfill material has been placed and compacted, backfill with final backfill material. Place backfill material in uniform layers, compacting each layer thoroughly as follows:

2. In 6-inch layers, if using light power tamping equipment, such as a “jumping jack”.
 2. In 12-inch layers, if using heavy tamping equipment, such as hammer with tamping feet.
 3. In 24-inch layers, if using a hydra-hammer.
- F. Settlement: If trench settles, re-fill, compact and grade the surface to conform to the adjacent surfaces.
- G. Final backfill shall be compacted to a minimum 90 percent of the maximum dry density, unless specified otherwise.

3.10 ADDITIONAL MATERIAL

Where final grades above the pre-construction grades are required to maintain minimum cover, additional fill material will be as shown on the Drawings. Utilize excess material excavated from the trench, if the material is suitable. If excess excavated materials are not suitable, or if the quantity available is not sufficient, provide additional suitable fill material.

3.11 BACKFILL WITHIN RIGHT-OF-WAYS

Compact backfill underlying pavement and sidewalks, and backfill under dirt and gravel roads to a minimum 95 percent of the maximum dry density.

3.12 BACKFILL WITHIN GEORGIA DOT RIGHT-OF-WAY

Backfill within the Georgia DOT right-of-way shall meet the requirements stipulated in the “Utility Accommodation Policy and Standards”, published by the Georgia Department of Transportation.

3.13 FLOWABLE FILL

- A. Where flowable fill is required, excavate the trench to provide a minimum of 6-inches clearance on either side of the pipe barrel. Lay the pipe to line and grade on solid concrete blocks or bricks. In lieu of bedding, haunching and initial backfill, place flowable fill to the full width and depth of the trench.
- B. Flowable fill shall be protected from freezing for a period of 36 hours after placement. Minimum temperature of flowable fill at point of delivery shall be 50 degrees F.
- C. The Contractor shall provide steel plates over flowable fill in road locations.

3.14 COMPACTED GRANULAR MATERIAL

Where compacted granular material is required as initial and final backfill material, it shall be placed after bedding and haunching material specified elsewhere has been placed. Compacted granular material shall be compacted to a minimum 95 percent of the maximum dry density.

3.15 TESTING AND INSPECTION

- A. The soils testing laboratory is responsible for the following:
 - 1. Compaction tests in accordance with Article 1.02 of this Section.
 - 2. Field density tests for each two feet of lift, one test site between each manhole, every 100 feet within road rights-of-way, or more frequently if ordered by the Engineer. The County shall direct where density tests will be performed along the Project route.
 - 3. Inspecting and testing stripped site, subgrades and proposed fill materials.
- B. The Contractor's duties relative to testing include:
 - 1. Notifying laboratory of conditions requiring testing.
 - 2. Coordinating with laboratory for field testing.
 - 3. Paying costs for additional testing performed beyond the scope of that required and for re-testing where initial tests reveal non-conformance with specified requirements.
 - 4. Providing excavation as necessary for laboratory personnel to conduct tests.

C. Inspection

1. Earthwork operations, acceptability of excavated materials for bedding or backfill, and placing and compaction of bedding and backfill is subject to inspection by the Engineer.
2. Foundations and shallow spread footing foundations are required to be inspected by a geotechnical engineer, who shall verify suitable bearing and construction.

- D. Comply with applicable codes, ordinances, rules, regulations and laws of local, municipal, state or federal authorities having jurisdiction.

END OF SECTION 02225

SECTION 02575

REMOVING AND REPLACING PAVEMENT

PART 1 - GENERAL

1.01 SCOPE

The work to be performed under this Section shall consist of removing and replacing existing pavement, sidewalks and curbs in paved areas where such have been removed for construction of utilities and appurtenances.

Existing pavement, sidewalks and curbs shall be replaced to the current County standards or to match existing, whichever is more stringent.

1.02 SUBMITTALS

If required by the County or Construction Manager, provide certificates stating that materials supplied comply with Specifications. Certificates shall be signed by the asphalt producer and the Design/Builder.

1.03 CONDITIONS

Weather Limitations

Apply bituminous tack coat only when the ambient temperature in the shade has been at least 50 degrees F for 12 hours immediately prior to application.

Do not conduct paving operations when surface is wet or contains excess of moisture which would prevent uniform distribution and required penetration.

Construct asphaltic courses only when atmospheric temperature in the shade is above 40 degrees F, when the underlying base is dry and when weather is not rainy.

Place base course when air temperature is above 35 degrees F and rising.

Grade Control: Establish and maintain the required lines and grades for each course during construction operations.

PART 2 PRODUCTS

2.01 MATERIALS AND CONSTRUCTION

Graded Aggregate Base Course: Graded aggregate base course shall be of uniform quality throughout and shall meet the requirements of Section 815.01 of the Georgia Department of Transportation Standard Specifications.

Black Base: Black base course shall be of uniform quality throughout and shall conform to the requirements of Section 828 of the Georgia Department of Transportation Standard Specifications.

Bituminous Tack Coat: The bituminous tack coat shall conform to the requirements of Section 400 of the Georgia Department of Transportation Standard Specifications.

Surface Course: The surface course for all asphaltic concrete pavement shall conform to the requirements of Section 400, Type "E" of the Georgia Department of Transportation Standard Specifications.

Concrete: Provide concrete and reinforcing for concrete pavement or base courses in accordance with the requirements of the Georgia Department of Transportation Standard Specifications, Section 430. Concrete shall be of the strength classifications shown on the Drawings.

Special Surfaces: Where driveways or roadways are disturbed or damaged which are constructed of specialty type surfaces, e.g., brick or stone, these driveways and roadways shall be restored utilizing similar, if not original, materials. Where the nature of these surfaces dictate, a specialty contractor shall be used to restore the surfaces to their previous or better condition. Special surfaces shall be removed and replaced to the limits to which they were disturbed.

2.02 TYPES OF PAVEMENTS

General: All existing pavement removed, destroyed or damaged by construction shall be replaced with the same type and thickness of pavement as that existing prior to construction, unless otherwise directed by the Construction Manager. Materials, equipment and construction methods used for paving work shall conform to the Georgia Department of Transportation specifications applicable to the particular type required for replacement, repair or new pavements.

Aggregate Base: Aggregate base shall be constructed in accordance with the requirements of Section 310 of the Georgia Department of Transportation

Standard Specifications. The maximum thickness to be laid in a single course shall be 6-inches compacted. If the design thickness of the base is more than 6-inches, it shall be constructed in two or more courses of approximate equal thickness. After the material placed has been shaped to line, grade and cross-section, it shall be rolled until the course has been uniformly compacted to at least 100 percent of the maximum dry density when Group 2 aggregate is used, or to at least 98 percent of maximum dry density when Group 1 aggregate is used.

Concrete Pavement: Concrete pavement or base courses shall be replaced with concrete. The surface finish of the replaced concrete pavement shall conform to that of the existing pavement. The surface of the replaced concrete base course shall be left rough. The slab depth shall be equivalent to the existing concrete pavement or base course, but in no case less than 6-inches thick. Transverse and longitudinal joints removed from concrete pavement shall be replaced at the same locations and to the same types and dimensions as those removed. Concrete pavements or concrete base courses shall be reinforced.

Asphaltic Concrete Base, Bituminous Tack Coat and Surface Course: Asphaltic concrete base, tack coat and surface course construction shall conform to Georgia Department of Transportation Standard Specifications, Section 400. The pavement mixture shall not be spread until the designated surface has been previously cleaned and prepared, is intact, firm, properly cured, dry and the tack coat has been applied. Apply and compact the base in maximum layer thickness by asphalt spreader equipment of design and operation approved by the Construction Manager. After compaction, the black base shall be smooth and true to established profiles and sections. Apply and compact the surface course in a manner approved by the Construction Manager. Immediately correct any high, low or defective areas by cutting out the course, replacing with fresh hot mix, and immediately compacting to conform and thoroughly bond to the surrounding area.

Surface Treatment Pavement: Bituminous penetration surface treatment pavement shall be replaced with a minimum thickness of 1-inch conforming to Section 424, Georgia Department of Transportation Standard Specifications.

Gravel Surfaces: Existing gravel road, drive and parking area replacement shall meet the requirements of graded aggregate base course. This surfacing may be authorized by the Construction Manager as a temporary surface for paved streets until replacement of hard surfaced pavement is authorized.

Temporary Measures: During the time period between pavement removal and complete replacement of permanent pavement, maintain highways, streets

and roadways by the use of steel running plates anchored to prevent movement. The backfill above the pipe shall be compacted, as specified in Section 02225 of these Specifications, up to the existing pavement surface to provide support for the steel running plates. All pavement shall be replaced within seven calendar days of its removal.

PART 3 EXECUTION

3.01 LOCATIONS FOR PAVEMENT REPLACEMENT

Type I Pavement Replacement (see Detail No. G-5) shall be used for pavement replacement for:

All point repairs;

All trenches, longitudinal or crossing installations, less than 12-inches wide;

All trenches for roadway crossings where the trench width at the top of the pipe is less than or equal to three feet, and the trench depth is less than or equal to eight feet.

At Design/Builder's option, in lieu of Type II and Type III Pavement Replacement.

Type II Pavement Replacement (see Detail No. G-6) shall be used for pavement replacement for:

All trenches for roadway crossings which do not meet the criteria for Type I Pavement Replacement;

All trench longitudinal installations which do not meet the criteria for Type III Pavement Replacement.

At Design/Builder's option, in lieu of Type III Pavement Replacement.

Type III Pavement Replacement shall be used only for longitudinal installations and where the trench width at the top of the pipe is greater than four feet.

“Graded Aggregate” pavement repair shall be used only where approved by the Construction Manager.

3.02 REMOVING PAVEMENT

General: Remove existing pavement as necessary for installing the pipe line and appurtenances.

Marking: Before removing any pavement, mark the pavement neatly paralleling pipe lines and existing street lines. Space the marks the width of the trench.

Breaking: Break asphalt pavement along the marks using pavement shearing equipment, jack hammers or other suitable tools. Break concrete pavement along the marks by scoring with a rotary saw and breaking below the score by the use of jack hammers or other suitable tools.

Machine Pulling: Do not pull pavement with machines until the pavement is completely broken and separated from pavement to remain.

Damage to Adjacent Pavement: Do not disturb or damage the adjacent pavement. If the adjacent pavement is disturbed or damaged, remove and replace the damaged pavement.

Sidewalk: Remove and replace any sidewalks disturbed by construction for their full width and to the nearest undisturbed joint.

Curbs: Tunnel under or remove and replace any curb disturbed by construction to the nearest undisturbed joint.

3.03 REPLACING PAVEMENT

Preparation of Subgrade: Upon completion of backfilling and compaction of the backfill, arrange to have the compaction tested by an independent testing laboratory approved by the Construction Manager. After compaction testing has been satisfactorily completed, replace all pavements, sidewalks and curbs removed.

The existing street pavement or surface shall be removed along the lines of the work for the allowable width specified for the trench or structure. After the installation of the sewerage or water works facilities and after the backfill has been compacted suitably, the additional width of pavement to be removed, as shown on the Drawings, shall be done immediately prior to replacing the pavement.

Trench backfill shall be compacted for the full depth of the trench as specified in Section 02225 of these Specifications.

Temporary trench backfill along streets and driveways shall include 6-inches of crushed stone or cherty clay as a temporary surfacing of the trenches. This temporary surface shall be maintained carefully at grade and dust-free by the Design/Builder until the backfill of the

trench has thoroughly compacted in the opinion of the Construction Manager and permission is granted to replace the street pavement.

When temporary crushed stone or chert surface is considered by the Construction Manager to be sufficient surface for gravel pavement, the surface shall be graded smooth and to an elevation that will make the final permanent surfacing level with the adjacent surfacing that was undisturbed.

Pavement Replacement

Prior to replacing pavement, make a final cut in concrete pavement 12-inches back from the edge of the damaged pavement with a concrete saw. Remove asphalt pavement 12-inches back from the edge of the damaged pavement using pavement shearing equipment, jack hammers or other suitable tools. Pavement cuts shall be parallel or perpendicular to the road centerline as much as practical. On parallel installations the final cut shall be long and straight and consistent.

Replace all street and roadway pavement as shown on the Drawings. Replace driveways, sidewalks and curbs with the same material, to nearest existing undisturbed construction joint and to the same dimensions as those existing.

If the temporary crushed stone or chert surface is to be replaced, the top 6-inches shall be removed and the crushed stone surfacing for unpaved streets or the base for the bituminous surface shall be placed.

Following this preparation, the chert or crushed stone base shall be primed with a suitable bituminous material and surfaced with the proper type of bituminous surface treatment.

Where the paved surface is to be replaced with asphaltic concrete pavement, concrete pavement or with a concrete base and a surface course, the temporary chert or crushed stone surface and any necessary backfill material, additional existing paving and new excavation shall be removed to the depth and width shown on the Drawings. All edges of the existing pavement shall be cut to a straight, vertical edge. Care shall be used to get a smooth joint between the old and new pavement and to produce an even surface on the completed street. Concrete base slabs and crushed stone bases, if required, shall be placed and allowed to cure for three days before bituminous concrete surface courses are applied. Expansion

joints, where applicable, shall be replaced in a manner equal to the original joint.

Where driveways or roadways, constructed of specialty type surfaces, e.g., brick or stone are disturbed or damaged, these driveways and roadways shall be restored utilizing similar materials. Where the nature of these surfaces dictate, a specialty contractor shall be used to restore the surfaces to their previous or better condition. Special surfaces shall be removed and replaced to the limits to which they were disturbed.

Pavement Resurfacing

Certain areas to be resurfaced are specified or noted on the Drawings. Where pavement to be resurfaced has been damaged with potholes, the Design/Builder shall remove all existing loose pavement material and fill the hole with black base, as specified, to the level of the existing pavement. After all pipe line installations are complete and existing pavement has been removed and replaced along the trench route, apply tack coat and surface course as specified.

Resurfacing limits shall be perpendicular to the road centerline. The limits of resurfacing shall be the full width of the disturbed roadway between the curbs on the main road being resurfaced, and to the point of tangency of the pavement on the side streets.

Pavement Striping: Pavement striping removed or paved over shall be replaced with the same type, dimension and material as original unless directed otherwise by the Construction Manager.

3.04 SIDEWALK AND CURB REPLACEMENT

Construction

All concrete sidewalks and curbs shall be replaced with concrete.

Preformed joints shall be 1/2-inch thick, conforming to the latest edition of AASHTO M 59 for sidewalks and AASHTO M 123 for curbs.

Forms for sidewalks shall be of wood or metal, shall be straight and free from warp, and shall be of sufficient strength, when in place, to hold the concrete true to line and grade without springing or distorting.

Forms for curbs shall be metal and of an approved section. They shall be straight and free from distortions, showing no vertical variation greater than 1/8-inch in 10 feet and no lateral variation greater than

1/4-inch in 10 feet from the true plain surface on the vertical face of the form. Forms shall be of the full depth of the structure and constructed such to permit the inside forms to be securely fastened to the outside forms.

Securely hold forms in place true to the existing lines and grades.

Wood forms may be used on sharp turns and for special sections, as approved by the Construction Manager. Where wooden forms are used, they shall be free from warp and shall be the nominal depth of the structure.

All mortar and dirt shall be removed from forms and all forms shall be thoroughly oiled or wetted before any concrete is deposited.

When a section is removed, the existing sidewalk or curb shall be cut to a neat line, perpendicular to both the centerline and the surface of the concrete slab. Existing concrete shall be cut along the nearest existing construction joints; if such joints do not exist, the cut shall be made five feet back.

Existing concrete sidewalks and curbs that have been cut and removed for construction purposes shall be replaced with the same width and surface as the portion removed. Sidewalks shall have a minimum uniform thickness of 4-inches. The new work shall be neatly jointed to the existing concrete so that the surface of the new work shall form an even, unbroken plane with the existing surfaces.

The subgrade shall be formed by excavating to a depth equal to the thickness of the concrete, plus 2-inches. Subgrade shall be of such width as to permit the proper installation and bracing of the forms. Subgrades shall be compacted by hand tamping or rolling. Soft, yielding or unstable material shall be removed and backfilled with satisfactory material. Place 2-inches of porous crushed stone under all sidewalks and curbs and compacted thoroughly, then finish to a smooth, unyielding surface at proper line, grade and cross section.

Joint for Curbs

Joints shall be constructed to match existing and as specified. Construct joints true to line with their faces perpendicular to the surface of the structure and within 1/4-inch of their designated position.

Thoroughly spade and compact the concrete at the faces of all joints filling all voids.

Install expansion joint materials at the point of curve at all street returns. Install expansion joint material behind the curb at abutment to sidewalks and adjacent structures.

Place contraction joints every 10 feet along the length of the curbs and gutters. Form contraction joints using steel templates or division plates which conform to the cross section of the structure. Leave the templates in place until the concrete has set sufficiently to hold its shape, but remove them while the forms are still in place. Contraction joint templates or plates shall not extend below the top of the steel reinforcement or they shall be notched to permit the reinforcement to be continuous through the joint. Contraction joints shall be a minimum of 1-1/2-inches deep.

Expansion joints shall be required to replace any removed expansion joints or in new construction wherever shown on the Drawings. Expansion joints shall be true and even, shall present a satisfactory appearance, and shall extend to within 1/2-inch of the top of finished concrete surface.

Finishing

Strike off the surface with a template and finish the surface with a wood float using heavy pressure, after which, contraction joints shall be made and the surface finished with a wood float or steel trowel.

Finish the face of the curbs at the top and bottom with an approved finishing tool of the radius to match existing.

Finish edges with an approved finishing tool having a 1/4-inch radius.

Provide a final broom finish by lightly combing with a stiff broom after troweling is complete.

4. The finished surface shall not vary more than 1/8-inch in 10 feet from the established grade.

G. Driveway and Sidewalk Ramp Openings

0. Provide driveway openings of the widths and at the locations indicated on the Drawings and as directed by the Construction Manager.

1. Provide sidewalk ramp openings to match existing in conformance with the applicable regulations and as directed by the Construction Manager.

- H. Concrete shall be suitably protected from freezing and excessive heat. It shall be kept covered with burlap or other suitable material and kept wet until cured. Provide necessary barricades to protect the work. All damage caused by people, vehicles, animals, rain, the Design/Builder's operations and the like shall be repaired by the Design/Builder, at no additional expense to the County.

3.05 MAINTENANCE

The Design/Builder shall maintain the surfaces of roadways built and pavements replaced until the acceptance of the Project. Maintenance shall include replacement, scraping, reshaping, wetting and rerolling as necessary to prevent raveling of the road material, the preservation of reasonably smooth surfaces and the repair of damaged or unsatisfactory surfaces, to the satisfaction of the Construction Manager. Maintenance shall include sprinkling as may be necessary to abate dust from the gravel surfaces.

3.06 SUPERVISION AND APPROVAL

- . Pavement restoration shall meet the requirements of the regulatory agency responsible for the pavement. Obtain agency approval of pavement restorations before requesting final payment.
- A. Obtain the Construction Manager's approval of restoration of pavement, such as private roads and drives that are not the responsibility of a regulatory agency.
- B. Complete pavement restoration as soon as possible after backfilling.
- C. Failure of Pavement: Should any pavement restoration or repairs fail or settle during the life of the Contract, including the bonded period, promptly restore or repair defects.

3.07 CLEANING

The Design/Builder shall remove all surplus excavation materials and debris from the street surfaces and rights-of-way and shall restore street, roadway or sidewalk surfacing to its original condition.

END OF SECTION 02575

SECTION NO. 02710

REHABILITATION OF SANITARY SEWER MANHOLES

PART 1 GENERAL

1.01 SCOPE

- A. This Section covers the work necessary to rehabilitate existing sanitary sewer manholes including:
 - 1. Sealing to exclude infiltration; and/or
 - 2. Rehabilitation methods include lining of manhole interiors
 - 3. Rehabilitating manhole bases
 - 4. Replacement and/or removal of broken manhole covers and frames, corroded step irons or corroded ladders
- B. Manholes to be rehabilitated shall be determined following sewer and/or manhole assessment.
- C. The information about the Owner's facilities shown on the drawings is taken from existing records. The Contractor is solely responsible for field verification.
- D. It shall be the responsibility of the Contractor to make sure that liner completely seals the manhole, shelf, pipe inlet and outlets, and the lid ring frame in a monolithic method as required or as shown on the plans and that no holes, cracks or seams be left unsealed, which would allow gases or fluids to flow behind the manhole liner.
- E. The Contractor shall provide all labor, materials and equipment required to clean and line the manholes. The Contractor shall comply with the Owner's and OSHA requirements for confined space entry.
- F. The manhole liner shall be designed and installed to protect concrete surfaces from corrosion. The interior surfaces to be protected shall include the walls, shelves, pipe junctions and the lid ring frame.
- G. Omission of a specific item or component obviously necessary for the proper installation and functioning of the system shall not relieve the Contractor from

the responsibility of supplying that specific item or component at no additional expense to the Owner.

- H. To minimize disruption to vehicular traffic no manhole cover slabs shall be removed to undertake the work until prior notice has been given to the Construction Manager. No additional payment will be made for alteration to existing manholes for access purposes or for reinstatement.
- I. Before commencing works to existing manholes a perforated catch bucket (to retain particulate larger than U.S. No. 8 sieve, for subsequent removal), or similar, shall be fitted to the outgoing pipe from the manhole structure. Contractors shall strictly adhere to the requirement that construction debris and waste material be prevented from entering downstream sewers.
- J. The Contractor shall keep accurate records of the location and nature of work performed on each manhole, and shall provide copies to the Construction Manager as and when required.

1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. The following references are part of this Specification. In case of conflict between the requirements of this Specification and those of the listed documents, the requirements of this Specification shall prevail. The latest edition of the following references shall be used:
 - 1. ASTM C794 - Test Method for Adhesion-in-Peel Elastomeric Joint Sealant
 - 2. ASTM D412 - Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers - Tension
 - 3. ASTM D882 - Test Methods for Tensile Properties of Thin Plastic Sheeting
 - 4. Standard Specifications

1.03 SUBMITTALS

- A. The Contractor shall submit the following information:
 - 1. Written certification by the rehabilitation system manufacturer stating that the installation Contractor is approved to install the rehabilitation system specified.

2. Rehabilitation system manufacturer's literature describing the rehabilitation system components, along with the Contractor's equipment.
 3. Listing of clients with experience of the rehabilitation system and their basic contact information. This information shall be submitted within two weeks of the commencement of the Contract.
 4. Manufacturer's technical literature on the rehabilitation material utilized, including the materials physical and chemical characteristics.
 5. Description of installation method including;
 - a. Product Material Safety Data Sheets.
 - b. Maximum pot life, storage life and essential storage requirements of all rehabilitation materials
 - c. Mixing and proportioning requirements (as applicable).
 - d. Environmental requirements for application and worker safety including ventilation, humidity, and temperature ranges.
 - e. Application film thickness per coat of activator and mastic (as applicable).
 - f. Curing time, including specific formulation requirements to provide specified setting time for foamed mastic (as applicable).
 6. The Contractor's method description, layout and application sequencing plan of manhole rehabilitation works shall be submitted to the Construction Manager for approval not less than 14 days prior to commencement of rehabilitation Work.
 7. Manufacturer's certification of applicator to be used for the lining installation work, including spray operator (as applicable).
- B. The Contractor shall also submit the following: Methodology, including detail drawing for finishing all anticipated pipe connections to rehabilitated manholes to prevent infiltration and exfiltration. Anticipated connections, including through or entering modified manhole, side connections and drop connections.
- C. The Contractor shall conform with all the requirements of the flow bypass and diversion pumping Section.
- D. The Contractor shall submit for approval all manufacturer warranties for all materials furnished under this section.

1.04 QUALITY ASSURANCE

- A. Materials and supplies provided shall be the standard products of manufacturers. The standard products of manufacturers other than those specified may be accepted if it is demonstrated to demonstrate that they are equal in composition, durability, and usefulness for the purpose intended.
- B. The Construction Manager will inspect the rehabilitated manholes to evaluate the Contractor's work.

1.05 WARRANTY

- A. The manufacturer of the lining shall furnish a affidavit attesting to the successful use of its materials as a lining for concrete and brick structures for a minimum period of 10 years in typical “domestic” wastewater conditions recognized as corrosive or otherwise detrimental to concrete.
- B. The lining shall be repairable at any time during the life of the structure. The lining shall have good impact resistance, shall be flexible, and shall have an elongation sufficient to bridge up to a ¼- inch settling crack, without damage to the lining. The liner shall be able to bridge any expansion cracks that may occur. Manufacturer shall warrant the performance of the manhole liner no less than 10 years in a typical “domestic” wastewater environment and shall include materials and labor to repair or replace any failing conditions of the liner in the structure. Certification shall be provided prior to approval.

1.06 RELATED SECTIONS

- A. The work of the following Sections apply to the work of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of work.
 - 1. Internal sewer condition assessment.
 - 2. Manhole condition assessment
 - 3. Preconditioning and cleaning
 - 4. Flow bypass and/or diversion
 - 5. Safety requirements
 - 6. Warranty requirements

PART 2 PRODUCTS**2.01 GENERAL**

- A. The installer shall warrant and save harmless the Owner and the Construction Manager against all claims for patent infringement and any loss thereof.
- B. The materials used shall be designed, manufactured and solely intended for sewer manhole rehabilitation and the specific application in which they are used. The materials shall have a proven history of performance in sewer manhole rehabilitation for a minimum of three (3) years in sewer systems elsewhere nationally, of similar age, groundwater levels and circumstance.
- C. The materials shall be delivered to the job site in original unopened packages and clearly labeled with the manufacturer's identification (brand name) date of manufacture, storage life and printed instructions.
- D. Stored materials shall be protected from weather and excessive heat or cold, and stored in accordance with the manufacturer's instructions. Flammable materials shall be stored in accordance with state and local codes. Materials exceeding storage life recommended by the manufacturer shall be removed from the site.
- E. The Contractor shall handle shall dispose of all wastes in accordance with applicable regulations.
- F. At the request of the Construction Manager, the Contractor shall provide a representative employed by the manufacturer having technical training in the any of the specific manhole rehabilitation materials and/or system or technique being applied. The appropriate specialist shall be available for consultation on site within 24 hours notice, at no cost to the Owner. Seals shall be tested to withstand all subsequent infiltration and inflow. All completed rehabilitation work shall be resistant to:
 - 1. Immersion in septic sewage at temperatures up to 85 F.
 - 2. Exposure to hydrogen sulfide gas from septic sewage at temperatures up to 85 .
 - 3. Deposits of free sulfur on exposed surfaces.
 - 4. Exposure to 10% sulfuric acid at temperatures up to 85 F.

2.02 MANHOLE LINING

A. General

1. Manhole lining systems shall be completely watertight and free of any joints or openings other than pipe inlets and the rim opening. The junction of the lining material with the pipe material at the inlets and outlets shall be completely watertight.
2. Each lining application shall be designed for application over damp (but not wet or active running water) surfaces without degradation of the final product and the bond between the product and the manhole surfaces.
3. Generally, the entire interior walls of manholes as designated on the drawing to be rehabilitated shall be lined with a fiberglass lining system.

B. The manhole liner system shall conform to one of the following:

1. The liner shall be a three-layered composite system with a total pre-saturated fabric weight of 44-ozs. per square yard. Layer #1 is 12-oz. structural fiberglass impregnated with a modified epoxy resin and bonded to the existing substructure. Layer #2 is a 20-oz. non-porous membrane of special synthetic materials bonded to layer #1 and layer #3. Layer #3 consists of 12-oz. structural fiberglass saturated with epoxy and bonded to the nonporous membrane, forming a smooth interior wall to the host structure. This liner shall be used in manhole structures up to 8 feet in depth if they are made of brick and 10 feet in depth if are made of pre-cast concrete. The liner shall be a Poly-Triplex Liner System PTL5-4400 series.
2. The liner shall be a three-layered composite system with a total pre-saturated fabric weight of 56-ozs. per square yard. Layer #1 is 18-oz. structural fiberglass impregnated with a modified epoxy resin and bonded to the existing substructure. Layer #2 is a 20-oz. non-porous membrane of special synthetic materials bonded to layer #1 and layer #3. Layer #3 consists of 18-oz. structural fiberglass saturated with epoxy and bonded to the nonporous membrane, forming a smooth interior wall to the host structure. This liner shall be used in manhole structures with depths of 8 feet up to 12 feet if they are made of brick and for manhole structures with depths of 10 feet up to 15 feet in depth if are made of pre-cast concrete. The liner shall be Poly-Triplex Liner System PTL5-5600 series.
3. The liner shall be Poly-Triplex Liner System (minimum PTL5-6800), a three-layered composite system with a total pre-saturated fabric weight

of 68-ozs. per square yard. Layer #1 is 24-oz. structural fiberglass impregnated with a modified epoxy resin and bonded to the existing substructure. Layer #2 is a 20-oz. Non-porous membrane of special synthetic materials bonded to layer #1 and layer #3. Layer #3 consists of 24-oz. structural fiberglass saturated with epoxy and bonded to the nonporous membrane, forming a smooth interior wall to the host structure. This liner shall be used in manhole structures with depths of 12 feet or greater if they are made of brick and for manhole structures with depths of 15 feet or greater in depth if are made of pre-cast concrete. There is no manhole depth limit on this liner. The liner shall be Poly-Triplex Liner System PTL5-6800 series.

4. The Lining system shall be applied by a qualified licensed applicator trained in handling and application of the material. The certified fabricator or authorized installer will custom fit the liner to the manhole in order to protect the concrete and brick surfaces from sewer gases.

2.03 MANHOLE DISH INSERTS TO EXCLUDE INFLOW

- A. Provide and install concave stainless steel manhole inserts including new gasket and relief valves, at locations shown on the drawings.
- B. Contractor shall exercise care in selecting the proper watertight insert dish to fit properly with the walls and frames of various sized manhole casting frame and covers. The insert flange should have an outside diameter 3/16" less than the outside of the manhole frame cover seat. Once a proper fit is established, Contractor shall clean surface of the manhole frame of all dirt, grit, debris with a wire mesh brush. Insert shall be fully sealed on the manhole frame, providing a water tight seal.
- C. The insert body shall be manufactured of 304 stainless steel with a thickness of not less than 18 gage. The insert shall have a straight side design to allow a loose fit into ring for easy removal. The insert manufacturer must furnish a "Load Test Verification" showing a load test failure in excess of 3,000 pounds.
- D. The gasket shall be made of close cell neoprene, and shall have a pressure sensitive adhesive on one side. The gasket shall be installed by the manufacturer and must be compatible with the insert material to form a long lasting bond in wet or dry conditions.
- E. The gas relief valve shall be designed to release at a pressure of 0.5 to 1.5 psi. The valve shall be made of Nitrile for prevention of corrosion from contact with hydrogen sulfide, dilute sulfuric acid and other gases associated with waste water collection systems.

- F. Inserts shall have a handle of plastic coated stainless steel cable installed on the body of the insert dish. The handle shall be attached with #6 high grade stainless steel rivets. The cable shall be braided in a manner which resists cutting with common bolt cutters. The cable terminal and eye end shall be made of stainless steel.
- G. Inserts shall be stamped with the words, 'Property of Fulton County Public Works Department.'
- H. Supply inserts as manufactured by Southwestern Packing and Seals 'Rain Stopper' or approved equivalent.

2.04 PATCHING

- A. Patching, re-pointing, filling, and repairing non-leaking holes, cracks, and spalls in concrete and masonry manhole walls, benching and slabs as well as through-flow channel dressing and repair.
- B. The patching material shall consist of a premixed non-shrink cement-based patching material consisting of hydraulic cement, graded silica aggregates, special plasticizing and accelerating agents, which has been formulated for vertical or overhead use. It shall not contain chlorides, gypsums, plasters, iron particles, aluminum powder, or gas forming agents or promote the corrosion of steel it may come into contact with. Set time (ASTM C-191) shall be less than 30 minutes. One hour compressive strength (ASTM C-109) shall be a minimum of 200 psi and the ultimate compressive strengths (ASTM C-882 Modified) shall be a minimum of 1700 psi.

2.05 NEW MANHOLE COVERS

New manhole covers and frames shall conform to paragraph 3.09 of this Section.

2.06 ELASTOMERIC CORBEL SEAL TO EXCLUDE RDI/I

- A. Provide a frame-to-manhole elastomeric seal consisting of a two component, aliphatic chemical curing, urethane sealant formulated as a high build coating to seal the casting to the manhole corbel. The purpose is to stop infiltration by the application of a corrosion resistant flexible coating to be applied to the inside wall. The corrosion resistant flexible urethane shall be Flex-Seal Utility Sealant as manufactured by Sealing Systems, Inc., Loretto, or approved equal.

B. Minimum Requirements: Flexible Aromatic Urethane Resin Liner Primer

1. Hardness, ASTM-D2240: 85
2. Elongation, ASTM-D412: 400%
3. Tensile Strength, ASTM-D412: 3000 psi
4. Adhesive Strength, ASTM-D0903: 3 50 lb. l/in.
5. Tear Resistance, ASTM-D1004: 200 lb. l/in.

C. Minimum Requirements: Flexible Aromatic Urethane Resin Liner Final Coat

1. Hardness, ASTM-D2240: 50
2. Elongation, ASTM-D412: 750
3. Tensile Strength, ASTM-D412: 1100 psi
4. Adhesive Strength, ASTM-D0903: 175 lb. l/in.
5. Tear Resistance, ASTM-DIO04: 155 lb. 1/in.

D. Minimum Final Thickness: 80 mils.

2.07 MANHOLE CASTING EMBEDMENT SEALANT TO EXCLUDE RDI/I

- A. Provide a premium, extruded bituminous tacky rubber sealant in rope form for use on manholes as an embedment material for the frame to adjusting brick/mortar corbel.
- B. Sealant shall conform to AASHTO M-198 Type B and SS-S-210 and SS-S-210A.

C. Properties

	Specification	Required
Chemical Composition		
Hydrocarbon Plastic Content, % by weight	ASTM D4	50 - 70
Inert Mineral Filler, % by weight	(mod.)	30 - 50
Volatile Matter, % by weight	SS-S-210A ASTM D6	3.0 max.
Physical Properties		
Specific Gravity, 77 F	ASTM D71	1.20 - 1.35
Ductility, 770 F	ASTM D113	5.0 min.
Softening Point	ASTM D36	320 min.
Flash Point, C.O.C. min.	ASTM D92	600 min.
Fire Point, C.O.C. min.	ASTM D92	625 min.
Penetration, 77 F (150 gm) 5 sec.	ASTM D217	50 - 120
Chemical Resistance		
30-Day Immersion		*
Elongation Initial, 77 F		300% min.
Two Weeks, Total Water Immersion		300% min.
Flow Resistance (1" wide overhead joint exposed to 135 F for 7 days)		No Flow
Storage Life		Indefinite
Application Temperature Range		10 - 125 F
Service Temperature Range		-20 - 200 F

* No visible deterioration when tested for 30 days in 5% caustic potash, 5% hydrochloric acid, 5% sulfuric acid, or 5% saturated hydrogen sulfide.

PART 3 EXECUTION**3.01 PERFORMANCE REQUIREMENTS**

- A. Perform work needed to make manholes structurally sound, improve flow, prevent entrance of inflow or groundwater infiltration, and prevent entrance of soil or debris.
- B. Existing manhole shall be Preconditioned and Cleansed in accordance with Specifications prior to any and all rehabilitation works.

3.02 PROJECT CONDITIONS

A. Manholes Containing Flow Monitoring Equipment:

1. Drawings may not show locations of flow monitoring equipment. If a manhole contains any mechanical hardware or electrical flow monitoring equipment, immediately notify the Construction Manager.
2. Reschedule work in such manholes until equipment has been removed by the Owner and further instructions are given, at no additional cost.
3. Do not subject manholes with mechanical hardware or electrical equipment or bypass or diversion pumping.
4. Damage to installed equipment, due to Contractor's failure to adhere to the above, will be repaired by the Owner and cost of repairs charged to Contractor.

B. Field Location of Manholes

1. Contractor is responsible for locating and uncovering all manholes. If Contractor is unable to locate manhole, after due diligence with tapes, metal detectors, and probing, the Contractor shall notify the Construction Manager in writing for Owner assistance.
2. Manholes may be located within project limits which are not part of the system being rehabilitated. Properly identify manholes before starting work. No payment will be made for work in manholes not indicated on the Drawings or not directed in writing by the Construction Manager.

3.03 SALVAGE

Manhole covers and frames, and adjusting rings from abandoned or broken or adjusted manhole castings remain the property of the Owner. Deliver salvaged items to Owner's storage facility or as otherwise directed by the Owner at the conclusion of the project.

3.04 PROTECTION

- A. Provide barricades and warning lights and signs for excavations created by manhole casting work in accordance with the drawings.
- B. Do not allow sand, debris or runoff to enter sewer system.

3.05 EXCAVATION

- A. Excavate in accordance with Owner's Standard Specifications.
- B. Perform work in accordance with OSHA standards. Employ a trench safety system, as required for excavations.

3.06 FLOW BYPASS AND DIVERSION PUMPING

Install and operate necessary dewatering and surface water control measures as required.

3.07 FIBERGLASS LINING SYSTEM

- A. After cleaning and prior to liner installation, all large voids and spelled areas shall be filled and patched with a suitably patching compound at the Contractor's expense. The patching compound shall be as recommended by the lining system manufacturer.
- B. The installation of the lining system shall be in strict accordance with the manufacturer's written installation procedures.
- C. After the liner system is installed it shall be cut and trimmed. The completed product shall be a permanent, monolithic, lined and impervious structure shaped to the interior of the existing manhole. The manhole shaft lining systems shall be completely water tight and free of any joints or openings other than pipe inlets, pipe outlets and the rim opening.
- D. All defective areas and imperfections including, but not limited to, poor adhesion, excessive void, and air bubbles shall be repaired in strict conformance with the recommendation of the lining system manufacturer and subject to the approval of the Construction Manager.

3.08 MANHOLE BENCHES/THROUGH FLOW CHANNELS

- A. Formation of Through-Flow Channel
 - 1. Remove obstructions and loose materials from benches prior to shaping the through flow channel. Form a smooth, U-shaped channel having a minimum depth of one pipe diameter and channel it across the floor of the manhole using an approved manhole rehabilitation material. Control flow to allow sufficient setting time for material used.

-
2. Form a smooth transition with a reshaped channel and a raised manhole bench to eliminate sharp edges of pipe and concrete bench. Build up and smooth through flow channel of manhole to match flow line of pipe.
 3. Make finished benches and through flow channels smooth and without defects which would allow for accumulation of debris.
- B. Remedial Work to Existing Manhole: Exposed reinforcement shall be sand blasted, epoxy primed and protected by a premixed non-shrink cement-based patching material consisting of hydraulic cement, graded silica aggregates, special plasticizing and accelerating agents, which has been formulated for vertical or overhead use. It shall not contain chlorides, gypsums, plasters, iron particles, aluminum powder, or gas forming agents or promote the corrosion of steel it may come into contact with.
- C. Connection of Renovated Pipelines to Existing Manholes
1. The Contractor shall note that in connecting renovated pipelines by insitu lining to existing manholes, every care shall be taken to ensure that the connections are watertight and that the existing sewers and manholes are not damaged.
 2. The Contractor shall ensure that there is no interruption to existing flows during the connection works.
 3. The Contractor shall not allow sewage to flow into newly rehabilitated pipelines unless the rehabilitated pipeline concerned and the downstream rehabilitated pipelines have been completed, inspected and certified complete by the Construction Manager.
 4. When upstream and/or downstream sewers connecting to a manhole are lined, the manhole through-flow channel shall also be lined where possible. Where the concrete benching is sound the sides and invert of the through-flow channel shall be broken out prior to lining to a minimum depth of 0.5-inch. A 0.5-inch minimum thickness of acid resistant premixed non-shrink cement-based patching material consisting of hydraulic cement, graded silica aggregates, with special plasticizing and accelerating agents shall be used. A bonding agent shall be applied if necessary. Where the upstream and downstream linings have been separately installed they shall abut in the manhole where possible at the entrance to the downstream pipeline.

5. The Contractor shall adjust manhole benchings and bases to accommodate linings to ensure a continuous invert without steps between the lining and the existing sewer.
6. On completion of rehabilitated sewer and manhole, the liner in the manhole through-flow channel shall be exactly over the pipe entry and exit and 0.5-inch above springing level. A premixed non-shrink cement-based patching material consisting of hydraulic cement, graded silica aggregates, with special plasticizing and accelerating and bonding agents shall be applied to the whole of the benching and exposed channel, behind the free edge of the cut liner and to the channel sides. Where the upstream and downstream linings abut in the manhole the butt joint shall be not more than 0.5-inch wide and shall have neat parallel faces. The butt joint shall be finished off with a premixed non-shrink cement-based patching material consisting of hydraulic cement, graded silica aggregates, with special plasticizing and accelerating and, if required, bonding agents.
7. In manholes where two dissimilar lining materials/section adjoin, the channel between the linings shall be broken out to a depth to allow a 0.5-inch minimum thickness of acid resistant premixed non-shrink cement-based patching material to be applied between and under the leading edge of the linings and 0.5-inch above springing level. The upstream and downstream pipeline lining shall abut at the inlet to the downstream pipe unless otherwise allowed.
8. All connections into manholes shall be designed and installed so as to ensure that groundwater is not permitted to enter the confines of the sewer or manhole. The Contractor shall submit proposals together with any material specification for making such connections to the Construction Manager for approval.

3.09 MANHOLE FRAMES AND COVERS

- A. Adjust manhole frames and covers indicated in the drawings or directed in writing by the Construction Manager above or at grade and reset loose frames.
- B. Where manholes are constructed in paved areas, frames and covers shall be Vulcan V-1357 or equivalent. The top surface of the frame and cover shall be combined with the pre-cast concrete adjustment rings so that the elevation of the installed casting cover is flush with the surrounding pavement constructed to the exact slope, crown and grade of the existing adjacent pavement. *Manholes in locally low-lying areas, where surface water may collect, shall incorporate the unique manhole number corresponding to the Fulton County*

GIS. The number shall be stenciled with 1.5-inch high epoxy painted figures on surface prepared to manufacturers requirement.

- C. *Where manholes are constructed in paved areas in flood planes, frame and covers shall be Neenah-R-662-KH (heavy duty “T” hinged) or equivalent. Light duty covers shall not be used. The top surface of the frame and covers shall have bolt down lids with a watertight gasket. The top surface of the frame and cover shall be combined with the pre-cast concrete adjustment rings so that the elevation of the installed casting cover is flush with the surrounding pavement constructed to the exact slope, crown and grade of the existing adjacent pavement. Inside surface of all manhole cover frames shall incorporate the unique manhole number corresponding to the Fulton County GIS. The number shall be stenciled with 1.5-inch high epoxy painted figures on surface prepared to manufacturer requirements.*
- D. *Where manholes are constructed in non-pavement areas in flood planes or otherwise, frame and covers shall Neenah-R-662 (heavy duty “T” hinged) or equivalent. Light duty covers shall not be used. The top surface of the frame and covers shall have bolt down lids with a watertight gasket. Manhole frame and covers in the wooded or un-maintained areas shall be 30-inches above grade when combined with the pre-cast concrete adjustment rings. Manholes in grassed areas maintained as lawns etc., shall be adjusted to be flush with the ground unless otherwise directed. The inside surface of all manhole cover frames shall incorporate the unique manhole number corresponding to the Fulton County GIS. The number shall be stenciled with 1.5-inch high epoxy painted figures on surface prepared to manufacturer requirements.*
- E. *An approved sealant shall be applied between the top adjustment ring and the manhole frame. No less than two beads shall be applied 1/2 inch wide and 3/4 inch high. An approved manhole lining material shall be applied between the rings and no less than one inch of non-shrink cement based patching material shall be applied to the inside and outside face of the adjustment rings.*
- F. *Six-inch diameter ductile iron manhole vent pipes covered with a 3/16-inch mesh screen and incorporating a breakaway coupling shall be placed in strategic locations where sealed manhole covers have been used. Normally, the vent pipe shall extend approximately four feet below ground and four feet above ground.*

3.10 MANHOLE INSERTS

- A. *Install stainless steel manhole inserts at locations shown on the.*
- B. *Contractor shall exercise care in selecting the proper insert dish to fit properly with the manhole frame/cover. The insert flange should have an outside*

diameter 3/16" less than the outside diameter of the manhole frame cover seat. Once a proper fit is established, Contractor shall clean surface of manhole frame of all dirt, grit, debris with a wire brush. Insert shall be fully sealed on the manhole frame, providing a water tight seal.

- C. Damaged, tight fitting or missing inserts identified prior to the final inspection shall be replaced at no cost to the Owner.

3.11 ELASTOMERIC CORBEL SEAL TO EXCLUDE RDI/

- A. The surfaces on which the elastomeric seal is to be installed shall be circular, clean, reasonably smooth and free of any loose material and excessive voids. If the surface is rough or irregular and would not provide an effective seal, it shall be smoothed with an approved microsilica enhanced grout. Any flaw or flaws in the manhole frame such as cracks, pits or protrusions, shall be repaired by filling with concrete or grinding smooth. This type of surface work will need to be done on manholes that have not been lined. Manholes that have been lined should not need any surface work in order to install the seal.
- B. Installation of seal shall be as directed by the manufacturer's installation instructions. A manufacturer's representative will train the Contractor in the proper method of installing the seal and will assist the Contractor with any problems they might encounter installing the seals.
- C. Frame to manhole seals shall be installed in such a manner that will prevent water migration between the manhole frame and manhole structure.
- D. The lower 3 inches on the casting frame and top 3 inches of the corbel must be prepared according to the manufacturer's instructions. The corbel/casting interface area shall receive a thickened flexible urethane to achieve a thickness of 80 mils to 120 mils. The seal shall be applied by spray, brush, or trowel 3 inches above the bottom of the frame, and shall cover the entire area to 3 inches below the lowest of bottom of the frame or lowest adjusting ring.

3.12 INSPECTION AND TESTING COMPLETED MANHOLE

- A. After manhole sealing or manhole rehabilitation has been completed the surface of the installed liner shall be cleaned and prepared to permit visual inspection, visually inspect the manhole in the presence of the Construction Manager. Check for cleanliness and for elimination of active leaks.
- B. Assist Construction Manager in verifying installation of lining thickness and sounding. Test several points on the manhole wall. Repair verification points prior to final acceptance for payment. The finished surface shall be free of blisters, "runs" or "sags" or other indications of uneven lining thickness. No evidence of visible leaks shall be allowed.

- C. In addition, at the Owner's request, the Contractor may be required within one year to visually inspect the manholes that were rehabilitated. Any work that has become defective within the one year period shall be redone by the Contractor at no additional expense to the Owner.

3.13 REPLACEMENT OF EXISTING MANHOLE

The Contractor shall replace manholes where shown on the drawings. The Contractor may also elect to replace manholes rather than rehabilitate. The Contractor shall clean and coat the existing shelf. The Contractor shall dispose of all materials from the removed manholes to a licensed landfill.

END OF SECTION 02710

SECTION NO. 02720

PIPEBURSTING METHOD

PART 1 -- GENERAL

1.1 DESCRIPTION:

- A. This specification shall cover the rehabilitation of existing gravity sanitary sewers. Pipebursting is a system by which the burster unit splits the existing pipe while simultaneously installing a new polyethylene pipe. The new pipe may be of the same size or larger size. The work also involves the reconnection of the existing sewer service house connections, television inspection of the polyethylene pipe and completion of the installation in accordance with the contract documents.
- B. Only pneumatically operated equipment with either front or rear expanders for the proper connection to the polyethylene pipe will be allowed for use. Exception to this requirement will only be considered where a static burster unit is proposed for use on isolated segments of pipeline that are to be burst closely adjacent to building foundations or other sensitive structures and where pneumatic bursting might be detrimental. The pneumatic burster must be used in conjunction with a constant tension hydraulic twin capstan winch of either 20, 10 or 5 tons, the size of the winch depends on the diameter of the pipe to be replaced. In no case is the constant tension on the winch to exceed 20 tons.

1.2 QUALIFICATIONS

- A. The Design-Builder or its pipebursting subcontractor shall be certified by the pipe bursting system patent owner, Britishgas – PLC, U.S. Patent 4738565, that such a company is a fully trained and licensed user of the pipe bursting system.
- B. Polyethylene pipe jointing shall be performed by personnel trained in the use of butt-fusion equipment and recommended methods for new pipe connections. Personnel directly involved with installing the new pipe shall receive training in the proper methods for handling and installing the polyethylene pipe. Training shall be performed by a qualified representative.
- C. Design-Builder shall hold the County and Engineer harmless in any legal action resulting from patent infringements.
- D. Design-Builder or Pipebursting subDesign-Builder shall have:

1. Minimum experience of 150,000 L.F. of pipe bursting existing gravity sanitary sewer pipe and replacing with polyethylene pipe within the last three years, AND
2. Minimum experience of 10,000 L.F. of pipe bursting replacement experience with polyethylene pipe two sizes greater than the host pipe, e.g. 10-inch to 15-inch diameter, 12-inch to 18-inch diameter, etc, in the last three years.

1.3 STANDARD SPECIFICATIONS

- A Except as otherwise indicated in this Section of the Specifications, the Design-Builder shall comply with the latest edition of the Standard Specifications for Fulton County Public Works Construction together with the latest adopted editions of the Regional and Fulton County Supplement Amendments, especially concerning the reconstruction of manholes and cleanouts.
- B Except as otherwise indicated, the current editions of the following apply to the WORK of this Section:

ASTM D 1248 Polyethylene Plastics Molding and Extrusion Materials

1.4 REGULATORY REQUIREMENTS

- A The WORK of this Section shall comply with the current versions, with revisions, of the following:
1. OSHA 29 CFR 1910.146 (permit-required confined-space regulations)
- B All work and testing shall comply with the applicable Federal codes, including Federal Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, as amended, and applicable state and local codes and standards; and to the extent applicable with the requirements of the Underwriter's Laboratories, Inc. and the National Electric Code.

1.5 RESPONSIBILITY FOR OVERFLOWS OR SPILLS

- A It shall be the responsibility of the Design-Builder to schedule and perform his work in a manner that does not cause or contribute to incidence of overflows or spills of sewage from the sewer system.

- B In the event that the Design-Builder's work activities contribute to overflows or spills, the Design-Builder shall immediately take appropriate action to contain and stop the overflow, clean up the spillage, disinfect the area affected by the spill, and notify the designated CONSTRUCTION MANAGER in a timely manner.
- C Design-Builder will indemnify and hold harmless the County for any fines or third-party claims for personal or property damage arising out of a spill or overflow that is fully or partially the responsibility of the Design-Builder, including the legal, engineering and administrative expenses of the County in defending such fines and claims.

1.6 SUBMITTALS

- A Submit the following:
 1. Shop drawings, catalog data, and manufacturer's technical data showing complete information on material composition, physical properties, and dimensions of new pipe and fittings. Include manufacturer's recommendations for handling, storage, joint welding and repair of pipe and fittings damaged.
 2. Methodology for construction and restoration of existing sewer service connections.
 3. Detail drawings and written descriptions of the entire construction procedure to install pipe, bypass sewerage flow and reconnection of sewer service connections, restoration of manhole base and provision for facilitating watertight junction of new pipe to existing and reconstructed manholes.
 4. Certification of workmen trained for welding and installing pipe.
 5. Pre and post upgrade CCTV inspection reports and videotapes. Post upgrade reports and videotapes shall be made after pipe installation and re-connection of all laterals and immediately prior to the commissioning stage.
 6. Written certification that the Design-Builder is an approved BG-PLC licensee of the pneumatic bursting system from T.T. Technologies or approved equal.
 7. The bidder must submit a preliminary schedule with the bid. The schedule submitted with the bid and the initial (at preconstruction meeting) and subsequent (half way through project) schedule submitted during the course of the project shall show:
 - (a) each site operation requiring the use of separate crew of equipment and/or labor as a separate activity

- (b) the assumed limitations upon the sequence of activities and the anticipated start and completion time for the activities in weeks, numbered from the date of the Notice to Proceed of the project
- (c) the number, nature and size of the plant and/or labor teams which it is anticipated shall be used on each activity
- (d) a description of the proposed methods of construction as well as the nature and extent of temporary works
- (e) the critical path of activities required to complete the whole of the works
- (f) list of all subDesign-Builders including the identification of the task and number of personnel.

The preliminary schedule shall not be used for evaluation of the bid nor will it form part of the contract.

8. An initial schedule shall be submitted at the preconstruction meeting by the selected Design-Builder. Thereafter at the end of each week until Final Completion has been issued, the Design-Builder shall submit a report in writing comprising:
- (a) a list of those activities shown on the current schedule which were begun during the week stating their remaining duration's and their anticipated completion times
 - (b) a list of those activities begun previously upon which work continued during the week and their anticipated completion times
 - (c) a list of those activities begun previously but upon which no work was carried out during week stating their remaining duration's in weeks and their anticipated completion times
 - (d) a list of activities completed during the week

If the anticipated completion time of any activity reported is later than that previously reported or where not previously reported later than the completion time shown on the current schedule the circumstances which in the opinion of the Design-Builder have caused the anticipated delay shall be stated. Any other matters not previously reported which in the opinion of the Design-Builder may cause delay to the current schedule shall be described. The current schedule is the revised schedule last produced and submitted to the CONSTRUCTION MANAGER or where no revised schedule has been submitted the latest revision of the initial schedule submitted.

PART 2 -- PRODUCTS

2.1 MATERIALS

A Polyethylene Plastic Pipe shall be high density solid wall polyethylene pipe and meet the applicable requirements of ASTM F714 Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter, ASTM1248, ASTM D3550.

1. Sizes of the insertions to be used shall be such to renew the sewer to greater flow capacity.
2. All pipes shall be made of virgin material. No reworked material shall be used except that obtained from the manufacturer's own production of the same formulation.
3. The pipe shall be homogenous throughout and shall be free of visible cracks, discoloration, pitting, varying wall thickness, holes, foreign material, blisters, or other deleterious faults.
4. Dimensions Ratios: The minimum wall thickness of the polyethylene pipe shall be SDR 17 throughout. Where required by Engineer, pipes may be tested at ground surface for circularity before installation and welding commences. Circularity will be checked by pulling a closed cylindrical mandrel through the polyethylene pipe. The mandrel shall be at least three times the diameter of the pipe in length and not greater than inside diameter of pipe minus 2 millimeters. Pipes will be rejected which have greater than 5% deformation due to thermal softening.
5. Material color shall be black. Interior of pipe shall have a light reflective color to allow easier/better viewing for television inspection.
6. Manufacturer shall be Chevron, Phillips 66 Driscopipe or equal.

2.2 DELIVERY, STORAGE, AND HANDLING

- A Transportation, handling, and storage of the polyethylene pipe and fittings shall be as recommended by manufacturer.

- B If new pipe and fittings become damaged before or during installation, it shall be repaired as recommended by the manufacturer or replaced as required by the Engineer at the Design-Builder's expense, before proceeding further.

- C Deliver, store and handle other materials as required to prevent damage.

2.3 MATERIAL TESTS

- A Design-Builder shall furnish samples and material tests for compliance with this specification from an independent laboratory to verify the required physical properties and characteristics of supplied materials in accordance with the applicable ASTM Specification. A certificate shall be furnished by the manufacturer, upon request, for all material furnished under this specification. Polyethylene plastic pipe and fittings may be rejected that does not meet any requirements of this specification. The OWNER shall pay for tests on pipe material which meets specification requirements. Design-Builder shall pay for failed tests and re-testing of failed materials

2.4 EQUIPMENT

- A The pipe bursting tool shall be designed and manufactured to force its way through existing pipe materials by fragmenting the pipe and compressing the old pipe sections into the surrounding soil as it progresses. The bursting unit shall be pneumatic and shall generate sufficient force to burst and compact the existing pipe line. See manufacturer's specifications for what size tool should be used in what diameter of pipe, as well as parameters of what size tool for percentage of upsize allowed.

- B The pipe bursting tool shall be pulled through the sewer by a winch located at the upstream manhole. The bursting unit shall pull the polyethylene pipe with it as it moves forward. The bursting head shall incorporate a shield/expander to prevent collapse of the hole ahead of the PE pipe insertion. The pipe bursting unit shall be remotely controlled.
- C The pipe bursting tool shall be pneumatic unless static is specified. The bursting action of the tool shall increase the external dimensions sufficiently, causing breakage of the pipe at the same time expanding the surrounding ground. This action shall not only break the pipe but also create the void into which the burster can be winched and enables forward progress to be made. At the same time the polyethylene pipe, directly attached to the sleeve on the rear of the burster, shall also move forward.
- D The burster shall have its own forward momentum while being assisted by winching. A hydraulic winch shall give the burster friction by which it can be move forward. To form a complete operating system, the burster must be matched to a constant tension hydraulic winching system.

2.5 WINCH UNIT

- A A winch shall be attached to the front of the bursting unit. The winch shall provide a constant tension to the burster in order that it may operate in an efficient manner. The winch shall ensure directional stability in keeping the unit on line.
- B The winch shall be of the constant tension type but shall be fitted with a direct reading load gauge to measure the winching load which must automatically be maintained at a constant tension at a set tonnage reading. The winch, which shall be hydraulically operated to provide the constant tension throughout the bursting operation, shall supply sufficient cable in one continuous length so that the pull may be continuous between approved winching points.
- C The winch, cable and cable drum must be provided with safety cage and supports so that it may be operated safely without injury to persons or property.
- D The Design-Builder shall provide a system of guide pulleys and bracing at each manhole to minimize cable contact with the existing sewer between manholes.
- E The supports to the trench shoring in the insertion pit shall remain completely separate from the winch boom support system and shall be so designed that neither the pipe nor the winch cable shall be in contact with them.

PART 3 -- EXECUTION

3.1 SEWER SERVICE CONNECTIONS

- A All sewer service connections shall be identified and located prior to pipe insertion. The complete list of service laterals, included relevant footage and diameter of lateral, shall be submitted prior to pipe bursting to the CONSTRUCTION MANAGER for information. Upon commencement, pipe insertion shall be continuous and without interruption from one manhole to another, except as approved by the engineer and/or his representative. Upon completion of insertion of the new pipe, the Design-Builder shall complete the reconnection of all service laterals on the segment within 24 hours of commencing pipe bursting, to minimize any inconvenience to customers.
- B The preferred method of saddle connection to the main line shall be either by A.) Inserter Tee, Fowler Manufacturing, Oregon, or B.) fusion of saddle connection with one of the following approved systems.
- 1 Electrofusion saddles as manufactured by Central Plastics shall be installed in accordance with the manufacturers recommended procedures.
 2. Conventional Fusion saddles as manufactured by Central Plastics, Phillips Driscopipe, or Plexco shall be installed in accordance with the manufacturers recommended procedures.
- C. Saddle material shall be compatible with that of the main pipe.

3.2 EXISTING FLOW

- A. The Design-Builder shall provide bypass pumping during the pipe bursting/replacement process. The pumps and by-pass lines shall be of adequate capacity and size to handle all flows including peak wet weather flow. All costs for by-pass pumping, required during installation of the pipe shall be included in the rate for pipe replacement by pipe bursting.
- B. The Design-Builder shall be responsible for maintaining continuous sanitary sewer service to each and every property connected to the segment of sewer subject to pipe bursting operations. The cost of dealing with tanking, by pass pumping and all other private service flow management shall be included in the rate for pipe replacement.

- C. If sewage backup occurs and enters buildings, the Design-Builder shall be responsible for clean-up, disinfection, repair, property damage as well as all resultant costs and claims.

3.3 PRE-INSTALLATION CCTV SURVEY

- A Pipelines that will be upgraded by pipe bursting or open cut shall be televised (CCTV) in conformance with the Fulton County Manual for Internal Sewer Condition Assessment.

CCTV inspection conditions shall include the following:

1. Preconstruction video tapes shall be available for viewing by the Construction Manager before construction begins and throughout the project.
2. Video tapes to remain property of the County. Design-Builder to retain second copy for his use.
3. All flows tributary to reach of sewer being inspected are to be completely by-passed around the reach during preconstruction inspection if necessary and required by the County.
4. Should any portion of the inspection tapes be of inadequate quality or coverage, as determined by the COUNTY of Design-Builder will have the portion re-inspected and video taped at no additional expense to the COUNTY.

3.4 CONSTRUCTION METHOD

- A Equipment used to perform the work shall be located away from buildings in order to minimize noise impact which under all circumstances shall be less than 70 dB unless otherwise allowed by the Engineer due to circumstances beyond the Design-Builder's control. A silent engine compartment with the winch shall be provided to reduce machine noise.
- B The Design-Builder shall install any pulleys, rollers, bumpers, alignment control devices and other equipment required to protect existing manholes, and to protect the polyethylene pipe from damage during installation. Lubrication may be used as recommended by the manufacturer. Under no circumstances shall the pipe be

stressed beyond its elastic limit. The winch line must be centered in the existing pipe to be burst with an adjustable boom.

- C The installed polyethylene pipe shall be allowed to relax and cool following installation in accordance with the manufacturer's recommended time, but not less than four (4) hours, prior to any reconnection of service lines, scaling of the annulus or backfilling of the insertion pit. Sufficient excess length of new pipe, but not less than four (4) inches, shall be allowed to protrude into the manhole to provide for further length reduction. End restraint of pipe ends shall be achieved by means of Central Plastics Electrofusion couplings. The Electrofusion couplings shall be slipped over pipe ends against manhole wall and fused in place. Installation of all electrofusion couplings shall be carried out in accordance with the manufacturers recommended procedures.
- D Following the relaxation period, the annular space may be sealed. Sealing shall be made with materials approved by the Engineer and/or his representative and shall extend a minimum of eight (8) inches into the manhole wall in such a manner as to form a smooth, uniform, watertight joint. The terminating pipe ends in manholes shall be connected by Central Plastics Electrofusion couplings to eliminate ground water infiltration. Installations of electrofusion couplings shall be installed in accordance with the manufacturers recommended procedures.

3.5 POST-INSTALLATION CCTV SURVEY

- A Following installation of new pipelines between manholes where bursting has occurred, CCTV inspection shall be carried out in accordance with the requirements of the Fulton County Manual of Internal Sewer Condition Assessment. The finished tape shall be continuous over the entire length of the sewer between two manholes and shall be completely free from visual defects.
- B Defects which may affect the integrity or strength of the pipe in the opinion of the Engineer shall be repaired or the pipe replaced at the Design-Builder's expense.
- C. Post construction video tape upon completion of reconstruction of each reach of sewer as appropriate with stationing of services indicated. Data and stationing to be on video.
- D. Video tapes to remain property of the county. Design-Builder to retain second copy for his use.

- E. Post construction Video tapes shall be available to view within one month after project is completed. Post construction video tapes shall be submitted to the Fulton County before final invoices and any retainage is released.
- F. Should any portion of the inspection tapes be of inadequate quality or coverage, as determined by the COUNTY of Design-Builder will have the portion re-inspected and video taped at no additional expense to the COUNTY.

3.6 PIPE JOINING

- A. The polyethylene pipe shall be assembled and joined at the site using the butt-fusion method to provide a leak proof joint in strict accordance with the manufacturer's instructions and ASTM D 2657. Threaded or solvent-cement joints and connections are not permitted.
- B. All equipment and procedures used shall be used in strict compliance with the manufacturer's instructions and recommendations. Fusing shall be accomplished by personnel certified as fusion technicians by a manufacturer of polyethylene pipe and/or fusing equipment.
- C. The butt-fused joint shall be true alignment and shall have uniform roll-back beads resulting from the use of proper temperature and pressure. The joint shall be allowed adequate cooling time before removal of pressure. The fused joint shall be watertight and shall have tensile strength equal to that of the pipe.
- D. All joints shall be subject to acceptance by the Construction Manager and/or his representative prior to insertion. All defective joints shall be cut out and replaced at no cost to the COUNTY. Any section of the pipe with a gash, blister, abrasion, nick, scar, or other deleterious fault greater in depth than ten percent (10%) of the wall thickness, shall not be used and must be removed from the site. However, a defective area of the pipe may be cut out and the joint fused in accordance with the procedures stated above.
- E. Any section of the pipe having other defects such as concentrated ridges, discoloration, excessive spot roughness, pitting, variable wall thickness or any other defect of manufacturing or handling as determined by the Construction Manager and/or his representative shall be discarded and not used.
- F. Terminal sections of pipe that are joined within the insertion pit shall be connected with Central Plastics Electrofusion Couplings or connectors with tensile strength equivalent to that of the pipe being joined.

- G. When transitioning from polyethylene pipe to ductile iron pipe, pipes shall be joined with a transition sleeve as recommended by the pipe manufacturer. Transition sleeves shall be approved by the construction manager.

3.7 MEASUREMENT AND PAYMENT

- A. The inserted pipe shall be paid for per linear foot of the size pipe specified. The inserted pipe rate shall be totally inclusive of all pipe bedding, backfill material, lubrication, annulus sealing material, launch pits and any other necessary material, manpower, equipment or technique necessary to deal with all or any difficulty encountered, e.g., water, rock, access arrangements, erosion control, reinstatement of disturbed property, suppression of noise and air pollution etc,.

Locating and reconstruction of services and all reconstruction and reconnections of service shall be separately paid for per each connection made including all fittings and pipes.

- B. The work performed as prescribed by this item will be paid at the unit price per linear foot of sanitary sewer by pipe bursting/replacement for the specified pipe diameter and location. The price shall be full compensation for the installation of the new pipe, furnishing and placing of all materials, labor, tools, equipment, cleaning, and preparation of the existing pipe to receive the new liner, and any other necessary to complete the project.
- C. The cost for both pre and post upgrade CCTV inspection of existing and final installed pipe shall be included in the cost per linear foot of burst or open cut pipeline.
- D. The cost of any necessary by-pass pumping shall be considered to be included in the cost per linear foot of burst or open cut installed pipeline.

PART 4 -- WARRANTY

4.1 MATERIAL WARRANTY

- A. A written guarantee of 10 years submitted to Fulton County for the specific project shall be provided by the MANUFACTURER against any breakdown of the polyethylene pipe material effectiveness.

END OF SECTION 02720

06RFB48856K-RS, BUTTERFIELD LANE SEWER REPLACEMENT (S225)
Addendum#2
Page 2
March 17, 2006

******The Due Date for this project has been changed to Monday, April 10, 2006******

ACKNOWLEDGEMENT OF ADDENDUM NO. 2

The undersigned bidder acknowledges receipt of this addendum by returning one (1) copy of this form with the proposal package to the Purchasing Department, Fulton County Public Safety Building, 130 Peachtree Street, Suite 1168, Atlanta, Georgia 30335 by the ITB due date and time **Monday, April 10, 2006, no later than 11:00 A.M.**

This is to acknowledge receipt of Addendum No. 2, _____ day of _____, 2006.

Legal Name of Bidder

Signature of Authorized Representative

Title