

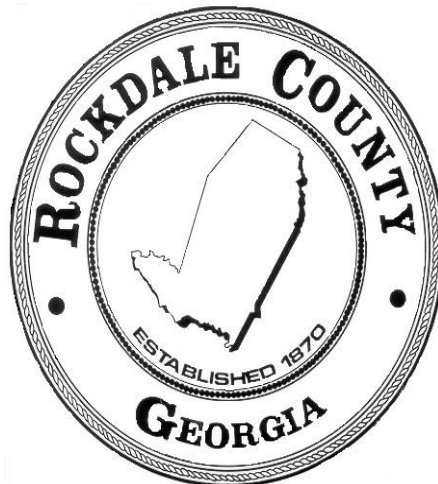
**INVITATION TO BID
20-09**

ROCKDALE COUNTY, GEORGIA

February 26, 2020

**8 INCH WATER LINE
EXTENSION**

**CONYERS OUTLOTS
TRACT 1 & 2**



**ROCKDALE COUNTY FINANCE DEPARTMENT
PROCUREMENT OFFICE
958 Milstead Avenue
CONYERS, GA 30012
770-278-7552**

INTRODUCTION:

This is an Invitation to Bid (ITB) for a **8 INCH WATER LINE EXTENSION CONYERS OUTLOTS TRACT 1 & 2** in Rockdale County. Instructions for preparation and submission of a bid are contained in this packet. Bids must be typed or printed in ink.

Rockdale County provides equal opportunity for all businesses and does not discriminate against any person or business because of race, color, religion, sex, national origin, and handicap or veterans status. This policy ensures all segments of the business community have access to supplying the goods and services needed by Rockdale County.

PURCHASING CONTACT FOR THIS REQUEST:

All questions concerning this ITB and all questions arising subsequent to award are to be addressed to the Purchasing Division via email to Meagan Porch, Buyer, at meagan.porch@rockdalecountyga.gov or the following address:

Rockdale County Finance Department
Purchasing Division
Attn: Meagan Porch
958 Milstead Avenue
Conyers, GA 30012
Phone: (770) 278-7557, Fax (770) 278-8910
E-mail: meagan.porch@rockdalecountyga.gov

To maintain a "level playing field", and to assure that all bidders receive the same information, bidders are requested **NOT** to contact anyone other than the contact above until after the award of the contract. Doing so could result in disqualification of the bidder.

BID COPIES FOR EVALUATION:

Three (3) hard copies and one (1) original hard copy and one (1) Flash Drive in Adobe PDF format will be required for review purposes. (*Original must be clearly marked "Original" and the Copies clearly marked "Copies."*). Flash Drives that are blank or have incorrect information on them will not be acceptable and may be justification for disqualification. Check your Flash Drive(s) to ensure that they have the appropriate material on it before submitting.

All bid materials must be completed and enclosed in a sealed envelope prior to submittal. The ITB number must be clearly written on the outside of the envelope. **Incomplete, incorrect, unsealed, unmarked, or improperly submitted bids may be rejected.**

CONTRACT TERM:

120 Calendar days from date of Notice to Proceed.

DUE DATE:

Sealed bids will be received at the Rockdale County Finance Department, Procurement Division, 958 Milstead Avenue, Conyers, GA 30012 no later than **2:00 P.M., local time, Thursday, March 19, 2020**. Bids received after this time will not be accepted. Bidders are not required to attend bid opening.

QUESTIONS AND CLARIFICATIONS:

All questions and/or requests for clarifications concerning this ITB must be submitted to the Purchasing Division via email to meagan.porch@rockdalecountyga.gov or at the above address no later than **2:00 p.m., local time, on Thursday, March 12, 2020**. It shall be the Bidders responsibility to seek clarification as early as possible prior to the due date and time. Written responses from the County to the questions it receives will be in an addendum and posted to the County's website at www.rockdalecountyga.gov, under Bid Opportunities. Questions or requests for clarifications received after this deadline will not receive a response.

ADDENDA:

Answers to questions submitted that materially change the conditions and specifications of this ITB will be issued in an addendum and posted to the County's website at www.rockdalecountyga.gov under Bid Opportunities. Any discussions or documents will be considered non-binding unless incorporated and issued in an addendum.

It is the bidder's responsibility to check the Rockdale County website at www.rockdalecountyga.gov, under Bid Opportunities for any addenda that may be issued, prior to submitting a bid for this ITB.

WARRANTY AND / OR GUARANTY:

The bidder will state below or will furnish a separate letter attachment which fully explains the condition of Warranty and/or Guaranty. If no Warranty and/or Guaranty is applicable, it must be so stated. NOTE: Failure to respond to the requirement of this paragraph may result in the bid being non-responsive.

FOREIGN PRODUCTS:

Rockdale County prefers to buy items produced and/or manufactured in the United States of America; however, foreign products may be considered provided it is so stated. Bidder certifies that item(s) offered on this bid is/are manufactured/produced in the United States.

Yes _____ No _____

If "No" state place: _____

QUALIFICATIONS OF OFFERORS:

Bidders must have a current business license from their home office jurisdiction and provide a copy of that license with the submittal of their bid response. Rockdale County bidders doing business in Rockdale County must have a current Rockdale County Business License.

Bids from any offeror that is in default on the payment of any taxes, license fees, or other monies due to Rockdale County will not be accepted.

Bidders are to submit at least **three (3) three references** from projects with similar experience using the materials and process in this Invitation to Bid.

SILENCE OF SPECIFICATIONS

The apparent silence of these specifications and any supplemental specifications as to any details, or the omission from it of a detailed description concerning any point, shall be regarded as meaning that only the best commercial practices are to prevail and that only materials of first quality and correct type, size and design are to be used. All workmanship is to be first quality. All interpretations of this specification shall be made upon the basis of this statement, with County interpretation to prevail.

OPTION TO AUDIT

Successful bidder will be required to maintain complete records during the life of the contract and for a period of one year after completion of the contract. Such records are to be made available to the County if officially requested, to be audited by a designated County auditing staff. In such audits reveal overcharges and/or undercharges, such will be adjusted and compensation made by either party to correct charges.

TORT IMMUNITY:

No officer, employee, or agent of the County acting within the scope of his/her employment or function shall be held personally liable in tort or named as a defendant in any action for injury or damage suffered because of any act, event, or failure to act.

PROPRIETARY INFORMATION:

Careful consideration should be given before submitting confidential information to Rockdale County. The Georgia Open Records Act permits public scrutiny of most materials collected as part of this process. Please clearly mark any information that is considered a trade secret, as defined by the Georgia Trade Secrets Act of 1990, O.C.G.A. §10-1-760 et seq., as trade secrets are exempt from disclosure under the Open Records Act. Rockdale County does not guarantee the confidentiality of any information not clearly marked as a trade secret.

AWARD OF CONTRACT:

The Rockdale County Procurement Office and/or Evaluation Committee make a recommendation for award. The Board of Commissioners will make the actual award of the contract and has the authority to award the contract to a company different than the company recommended by the Procurement Office and/or Evaluation Committee. Rockdale County reserves the right to make no awards, multiple awards, one award for all items; or whatever the County deems to be in its best interest.

QUANTITIES:

The quantities listed in the Bidders Response Schedule are provided as an estimate for bid purposes. The County will not be obligated to quantities beyond actual needs.

SELECTION PROCESS:

The Rockdale County Procurement Office and/or Evaluation Committee make a recommendation for award. The Board of Commissioners will make the actual award of the contract and has the authority to award the contract to a company different than the company recommended by the Purchasing Department and/or Evaluation Committee.

This is a past performance/quality/price trade-off source selection in which competing offeror's past and present performance history and product quality will be evaluated on a basis approximately equal to price. Award will be made to the responsible offeror whose bid represents the best value after evaluation in accordance with the factors listed below. Rockdale County Board of Commissioners may reject any or all bids if such action is in the county's interest.

Rockdale County may evaluate bids and award a contract without discussions with offerors. Therefore, the offeror's initial bid should contain the offeror's best terms from a price and technical standpoint. The County reserves the right to conduct discussions if the County later determines them to be necessary.

INSURANCE:

Before starting any work, the successful contractor must furnish to Rockdale County certificate(s) of insurance from companies doing business in Georgia. The Company shall maintain in full force and effect the following insurance during the term of the Agreement:

Coverages:	Limits of Liability:
Workers' Compensation	Statutory
Employers' Liability	\$1,000,000.00
Bodily Injury Liability	\$1,000,000.00 each occurrence
except Automobile	\$1,000,000.00 aggregate
Property Damage Liability	\$1,000,000.00 each occurrence
except Automobile	\$1,000,000.00 aggregate
Personal & Advertising Injury Limit	\$1,000,000.00
Products / Completed Ops.	\$2,000,000.00 aggregate
Automobile Bodily Injury	\$1,000,000.00 each person
Liability	\$1,000,000.00 each occurrence
Automobile Property Damage	\$1,000,000.00 each occurrence
Liability	
Professional Liability/General Liability	\$1,000,000.00
Excess Umbrella Liability	\$3,000,000.00

All insurance shall be provided by an insurer(s) acceptable to the County, and shall provide for thirty (30) days prior notice of cancellation to the County. Upon contract award, Contractor shall deliver to the County a certificate or policy of insurance evidencing Contractor's compliance with this paragraph. Contractor shall abide by all terms and conditions of the insurance and shall do nothing to impair or invalidate the coverage.

Rockdale, GA shall be named as Additional Insured under any General Liability, Business Auto and Umbrella Policies using ISO Additional Insured Endorsement forms CG 2010 or its equivalent. Coverage shall apply as Primary and non-contributory with Waiver of Subrogation in favor of Rockdale County, Georgia.

The insurance carrier must have a minimum rating of A or higher as determined by the rating firm A.M. Best.

Certificates must contain policy number, policy limits, and policy expiration date of all policies. The Invitation to Bid (ITB) number and project name must be inserted in the Description of Operations section of the certificate.

Certificates are to be issued to:

Rockdale County, Georgia
958 Milstead Avenue
Conyers, GA 30012

BONDS:

Rockdale County shall request the following for bids/proposals in excess of Fifty Thousand Dollars (\$50,000.00).

BID BOND

Each bid shall include a bid bond in the amount of five percent (5%) of the total bid amount as guarantee that the bidder shall not withdraw the bid for 120 days after the scheduled bid opening. If awarded the contract, Bidders shall enter a written agreement with Rockdale County in accordance with the bid.

PERFORMANCE BOND

Upon execution and delivery of the contract, the bidder shall furnish Rockdale County a performance bond for the full amount of the contract. Maintenance provisions of the bond shall remain in effect for a period of twelve (12) months after acceptance of the work by the County. The surety shall be a reputable bonding company authorized to transact business in the State of Georgia.

PAYMENT BOND

Upon execution and delivery of the contract, the bidder shall furnish Rockdale County a payment bond for the full amount of the contract. Maintenance provisions of the bond shall remain in effect for a period of twelve (12) months after acceptance of the work by the County. The surety shall be a reputable bonding company authorized to transact business in the State of Georgia.

All sureties of bonds for Rockdale County must be licensed to do business in the State of Georgia and must be listed on the Department of Treasury Federal Register.

PERMITS:

The awarded contractor will be responsible for acquiring any permits that are required for this project/purchase. Rockdale County will waive fees on all permits issued by Rockdale County.

ILLEGAL IMMIGRATION REFORM AND ENFORCEMENT ACT OF 2011

Bidders submitting a Qualification package in response to this ITB must complete the Contractor Affidavit under O.C.G.A. §13-10-91(b)(1) which is provided with the ITB package to verify compliance with the Illegal Immigration Reform and Enforcement Act of 2011.

- A. The form must be signed by an authorized officer of the contractor or their authorized agent.
- B. The form must be notarized.
- C. The contractor will be required to have all subcontractors and sub-subcontractors who are engaged to complete physical performance of services under the final contract executed between the County and the contractor complete the appropriate subcontractor and sub-subcontractor affidavits and return them to the County a minimum of five (5) days prior to any work being accomplished by said subcontractor or sub-subcontractor. Format for this affidavit can be provided to the contractor if necessary.

LIQUIDATED DAMAGES

Time is of the essence and is an essential element of this Contract, and the Contractor shall pay to the County, not as a penalty, but as liquidated damages, the sum of \$100.00 for each calendar day that there is default of completing the Work within the time limit named herein. If the Contractor abandons the Contract before commencement of the Work or defaults in completion of all the Work after commencement thereof, the Contractor shall be liable for such liquidated damages. These fixed liquidated damages are not established as a penalty but are calculated and agreed upon in advance by the County and the Contractor due to the uncertainty and impossibility of making a determination as to the actual and consequential damages incurred by the County and the general public of Rockdale County, Georgia as a result of the failure on the part of the Contractor to complete the Work on time. Such liquidated damages referred to herein are intended to be and are cumulative and shall be in addition to every other remedy now or hereafter enforceable at law, in equity, by statute, or under the Contract.

GENERAL INFORMATION:

RECEIPT OF BID:

No bids received after said time or at any place other than the time and place as stated in the notice shall be considered. No responsibility shall attach to Rockdale County for the premature opening of a bid not properly addressed and identified.

WITHDRAWAL OF BID:

A bidder may withdraw his bid before the bid due date, without prejudice to the bidder, by submitting a written request of withdrawal to the Rockdale County Procurement Office.

REJECTION OF BID:

Rockdale County may reject any and all bids and must reject a bid of any party who has been delinquent or unfaithful in any formal contract with Rockdale County. Also, the right is reserved to waive any irregularities or informalities in any bid in the proposing procedure. Rockdale County shall be the sole judge as to which bid is best, and in ascertaining this, will take into consideration the business integrity, financial resources, facilities for performing the work, and experience in similar operations of the various bidders.

STATEMENT OF EXPERIENCE AND QUALIFICATIONS:

The bidder may be required, upon request, to prove to the satisfaction of Rockdale County that he/she has the skill, experience, necessary facilities and ample financial resources to perform the contract(s) in a satisfactory manner and within the required time. If the available evidence of competency of any bidder is not satisfactory, the bid of such bidder may be rejected. The successful bidder is required to comply with and abide by all applicable federal and state laws in effect at the time the contract is awarded.

NON-COLLUSION AFFIDAVIT:

By submitting a bid, the bidder represents and warrants that such bid is genuine and not sham or collusive or made in the interest or in behalf of any person not therein named, that the bidder has not directly or indirectly induced or solicited any other bidder to put in a sham bid, or any other person, firm or corporation to refrain from proposing and that the bidder has not in any manner sought by collusion to secure to that bidder any advantage over any other bidder.

INTEREST OF:

By submitting a bid, the bidder represents and warrants that a Commissioner, Administrator, employee, nor any other person employed by Rockdale County has, in any manner, an interest, directly or indirectly, in the bid or in the contract which may be made under it, or in any expected profits to arise therefrom.

DOCUMENTS DEEMED PART OF THE CONTRACT:

The notice, invitation to bidders, general conditions, and instructions for bidders, special conditions, specifications, bid, and addenda, if any, will be deemed part of the contract.

GOVERNING LAWS:

This contract is made under and shall be governed and construed in accordance with the laws of the State of Georgia.

ERRORS AND OMISSIONS:

The bidder shall not take advantage of any errors or omissions in this Bid Request, and shall promptly notify Rockdale County of any omissions or errors found in this document.

STANDARD INSTRUCTIONS:

1. The instructions contained herein shall be construed as a part of any bid invitation and/or specifications issued by Rockdale County and must be followed by each bidder.
2. The written specifications contained in this bid shall not be changed or superseded except by written addendum from Rockdale County. Failure to comply with the written specifications for this bid may result in disqualification by Rockdale County.
3. All goods and materials shall be F.O.B. Destination Conyers, Georgia and no freight or postage charges will be paid by Rockdale County unless such charges are included in the bid price.
4. The following **ITB# 20-09** must be written clearly on the outside of each bid envelope in order to avoid prior opening in error.
5. All bids must be received and in-hand at bid due date and time. Each bidder assumes the responsibility for having his/her bid received at the designated time and place of bid due date. Bids received after the stated time and date may be subject to rejection without consideration, regardless of postmark. Rockdale County accepts no responsibility for mail delivery.
6. Unless otherwise stated, all bids submitted shall be valid and may not be withdrawn for a period of 120 days from the due date.
7. Each bid form submitted must include the name of the business, mailing address, the name, title and signature of the person submitting the bid. When submitting a bid to Rockdale County the first page of your bid package should be the bid form listing the price, delivery date, etc., unless the bid form is requested to be in a separate envelope.
8. Rockdale County reserves the right to accept a bid that is not the lowest price if, in the County's judgment, such bid is in the best interest of the County and the public. The County reserves the right to reject any and all bids.
9. Telephone, Emailed or Facsimile bids will not be accepted.
10. No sales tax will be charged on any orders except for contracts that include construction materials being purchased through a third party.

Federal I.D. #58-6000882
Sales Tax Exempt #58-800068K
11. If applicable, completed questionnaires must be signed manually. Rockdale County reserves the right to accept or reject any bid on the basis of incomplete or inaccurate answers to the questionnaire.
12. If applicable, warranty information shall be provided.
13. Bidders shall state delivery time after receiving order.
14. Bidders shall identify any subcontractors, and include an explanation of the service or product that they may provide.

BID SPECIFICATIONS:

The specifications are as follows on the attached pages:

BID FORM – ITB No. 20-09

Instructions: Complete all THREE parts of this bid form.

PART I: Bid Summary

Complete the Bid Item Table included in this ITB, and print the Total Bid Amount below.

Total Bid Amount = \$ _____

PART II: Addenda Acknowledgements (if applicable)

Each bidder is responsible for determining that all addenda issued by the Rockdale County Finance Department – Purchasing Division have been received before submitting a bid.

Addenda	Date Bidder Received	Initials
"1"		
"2"		
"3"		
"4"		
"5"		
"6"		

PART III: Bidder Information:

Bidder Name	
Address	
Telephone	
E-Mail	
Representative (print name)	
Signature of Representative	
Date Submitted	

BID ITEM TABLE – ITB # 20-09

Instructions: Type or clearly print all prices.

Any modifications to items, quantities, or units will result in rejection of the bid. Items marked with an asterisk (*) will only be used with Project Manager's authorization.

Item #	Item Description	Approx. Quantity	Unit	Unit Price	Projected Price
1	Mobilization	1	LS		
2	Erosion and Sedimentation Control	1	LS		
3	Boring and Receiving Pit Soil Excavation	400	CY		
4	Furnish and Install 8" Ductile Iron Pipe	334	LF		
5	Cut & Replace Asphalt Pavement	22	SY		
6	Cut & Replace Concrete Pavement	25	SY		
7	Bore & Jack 18" Steel Casing (0.25 Wall)	67	LF		
8	Furnish & Install Fire Hydrant Assembly with 6" Gate Valve	2	EA		
9	Furnish and Install 8"x8" Tapping Sleeve with 8" Valve	1	EA		
10	Furnish and Install 8" Gate Valve	2	EA		
11	Testing	1	EA		
12	Furnish & Install 8" Plug (Restrained)	2	EA		
13	Traffic Control	1	EA		
				Subtotal	
				Contingency(10% of Subtotal)	
				Total Bid Amount	

Representative's Signature: _____ Date: _____

ROCKDALE COUNTY BOARD OF COMMISSIONERS
NON-COLLUSION AFFIDAVIT OF BIDDER

State of _____)

County of _____)

_____, being first duly sworn, deposes and says that:

(1) He/She is _____ (owner, partner officer, representative, or agent) of _____, the Bidder that has submitted the attached ITB;

(2) He/She is fully informed respecting the preparation and contents of the attached ITB and of all pertinent circumstances respecting such ITB;

(3) Such ITB is genuine and is not a collusive or sham ITB;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affidavit, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham ITB in connection with the Contract for which the attached ITB has been submitted or refrain from proposing in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached ITB or of any other Bidder, or to fix any overhead, profit or cost element of the proposing price or the proposing price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Rockdale County or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached ITB are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

(Signed)

(Title)

Subscribed and Sworn to before me this _____ day of _____, 202

Name _____

Title _____

My commission expires (Date)

ROCKDALE COUNTY BOARD OF COMMISSIONERS
NON-COLLUSION AFFIDAVIT OF BIDDER

State of _____)

County of _____)

_____, being first duly sworn, deposes and says that:

(1) He/She is _____ (owner, partner officer, representative, or agent) of _____, the Bidder that has submitted the attached ITB;

(2) He/She is fully informed respecting the preparation and contents of the attached ITB and of all pertinent circumstances respecting such ITB;

(3) Such ITB is genuine and is not a collusive or sham ITB;

(4) Neither the said Bidder nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affidavit, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham ITB in connection with the Contract for which the attached ITB has been submitted or refrain from proposing in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached ITB or of any other Bidder, or to fix any overhead, profit or cost element of the proposing price or the proposing price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Rockdale County or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached ITB are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

(Signed)

(Title)

Subscribed and Sworn to before me this _____ day of _____, 202

Name _____

Title _____

My commission expires (Date)

ROCKDALE COUNTY BOARD OF COMMISSIONERS
NON-COLLUSION AFFIDAVIT OF SUB-CONTRACTOR

State of _____)

County of _____)

_____, being first duly sworn, deposes and says that:

(1) He/She is _____ (owner, partner officer, representative, or agent) of _____, the sub-contractor that has submitted the attached ITB;

(2) He/She is fully informed respecting the preparation and contents of the attached ITB and of all pertinent circumstances respecting such ITB;

(3) Such ITB is genuine and is not a collusive or sham ITB;

(4) Neither the said sub-contractor nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affidavit, has in any way colluded, conspired, connived or agreed, directly or indirectly with any other Bidder, firm or person to submit a collusive or sham ITB in connection with the Contract for which the attached ITB has been submitted or refrain from proposing in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other Bidder, firm or person to fix the price or prices in the attached ITB or of any other Bidder, or to fix any overhead, profit or cost element of the proposing price or the proposing price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against Rockdale County or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached RFP are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the sub-contractor or any of its agents, representatives, owners, employees, or parties in interest, including this affidavit.

(Signed)

(Title)

Subscribed and Sworn to before me this _____ day of _____, 202__.

Name _____

Title _____

My commission expires (Date)

Contractor Affidavit under O.C.G.A. §13-10-91(b)(1)

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

Federal Work Authorization User Identification Number

Date of Authorization

Name of Contractor

Name of Project

Name of Public Employer

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

Executed on _____, ____, 202__ in _____(city), _____(state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 202__.

NOTARY PUBLIC
My Commission Expires:

Subcontractor Affidavit under O.C.G.A. § 13-10-91(b)(3)

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

Federal Work Authorization User Identification Number

Date of Authorization

Name of Subcontractor

Name of Project

Name of Public Employer

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

Executed on _____, ____, 202__ in _____(city), _____(state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 202__.

NOTARY PUBLIC
My Commission Expires:

Sub-subcontractor Affidavit under O.C.G.A. §13-10-91(b)(4)

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

Federal Work Authorization User Identification Number

Date of Authorization

Name of Sub-Subcontractor

Name of Project

Name of Public Employer

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

Executed on _____, ____, 202__ in _____(city), _____(state).

Signature of Authorized Officer or Agent

Printed Name and Title of Authorized Officer or Agent

SUBSCRIBED AND SWORN BEFORE ME
ON THIS THE _____ DAY OF _____, 202__.

NOTARY PUBLIC

My Commission Expires: _____

**Affidavit Verifying Status
for County Public Benefit Application**

By executing this affidavit under oath, as an applicant for the award of a contract with Rockdale, County Georgia, I _____. [Name of natural person applying on behalf of individual, business, corporation, partnership, or other private entity] am stating the following as required by O.C.G.A. Section 50-36-1:

1) _____ I am a United States citizen

OR

2) _____ I am a legal permanent resident 18 years of age or older or I am an otherwise qualified alien or non-immigrant under the Federal Immigration and Nationality Act 18 years of age or older and lawfully present in the United States.*

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

Signature of Applicant:

Date

Printed Name:

*_____
Alien Registration number for non-citizens

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE
_____ DAY OF _____, 202__.

Notary Public
My commission Expires:

***Note:** O.C.G.A. § 50-36-1(e)(2) requires that aliens under the federal Immigration and Nationality Act, Title 8 U.S.C., as amended, provide their registration number. Because legal permanent residents are included in the federal definition of “alien”, legal permanent residents must also provide their alien registration number. Qualified aliens that do not have an alien registration number may supply another identifying number below.

BID BOND FORM

KNOW ALL MEN BY THESE PRESENTS, that we, _____ (hereinafter called the Principal) and _____ (hereinafter called the Surety), a corporation chartered and existing under the laws of the State of _____ with its principal offices in the City of _____ and listed in the Federal Register and licensed to write surety bonds in the State of Georgia, are held and firmly bound unto Rockdale County, Georgia, in the full and just sum of _____ Dollars (\$ _____) good and lawful money of the United States of America, to be paid upon demand of Rockdale County, Georgia, to which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, and assigns, jointly and severally and firmly by these presents.

WHEREAS, the Principal is about to submit, or has submitted to Rockdale County, Georgia, a Bid for ITB/RFP No. _____.

WHEREAS, the Principal desires to file this Bond in accordance with law to accompany this Bid. NOW, THEREFORE, the conditions of this obligation are such that if the Bid be accepted within one hundred and twenty (120) days of the Bid opening, the Principal shall execute a Contract in accordance with the Bid and upon the terms, conditions, and prices set forth therein, and in the form and manner required by Rockdale County, Georgia, and within ten (10) days from the date of Notice of Award of the Contract, execute a sufficient and satisfactory Performance Bond equals to 100% of the Contract Price and Payment Bond equals to 100% of the Contract Price, payable to Rockdale County, Georgia, in form and with security satisfactory to Rockdale County and furnish satisfactory proof of the insurance required, then this obligation to be void; otherwise, to be and remain in full force and virtue in law; and the Surety shall, upon failure of the Principal to comply with any or all of the foregoing requirements within the time specified above, immediately pay to the aforesaid Rockdale County, Georgia, upon demand, the amount hereof in good and lawful money of the United States of America, not as a penalty, but as liquidated damages.

IN TESTIMONY THEREOF, the Principal and Surety have caused these presents to be duly signed and sealed this _____ day of _____, 202__ .

PRINCIPAL

By: _____ (SEAL)
Signature of Principal

Print Name and Title of Authorized Signer

Print Name of Principal Business

ATTEST:

Corporate Secretary

SURETY

By: _____ (SEAL)
Signature of Surety (by Power of Attorney)

Print Name and Title of Authorized Signer

Print Name of Surety Business

WITNESS:

Performance Bond

STATE OF GEORGIA BOND NO. _____

COUNTY OF ROCKDALE

KNOW ALL MEN BY THESE PRESENTS, that we, _____,
as Principal, (hereinafter known as Contractor), and we, _____, as Surety, do hereby
acknowledge ourselves indebted and firmly bound and held unto Rockdale County, Georgia for use and benefit
of those entitled thereto, in the sum of _____
Dollars (\$ _____) for the payment of which will and truly to be made, in lawful money of the United
States of America, we do hereby bind ourselves, successors, assigns, heirs and personal representatives.

BUT THE CONDITION OF THE FOREGOING OBLIGATION OR BOND IS THIS:

WHEREAS, the Owner has engaged the said Contractor for the sum of
_____ (\$ _____) for construction of Rockdale County,
Georgia, **ITB/RFP#** : _____ as more fully appears in a written Contract Agreement bearing
the date of _____, 2020, a copy of which Contract Agreement is by reference hereby made a part
hereof.

NOW, THEREFORE, if said Contractor shall fully and faithfully perform all the undertakings and obligations
under the said Contract Agreement hereinbefore referred to and shall fully indemnify and save harmless the
said Owner from all costs and damage whatsoever which it may suffer by reason of any failure on the part of
said Contractor to do so, and shall fully reimburse and repay the said Owner any and all outlay and expense
which it may incur in making good any such default, and shall correct all defects in products and workmanship
appearing within one year of the completion of all Work, then this obligation shall be null and void, otherwise,
it shall remain in full force and effect.

And for value received it is hereby stipulated and agreed that no change, extension of time, alteration or
addition to the terms of the said Contract Agreement, or in the Work to be performed there under, or the
Specifications accompanying the same shall in any wise affect the obligations under this Contract Agreement
or Bond, and notice is hereby waived of any such damage, extension of time, alteration or addition to the terms
of the Contract Agreement or to the Work or to the Contract Documents.

This bond is given pursuant to and in accordance with the provisions of O.C.G.A. Section 36-10-1 et. seq. and
36-82-100 et. seq. and all the provisions of the law referring to this character of Bond as set forth in said
Sections or as may be hereinafter enacted, and these are hereby made a part hereof to the same extent as if
set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and seal, and said Surety has
hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this ____ day
of _____, 2020, executed in six counterparts.

CONTRACTOR - PRINCIPAL:

By: _____

Name: _____
(Please Print)

Title: _____

Address: _____

Phone: _____

ATTEST:

Name: _____

(Please Print)

Title: _____

(SEAL)

Note: Attestation for a corporation must be by the corporate secretary; for a partnership by another partner; for an individual by a notary.

SURETY:

By: _____

Name: _____

(Please Print)

Title: _____

(SEAL)

WITNESS:

Name: _____

(Please Print)

Title: _____

(SEAL)

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

Resident agent in state in which Work is to be performed:

By: _____

Name: _____

(Please Print)

Title: _____

Address: _____

Phone: _____

Payment Bond

STATE OF GEORGIA

BOND NO. _____

COUNTY OF ROCKDALE

KNOW ALL MEN BY THESE PRESENTS, that we, _____, as Principal, (hereinafter known as Contractor), and we, _____, as Surety, are held and firmly bound unto Rockdale County, Georgia (hereinafter called the Owner), in the penal sum of _____ Dollars (\$ _____) lawful money of the United States of America, for the payment of which sum will and truly to be made, we bind ourselves, our heirs, personal representatives, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, said Contractor has entered into a certain Contract Agreement with said Owner, dated _____, 2020, for construction of Rockdale County, Georgia **ITB/RFP#** : _____ (hereinafter called the Contract), which Contract Agreement and the Contract Documents for said Work shall be deemed a part hereof as fully as if set out herein.

NOW, THEREFORE, the condition of this obligation is such, that if said Contractor and all subcontractors to whom any portion of the Work provided for in said Contract Agreement is sublet and all assignees of said Contractor and of such subcontractors shall promptly make payments to all persons supplying them with labor, products, services, or supplies for or in the prosecution of the Work provided for in such Contract Agreement, or in any amendment or extension of or addition to said Contract Agreement, and for the payment of reasonable attorney's fees, incurred by the claimant in suits on this Bond, then the above obligation shall be void; otherwise, it shall remain in full force and effect.

HOWEVER, this Bond is subject to the following conditions and limitations:

- (a) Any person, firm or corporation that has furnished labor, products, or supplies for or in the prosecution of the Work provided for in said Contract Agreement shall have a direct right of action against the Contractor and Surety on this Bond, which right of action shall be asserted in a proceeding, instituted in the county in which the Work provided for in said Contract Agreement is to be performed or in any county in which Contractor or Surety does business. Such right of action shall be asserted in proceedings instituted in the name of the claimant or claimants for its use and benefit against said Contractor and Surety or either party (but not later than one year after the final settlement of said Contract Agreement) in which action such claim or claims shall be adjudicated and judgment rendered thereon.
- (b) The Principal and Surety hereby designate and appoint the _____, as the agent of each party to receive and accept service of process or other pleading issued or filed in any proceeding instituted on this Bond and hereby consent that such service shall be the same as personal service on the Contractor and/or Surety.
- (c) In no event shall the Surety be liable for a greater sum than the penalty of this Bond, or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said Contract Agreement.
- (d) This Bond is given pursuant to and in accordance with provisions of O.C.G.A. Section 13-10-1 et. seq. and 36-82-100 et. seq. hereinafter, and all the provisions of law referring to this character of Bond

as set forth in said Sections or as may be hereinafter enacted, and these are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and seal, and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers, on this _____ day of _____, 2020, executed in six counterparts.

CONTRACTOR - PRINCIPAL:

By: _____

Name: _____
(Please Print)

Title: _____

Address: _____

Phone: _____

ATTEST:

Name: _____
(Please Print)

Title: _____

(SEAL)

Note: Attestation for a corporation must be by the corporate secretary; for a partnership by another partner; for an individual by a notary.

SURETY:

By: _____

Name: _____
(Please Print)

Title: _____

(SEAL)

WITNESS:

Name: _____
(Please Print)

Title: _____

(SEAL)

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

Resident agent in state in which Work is to be performed:

By: _____

Name: _____

(Please Print)

Title: _____

Address: _____

Phone: _____

CONTRACTOR'S QUALIFICATION STATEMENT AND QUESTIONNAIRE

NAME OF PROPOSED CONTRACTOR: _____

I. INSTRUCTIONS

- A. All questions are to be answered in full. If copies of other documents will answer the question completely, they may be attached and clearly labeled. If additional space is needed, additional pages may be attached and clearly labeled.
- B. The owner, Rockdale County, Georgia, its agents and representatives, shall be entitled to contact each and every reference listed in response to this questionnaire, and each entity referenced in any response to any question in this questionnaire. By completing this questionnaire, the contractor expressly agrees that any information concerning the contractor in possession of said entities and references may be made available to the owner.
- C. Only complete and accurate information shall be provided by the contractor. The contractor hereby warrants that, to the best of its knowledge and belief, the responses contained herein are true, accurate, and complete. The contractor also acknowledges that the owner is relying on the truth and accuracy of the responses contained herein. If it is later discovered that any material information given in response to a question was provided by the contractor, knowing it was false, it shall constitute grounds for immediate termination or rescission by the owner of any subsequent agreement between the owner and the contractor. The owner shall also have and retain any other remedies provided by law.
- D. The completed form shall be submitted with contractor's proposals.
- E. This form, its completion by the contractor, and its use by the contractor, and its use by the owner, shall not give rise to any liability on the part of the owner to the contractor or any third party or person.

II. GENERAL BACKGROUND

- A. Current address of contractor: _____

- B. Previous Name or address of contractor: _____

- C. Current president or CEO and years in position: _____
- D. Number of permanent employees: _____
- E. Name and address of affiliated companies: _____

III. FINANCIAL STATUS

- A. Please attach financial statements for the past three years for which they are complete. If such statements are not available, please furnish the following information:
 - 1. LAST COMPLETE FISCAL YEAR:

- A. Revenues (Gross) _____
- B. Expenditures (Gross) _____
- C. Overhead & Admin (Gross) _____
- D. Profit (Gross) _____

2. YEAR PRIOR TO "1" ABOVE:

- A. Revenues (Gross) _____
- B. Expenditures (Gross) _____
- C. Overhead & Admin (Gross) _____
- D. Profit (Gross) _____

3. YEAR PRIOR TO "2" ABOVE:

- A. Revenues (Gross) _____
- B. Expenditures (Gross) _____
- C. Overhead & Admin (Gross) _____
- D. Profit (Gross) _____

B. BANKRUPTCIES

1. Has the Contractor, or any of its parents or subsidiaries, ever had a Bankruptcy Petition filed in its name, voluntarily or involuntarily? (If yes, specify date, circumstances, and resolution).

2. Has any Majority Shareholder ever had a Bankruptcy Petition filed in his/her name, voluntarily or involuntarily? (If yes, specify date, circumstances, and resolution).

C. BONDING

1. What is the Contractor's current bonding capacity? _____

2. What is the value of the Contractor's work currently under contract? _____

IV. COMPANY EXPERIENCE – SIMILAR PROJECTS

A. List three projects of reasonably similar nature, scope, and duration performed by your company in the last five years, specifying, where possible, the name and last known address of each owner of those projects:

Reference/Project #1:

Name and Address: _____

Date of Construction/Project:

Type of Construction/Project:

Contract Price:

Owner contact info:

Architect/Engineer contact info:
(if applicable)

Reference/Project #2:

Name and Address:

Date of Construction/Project:

Type of Construction/Project:

Contract Price:

Owner contact info:

Architect/Engineer contact info:
(if applicable)

Reference/Project #3:

Name and Address:

Date of Construction/Project:

Type of Construction/Project:

Contract Price:

Owner contact info:

Architect/Engineer contact info: _____
(if applicable) _____

V. ARBITRATIONS, LITIGATIONS, AND OTHER PROCEEDINGS

Has your company been involved in any construction _____
arbitration demands filed by, or against, you in the last five years?

Has your company been involved in any construction-related _____
lawsuits (other than labor or personal injury litigation) filed by, or against, you
in the last five years?

Has your company been involved in any lawsuits, _____
proceedings, or hearings initiated by the National Labor Relations Board or
similar state agency in the past seven years?

Has your company been involved in any lawsuits, proceedings, _____
or hearings initiated by the Occupational Safety and Health Administration
concerning the project safety practices of the Contractor in the last seven years?

Has your company be involved in any lawsuits, proceedings, _____
or hearings initiated by the Internal Revenue Service, or any state revenue
department, concerning the tax liability of the Contractor (other than audits) in
the last seven years?

Have any criminal proceedings or investigations been brought _____
against the Contractor in the last ten years?

If you answered yes to any of the questions above, please identify the nature of the claim, the amount in
dispute, the parties, and the ultimate resolution of the proceeding (attach documentation if needed):

VI. COMMENTS

Please list any additional information that you believe would assist the Owner in evaluating the possibility of
using the Contractor on this Project. You may attach such additional information as an Exhibit to this Statement
and Questionnaire.

I certify to the Owner that the information and responses provided on this Questionnaire are true, accurate and complete. The Owner, or its designated representative, may contact any entity or reference listed in this Questionnaire. Each entity or reference may make any information concerning the Contractor available to the Owner, or its designated representative.

Contractor:

Signature

Date

Title

Sworn to and subscribed before me
This _____ day of _____

Signature

Notary Public

My Commission Expires:

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ATTACHMENTS:

**ATTACHMENT
ROCKDALE COUNTY DRAWING
SHEETS:
G-00 THROUGH G-03
C-01 THROUGH C-04**

**ATTACHMENT B:
Geotechnical Reports by Alhberg Engineering Inc (dated 8/13/2019)**

SECTION 00100-INSTRUCTIONS TO BIDDERS

SECTION 00100 Instructions to Bidders

1.01 CONTRACT DOCUMENTS

- A. The Contract Documents include the Contract Agreement, Invitation to Bid, Instructions to Bidders, Contractor's Bid (including all documentation accompanying the Bid and any post-Bid documentation required by the Owner 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 PM/CM's written interpretations and clarifications issued in accordance with the General Conditions on or after the date of the Contract Agreement.
- B. Shop drawing submittals reviewed in accordance with the General Conditions, geotechnical investigations and soils reports, and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the site, are not Contract Documents.
- C. The Contract Documents shall define and describe the complete work to which they relate.

1.02 DEFINITIONS

- A. Where the following words or the pronouns used in their stead occur herein, they shall have the following meaning:
 - 1. "Owner" shall mean Rockdale County, Georgia, party of the first part to the Contract Agreement, or its authorized and legal representatives.
 - 2. "Program Manager/Construction Manager" shall mean Rockdale Water Resources-Engineering Dept., hereinafter also designated as "PM/CM".
 - 3. "Designer" shall mean Rockdale Water Resources(RWR).
 - 4. "Contractor" shall mean the party of the second part to the Contract Agreement or the authorized and legal representative of such party.
 - 5. "Work" and "Project" shall mean the entire completed construction required to be furnished under the Contract Documents.

SECTION 00100-INSTRUCTIONS TO BIDDERS

6. "Contract Time" shall mean consecutive calendar days as provided in the Contract Document for completion of the Project, to be computed from the date of the Notice to Proceed.
7. "Liquidated Damages" shall mean the sum of \$100.00 which the Bidder agrees to pay for each consecutive calendar day beyond the Contract Time required to complete the Project. Liquidated Damages will end upon written notification from the Owner of final acceptance of the Project.
8. "Products" shall mean materials or equipment permanently incorporated into the Project.
9. "Provide" shall mean to furnish and install.
10. "Balanced Bid" shall mean the total amount bid reasonably reflects the value of that item with regard to the entire job considering the prevailing cost of labor, material and equipment in the relevant market. A Bid is unbalanced when, in the opinion of the Owner, total amounts bid on any of the listed items do not reasonably reflect such values.
11. "Substantial completion of the work", solely for the purposes of Official Code of Georgia Annotated (O.C.G.A.) §13-10-20(c), shall be defined as occurring on the date of the written notification from the PM/CM that the Project is ready for final inspection, as specified in Section 00800, Article 30, paragraph (g).
12. "Satisfactorily completed", solely for the purposes of O.C.G.A. §13-10-20(b), shall mean the completion of all work, certifications and affidavits as specified in Section 00800, Article 30, paragraph (g).

1.03 PREPARATION AND EXECUTION OF BID

- A. Each Bid must be prepared to represent that it is based solely upon the materials and equipment specified in the Contract Documents.
- B. Each Bid must be submitted on the Bid forms which are attached to the Contract Documents. All blank spaces for Bid prices, both words and figures, must be filled in, in ink. In case of discrepancy, the amount shown in words will govern. All required enclosed certifications must be fully completed and executed when submitted.

SECTION 00100-INSTRUCTIONS TO BIDDERS

- C. Each Bid must be submitted in a sealed envelope, addressed to the Owner. Each sealed envelope containing a Bid must be plainly marked on the outside as, "Bid for Rockdale County, Georgia - 8 INCH WATER LINE EXTENSION CONYERS OUTLOTS TRACTS 1 & 2".
- D. The Bidder shall provide on the outside of the sealed envelope the following information; otherwise the Bid will not be opened and will be returned to the Bidder:
 - 1. Bidder's Name
 - 2. Georgia Utility Contractor License Number
 - 3. ITB #20-09: - 8 INCH WATER LINE EXTENSION CONYERS OUTLOTS TRACT 1 & 2
- E. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to the Rockdale County Finance Department, Purchasing Division, 958 Milstead Avenue, P.O. Box 289, Conyers, GA 30012, Attn: Meagan Porch.
- F. Any and all Bids not meeting the aforementioned criteria for Bid submittal, may be declared non-responsive, and subsequently returned to the Bidder.
- G. The Contractor, in signing a Bid on the whole or any portion of the Project, shall conform to the following requirements:
 - 1. Bids which are not signed by individuals making them shall have attached thereto a power of attorney evidencing authority to sign the Bid in the name of the person for whom it is signed.
 - 2. Bids which are signed for a partnership shall be signed by all of the partners or by an attorney-in-fact. If a Bid is signed by an attorney-in-fact, there should be attached to the Bid a power of attorney executed by the partners evidencing authority to sign the Bid.
 - 3. Bids which are signed for a corporation shall have the correct corporate name thereof and the signature of the president or other authorized officer of the corporation manually written below the corporate name following the wording "By_____". Corporation seal shall also be affixed to the Bid.
 - 4. The Bidder shall complete, execute and submit the following documents, which are attached to these Contract Documents
 - a. Bid Form

SECTION 00100-INSTRUCTIONS TO BIDDERS

- b. The Bid Bond
- c. Corporate Certificate, if the Bidder is a corporation
- d. Non-Collusion Affidavit of Prime Bidder
- e. Non-Collusion Affidavit of Sub-Contractor
- f. Contractor's Affidavit
- g. Sub-Contractor's Affidavit
- h. Affidavit Verifying Status for County Public Benefit Application
- i. Contractor's License Certification
- j. Contractor Qualification Statement and Questionnaire

1.04 METHOD OF BIDDING

Lump sum price for each of the several items in the Bid of each Bidder shall include its pro rata share of overhead and profit so that the sum of the products, obtained by multiplying the quantity shown for each item by the unit price, represents the total Bid. Any Bid not conforming to this requirement may be rejected. Additionally, Unbalanced Bids will be subject to rejection. Conditional Bids will not be accepted. The special attention of all Bidders is called to this provision, for should conditions make it necessary to revise the quantities, no limit will be fixed for such increased or decreased quantities nor extra compensation allowed.

1.05 BID MODIFICATIONS

Bidders may modify their Bid by Facsimile Transmittal at any time prior to the scheduled closing time for receipt of Bids, provided such Facsimile Transmittal is received by the Owner prior to the closing time, and provided further, the Owner is satisfied that a written confirmation of the Facsimile Transmittal modification over the signature of the Bidder was mailed prior to the closing time. The Facsimile Transmittal should not reveal the Bid price but should provide the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed Bid is opened. If written confirmation is not received within two business days from the closing time, no consideration will be given to the Facsimile Transmittal.

1.06 BID SECURITY

- A. Each Bid must be accompanied by a Bid Bond, prepared on the form of Bid Bond included herein or a Surety Company's Standard Bid Bond, duly executed by the Bidder as principal and having as surety thereon a surety company authorized to do business in the State of Georgia and listed in the latest issue of U.S. Treasury Circular 570, in the amount of 5 percent of the Bid. Attorneys-in-fact who sign Bonds must file with each Bond a currently dated copy of their power of attorney.

- B. If for any reason whatsoever the successful Bidder withdraws from the competition after opening of the Bids, or if Bidder refuses to execute and deliver the Contract and Bonds required within 10 days after receipt of notice of the acceptance of Bid, the Owner may proceed to enforce the provisions of the Bid Bond.

1.07 RECEIPT AND OPENING OF BIDS

The Owner may consider a minor irregularity any Bid not prepared and submitted in accordance with the provisions hereof and may waive any minor irregularities or reject any and all Bids. Any Bid may be withdrawn prior to the above scheduled time for the opening of Bids or authorized postponement thereof. Any Bid received after the time and date specified shall not be opened.

1.08 SUBCONTRACTS

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

1.10 CONDITIONS OF THE PROJECT

- A. Each Bidder must be informed fully of the conditions relating to the construction of the Project and the employment of labor thereon. Failure to do so will not relieve a successful Bidder of the obligation to furnish all material and labor necessary to carry out the provisions of the Contract. Insofar as possible, the Contractor, in carrying out the work, must employ such methods or means as will not cause any interruption of or interference with the work of any other Contractor.
- B. The Bidder is advised to examine the location of the Project and to be informed fully as to its conditions; the conformation of the ground; the character, quality and quantity of the products needed preliminary to and during the prosecution of the work; the general and local conditions and all other matters which can in any way affect the work to be done under the Contract. Failure to examine the site will not relieve the successful Bidder of an obligation to furnish all products and labor necessary to carry out the provisions of the Contract.
- C. The Bidder shall notify the Owner of the date and time Bidder proposes to examine the location of the Project. The Bidder shall confine examination to the specific areas designated for the proposed construction, including easements and public right-of-ways. If, due to some unforeseen reason, the Owner's proceedings for obtaining the proposed construction site (including easements), have not been completed, the Bidder may enter the site only with the express consent of the property owner. The Bidder is solely responsible for any damages caused by examination of the site.

2.10 NOTICE OF SPECIAL CONDITIONS

If any special federal, state, county or city laws, municipal ordinances, and the rules and regulations of any authorities having jurisdiction over construction of the Project, enclosed, herein referred to, or applicable by law to the Project, conflict with requirements of the Contract Documents, then the most stringent requirement prevails.

3.10 OBLIGATION OF BIDDER

By submission of a Bid, each Bidder warrants that Bidder has inspected the site and has read and is thoroughly familiar with the Contract Documents (including all addenda). The failure or omission of any Bidder to examine any form, instrument or document shall in no way relieve any Bidder from any obligation in respect to the Bid.

4.10 METHOD OF AWARD

- A. The contract will be awarded to the responsive, responsible Bidder submitting the Bid which is in the best interest of the Owner as determined by the Owner.
- B. The Bidder to whom the award is made will be notified. The Owner reserves the right to reject any and all Bids and to waive any minor irregularities in Bids received whenever such rejection or waiver is in the Owner's interest.
- C. A responsive Bidder who submits a Bid in the proper form without qualification or intent other than as called for in the Contract Documents, and who binds himself or herself on behalf of the Bid to the Owner with the proper Bid Bond completed and attached, and who properly completes all forms required to be completed and submitted at the time of the Bidding. The Bidder shall furnish all data required by these Contract Documents. Failure to do so may result in the Bid being declared non-responsive.
- D. Acceptance of the Bidder's documentation and substantiation or Contract Award by the Owner does not relieve the Bidder of liability for non-performance as covered in the Contract Documents, nor will the Bidder be exempted from any other legal recourse the Owner may elect to pursue.

END OF SECTION

SECTION 00422-CORPORATE CERTIFICATE

**SECTION 00422
Corporate Certificate**

I, _____, certify that I am the Secretary of the Corporation named as Contractor in the foregoing Bid; that _____, who signed said Bid on behalf of the Contractor was then _____ of said Corporation; that said Bid was duly signed for and on behalf of said Corporation by authority of its Board of Directors, and is within the scope of its corporate powers; that said Corporation is organized under the laws of the State of _____.

This _____ day of _____, 2020.

(Corporate Secretary) _

(SEAL)

END OF SECTION

SECTION 00425-CONTRACTOR'S LICENCE CERTIFICATION

SECTION 00425
Contractor's License Certification

Contractor's Name: _____

Georgia Utility Contractor's License Number: _____

Expiration Date of License: _____

I certify that the above information is true and correct and that the classification noted is applicable to the Bid for this Project.

Signed:

Printed:

Date:

END OF SECTION

SECTION 00500-CONTRACT AGREEMENT

SECTION 00500 SAMPLE CONTRACT

(PAGE 1 OF 7)

AGREEMENT FOR THE CONSTRUCTION OF THE [PROJECT NAME]

This Agreement entered into on this _____ day of _____ 2020, between ROCKDALE COUNTY, GEORGIA, a political subdivision of the State of Georgia, whose address is 962 Milstead Avenue, Conyers, Georgia 30012, (hereinafter referred to as the "County") and (CONTRACTOR'S NAME), a [DESCRIPTION OF CONTRACTOR'S BUSINESS TYPE], whose address is [CONTRACTOR'S ADDRESS] (hereinafter referred to as "Contractor").

WHEREAS, the County desires to engage the services of Contractor for the construction of the (PROJECT NAME); and

WHEREAS, Contractor is qualified to perform this service and desires to render this service to the County as provided herein.

NOW THEREFORE, the County engages the services of Contractor for and in consideration of the mutual promises contained in this Agreement and the parties agree as follows:

1. Services Provided by Contractor.

The Contractor will furnish all products, tools, construction equipment, skill and labor of every description necessary to carry out and to complete in a good, firm, substantial workmanlike manner the construction of the [PROJECT NAME] as described in the County's Invitation to Bid (ITB) [ITB#] incorporated herein by reference, (hereinafter called "Work"), and Contractor's bid dated [DATE], attached hereto and made a part hereof (hereinafter called "Bid"). Contractor shall provide, at their expense, all vehicles and equipment necessary to provide this Work. The Work shall be performed at the direction of the Stormwater Utility's General Engineering Manager or their designee and consistent with all Federal, State and local laws.

The Contract Documents, Bid Documents, Invitation to Bid, and drawings are considered essential parts of the Agreement, and requirements occurring in one are as binding as though occurring in all. They are intended to define, describe and provide for all labor necessary to complete the Work in an acceptable manner, ready for use, or operation by the County.

2. Fees and Compensation.

- (a) Contract Price: The Contract Price shall not exceed [CONTRACT AMOUNT], and shall be the total amount payable by the County to the Contractor for the performance of the Work set forth in the Contract Documents, unless amended as agreed upon by both parties in writing as detailed in Section 6 of this Agreement. The County shall provide payment within _____ () days of receiving said invoice.

It is understood that the Contractor shall provide and pay for all products, labor (including labor performed after regular working hours, on Saturdays or Sundays, or on legal holidays), tools, construction equipment, supervision, and all other services and facilities of any nature whatsoever necessary to execute, complete, place into operation, and deliver the Work.

The Contractor shall be responsible for any additional expenses incurred by the County as a result of the extended work hours, including resident inspection overtime. The cost associated with resident inspector overtime will be deducted from the Contractor's monthly payment request.

Rockdale County Water Resources
Conyers Outlots Tract 1 & 2- 8" Water Line Extension

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SECTION 00500-CONTRACT AGREEMENT

SECTION 00500 SAMPLE CONTRACT

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(b) Payments Withheld: The County may decline to approve an application for payment, in whole or in part, as may be necessary to protect the County from loss because of:

- (1) Failure of the Contractor to make payments properly to subcontractors or for labor or products.
- (2) Unsatisfactory prosecution of the Work by the Contractor either due to quality of the Work or if the Contractor is behind the currently approved construction schedule.

When the above reasons for nonpayment are corrected, then payment will be made for amounts withheld because of such reasons, not later than the next payment.

(c) Retention: The County will retain the following amounts from each properly certified estimate:

- (1) Until the value of the Work completed, including stored materials, is at least 50 percent of the Contract amount, 10 percent of the value of all Work satisfactorily completed, including stored materials.
- (2) When the value of the completed Work totals at least 50 percent of the Contract amount, the County will reduce the retainage to 5 percent of the value of Work completed, including stored materials provided the Work is progressing satisfactorily and there is no specific cause for retaining a larger sum. The total amount retained will be at least 5 percent of the Contract amount, adjusted for Change Orders, until the date of final payment.
- (3) The County may elect to reinstate retention of 10 percent of the value of the Work completed if at any time the Contractor fails to make satisfactory progress or if there is other specific cause. No form of collateral in lieu of cash will be acceptable as retainage.

Amounts retained by the Contractor from payments due to suppliers and subcontractors (expressed as a percentage) shall not exceed that being retained by the County.

3. Effective Dates of Agreement.

The effective date of this Agreement shall be the date said Agreement is signed by the Chairman of the Rockdale County Board of Commissioners (the "Board"). The terms of this Agreement shall be _____ () months from the effective date, unless terminated by either party as detailed in section 13 of this Agreement.

The Contractor shall begin the Work no later than thirty (30) days after issuance of the Notice to Proceed, and shall complete the Work no later than _____ () days after issuance of the Notice to Proceed, unless a time extension is authorized in writing by the Project Manager.

Time is of the essence and is an essential element of this Contract, and the Contractor shall pay to the County, not as a penalty, but as liquidated damages, the sum of \$ _____ for each calendar day that there is default of completing the Work within the time limit named herein. If the Contractor abandons the Contract before commencement of the Work or defaults in completion of all the Work after commencement thereof, the Contractor shall be liable for such liquidated damages. These fixed liquidated damages are not established as a penalty but are calculated and agreed upon in advance by the County and the Contractor due to the uncertainty and impossibility of making a determination as to the actual and consequential damages incurred by the County and the general public of Rockdale County, Georgia as a result of the failure on the part of the Contractor to complete the Work on time. Such liquidated damages referred to herein are intended to be and are cumulative and shall be in addition to every other remedy now or hereafter enforceable at law, in equity by statute, or under the Contract.

SECTION 00500-CONTRACT AGREEMENT

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4. **Rejection of Work and Materials.**

All products furnished and all Work completed will be inspected by the County. All products furnished and all Work completed that is not in accordance with the Contract Documents or that is defective will be rejected. All rejected products or Work shall be removed immediately. If rejected products or Work is not removed within 48 hours, the County will have the right and authority to stop the Work immediately and will have the right to arrange for the removal of said rejected products or Work at the cost and expense of the Contractor.

5. **Supervision of Work.**

The Contractor shall supervise and direct the Work. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of the **Work**. The Contractor shall employ and maintain on the Work a qualified supervisor or superintendent who shall be designated in writing by the Contractor as the Contractor's representative at the site. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work.

The supervisor shall have full authority to act on behalf of the Contractor and to execute the orders or directions of the County without delay. The supervisor shall have full authority to promptly supply products, tools, plant equipment and labor as may be required. The supervisor's authority shall be such that all communication given to the supervisor shall be as binding as if given to the Contractor.

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

6. **Changes in the Contract.**

The County may at any time, as the need arises, order changes within the scope of the Work without invalidating the Contract Agreement. If such changes increase or decrease the amount due under the Contract Documents, or in the time required for performance of the Work, an equitable adjustment will be authorized by Change Order.

7. **Insurance.**

The Contractor shall not commence any work under this Contract until all insurance, as stipulated in the Invitation to Bid, has been obtained and such insurance has been approved by the County, nor shall the Contractor allow any subcontractor to commence any work on subcontractor's contract until all similar insurance required of the subcontractor has been so obtained and approved by the Contractor.

8. **Interruption of Facility Operations.**

The Contractor shall provide the County with written notice at least three days prior to any interruption in facility operations required by construction activity. The notice shall include the date and time of the scheduled interruption, the length of time the interruption will be in effect, the procedures to be followed, a complete identification of all those processes, equipment and operations to be affected and all other information the County may require. The Contractor shall provide any equipment, piping, auxiliary power or other means necessary to sustain facility operations.

SECTION 00500-CONTRACT AGREEMENT

SECTION 00500 SAMPLE CONTRACT

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9. Protection of Work, Property and Persons.

- (a) The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby, all the Work and all products to be incorporated therein, whether in storage on or off the site, and other property at the site *or* adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- (b) The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction, promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596) and under Section 1 07 of the Contract Work Hours and Safety Standards Act (PL 91-54) as amended. The Contractor shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection.
- (c) The Contractor shall remedy all damage, injury or loss to any property, improvements or facilities caused, directly or indirectly, in whole or in part, by the Contractor or any of the Contractor's subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. The property, improvements or facilities shall be replaced or restored to a condition as good as when the Contractor entered upon the Work. In case of failure on the part of the Contractor to restore such property, or make good such damages or injury, the County may, after 48 hours written notice, proceed to repair, rebuild, or otherwise restore such property, improvements or facilities as may be deemed necessary. The cost thereof will be deducted from any monies due or which may become due the Contractor under this Contract.
- (d) In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the County, shall act to prevent threatened damage, injury or loss.
- (e) Completed Work and stored products shall be suitably protected during unseasonable weather, to allow Work to proceed in a timely fashion. Work planned, or in progress, should be performed to minimize impact of adverse weather.

10. Protection of the Environment.

- (a) The Contractor shall be responsible for taking all measures required to minimize all types of pollution associated with the undertaking of the proposed Work, and shall abide by the requirements of all governmental agencies having jurisdiction over the Work or Contractor's Project operations. This shall include but not be limited to air, water & noise pollution during torch cutting, grinding, burning and grading operations.
- (b) Any area used or involved in the Project that is disturbed by the Contractor, shall be restored to original or better condition, even though such area is outside the limits of that specified for grading, grassing or landscaping.
- (c) The Contractor is responsible for maintenance of all erosion control measures, final removal of all temporary BMP's, and irrigation of all permanent vegetative measures until fully established.

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11. Protection, Location and Relocation of Utilities.

The Contractor shall notify utility owners of the new work in accordance with Georgia Law by calling the Utilities Protection Center (UPC) at 800-282-7411, 72 hours before work is to begin. The Contractor shall protect from damage all existing improvements or utilities at, or in proximity to, the site of the Work, and shall repair or restore any damage to such facilities resulting from failure to exercise reasonable care in the performance of Work. If the Contractor fails or refuses to repair any such damage promptly, the County may have the Work performed and charge the cost thereof to the Contractor.

Prior to the construction or installation of any new Work, the Contractor shall excavate all existing utilities within the vicinity of the Work to their actual vertical and horizontal location. In order to avoid conflicts between existing and new Work, the Contractor shall either relocate the existing utility on a temporary or permanent basis, or shall take whatever means necessary to protect the existing facilities or utilities during the installation of new Work.

12. Indemnification.

In addition to its agreement to obtain and maintain insurance as set forth herein, the Contractor agrees to indemnify and hold harmless the County, its officers, agents, and employees, from any and all claims against the County, its officers, agents and employees, which arise out of any act or omission of the Contractor or any of the Contractor's officers, agents and/or employees, and any and all claims which result from any condition created or maintained by the Contractor or anyone employed by the Contractor or any of their officers, agents or employees, which condition does not specify to be created or maintained by this Contract.

13. Termination of Agreement.

In the event either party elects to terminate this Agreement for whatever reason deemed appropriate, written notice shall be provided and termination shall be effective 15 days from receipt of written notice.

14. Notice.

Any notice or other communication required or permitted to be given under this Agreement must be in writing and must be mailed by overnight delivery or certified mail, postage prepaid, so that the notifying party can prove delivery of notice and the date thereof, and addressed as follows:

To the County:

Rockdale County, Georgia
Stormwater Utility
Attn: [PROJECT MANAGER]
P.O. Box 1495
Conyers, Georgia 30012

To the Contractor:

[COMPANY NAME]
Attn: [REPRESENTATIVE]
[ADDRESS 1]
[ADDRESS 2]
[CITY, STATE, ZIP CODE]

The addresses stated in this paragraph may be changed by the respective parties upon a documented notice delivered in advance, pursuant to this paragraph.

15. Assignment.

The Contractor shall have no right to transfer or assign its interest in this Agreement without the prior written consent of an authorized representative of the County.

SECTION 00500-CONTRACT AGREEMENT

Rockdale County Water Resources
Conyers Outlots Tract 1 & 2- 8" Water Line Extension

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**SECTION 00500
SAMPLE CONTRACT**

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16. Corporate Authority.

Contractor represents to the County that this Agreement, the transaction contemplated in this Agreement, and the execution and delivery hereof, have been duly authorized by all necessary corporate proceedings and actions, including, without limitation, the action on the part of the directors. The individual executing this Agreement on behalf of Contractor warrants that he or she is authorized to do so and that this Agreement constitutes the legally binding obligation of the corporation.

17. Waiver.

No action taken pursuant to this Agreement shall be deemed to constitute a waiver by the party taking such action of compliance with any representation, warranty, covenant or agreement in this Agreement. The waiver by any party of a breach of any provision or condition contained in this Agreement shall not operate or be construed as a waiver of any subsequent breach or of any other conditions.

18. Severability.

If any provision of this Agreement or application to any party or circumstances shall be determined by any court of competent jurisdiction to be unenforceable to any extent, the remainder of this Agreement or the application of such provision to such person or circumstances, other than those as to which it is so determined invalid or unenforceable, shall not be affected thereby, and each provision hereof shall be valid and shall be enforced to the fullest extent permitted by law.

19. Interpretation.

Should any provision of this Agreement require a judicial interpretation, the parties agree that the body interpreting or construing this Agreement will not apply the assumption that the terms of this Agreement will be more strictly construed against one party by reason of the rule of legal construction that an instrument is to be construed more strictly against the party which itself or through its agents prepared the Agreement. The parties acknowledge and agree that they and their agents have each participated equally in the negotiation and preparation of this Agreement.

20. Venue & Jurisdiction.

The County and the Contractor, by entering into this Promissory Note, hereby agree that the courts of Rockdale County, Georgia shall have jurisdiction to hear and determine any claims or disputes between them pertaining directly or indirectly to this Agreement. Contractor expressly submits and consents in advance to such jurisdiction in any action or proceeding commenced in said courts. The choice of forum set forth in this section shall not be deemed to preclude the bringing of any action by the County or the enforcement by the County of any judgment obtained in such forum in any other appropriate jurisdiction. Further, the Contractor hereby waives the right to assert the defense of forum non-convenient and the right to challenge the venue of any court proceeding.

21. Governing Law.

This Agreement shall be construed and interpreted according to the provisions of the laws of the State of Georgia.

22. Binding Effect.

This Agreement shall be binding upon the Contractor and its successors and permitted assigns.

23. Further Assurances.

The Contractor agrees to execute, acknowledge, seal and deliver, after the date of this Agreement, without additional consideration, such further assurances, instruments and documents, and to take such further actions, as the County may reasonably request in order to fulfill the intent of this Agreement and the transactions contemplated by this Agreement.

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24. Entire Agreement.

This Agreement, its attachments and essential documents (as provided in I above) represent the entire understanding of the parties with regard to the subject matter of this Agreement. There are no oral agreements, understandings, or representations made by any party to this Agreement that are outside of this Agreement and are not expressly stated in it. No supplement, modification, or amendment of this Agreement will be binding unless executed in writing by all parties.

By signing this Agreement, the parties acknowledge that they have read each and every page of this Agreement before signing same and that they understand and assent to all the terms thereof. In addition, by signing this Agreement, the parties acknowledge that they are entering into this Agreement freely and voluntarily and under no compulsion or duress.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals on the date and year first above written.

[CONTRACTOR'S NAME]

ROCKDALE COUNTY, GEORGIA
BOARD OF COMMISSIONERS

By: _____

By: _____
Osborn Nesbitt, Sr., Chairman

Witness:

Attest:

By: _____

By: _____
Jennifer Rutledge, County Clerk

Approved as to Form:

By: _____
M Qader A. Baig, County Attorney

**SECTION 00700
General Conditions**

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SECTION 00700-GENERAL CONDITIONS

GENERAL: The provisions of these General Conditions are intended, but are not limited to, providing general conditions of agreement and provisions toward the awarding of the Contract, the obligations of the successful Bidder and requirements for execution and administration of the Contract. IN ANY EVENT, PROVISIONS IN THIS SECTION ARE SUBJECT TO AND GOVERNED BY PROVISIONS IN THE SUPPLEMENTARY CONDITIONS, AS APPLICABLE.

ARTICLE 1 - NOTICE OF AWARD OF CONTRACT

After receipt of Bids, the Owner shall notify the successful Bidder of the award of the Contract as stipulated in the Supplementary Conditions.

ARTICLE 2 - EXECUTION OF CONTRACT DOCUMENTS

Within 10 days of notification of Award of Contract, the Owner will furnish the Contractor with conformed copies of Contract Documents for execution by the Contractor and the surety.

Within 10 days after receipt, the Contractor shall return all the Documents properly executed by the Contractor and the 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.

Within 30 days after receipt of the conformed Documents executed by the Contractor and the surety with the power-of-attorney and certificates of insurance, the Owner will complete the execution of the Documents. Distribution of the completed Documents will be made upon execution by the Owner.

Should the Contractor and/or the surety fail to properly execute the Documents within the specified time; the Owner will 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 will have the right to withdraw the Bid without penalty. In such event the Owner will have no liability to the Contractor under these Documents or otherwise.

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

ARTICLE 3 - CONTRACT SECURITY

The Contractor shall furnish separate Performance and Payment Bonds each in a sum equal to the amount of the Contract Price, the Performance Bond conditioned upon the performance by the Contractor of all undertakings, covenants, terms, conditions and agreements of the Contract Documents, and the Payment Bond conditioned upon the prompt payment by the Contractor to all persons supplying labor and products in the prosecution of the Work provided by the Contract Documents. Such Bonds shall be executed by the Contractor and a corporate bonding company licensed to transact such business in the State where the Project is located and named on the current

SECTION 00700-GENERAL CONDITIONS

list of "Surety Companies Acceptable on Federal Bonds" as published in the Treasury Department Circular Number 570. The expense of these Bonds shall be borne by the Contractor. If at any time a surety on any such Bond is declared bankrupt or loses its right to do business in the State where the Project is located or is removed from the list of Surety Companies accepted on Federal Bonds, the Contractor shall, within 10 days after notice from the Owner to do so, substitute an acceptable Bond (or Bonds) in such form and sum and signed by such other surety as may be satisfactory to the Owner. The premium on such Bond (or Bonds) shall be paid by the Contractor. No further progress payments shall be deemed due, nor shall be made, until the new surety furnishes an acceptable Bond to the Owner.

The person executing the Bond on behalf of the surety shall file with the Bond a general power of attorney, unlimited as to amount and type of Bond covered by such power of attorney and certified to by an official of said surety.

ARTICLE 4 - INSURANCE

The Contractor shall not commence any work under this Contract until all insurance, as stipulated in the Supplementary Conditions, has been obtained and such insurance has been approved by the Owner, nor shall the Contractor allow any subcontractor to commence any work on subcontractor's contract until all similar insurance required of the subcontractor has been so obtained and approved by the Contractor.

ARTICLE 5 - INDEMNIFICATION

The Contractor shall indemnify and hold harmless the Owner, the PM/CM, the Designer and their agents and employees from and against all claims, damages, losses and expenses including claims consultants' and attorneys' fees arising out of or resulting from the performance of the Work, provided that any such claims, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including the loss of use resulting thereof; and is caused in whole or in part by willful act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

In any and all claims against the Owner, the PM/CM, the Designer, or any of their agents or employees, by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under worker's compensation acts, disability benefit acts or other employee benefits acts.

This indemnification and hold harmless obligation shall extend to cover any and all claims not covered by the Owner's Protective Liability Insurance, the requirements of which are specified in Article 4 of the Supplementary Conditions.

ARTICLE 6 - NOTICE TO PROCEED

The Notice to Proceed will be issued, following the pre-construction conference, within 10 days of the execution of the Contract Agreement by the Owner. The time may be extended by mutual agreement between the Owner and the Contractor. If the Notice to Proceed has not been issued within the 10 day period or within the period mutually agreed upon, the Contractor may terminate the Contract Agreement without further liability on the part of either party.

ARTICLE 7 - TERMINATION OF WORK FOR DEFAULT

- (a) The Work may be terminated if:
 - (1) The Contractor is adjudged bankrupt or insolvent.
 - (2) The Contractor makes a general assignment for the benefit of creditors.
 - (3) A trustee or receiver is appointed for the Contractor or for any of Contractor's property.
 - (4) The Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws.
 - (5) The Contractor repeatedly fails to supply sufficient skilled workmen, materials or equipment.
 - (6) The Contractor fails to make satisfactory progress toward timely completion of the Work.
 - (7) The Contractor repeatedly fails to make prompt payments to subcontractors or material suppliers for labor, materials or equipment.
 - (8) The Contractor disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the Work.
 - (9) The Contractor fails to comply with directives of the PM/CM.
 - (10) The Contractor otherwise violates any provision of the Contract Documents.
- (b) The Owner may, without prejudice to any other right or remedy and after giving the Contractor and surety a minimum of 10 days from delivery of a written notice, terminate the services of the Contractor and take possession of the Project and of all products thereon owned by the Contractor, and finish the Work by whatever method the Owner may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess shall be paid to the

SECTION 00700-GENERAL CONDITIONS

Contractor. If such costs exceed such unpaid balance, the Contractor and/or surety shall pay the difference to the Owner. Such costs incurred by the Owner will be determined by the PM/CM and incorporated in a Change Order.

- (c) Where the Contractor's services have been so terminated by the Owner, said termination will not affect any right of the Owner against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies by the Owner due the Contractor will not release the Contractor from compliance with the Contract Documents.

ARTICLE 8 - TERMINATION FOR CONVENIENCE OF THE OWNER

If, for any reason other than those provided for under Article 7, the Owner elects to discontinue, in whole or part, the Work under this Contract, the Owner may, after 10 days from delivery of a written notice to the Contractor and the PM/CM, terminate, in whole or in part, the Contractor's performance of the Work under this Contract. The notice of termination shall specify the extent to which performance of the Work under the Contract is terminated.

In the event of such termination by the Owner, the Contractor shall be entitled to payment for the Work at the jobsite acceptably performed up to the time of the termination and reimbursement for such costs as are reasonably incurred by the Contractor due to the termination and not otherwise compensated. The Contractor shall also be entitled to profit on the amounts payable to the Contractor, but such profit shall be limited to 6 percent of such amounts. The Contractor will not be entitled to any payment, including any anticipated profit, on Work not performed and will not be entitled to any compensation for other economic loss arising out of or resulting from such compensation or damages of any nature.

ARTICLE 9 - ASSIGNMENTS

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

ARTICLE 10 – SUBCONTRACTING

- (a) The Contractor shall not subcontract the complete Work, or any part thereof, and shall not award any work to any subcontractor without prior written approval of the Owner. Owner approval will not be given except upon the basis of written statements containing such information as the Owner may require. At the pre-construction conference, the Contractor shall submit all subcontractors that the Contractor plans to use on the Project. Any changes or additional subcontractors should be submitted at least 14 days prior to the needed approval.
- (b) The Contractor shall utilize the services of specialty subcontractors on those parts of the Work which, under normal contracting practices, are best performed by specialty subcontractors, as required by the Owner in the Owner's sole discretion, at no additional cost to the Owner.

If the Contractor desires to perform specialty work, the Contractor shall submit a request to the Owner, accompanied by evidence that the Contractor's own organization has successfully performed the type of work in question, is presently competent to perform the type of work, and the performance of the work by specialty subcontractors will result in materially increased costs or inordinate delays.

- (c) The Contractor shall be fully responsible to the Owner for the acts and omissions of the Contractor's subcontractors and of persons either directly or indirectly employed by the Contractor. The Contractor shall be fully responsible to the Owner for the acts and omissions of independent contractors or independent subcontractors of the Contractor and of persons indirectly employed by the Contractor as the Contractor is for the acts and omissions of persons directly employed by the Contractor.
- (d) The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind subcontractors to the Contractor by the terms of the General Conditions and other Contract Documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provision of the Contract Documents.
- (e) Nothing contained in this Contract shall create any contractual relation between any subcontractor and the Owner.

ARTICLE 11 - AUTHORITY OF THE PM/CM

The PM/CM will act as the Owner's representative during the construction period. The Owner will decide questions which may arise as to quality and acceptability of products furnished and Work performed. The Owner will interpret the intent of the Contract Documents in a fair and unbiased manner. The PM/CM will make visits to the site and determine if the Work is proceeding in accordance with the Contract Documents. The PM/CM will judge as to the accuracy of quantities submitted by the Contractor in partial payment estimates which these quantities represent. The decisions of the PM/CM will be final and conclusive.

ARTICLE 12 - SEPARATE CONTRACTS

- (a) The Owner reserves the right to let other contracts in connection with this Project. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their products and the execution of their work, and the Contractor and other contractors shall properly connect and coordinate their work with each other. If the proper execution or results of any part of the Contractor's work depends upon the work of any other contractor, the Contractor shall inspect and promptly report to the PM/CM any defects in such work that render it unsuitable for such proper execution and results.
- (b) The Owner may perform additional work related to the Project with Owner's own forces. The Contractor shall afford the Owner reasonable opportunity for the introduction and storage of products and the execution of work, and shall properly connect and coordinate Contractor's work with work performed by Owner's own forces.
- (c) If the performance of additional work by other contractors or the Owner is not noted in the Contract Documents prior to the execution of the Contract, written notice thereof will be given to the Contractor prior to starting any such additional work. If the Contractor believes that the performance of such additional work by the Owner or others involves the Contractor in additional expense or entitles the Contractor to an extension of the Contract Time, the Contractor may make a claim therefor as provided in Article 29.

ARTICLE 13 - LAWS AND REGULATIONS

The Contractor's attention is directed to the fact that all applicable federal, state, county and city laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the Project shall apply to the Contract throughout, and they will be deemed to be included in the Contract as though written out in full herein. The Contractor shall keep fully informed of all laws, ordinances and regulations of the federal, state, county, city and municipal governments or authorities in any manner affecting those engaged or employed in the Work or the materials used in the Work or in any way affecting the conduct of the Work and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. If any discrepancy or inconsistency should be discovered in these Contract Documents herein referred to, in relation to any such law, ordinance, regulation, order or decree, the Contractor shall herewith report the same, in writing, to the Owner. The Contractor shall at all times observe and comply with all such existing and future laws, ordinances and regulations, and shall protect and indemnify the Owner, the PM/CM, the Designer and their agents against the violation of any such law, ordinance, regulation, order or decree, whether by the Contractor or by the Contractor's employees.

ARTICLE 14 - TAXES

The Contractor shall pay all sales, consumer, use and other similar taxes required by the law of the place where the Work is performed. The Owner will be responsible for any sales or use tax due on products furnished by the Owner to the Contractor to be incorporated into the Work.

ARTICLE 15 - NOTICE AND SERVICE THEREOF

- (a) All notices, demands, requests, instructions, approvals, and claims shall be in writing.
- (b) Any notice to or demand upon the Contractor will be sufficiently given if delivered at the office of the Contractor specified in the Bid (or at such other office as the Contractor may from time to time designate to the Owner in writing), or if delivered by the United States Mail in a sealed, postage-prepaid envelope, or delivered by facsimile transmission, followed by written confirmation, in each case addressed to such office.
- (c) All papers required to be delivered to the Owner shall be delivered as stipulated in the Supplementary Conditions.
- (d) Any such notice or demand shall be deemed to have been given to the Owner or made as of the time of actual delivery to Owner.

ARTICLE 16 - PATENTS

- (a) The Contractor shall hold and save the Owner, the PM/CM, the Designer and their agents harmless from liability of any kind, including cost and expenses, reasonable attorney's fees, for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the Work, including its use by the Owner.
- (b) If the Contractor uses any design, process, device or materials covered by letters, trademarks, patent or copyright, the Contractor shall provide for such use by suitable agreement between the Owner and the holder of such patented or copyrighted design, device or material. The Contract prices shall include royalties or costs arising from the use of such design, device or materials, in any way involved in the Work. The Contractor and the Contractor's sureties shall indemnify and save harmless the Owner, the PM/CM, the Designer and their agents from claims for infringement by reason of the use of such patented or copyrighted design, process, device or materials or any trademark or copyright in connection with Work agreed to be performed under this Contract, and shall indemnify the Owner, the PM/CM, the Designer and their agents for any cost, expense, damage and reasonable attorney's fees which it may be obliged to pay by reason of such infringement, at any time during the prosecution of the Work or after completion of the Work.

ARTICLE 17 - LAND AND RIGHTS-OF-WAY

The Owner will provide, as indicated in the Contract Documents and prior to the Notice to Proceed, the lands upon which the Work is to be done, rights-of-way for access thereto, and such other lands which are designated for the use of the Contractor. The Contractor shall confine 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 and/or an equitable increase in the Contract Price to cover the Contractor's additional costs as a result thereof, provided the Owner is notified immediately of the claim. The Contractor's claim therefor shall be handled as provided for under Article 29.

Should additional temporary easements for ingress or egress be required by the Contractor for more suitable access to the Work, these easements shall be obtained by the Contractor, at no additional cost to the Owner.

Additional requirements shall be as stipulated in the Supplementary Conditions.

ARTICLE 18 - PRODUCTS

- (a) Products shall be so stored in accordance with the manufacturer's recommendations to insure the preservation of their quality and fitness for the Work. Stored products to be incorporated in the Work shall be located so as to facilitate prompt inspection.
- (b) Manufactured products shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturer.
- (c) Products shall be furnished in accordance with shop drawings and/or samples submitted by the Contractor and approved by the Designer.
- (d) Products to be incorporated into the Work shall not be purchased by the Contractor or the subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller.

ARTICLE 19 - SUPERVISION OF WORK

The Contractor shall supervise and direct the Work. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor shall employ and maintain on the Work a qualified supervisor or superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the site. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the Work.

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The supervisor shall have full authority to act on behalf of the Contractor and to execute the orders or directions of the PM/CM without delay. The supervisor shall have full authority to promptly supply products, tools, plant equipment and labor as may be required. The supervisor's authority shall be such that all communication given to the supervisor shall be as binding as if given to the Contractor.

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

ARTICLE 20 - INTERRUPTION OF FACILITY OPERATIONS

The Contractor shall provide the Owner with written notice at least five days prior to any interruption in facility operations required by construction activity. The notice shall include the date and time of the scheduled interruption; the length of time the interruption will be in effect; the procedures to be followed in effecting the interruption; a complete identification of all those processes, equipment and operations to be affected; and all other information the Owner may require. The Contractor shall provide any equipment, piping, auxiliary power or other means necessary to sustain facility operations or function for interruptions which have not been identified by the Specifications, or when interruptions must exceed the time allowed by the Specifications.

Additional requirements, if any, shall be as stipulated in the Supplementary Conditions.

ARTICLE 21 - PROTECTION OF WORK, PROPERTY AND PERSONS

- (a) The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby, all the Work and all products to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- (b) The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction, promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54). The Contractor shall erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection.
- (c) The Contractor shall remedy all damage, injury or loss to any property, improvements or facilities caused, directly or indirectly, in whole or in part, by the Contractor or any of the Contractor's subcontractors or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. The property, improvements or facilities shall be replaced or restored to a condition as good as when the Contractor entered upon the Work. In case of failure on the part of the Contractor to restore such

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property, or make good such damages or injury, the Owner may, after 48 hours written notice, proceed to repair, rebuild, or otherwise restore such property, improvements or facilities as may be deemed necessary. The cost thereof will be deducted from any monies due or which may become due the Contractor under this Contract.

- (d) In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the PM/CM or Owner, shall act to prevent threatened damage, injury or loss.
- (e) Completed Work and stored products shall be suitably protected during unseasonable weather, to allow Work to proceed in a timely fashion. Work planned, or in progress, should be performed to minimize impact of adverse weather.

ARTICLE 22 - PROTECTION OF THE ENVIRONMENT

- (a) The Contractor shall be responsible for taking all measures required to minimize all types of pollution associated with the undertaking of the proposed Work, and shall abide by the requirements of all governmental agencies having jurisdiction over the Work or Contractor's Project operations.
- (b) Any area used or involved in the Project that is disturbed by the Contractor, shall be restored to original or better condition, even though such area is outside the limits of that specified for grading, grassing or landscaping.

ARTICLE 23 - PROTECTION, LOCATION AND RELOCATION OF UTILITIES

The Contractor shall notify owners of adjacent utilities when prosecution of the Work may affect them. The Contractor shall protect from damage all existing improvements or utilities at, or in proximity to, the site of the Work, and shall repair or restore any damage to such facilities resulting from failure to exercise reasonable care in the performance of Work. If the Contractor fails or refuses to repair any such damage promptly, the Owner may have the Work performed and charge the cost thereof to the Contractor.

Prior to the construction or installation of any proposed facility or pipeline, the Contractor shall expose all existing utilities true to their vertical and horizontal location, within the vicinity of the Work. In order to avoid conflicts between existing and proposed facilities or utilities, the Contractor shall either relocate the existing or proposed utility on a temporary or permanent basis, or shall take whatever means necessary to protect the existing facilities or utilities during the installation of proposed utilities, as approved by the Owner. No separate payment will be made for the relocation of existing utilities or for any work associated with the protection of existing facilities or utilities.

ARTICLE 24 - SCHEDULES, REPORTS AND RECORDS

The Contractor shall submit to the Owner progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed as stipulated in the Supplementary Conditions.

ARTICLE 25 - 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.

The PM/CM will furnish the Contractor five copies of the Contract Documents, one copy of which the Contractor shall have available at all times on the Project site. Any additional copies will be furnished at additional cost.

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

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

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 PM/CM, in writing, prior to the commencement of Work at the site. Failure of the Contractor to notify the PM/CM, 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 Article 29.

Any ambiguities or need for clarification of the Drawings or Specifications shall be immediately reported in writing to the PM/CM. Any such ambiguity or need for clarification will be handled by the PM/CM, in writing, as authorized by Article 11. No clarification of the Drawings and Specifications hereunder by the PM/CM will entitle the Contractor to any additional monies unless a Change Order has been processed as provided by Article 29 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 PM/CM, shall not entitle the Contractor to additional monies and shall be done at the Contractor's risk.

ARTICLE 26 - SURVEYS

The Owner will furnish AutoCad files of the Construction Drawings to assist with construction layout of the Work. The County's benchmark information will be provided. From this information, unless otherwise specified in the Contract Documents, the Contractor shall develop and make all detailed surveys needed for construction, such as alignment, slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets.

ARTICLE 27 - TESTING, INSPECTION AND REJECTION OF WORK

- (a) Testing of Materials: Unless otherwise specifically provided for in the Specifications, the inspection and testing of products to be incorporated in the Work at the site shall be made by bureaus, laboratories, or agencies approved by the Owner; the cost of such inspection and testing shall be paid by the Contractor. The Contractor shall furnish evidence, satisfactory to the Owner, that the products have passed the required tests prior to their incorporation into the Work. The Contractor shall promptly segregate and remove rejected products from the site of the Work.
- (b) Inspection: The Contractor shall furnish the Owner with every reasonable facility for ascertaining whether or not the Work performed and products used are in accordance with the requirements and intent of the Specifications and Contract Documents. No Work shall be done or products used without suitable inspection by the Owner or the Owner's representative. Failure to reject any defective Work or product shall not in any way prevent later rejection when such defect is discovered, or obligate the Owner to final acceptance.
- (c) Authority and Duties of the Resident Inspector: The Resident Inspector will be authorized to inspect all Work done and all products furnished, including preparation, fabrication and manufacture of the products to be used, but the Resident Inspector will not be authorized to alter or waive any requirements of the Contract Documents. The Resident Inspector may reject products or suspend the Work until any question at issue can be referred to and decided by the Owner. The responsibility of the Contractor is not lessened by the presence of the Resident Inspector.
- (d) Rejection of Work and Materials: All products furnished and all Work done that is not in accordance with the Drawings or Specifications or that is defective will be rejected. All rejected products or Work shall be removed immediately. If rejected products or Work is not removed within 48 hours, the PM/CM will have the right and authority to stop the Work immediately and will have the right to arrange for the removal of said rejected products or Work at the cost and expense of the Contractor. All rejected products or Work shall be replaced with other products or Work which conforms with the Drawings and Specifications.

- (e) Contractor's Responsibilities: Inspection of the Work will not relieve the Contractor of any obligations to fulfill the Contract and defective Work shall be made good regardless of whether such Work has been previously inspected by the Owner and accepted or estimated for payment. The failure of the Owner to reject improper Work shall not be considered a waiver of any defect which may be discovered later, or for Work actually defective.

ARTICLE 28 - CONTRACT TIME AND LIQUIDATED DAMAGES

The Contract Time and Liquidated Damages shall be defined in the Instructions to Bidders.

The Contractor shall proceed with the Work at a rate of progress which will insure completion within the Contract Time. It is expressly understood and agreed by and between the Contractor and the Owner, that the Contract Time for the Work described herein is a reasonable time, taking into consideration the average climatic and economic conditions, and other factors prevailing in the locality of the Work.

If the Contractor shall fail to perform the Work required within the Contract Time, or extended Contract Time if authorized by Change Order, then the Contractor shall pay to the Owner the full amount of liquidated damages specified in the Contract Documents for each calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.

The Contractor shall not be charged with liquidated damages or any excess cost when the delay in performance of the Work is due to the following and the Contractor has promptly given written notice of such delay to the Owner and PM/CM:

- (a) To any preference, priority or allocation order duly issued by the Owner.
- (b) To unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God or of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather; and,
- (c) To any delays of subcontractors occasioned by any of the causes specified in paragraphs (a) and (b).

ARTICLE 29 - CHANGES IN THE CONTRACT

- (a) Changes in the Work: The Owner may at any time, as the need arises, order changes within the scope of the Work without invalidating the Contract Agreement. If such changes increase or decrease the amount due under the Contract Documents, or in the time required for performance of the Work, an equitable adjustment will be authorized by Change Order.

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The Owner, also, may at any time, by issuing a field order, make changes in the details of the Work. These changes by field order will not affect Contract Time or Contract Price. The Contractor shall proceed with the performance of any changes in the Work so ordered by the Owner, unless the Contractor believes that such field order entitles Contractor to a change in Contract Price or Contract Time or both, in which event Contractor shall give the PM/CM immediate, written notice thereof and if required by the Owner, an immediate estimate of the direct cost of Work as outlined in (b) below, after the receipt of the ordered change, and the Contractor shall not execute such changes pending the receipt of an executed Change Order or further written instruction from the Owner.

Should the Contractor encounter, or the Owner discover, during the progress of the Work, subsurface or latent conditions at the site materially differing from those shown on the Drawings or indicated in the Specifications, or unknown conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Drawings and Specifications, the Owner shall immediately be notified in writing of such conditions before they are disturbed. The Owner will thereupon promptly investigate the conditions.

If the Owner finds that conditions do so materially differ, or are of an unusual nature, and upon written request of the Contractor, an equitable adjustment will be authorized by Change Order.

If the Contractor does not immediately notify the Owner in writing of the belief that a field order, additional work by other contractors or the Owner, or subsurface, latent or unusual unknown conditions entitles the Contractor to a Change Order, no consideration for time or money will be given the Contractor.

The Owner may, with the Contractor's concurrence, elect to postpone the issuance of a Change Order until such time that a single Change Order of substantial importance can be issued incorporating several changes. In such cases, the Owner will indicate this intent for each change in the Contract in a written response to the Contractor's request for a change, following agreement by the Owner and Contractor on the change's scope, price and time.

- (b) Changes in Contract Price: The Contract Price may be changed only by a Change Order. The value of any Work covered by a Change Order for increase or decrease in the Contract Price will be determined by one or more of the following methods, in the order of precedence listed below:
 - (1) By estimating the number of unit quantities of each part of the Work which is changed (either increased or decreased) and then multiplying the estimated number of such unit quantities by the price Bid (which price shall include the Contractor's overhead and profit) for a unit quantity thereof.

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- (2) The Owner will fix the total lump sum value of the change in the Work of the Contractor following the Contractor's submittal, within a reasonable time, of an estimate of the direct cost of the Work. The direct cost estimate will be added to, or deducted from, the Contract Price (which price will include the Contractor's overhead and profit as outlined below). If the Contractor does not submit a cost estimate of the Work in a reasonable time or if the Owner and Contractor do not reach agreement on the cost, the Owner may fix the total lump sum value at a reasonable amount. On any lump sum change which involves a net credit to the Owner, no allowance for overhead and profit will be figured.
- (3) By ordering the Contractor to proceed with the Work and to keep and present, in such form as the Owner may direct, a correct account of the cost of the change together with all vouchers therefor. The cost hereunder will only include an allowance for overhead and profit as outlined below.

For the Work performed in item (2) or (3) above, payment will be made for the documented actual direct cost of the following:

- (aa) Labor, including foremen, for those hours they are assigned and participating in the Work covered by the change order (actual direct payroll cost of wages). The Contractor shall furnish, if required by the Owner, certified payrolls to verify wages. All labor related costs will be included in a 30 percent markup of the cost of direct payroll wages. This refers to the Contractor's specific labor wages.
- (bb) Material delivered and used on the designated Work, including sales tax, if paid for by the Contractor and as verified by original invoices or otherwise verifiable to the Owner's acceptance.
- (cc) Rental, or ownership cost of equipment, including necessary transportation of equipment, having a purchase value in excess of \$300.00. Rental or ownership cost will be allowed for only those hours during which the equipment is required on the project site. Cost allowances will not exceed the rates defined as follows: the hourly rate, for equipment not used exclusively in the change to the scope of work, will be the monthly rate, as printed in the current Rental Blue Book for Construction Equipment published by Dataquest, divided by 176; the rate, for equipment used exclusively for those tasks identified in the change to the scope of work, will be the daily, weekly or monthly rate, used singularly or in combination, which will provide the lowest total cost. The rates will be modified by the Rate Adjustment Table factors to reflect a depreciation allowance indexed to the year a machine was originally manufactured and sold. The rates will be adjusted to account for regional differences in annual use hours, cost of labor, freight, taxes, etc. The amount by which

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basic rates will be increased or decreased is shown on the adjustment maps included in the "Blue Book".

The equipment use period will begin only at the time equipment is unloaded at the site of the changed work, will include each day that the equipment is required at the site of the changed work and will terminate at the end of the day on which the use of such equipment becomes unnecessary, plus reasonable transportation time. The maximum time to be paid per day will not exceed eight hours unless the equipment is in operation for a longer time. The time which will be paid for per day, for equipment not used exclusively in the change to the scope of work, will be the hours which the equipment was actually in operation on the changed work.

In addition to the actual costs in items (aa) through (cc) above, there will be, for the Contractor actually performing the work, a fixed fee of 16 percent for bond, insurance, overhead and profit added to the cost of Items (aa), (bb) and (cc), above.

If all or a portion of the Change Order is performed by a subcontractor, payment will be made for the documented actual direct cost as outlined in (aa), (bb) and (cc), above. A fixed fee of 16 percent for bond, insurance, overhead and profit will be added to the cost of (aa), (bb) and (cc) of the subcontractor's work only.

A fixed fee of 10 percent will be added to the subcontractor's Work for the Contractor's administrative handling of portions of the Work that are performed by an approved subcontractor. No additional fixed fee will be allowed for the Contractor's or a subcontractor's administrative handling of Work performed by a subcontractor's subcontractor, unless by written permission from the Owner. All other costs not specifically listed above are considered to be included in the fixed fee.

- (4) The Contractor shall, when required by the Owner, furnish the Owner with an itemized breakdown of the quantities and prices used in computing the value of any change that might be ordered, in a printed format, and with sufficient detail as required by the Owner.
- (c) Changes in Contract Time: The Contract Time may be changed only by a Change Order. Changes in the Work described in (a) and any other claim made by the Contractor for a change in the Contract Time will be evaluated by the Owner with the assistance and input of the PM/CM and if the conditions warrant, an appropriate adjustment of the Contract Time will be made.

The Owner, when making these evaluations will take into consideration the amount and scope of Work which has been changed and will evaluate if the change in Work has

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affected the critical path as currently accepted on the progress schedule such that it would delay the completion of the Project. If after these evaluations have been made and in the sole opinion of the Owner, the Contractor is due an extension of time, then it will be granted by a Change Order and the Owner will pay the associated cost due the Contractor for direct field costs, only as outlined under Changes in Contract Price (aa) and (cc), exclusive of Item (bb), based on any delays to the overall Project. Extensions of time granted as a result of weather will not result in a change in Contract Price.

ARTICLE 30 - PAYMENTS AND COMPLETION

- (a) **Contract Price:** The Contract Price is a lump sum stated in the Contract Agreement, and is the total amount payable by the Owner to the Contractor for the performance of the Work set forth in the Contract Documents.

It is understood that the Contractor shall provide and pay for all products, labor (including labor performed after regular working hours, on Sundays, or on legal holidays), equipment, tools, water, light, power, sewer, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, place into operation, and deliver the Work.

It is further understood that the Contractor's proposed construction schedule is based on a normal 40 hour, 5 day work week, less recognized holidays. If the Contractor desires to work in excess of this limit, the Contractor shall submit a written request to the Owner 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 will be deducted from the Contractor's monthly payment request.

- (b) **Breakdown of Cost:** Before the first application for payment the Contractor shall submit to the PM/CM a breakdown of cost for the various portions of the Work, including quantities if required by the PM/CM, aggregating the total Contract Price prepared in such form as specified or as the PM/CM and the Contractor may agree upon and supported by such data to substantiate its correctness as the PM/CM may reasonably require.

This schedule of values, when approved by the PM/CM, will be used only as a basis for the Contractor's application for payment; however, the payment schedule will correlate directly with the Overall Project Schedule (OPS) cost information, when applicable.

- (c) **Progress Payments:** At the end of each calendar month, the Contractor shall submit to the PM/CM an itemized application for payment supported by such othersubstantiating data as the PM/CM may reasonably require covering Work completed through the 20th day of the month. Progress payments shall be submitted to the PM/CM no later than the 25th of the month. Any progress payment submitted by the Contractor after the 5th of the month will be included in the following month's payment.

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Application for payment may include, at the Contractor's option, the cost of products not yet incorporated into the Work which have been delivered to the site or to other storage locations authorized and approved by the PM/CM. The Owner reserves the right to accept or reject pay requests for stored materials, and to limit payments to those stored materials which, in the PM/CM's judgment, are necessary for continuing satisfactory Project progress.

Payment for stored products will be subject to the following conditions being met or satisfied:

- (1) The products shall be received in a condition satisfactory for incorporation in the Work, including manufacturer's storage and installation instructions.
- (2) The products shall be stored in accordance with the manufacturer's recommendations and in such manner that any and all manufacturer's warranties will be maintained and that they will not be damaged due to weather, construction operations or any other cause.
- (3) An invoice from the manufacturer shall be furnished for each item on which payment is requested. The request may include reimbursement for cost of delivery, limited to common carrier rates, to the site, but will not include the Contractor handling, on or off site, or for storage expense.
- (4) The Contractor shall, on request of the PM/CM, furnish written proof from the supplier of payment (less retention equal in percentage to that being retained by the Owner) for the products no later than 30 days after receipt of payment for same from the Owner.
- (5) Shop drawings, product data and samples, showing "No Exceptions Taken", has been received from the Contractor for that specific equipment or material.

The Contractor warrants that title to all Work and products covered by an Application for Payment, whether incorporated into the Project or not, will pass to the Owner upon the receipt of such payment by the Contractor, free and clear of all liens, claims, security interests or encumbrances (except retention equal in percentage to that being retained by the Owner which may be withheld from suppliers and subcontractors to guarantee completion and performance).

- (d) Certificate for Payment: If the Contractor has made application for payment as provided above, the PM/CM will issue a Certificate for Payment to the Owner, with a copy to the Contractor, for such amount as the PM/CM determines to be properly due, or the PM/CM will state, in writing, itemized and specific reasons for withholding a

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Certificate as provided herein.

After the PM/CM has issued a Certificate for Payment, the Owner will pay to the Contractor the amount covering Work completed plus stored products, less retention and less previous payments made.

No certificate for a progress payment, nor any progress payment, nor any partial or entire use of occupancy of the Project by the Owner, shall constitute an acceptance of any Work not in accordance with the Contract Documents.

- (e) Retention: The Owner will retain the following amounts from each properly certified estimate:
- (1) Until the value of the Work completed, including stored materials, is at least 50 percent of the Contract amount, 10 percent of the value of all Work satisfactorily completed, including stored materials.
 - (2) When the value of the completed Work totals at least 50 percent of the Contract amount, the Owner will discontinue retaining additional amounts provided the Work is progressing satisfactorily and there is no specific cause for retaining a larger sum. The total amount retained will be at least 5 percent of the Contract amount, adjusted for Change Orders, until the date of final payment.
 - (3) The Owner may elect to reinstate retention of 10 percent of the value of the Work completed if at any time the Contractor fails to make satisfactory progress or if there is other specific cause. Satisfactory progress is identified as conforming to the construction progress schedule as required in Article 24, as modified by the Supplementary Conditions. No form of collateral in lieu of cash will be acceptable as retainage. Amounts retained by the Contractor from payments due to suppliers and subcontractors (expressed as a percentage) shall not exceed that being retained by the Owner.
- (f) Payments Withheld: The PM/CM may decline to approve an Application for Payment and may withhold certificate, in whole or in part, as may be necessary to protect the Owner from loss because of:
- (1) Failure of the Contractor to make payments properly to subcontractors or for labor or products.
 - (2) Unsatisfactory prosecution of the Work by the Contractor either due to quality of the Work or if the Contractor is behind the currently approved construction schedule. When the above reasons for nonpayment are corrected, then payment will be made for amounts withheld because of such reasons, not later than the next payment. Completion and Final Acceptance shall be as stipulated in the Supplementary Conditions.

END OF SECTION

**SECTION 00800
Supplementary Conditions**

GENERAL

The provisions in this Section of the Specifications shall govern in the event of any conflict between this Section and the General Conditions.

ARTICLE 1 - NOTICE OF AWARD OF CONTRACT

Article 1 - Notice of Award of Contract, of the General Conditions, is hereby modified to include the following:

Within 120 days after receipt of Bids, the Owner will notify the successful Bidder of the award of the Contract.

Should the Owner require additional time to award a Contract, the time may be extended by the mutual agreement between the Owner and the successful Bidder. If an award of Contract has not been made within 120 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.

ARTICLE 13 - LAWS AND REGULATIONS

Article 13 - Laws and Regulations, of the General Conditions is hereby modified to include the following:

Article 13, following first paragraph,

Where professional engineering work is required in connection with any of the components required by the Contract, all Bidders and component suppliers must insure that there is full compliance with all applicable laws of the state of Georgia and any other state governing professional engineering. The Owner and PM/CM do not warrant that the name of an entity listed as an acceptable manufacturer is or will be in compliance with said laws.

ARTICLE 15 - NOTICE AND SERVICE THEREOF

Article 15 - Notice and Service Thereof, of the General Conditions is hereby modified to include the following:

- (c) All papers required to be delivered to the Owner shall, unless otherwise specified in writing to the Contractor, be delivered to the Rockdale Water Resources Commissioners, 943 Court Street, Conyers, Georgia 30012, Attn: Oz Nesbitt, Chairman, Board of Commissioners.

Any notice to or demand upon the Owner shall be sufficiently given if delivered to the

SECTION 00800-SUPPLEMENTARY CONDITIONS

Office of said Chairman if delivered by the United States Mail in a sealed, postage-prepaid envelope, or delivered by facsimile transmission, followed by written confirmation, in each case addressed to said Chairman or to such other representative of the Owner or to such other address as the Owner may subsequently specify in writing to the Contractor for such purposes.

- (e) The Contractor shall file all "Notices of Commencement" required for this Project in accordance with O.C.G.A. §44-14-361.5 et.seq. and §36-82-104 et.seq., as applicable. The Contractor shall respond to all requests for copies of a Notice of Commencement. Should the Owner or PM/CM receive such a request, this request will be forwarded to the Contractor for further handling. The name and address of the Owner shall be as stated in paragraph (c) of this Article. The name and general description of the Project shall be as stated in the Invitation to Bid.

ARTICLE 17 - LAND AND RIGHTS-OF-WAY

Article 17 - Lands and Rights-of-Way, of the General Conditions, is hereby modified to include the following:

No additional requirements.

ARTICLE 20 - INTERRUPTION OF FACILITY OPERATIONS

Article 20 - Interruption of Facility Operations, of the General Conditions, is hereby modified to include the following:

Bypasses/interruption of untreated or partially treated wastes will not be permitted unless the Contractor has obtained prior approval from the Owner. The Owner/PM/CM shall be notified at least two weeks in advance and in writing, of the date, time and duration of such bypasses/interruption. The Contractor shall pay all fines that may be imposed on the Owner for the bypassing without prior approval.

ARTICLE 24 - SCHEDULES, REPORTS AND RECORDS

Article 24 - Schedules, Reports and Records, of the General Conditions, is hereby modified to include the following:

- (a) The Contractor shall submit to the Owner progress schedules, payrolls, reports, estimates, records and other data as the Owner may request concerning work performed or to be performed as stipulated in the various sections of these Specifications.
- (b) Immediately after execution of the Contract by the Owner, and before the first partial payment is made, the Contractor shall deliver to the Owner a construction progress schedule in form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required

SECTION 00800-SUPPLEMENTARY CONDITIONS

under the Contract Documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the Progress Schedule.

- (c) An updated schedule and an updated Schedule of Submittals shall be presented with each partial payment request. Lack of an updated schedule and/or an updated Schedule of Submittals will delay processing of the pay request until receipt of the updated schedule and/or an updated Schedule of Submittals.
- (d) If the schedule reflects a completion date prior to the completion date established by the Contract Agreement, this shall afford no basis to claim for delay should the Contractor not complete the Work prior to the projected completion date. Instead all "float" between the completion date in the Contractor's schedule and the completion date established in the Contract Agreement shall belong to and be exclusively available to the Owner. Should a change order be executed with a revised completion date, the progress schedule shall be revised to reflect the new completion date.
- (e) The Contractor shall maintain on the Project site, a complete set of up-to-date Record Documents.
- (f) Project Coordination Meetings: The General Contractor shall participate in Project Coordination Meetings to be held on the site monthly, or more often if conditions warrant, to establish the current state of completion and revise the schedule as necessary. The Project Coordination Meeting will be conducted by the PM/CM.
- (g) Contractor's Responsibilities
 - (1) Implement the detailed Near Term Schedule of activities to the fullest extent possible between Project Coordination Meetings.
 - (2) The Contractor shall prepare and provide one copy of the Contractor's Daily Report to the PM/CM by 10:00 a.m. of the day following the Report date. This Daily Report will contain, as a minimum, the weather conditions; number of workers by craft, including supervision and management personnel on site; active and inactive equipment on site; work accomplished by CPM activity item; problems; and visitors to the jobsite.
 - (3) If a current activity or series of activities on the OPS is behind schedule and if the late status is not due to an excusable delay for which a time extension would be forthcoming, the Contractor shall attempt to reschedule the activity to be consistent with the Overall Project Schedule so as not to delay any of the Contract milestones. The Contractor agrees that:
 - a. The Contractor shall attempt to expedite the activity completion so as to have it agree with the OPS. Such measures as the Contractor may choose shall be made explicit during the Project Coordination Meeting.
 - b. If, within two weeks of identification of such behind-schedule activity, the

SECTION 00800-SUPPLEMENTARY CONDITIONS

Contractor is not successful in restoring the activity to an on schedule status, the Contractor shall:

1. Carry out the activity with the scheduled crew on an overtime basis until the activity is complete or back on schedule.
2. Increase the crew size or add shifts so the activity can be completed as scheduled.
3. Commit to overtime or increased crew sizes for subsequent activities, or some combination of the above as deemed suitable by the PM/CM.

These actions shall be taken at no increase in the Contract amount.

- (4) Maintain a current copy of all construction schedules on prominent display in the Contractor's field office at the Project site.
- (5) Cooperate with the Owner or Owner's representative in all aspects of the Project Scheduling System. Failure to implement the Project Scheduling System or to provide specified schedules, diagrams and reports, or to implement actions to re-establish progress consistent with the OPS may be causes for withholding of payment.

ARTICLE 30 - PAYMENTS AND COMPLETION

Article 30 - Payments and Completion, of the General Conditions, is hereby modified to include the following:

- (g) Completion: ALL WORK REQUIRED BY THE CONTRACT DOCUMENTS, CONTRACT DRAWINGS AND SPECIFICATIONS MUST BE COMPLETED BEFORE THE FINAL INSPECTION IS PERFORMED. This includes, but is not limited to, the following:
 - (1) Performing tests as described in the detailed Specifications.
 - (2) Removing temporary plugs, bulkheads, bypasses, etc., and diverting flow into the facility when approved by the PM/CM.
 - (3) Grassing and restoration of the work area.

Upon completion of all work required, the Contractor shall submit completed Record Drawings to the PM/CM and request, in writing, that the final inspection be performed. The PM/CM will arrange for final inspection of the work by the Owner and Designer. If the PM/CM finds the work of the Contractor complete and acceptable in accordance with the provisions of the Contract Documents and that the Record Drawings accurately depict the complete work, PM/CM will recommend to the Owner that the job be accepted and that final payment be made.

SECTION 00800-SUPPLEMENTARY CONDITIONS

In the event that the final inspection reveals deficiencies in meeting the Contract requirements, the Contractor shall complete all remaining items of work, and make adjustments found to be necessary. Upon receipt of written notice from the Contractor that the work is complete and ready for re-inspection, the PM/CM will arrange a final inspection.

The Contractor will be notified, in writing, by the Owner of the final acceptance of the work. The date of final acceptance shall be the termination date for the Contractor's liability for the physical properties of the facilities and the beginning of the warranty period.

Before final payment can be made, the Contractor must certify, in writing, to the Owner that all payrolls, materials bills, and other indebtedness connected with the work have been paid. If requested by the PM/CM, the Contractor shall provide release of lien documentation from subcontractors or suppliers.

Final payment will not be made if there is disputed indebtedness or if there are liens upon the property.

If upon completion of all work there is disputed indebtedness or there are liens upon the property, semi-final payment may, be made, at the Owner's option, in accordance with the following provisions:

- (1) The Owner will retain an amount equal to the disputed indebtedness and/or liens upon the property including all related cost and interest in connections with said disputed indebtedness and liens which the Owner may be compelled to pay upon and subsequent adjudication.
- (2) The Contractor shall certify to those items of work not disputed that all payables, materials bills and other indebtedness connected with the work have been paid or otherwise satisfied.

The making of the final payment shall constitute a waiver of all claims by the Owner, other than those for faulty work covered by and appearing within the warranty period.

The acceptance of final payment shall constitute a waiver of all claims by the Contractor, except those previously made, in writing, and still unsettled.

(h) Prompt Payment Clause

- (1) Owner and Contractor agree that all partial payments and final payments shall be subject to the Georgia Prompt Pay Act, as originally enacted and amended, and as set forth in O.C.G.A. §§ 13-11-1 through 13-11-11, except as provided below to the extent authorized by law:
 - a. Interest Rate: For purposes of computing interest on late payments, the rate of interest shall be one-half percent per month or a pro-rata fraction thereof

SECTION 00800-SUPPLEMENTARY CONDITIONS

- on the unpaid balance as may be due.
- b. Payment Periods:
1. When the Contractor has performed in accordance with the provisions of these Contract Documents, the Owner shall pay the Contractor within 45 days of receipt by the Owner or the Owner's representative of any properly completed Application for Payment, based upon work completed or service provided pursuant to the terms of these Contract Documents.
 2. When a subcontractor has performed in accordance with the provisions of its subcontract and the subcontract conditions precedent to payment have been satisfied, the Contractor shall pay to that subcontractor and each subcontractor shall pay to its subcontractor, within ten days of receipt by the Contractor or subcontractor of each periodic or final payment, the full amount received for such subcontractors work and materials based on work completed or service provided under the subcontract, less retainage expressed as a percentage, but such retainage shall not exceed that retainage being held by the Owner, provided that the subcontractor has provided or provides such satisfactory reasonable assurances of continued performance and financial responsibility to complete its work as the Contractor in its reasonable discretion may require, including but not limited to a payment and performance bond.
- c. Interest on Late Payment: Except as otherwise provided in these Contract Documents and/or in O.C.G.A. § 13-11-5, if a periodic or final payment to the Contractor is delayed by more than the time allotted in Paragraph b. of this Prompt Payment Clause or if a periodic or final payment to a subcontractor is delayed more than ten days after receipt of periodic or final payment by the Contractor or subcontractor, the Owner, Contractor, or subcontractor, as the case may be, shall pay interest to its Contractor, or subcontractor beginning on the day following the due dates as provided in Paragraph b. of this Prompt Payment Clause at the rate of interest as provided herein. Interest shall be computed per month or a pro-rata fraction thereof on the unpaid balance. There shall be no compounded interest. No interest is due unless the person or entity being charged interest receives "Notice" as provided in Paragraph d. of this Prompt Payment Clause. Acceptance of progress payments or final payment shall release all claims for interest on said payments.
- d. Notice of Late Payment and Request for Interest: Any person or entity asserting entitlement to interest on any periodic or final payment pursuant to the provisions of this Prompt Payment Clause shall provide "notice" to the person or entity being charged interest of the charging party's claim to interest on late payment. "Notice" shall be in writing, served by U.S. Certified Mail - Return Receipt Requested at the time the properly completed Application for Payment is received by the Owner or Owner's representative, and shall set forth the following:

SECTION 00800-SUPPLEMENTARY CONDITIONS

1. A short and concise statement that interest is due pursuant to the provisions of the Georgia Prompt Pay Act and this Prompt Payment Clause;
2. The principal amount of the periodic or final payment which is allegedly due to the charging party; and
3. The first day and date upon which the charging party alleges that said interest will begin to accrue, pursuant to the provisions of the Georgia Prompt Pay Act and this Prompt Payment Clause.

These "Notice" provisions are of the essence; therefore, failure to comply with any requirement as set forth in this Prompt Payment Clause precludes the right to interest on any alleged late payment to which said "Notice" would otherwise apply.

- (2) Integration with the Georgia Prompt Pay Act: Unless otherwise provided in these Contract Documents, the parties hereto agree that these provisions of this Prompt Payment Clause supersede and control all provisions of the Georgia Prompt Pay Act (O.C.G.A. §§ 13-11-1 through 13-11-11 (1994)), as originally enacted and as amended, and that any dispute arising between the parties hereto as to whether or not the provisions of this contract or the Georgia Prompt Pay Act control will be resolved in favor of these Contract Documents and its terms.

END OF SECTION

**SECTION 01010
SUMMARY OF WORK**

PART 1 GENERAL

1.01 THE REQUIREMENT

- A. The work to be performed under this contract shall consist of furnishing and installation of all tools, equipment, materials, supplies, manufactured articles, transportation and services, including fuel, power, water, and essential communications, for the performance of all labor, work, and/or other operations as required from the fulfillment of the Contract in strict accordance with the Contract Documents. The work shall be complete, and all work, materials, and services not expressly shown or called for in the Contract Documents which may be necessary for the complete and proper construction of the Work in good faith shall be performed, furnished, and installed by the Contractor as though originally so specified or shown, at no increase in cost to the County.
- B. Wherever the Contract Documents address a third party, i.e., subcontractor, manufacturer, etc., it is to be considered as the Contractor through the third party.
- C. Wherever a reference to number of days is noted, it shall be construed to mean calendar days.

1.02 WORK COVERED BY CONTRACT DOCUMENTS

- A. The work of this contract consists of, but is not limited to, the construction, and installation of 8 inch water lines and casing, service lines, associated site work, fittings, erosion and sedimentation control testing, and other appurtenances as shown on the drawings and contained herein.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

**SECTION 01025
MEASUREMENT AND PAYMENT**

PART 1 GENERAL

1.01 SCOPE

- A. The Bid lists each item of Work for which payment will be made. No payment will be made for any items other than those listed in the Bid.
- B. Required items of Work necessary for the satisfactory completion of the Work, which are not specifically listed in the Bid, and not specified in this Section to be measured or included in one of the items listed in the Bid, shall be considered incidental to the Work. All costs thereof, including Contractor's overhead costs and profit and all mobilization costs for the Contract duration shall be included in the unit prices bid for the various Bid items. The Contractor shall prepare the Bid accordingly.

No separate or future payments shall be made for MOBILIZATION except as specifically shown in the Bid.

- C. Work includes furnishing all plant, labor, equipment, tools, power and materials, and performing all operations required to complete the Work satisfactorily, as specified and as indicated on the Drawings.

1.02 DESCRIPTIONS

- A. Measurement of an item of Work will be by the unit indicated in the Bid.
- B. Final payment quantities shall be determined from the Record Drawings. The Record Drawing quantities shall be determined by a survey after the completion of all required work. The survey shall conform to Article 24 - Schedules, Reports and Records as specified in Section 00800, Supplementary Conditions. The precision of measurement for final payment quantities shall match the precision shown for that item in the Bid.

1.03 PAYMENT

- A. Payment will include all necessary and incidental related work not specified to be included in any other item of work listed in the Bid.
- B. Unless otherwise stated in individual sections of the Specifications or in the Bid, no separate payment will be made for any item of work, materials, parts, equipment, supplies or relate items required to perform and complete the work. The costs for all such items required shall be included in the price bid for item of which it is a part.

SECTION 01025 MEASUREMENT AND PAYMENT

- C. Payment will be made by extending unit prices multiplied by quantities provided and then summing the extended prices to reflect actual work. Such price and payment shall constitute full compensation to the Contractor for furnishing all plant, labor, equipment, tools and materials not furnished by the Owner and for performing all operations required to provide to the Owner the entire Project, complete in place, as specified and as indicated on the Drawings.
- D. The Contractor shall carefully acquaint himself with all work associated with each payment item and shall have no claim for his unfamiliarity with the requirement of various items.
 - i. The Contractor shall have included in his various bid items, an amount to cover costs for additional work which may be necessary, to deliver equipment and products to the project sites as required for project completion.
 - ii. The Contractor shall have included in his various bid items, an amount to cover costs for additional work which may be necessary, to construct the water mains in the close proximity of underground facilities, services, poles and other facilities which may exist.
 - iii. The discovery of an underground facility during the construction, not shown on the Contract Drawings shall not constitute automatic initiation of a change order. The additional work to cross or pass this underground facility must be substantial for consideration for additional payment.

1.04 CLEARING AND GRUBBING

- A. No separate payment shall be made for clearing and grubbing.
- B. The cost of moving and reestablishing landscape features, including labor and materials, shall be included in the unit price bid for the item to which it pertains.

1.05 TRENCH EXCAVATION AND BORING PIT EXCAVATION AND BACKFILL

- A. No separate or additional payment will be made for any special or unique method, means, techniques or equipment necessary for the Contractor's compliance with these Specifications, regulatory requirements, permits, laws or regulations which govern this Project.
- B. Trench Excavation: No separate payment will be made for trench excavation. All costs shall be included in the unit price bid for the item to which it pertains at the appropriate depth.
- C. Sheet piling, Bracing and Shoring: No separate payment will be made for providing any sheet piling, bracing and shoring.

SECTION 01025 MEASUREMENT AND PAYMENT

- D. Dewatering Excavations: All costs of equipment, labor and materials required for dewatering shall be included in the price bid for the item to which it pertains.
- E. Bedding and Haunching
1. The unit price bid for pipe for WATER LINE shall include the excavation of the trench to the depth below the pipe necessary to provide specified bedding and to lay the new waterline. Measurements for payment will be made from ground surface to the pipe invert.
 2. No separate payment will be made for material used to provide specified bedding. The cost of all bedding materials shall be included in the unit price bid for the item to which it relates, except for trench stabilization.
 3. No additional payment will be made for improved bedding required to compensate for over excavation of the trench.
- F. Initial Backfill
1. No separate payment shall be made for initial backfill.
 2. No separate payment shall be made for drying out the initial backfill material in order to meet the compaction requirements.
 3. No separate payment shall be made for the adding of moisture to the initial backfill materials in order to meet the compaction requirements.
 4. No separate payment shall be made for providing select material if the insitu material cannot meet the compaction requirements.
- G. Final Backfilling
1. No additional payment will be made for additional material when excavated materials are used.
 2. No separate payment shall be made for drying out the final backfill material in order to meet the compaction requirements.
 3. No separate payment shall be made for the adding of moisture to the final backfill materials in order to meet the compaction requirements.
 4. No additional payment will be made for providing select material if the insitu material cannot meet the compaction requirements.

108 WATER LINE AND ACCESSORIES

A. Existing Utilities and Obstructions –

Horizontal and Vertical Conflict: Payments for conflicts with existing utilities shall be made only where the Owner approves additional lengths of pipe. Said payment shall be made at the unit prices in the Bid. No other payment will be made for any delay or extra cost encountered by the Contractor due to protection, avoidance or relocation of existing utilities, mains or services or changing the horizontal or vertical alignment of the sewer.

B. Location and Grade - No separate payment shall be made for survey work performed by or for the Contractor in the establishment of reference points, benchmarks, cut sheets, limits of right-of-way or easement, including their restoration, as well as centerline or baseline points.

C. Laying and Jointing Pipe and Accessories

1. Measurement for payment at the unit price for WATER LINE shall be made for the actual quantity installed. Depth of cut shall be measured from pipe invert to ground level at pipe centerline. Cut sheets prepared by the Contractor and approved by the Owner shall be the basis for payment.
2. No additional payment will be made for replacement of defective materials.
3. No additional payment will be made for maintaining service while placing the new water main in service.
4. Payment for furnishing and installing Ductile Iron will be made at the unit price per linear foot of pipe named in the Bid Schedule, which shall constitute full compensation for the complete operation including, but not limited to, providing all necessary pipe, fittings, restrained joints, excavation, disinfection, testing, clean-up, removal/disposal of existing pipe in trench, as-builts, restraints and accessories, dewatering, backfilling, compaction and all restoration to land/blacktop surface as required.
5. Payment shall be made only where authorized by the Owner for sewer to be removed and installed.
6. Clean-up and Testing: No separate payment will be made for clean-up and testing. All costs shall be included in the unit price bid for the item to which it pertains.

END OF SECTION

SECTION 01026-SCHEDULE OF VALUES

**SECTION 01026
SCHEDULE OF VALUES**

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work Included: Provide a detailed breakdown of the agreed Contract Sum showing values allocated to each of the various parts of the Work, as specified herein and in other provisions of the Contract Documents.

1.02 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 0 and Division 1 of these Specifications.

1.03 GENERAL

- A. For accounting purposes for the Engineer's convenience and as an aid in determining progress payments and price additions or deductions for Contract modifications, the Contractor shall furnish to the Engineer a schedule of values which shall be approved.
 - 1. The schedule of values shall apportion the total amount of the Contract price(s) for each separate item among the main features or costs that form the completed Work.
 - 2. The price breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, subcontract and overhead costs, as well as profit, and shall cover all work involved for the properly completed item and feature listed.
 - 3. Any amount claimed for subcontracts shall be supported by a similar schedule of values with the total amount shown by this price under the Contract price stated in the bid form.

1.04 SUBMITTALS

- A. Prior to first application for payment, submit a proposed Schedule of Values to the Engineer.
 - 1. Meet with the Engineer and determine additional data, if any, required to be submitted.
 - 2. Secure the Engineer's approval of the Schedule of Values prior to submitting first application for payment.

END OF SECTION

SECTION 01091-CODE AND STANDARDS

**SECTION 01091
CODES AND STANDARDS**

PART 1 GENERAL

1.01 DESCRIPTION

- A. Whenever reference is made to conforming to the standards of any technical society, organization, body, code or standard, it shall be construed to mean the latest standard, code, specification or tentative specification adopted and published at the time of advertisement for Bids. This shall include the furnishing of materials, testing of materials, fabrication and installation practices. In those cases where the Contractor's quality standards establish more stringent quality requirements, the more stringent requirement shall prevail. Such standards are made a part hereof to the extent which is indicated or intended.
- B. The inclusion of an organization under one category does not preclude that organizations' standards from applying to another category.
- C. In addition, all work shall comply with the applicable requirements of local codes, utilities and other authorities having jurisdiction.
- D. All material and equipment, for which a UL Standard, an AGA or NSF approval or an ASME requirement is established, shall be so approved and labeled or stamped. The label or stamp shall be conspicuous and not covered, painted, or otherwise obscured from visual inspection.
- E. The standards which apply to this Project are not necessarily restricted to those organizations which are listed in Article 1.02.

1.02 STANDARD ORGANIZATIONS

A. Piping and Valves

ACPA	American Concrete Pipe Association
ANSI	American National Standards Institute
API	American Petroleum Institute
ASME	American Society of Mechanical Engineers
AWWA	American Water Works Association
CISPI	Cast Iron Soil Pipe Institute
DIPRA	Ductile Iron Pipe Research Association
FCI	Fluid Controls Institute

SECTION 01091-CODE AND STANDARDS

MSS	Manufacturers Standardization Society
NCPI	National Clay Pipe Institute
NSF	National Sanitation Foundation
PPI	Plastic Pipe Institute
UPPA	Uni-Bell PVC Pipe Association

B. Materials

AASHTO	American Association of State Highway and Transportation Officials
ANSI	American National Standards Institute
ASTM	American Society for Testing and Materials

C. Painting and Surface Preparation

NACE	National Association of Corrosion Engineers
SSPC	Steel Structures Painting Council

D. Electrical and Instrumentation

AEIC	Association of Edison Illuminating Companies
AIEE	American Institute of Electrical Engineers
EIA	Electronic Industries Association
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronic Engineers
IES	Illuminating Engineering Society
IPC	Institute of Printed Circuits
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
TIA	Telecommunications Industries Association
UL	Underwriter's Laboratories
VRCI	Variable Resistive Components Institute

E. Aluminum

AA	Aluminum Association
AAMA	American Architectural Manufacturers Association

F. Steel and Concrete

ACI	American Concrete Institute
AISC	American Institute of Steel Construction, Inc.
AISI	American Iron and Steel Institute

SECTION 01091-CODE AND STANDARDS

CRSI Concrete Reinforcing Steel Institute
NRMA National Ready-Mix Association
PCA Portland Cement Association
PCI Prestressed Concrete Institute

G. Welding

ASME American Society of Mechanical Engineers
AWS American Welding Society

H. Government and Technical Organizations

AIA American Institute of Architects
APHA American Public Health Association
APWA American Public Works Association
ASA American Standards Association
ASAE American Society of Agricultural Engineers
ASCE American Society of Civil Engineers
ASQC American Society of Quality Control
ASSE American Society of Sanitary Engineers
CFR Code of Federal Regulations
CSI Construction Specifications Institute
EDA Economic Development Administration
EPA Environmental Protection Agency
FCC Federal Communications Commission
FmHA Farmers Home Administration
FS Federal Specifications
IAI International Association of Identification
ISEA Industrial Safety Equipment Association
ISO International Organization for Standardization
ITE Institute of Traffic Engineers
NBFU National Board of Fire Underwriters
(NFPA) National Fluid Power Association
NBS National Bureau of Standards
NISO National Information Standards Organization
OSHA Occupational Safety and Health Administration

H. Government and Technical Organizations Contd.

SI Salt Institute
SPI The Society of the Plastics Industry, Inc.
USDC United States Department of Commerce
WEF Water Environment Federation

SECTION 01091-CODE AND STANDARDS

I. General Building Construction

AHA	American Hardboard Association
AHAM	Association of Home Appliance Manufacturers
AITC	American Institute of Timber Construction
APA	American Parquet Association, Inc.
APA	American Plywood Association
BHMA	Builders Hardware Manufacturers Association
BIFMA	Business and Institutional Furniture Manufacturers Association
DHI	Door and Hardware Institute
FM	Factory Mutual Fire Insurance Company
HPMA	Hardwood Plywood Manufacturers Association
HTI	Hand Tools Institute
IME	Institute of Makers of Explosives
ISANTA	International Staple, Nail and Tool Association
ISDSI	Insulated Steel Door Systems Institute
IWS	Insect Screening Weavers Association
MBMA	Metal Building Manufacturers Association
NAAMM	National Association of Architectural Metal Manufacturers
NAGDM	National Association of Garage Door Manufacturers
NCCLS	National Committee for Clinical Laboratory Standards
NFPA	National Fire Protection Association
NFSA	National Fertilizer Solutions Association
NKCA	National Kitchen Cabinet Association
NWMA	National Woodwork Manufacturers Association
NWWDA	National Wood Window and Door Association
RMA	Rubber Manufacturers Association
SBC	SBCC Standard Building Code
SDI	Steel Door Institute
SIA	Scaffold Industry Association
SMA	Screen Manufacturers Association
SPRI	Single-Ply Roofing Institute
TCA	Tile Council of America
UBC	Uniform Building Code

J. Roadways

AREA	American Railway Engineering Association
DOT	Department of Transportation
SSRBC	Standard Specifications for Construction of Transportation Systems, Georgia Department of Transportation

K. Plumbing

AGA	American Gas Association
NSF	National Sanitation Foundation
PDI	Plumbing Drainage Institute

SECTION 01091-CODE AND STANDARDS

SPC SBCC Standard Plumbing Code

L. Refrigeration, Heating, and Air Conditioning

AMCA Air Movement and Control Association
ARI American Refrigeration Institute
ASHRAE American Society of Heating, Refrigeration, and Air Conditioning
Engineers
ASME American Society of Mechanical Engineers
CGA Compressed Gas Association
CTI Cooling Tower Institute
HEI Heat Exchange Institute
IIAR International Institute of Ammonia Refrigeration
NB National Board of Boilers and Pressure Vessel Inspectors
PFMA Power Fan Manufacturers Association
SAE Society of Automotive Engineers
SMACNA Sheet Metal and Air Conditioning Contractors National Association
SMC Standard Mechanical Code
TEMA Tubular Exchangers Manufacturers Association

M. Equipment

AFBMA Anti-Friction Bearing Manufacturers Association, Inc.
AGMA American Gear Manufacturers Association
ALI Automotive Lift Institute
CEMA Conveyor Equipment Manufacturers Association
CMAA Crane Manufacturers Association of America
DEMA Diesel Engine Manufacturers Association
MMA Monorail Manufacturers Association
OPEI Outdoor Power Equipment Institute, Inc.
PTI Power Tool Institute, Inc.
RIA Robotic Industries Association
SAMA Scientific Apparatus Makers Association

END OF SECTION

SECTION 01200- PROJECT MEETINGS

SECTION 01200 PROJECT MEETINGS

PART 1 GENERAL

1.1 GENERAL

- A. Owner's Project Representative will schedule physical arrangements for meetings throughout progress of Work, prepare meeting agenda with regular participant input and distribute with written notice of each meeting, preside at meetings, record minutes to include significant proceedings and decisions, and reproduce and distribute copies of minutes within 5 days after each meeting to participants and parties affected by meeting decisions.

1.2 SUBMITTALS

- A. Administrative Submittals:
1. Provide suggested agenda for pre-installation meeting and facility start-up meeting to Owner's Project Representative to include reviewing conditions of installation, preparation and installation or application procedures, and coordination with related Work and work of others.

1.3 PRECONSTRUCTION CONFERENCE

- A. Be prepared to discuss the following subjects, as a minimum:
1. Required schedules.
 2. Status of Bonds and insurance.
 3. Sequencing of critical path work items.
 4. Progress payment procedures.
 5. Project changes and clarification procedures.
 6. Use of site, access, office and storage areas, security and temporary facilities.
 7. Major product delivery and priorities.
 8. CONTRACTOR's safety plan and representative.
- B. Attendees will include:
1. Owner's representatives.
 2. CONTRACTOR's office representative.
 3. CONTRACTOR's resident superintendent.
 4. CONTRACTOR's quality control representative.
 5. Subcontractors' representatives whom CONTRACTOR may desire

or ENGINEER may request to attend.

6. ENGINEER's representatives.
7. Others as appropriate.

SECTION 01200- PROJECT MEETINGS

1.4 PRELIMINARY SCHEDULES REVIEW MEETING

- A. As set forth in General Conditions and Section 01310, PROGRESS SCHEDULES.

1.5 PROGRESS MEETINGS

- A. Owner's Project Representative will schedule regular progress meetings at site, conducted weekly to review Work progress, progress schedule, Shop Drawing and Sample submissions schedule, Application for Payment, contract modifications, and other matters that require discussion and resolution.
- B. Attendees will include:
 - 1. Owner's Project Representative and others, as appropriate.
 - 2. CONTRACTOR, Subcontractors, and Suppliers, as appropriate.
 - 3. ENGINEER's representative(s).
 - 4. Others as appropriate.
- C. ENGINEER shall prepare agenda and distribute 48 hours prior to meeting, preside at meetings, and prepare and distribute minutes of proceedings to all parties.
- D. CONTRACTOR shall provide data required and be prepared to discuss all items on agenda.
- E. Agenda:
 - 1. Agenda will include but not necessarily be limited to the following:
 - a. Revisions and/or Corrections to Previous Minutes.
 - b. Unresolved Items.
 - c. Administrative Items.
 - d. New Agenda items to be discussed.
 - e. Change Orders and review of Change Order Log.
 - f. Shop Drawings and review of Shop Drawing Log.
 - g. Request for Information (RFI) and review of RFI Log.
 - h. Request for Proposal (RFP) and review of RFP Log.
 - i. Problems, Conflicts, Observations.
 - j. Coordination with OWNER and other CONTRACTOR's.
 - k. Progress since last meeting.
 - l. Planned Progress for Next Meeting and milestone work.
 - m. Schedule Assessment / Delay.

SECTION 01200- PROJECT MEETINGS

- n. Project security and Project Safety.
- o. Testing.
- p. Subcontractors.
- q. Work Hours.
- r. Other Business and planned visitors

1.6 QUALITY CONTROL AND COORDINATION MEETINGS

- A. Scheduled by Owner's Project Representative on regular basis and as necessary to review test and inspection reports, and other matters relating to quality control of Work and work of other contractors.
- C. Attendees will include:
 - 1. CONTRACTOR.
 - 2. CONTRACTOR's designated quality control representative.
 - 3. Subcontractors and Suppliers, as necessary.
 - 4. Owner's Project Representative.
 - 5. ENGINEER's representative(s), as necessary.

1.7 PREINSTALLATION MEETINGS

- A. When required in individual Specification sections, convene at site prior to commencing Work of that section.
- B. Require attendance of entities directly affecting, or affected by, Work of that section.
- C. Notify Owner's Project Representative 5 business days in advance of meeting date.

1.8 OTHER MEETINGS

- A. In accordance with Contract Documents and as may be required by OWNER and ENGINEER.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTIONS (NOT USED)

END OF SECTION

**SECTION 01310
CONSTRUCTION SCHEDULES**

PART 1 GENERAL

1.01 SCOPE

- A. The work under this Section includes preparing, furnishing, distributing, and periodic updating of the construction program/schedules as specified herein.
- B. The purpose of the schedule is to demonstrate that the Contractor can complete the overall Project within the Contract Time, and meet all required interim milestones.

1.02 QUALITY ASSURANCE

The Project Schedule shall be developed using Microsoft Project or other approved method/program. Coordinate with the PM/CM to insure compatibility of software and computer systems.

1.03 SUBMITTALS

- A. Project Schedule
 - 1. Submit the Project Schedule within 5 days after date of the Notice to Proceed.
 - 2. The PM/CM will review schedule and will return the reviewed copy within 5 days after receipt.
 - 3. If required, resubmit within five days after receipt of a returned review copy.
- B. Updating: Submit an update of the schedule with each request for payment.
- C. Submit the number of copies required by the Contractor, plus four copies to be retained by the PM/CM.

1.04 APPROVAL

Approval of the Contractor's construction program and revisions thereto, shall in no way relieve the Contractor of any duties and obligations under the Contract. Such approval is limited to the format of the schedule and does not in any way indicate approval of, or concurrence with, the Contractor's means, methods and ability to carry out the Work.

SECTION 013110-CONSTRUCTION SCHEDULES

1.05 PRELIMINARY PROJECT SCHEDULE (PPS)

- A. The Project Schedule shall be a bar chart or time scaled network diagram showing the Contractor's proposed operations.

1.06 UPDATING

- A. Written Narrative Report: Provide a written narrative report with each update including:
 - 1. A status review of the Project.
 - 2. A discussion of problem areas including current and anticipated delay factors and their impact.
 - 3. Direct action taken, or proposed, and its effect.
 - 4. A description of revisions including:
 - a. Their effect on the schedule due to the change of scope.
 - b. Revisions in duration of activities.
 - c. Other changes that may affect the schedule.
 - 5. A listing of behind-schedule materials and equipment procurement activities.
 - 6. A listing of any significant changes in the activities and restraints occurring since the last update and why the changes were made.
- B. Critical Work List: Provide a listing of critical work to be performed prior to the next Project Coordination Meeting, specifically listing what must be done during the next 30 days to stay on the critical path schedule.
- C. At each Project Coordination Meeting, the Contractor shall present for discussion the most current update of the schedule.

END OF SECTION

SECTION 01320-CONSTRUCTIONS PHOTOGRAPHS

**SECTION 01320
CONSTRUCTION PHOTOGRAPHS**

PART 1 GENERAL

1.01 SCOPE

- A. The Contractor shall furnish all equipment and labor materials required to provide the Owner with construction photographs of the Project.
- B. Negatives shall become the property of the Owner and none of the photographs herein shall be published without express permission of the Owner.

1.02 PRE AND POST CONSTRUCTION PHOTOGRAPHS

- A. Prior to the beginning of any work, the Contractor shall take project photographs of the work area to record existing conditions.
- B. Following completion of the work, another recording shall be made showing the same areas and features as in the pre-construction photographs.
- C. All conditions which might later be subject to disagreement shall be shown in sufficient detail to provide a basis for decisions.
- D. The Contractor shall coordinate the taking of pre and post-construction photographs with the PM/CM. The PM/CM shall observe the taking of the photographs.
- E. The pre-construction photographs shall be submitted to the PM/CM within 20 calendar days after the date of receipt by the Contractor of Notice to Proceed. Post-construction photographs shall be provided prior to final acceptance of the project.

1.03 PROGRESS PHOTOGRAPHS

- A. Photographs shall be taken to record the general progress of the Project during each pay period. Photographs shall be representative of the primary work being performed at that time.
- B. The photographs shall include the date and time marking of the recording. All photographs shall be labeled on a tab connected to the bottom of the photo to indicate date and description of work shown.
- C. A minimum of 10 photographs shall be submitted with each request for payment. The

SECTION 01320-CONSTRUCTIONS PHOTOGRAPHS

view selection will be as agreed to with the PM/CM. Two prints of each photograph shall be submitted to the PM/CM.

1.04 SUBMITTALS

- A. A CD disc is an acceptable method for submitting the photographs.
- B. Construction photographs shall be submitted with each payment request. Failure to include photographs may be cause for rejection of the payment request.

END OF SECTION

SECTION 01510-TEMPORARY FACILITIES

SECTION 01510 TEMPORARY FACILITIES

PART 1 GENERAL

1.01 DESCRIPTION

A. The work of this Section shall consist of providing the following temporary facilities:

1. Water,
2. Sanitary Facilities,
3. Electrical Service

PART 2 PRODUCTS

2.01 TEMPORARY WATER

A. Drinking water shall be provided by the Contractor for his personnel and the personnel of his sub-contractors.

1. Drinking water shall be tested and approved by the State Agency as "safe drinking water suitable for human consumption".
2. Contractor shall furnish water for construction.

2.02 TEMPORARY SANITARY FACILITIES

A. Sanitary conveniences, properly screened from public observation, for the use of all persons employed on the work and beginning with the first man engaged in preliminary operations, shall be provided and maintained by the Contractor in sufficient numbers through the completion of the work.

B. Contractor shall be diligent in maintaining sanitary facilities; pumping weekly, or more often as required to protect soil and water quality.

2.03 ELECTRICAL SERVICES

A. Provide the necessary temporary electrical service connections as required by the local electrical power provider.

1. Temporary distribution wiring and boxes as needed by the construction trades working on the site(s).
2. Temporary service to field offices.

END OF SECTION

PART 3 EXECUTIONS (Not Applicable)

END OF SECTION

SECTION 01570-TRAFFIC REGULATION

SECTION 01570 TRAFFIC REGULATION

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work under this Section shall consist of maintaining and protecting traffic in the project area to the satisfaction of the applicable Local Regulatory Agencies, and the Owner.
 - 1. Unless otherwise specified within the Contract Documents, the Contractor must maintain pedestrian and vehicular traffic and permit access to businesses, factories, residences, and intersecting streets

PART 2 PRODUCTS

2.01 TRAFFIC SIGNS

- A. The Contractor shall furnish light(s) and maintain traffic signs as may be directed, or may be necessary for the safe regulation, or convenience of traffic.
 - 1. Said signs shall be as shown or noted on the Contract Drawings or elsewhere herein, or if not specified, they shall be adequate for the regulation, safety and convenience of traffic and in conformance with the applicable requirements of the State/Federal Manual on Uniform Traffic Control Devices.

2.02 BARRICADES

- A. Suitably lighted barriers or barricades shall be furnished by the Contractor and put up and maintained at all times during the night or daytime, around all open ditches, trenches, excavation, or other work potentially dangerous to traffic.
 - 1. Such barricades shall be as shown on the Contract Drawings, or if not shown, shall be constructed of 2 inch by 8 inch rough lumber, securely supported, braced and at least 3 feet high above the ground.
 - 2. Barricades shall be placed on all sides and throughout the entire length and breadth of all open ditches, trenches, excavations, or other work which must be barred to the general public.
 - 3. Barricades shall be properly painted to the satisfaction of the Local Regulatory Agency in order to retain a high degree of visibility to vehicular and pedestrian traffic.

SECTION 01570-TRAFFIC REGULATION

2.03 FLASHERS

- A. The Contractor shall furnish and securely fasten flashing units to signs, barricades, and other objects in such numbers and for such lengths of time as are required for the maintenance and protection of traffic.
1. The flashers shall be in operation during all hours between sunset and sunrise, and during periods of low visibility.
 2. Suitably lighted barricades shall be defined as barricades lit by flashers in accordance with this Section or other lighting methods approved by the Local Regulatory Agency in lieu thereof.
 3. Flashers shall be placed along the entire length of the barricades at an interval no greater than 8 feet, center to center. Flashers shall be power operated, lens directed, enclosed light units which shall provide intermittent light from 70 to 120 flashers per minute, with the period of light emittance occurring not less than 25 percent of each on-off cycle, regardless of temperature.
 4. The emitted light shall be yellow in color and the area of light on at least one face of the unit shall be not less than 12 square inches. The discernible light shall be bright enough to be conspicuously visible during the hours of darkness at a minimum distance of 800 feet from the unit under normal atmospheric conditions.
 5. For units which beam light in one or more directions, the foregoing specifications shall apply 10 degrees or more to the side and 5 degrees or more above and below the photometric axis.

2.04 TEMPORARY BRIDGING

- A. The Contractor shall include in his bid, bridging for trenches at and all street and driveway crossings in such manner as the Local Regulatory Agency may direct for the accommodation and safety of the traveling public, to provide facilities for access to private driveways for vehicular use, and to prevent blocking of intersecting traffic.
1. He shall erect suitable barriers around the excavation to prevent accidents to the public and shall place and maintain, during the night, sufficient lights on or near the work.
 2. A space of 20 feet must be left so that free access may be had at all times to fire hydrants and proper precautions shall be taken so that the entrances to fire hydrants and fire stations shall not be blocked or obstructed.

SECTION 01570-TRAFFIC REGULATION

2.05 DETOURS

- A. Temporary detours shall be constructed on the site as proposed by the Contractor and approved by the Applicable State and/or Local Authorities required by the Contract Drawings or specified elsewhere herein.
 - 1. Detours shall not have grades in excess of 10% anywhere along their lanes unless otherwise shown on the Contract Drawings. Detours shall be smooth riding.
 - 2. Suitable barricades shall be installed continuously along both sides of a detour where:
 - a. The adjacent side slope is steeper than 1 on 6 inches.
 - b. The Contractor's operations or equipment may operate within 20 feet of the detour.
 - c. Other unsafe conditions requiring them for the protection of traffic along the line of detour.

2.06 MISCELLANEOUS

- A. The Contractor may be required to employ traffic persons and/or uniform police officers as required and take other such reasonable means or precautions as the Local Regulatory Agency may direct, or as may be needed to prevent damage or injury to persons, vehicles, or other property and to minimize the inconveniences and danger to the public by his construction operations.

END OF SECTION

SECTION 01700-CONTRACT CLOSEOUT

**SECTION 01700
CONTRACT CLOSEOUT**

PART 1 GENERAL

1.01 DESCRIPTION

- A. The work of this Section consists of procedures and requirements for contract closeout, such as cleaning, restoration of project site to original condition, inspections and guarantees.

PART 2 MATERIALS (Not Applicable)

PART 3 EXECUTIONS

3.01 CLEANING UP

- A. During its progress, the work and the adjacent areas affected thereby shall be kept cleaned up and all rubbish, surplus materials, and unneeded construction equipment shall be removed and all damage repaired so that the public and property owners will be inconvenienced as little as possible.
- B. All local water courses, catch basins and drains discharge into the drinking water reservoir. No material or debris shall be washed or flowed into or be placed in watercourses, ditches, gutters, drains, catch basins, or elsewhere as a result of the Contractor's operations, such material or debris shall be entirely removed and legally disposed of during progress of the work, and the ditches, channels, drains, etc., shall be protected from spillage and kept in a neat, clean and functioning condition.
- C. On or before the completion of the work, the Contractor shall, unless otherwise especially directed or permitted in writing, remove all rubbish from any grounds which he has occupied; and shall leave the roads and all parts of the premises and adjacent property affected by his operation in a neat and satisfactory condition.
- D. Unless otherwise specifically directed or permitted in writing, the Contractor shall perform the following tasks:
 - 1. Tear down and remove all temporary buildings and structures built by him.

SECTION 01700-CONTRACT CLOSEOUT

2. Remove all temporary works, tools, and machinery or other construction equipment furnished by him.
3. Remove, acceptably disinfect, and cover all organic matter and material containing organic matter in, under, and around privies, houses, and other buildings used by him.
 - a. Subsequent to disinfection, remove or suitably neutralize disinfectant residuals from treated area(s).
4. Remove all rubbish from any grounds which he has occupied.
5. Leave roads and all parts of premises and adjacent property affected by his operations in a neat and satisfactory condition.

3.02 RESTORATION

- A. The Contractor shall restore or replace, when and as directed by the Engineer, any public or private property damaged by his work, equipment, or employees, to a condition at least equal to that existing immediately prior to the beginning of operations.
 1. To this end, the Contractor shall do as required all necessary highway or driveway, walk, and landscaping work.
 2. Suitable materials, equipment and methods shall be used for such restoration, or as required in other divisions of this Specification.
- B. In restoring the disturbed areas the Contractor shall:
 1. Replace to an equivalent depth any loam that has been removed during the excavation.
 2. Remove from the property and legally dispose of in an approved fashion all trees, brush and other items that the Contractor has cut in order to prosecute his work.
 3. Remove from the property upon completion of the work thereon, all excess materials of construction such as stone, pipe, concrete block, gravel, etc., that the Contractor may have stockpiled for use during the course of the work.
 4. Leave the land in a smooth, even condition. All ruts, holes or other undesirable grading conditions which resulted from work under this Contract shall be filled and the area so graded to eliminate ponding.
 5. All drainage course(s) shall be restored to their pre-existing condition or better.
 6. Reset all public or private monuments, iron pipes or other types of property line and geodetic markers damaged or disturbed by operations under this Contract.

This work shall be done by a licensed land surveyor at no additional cost.

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SECTION 01700-CONTRACT CLOSEOUT

7. Repair, reset or replace as directed all pipes, walls, utilities, fences, railings, stone walls, etc., and ornamental or utilitarian domestic accessories, such as, but not limited to, arbors, fireplaces, sheds and incinerators, or other surfaces structures, or property which may have been damaged, either directly or indirectly by his operations under this Contract.
8. Restore to a condition at least equal to that in which they were found immediately prior to the beginning of construction all sidewalks, gutters, driveways and curbs which have been damaged by the Contractor's operations.

3.03 FINAL INSPECTION

- A. At completion of all work, the Owner and Engineer, along with the General Contractor and each of the subcontractors shall conduct a final inspection jointly for "punch list" purposes and to determine the exact status of the project before final acceptance.

3.04 GUARANTEES

- A. The Contractor shall take notice of special guarantees required in the technical Sections of these Specifications.
 1. If, in the opinion of the Owner, any item requires excessive maintenance during guarantee periods, the item shall be considered defective and the Contractor shall correct the defects.
 2. All defects so corrected shall be at the expense of the Contractor.

END OF SECTION

**SECTION 01710
CLEANING**

PART 1 GENERAL

1.01 SCOPE

This Section covers the general cleaning which the Contractor shall be required to perform both during construction and before final acceptance of the Project unless otherwise shown on the Drawings or specified elsewhere in these Specifications.

1.02 QUALITY ASSURANCE

- A. Daily, and more often if necessary to conduct inspections verifying that requirements of cleanliness are being met.
- B. In addition to the standards described in this Section, comply with all pertinent requirements of governmental agencies having jurisdiction.

1.03 HAZARDOUS MATERIAL AND WASTE

- A. The Contractor shall handle hazardous waste and materials in accordance with applicable local, state, and federal regulations. Waste shall also be disposed of in approved landfills as applicable.
- B. The Contractor shall prevent accumulation of wastes which create hazardous conditions.
- C. Burning or burying rubbish and waste materials on the site shall not be allowed.
- D. Disposal of hazardous wastes or materials into sanitary or storm sewers shall not be allowed.

1.04 DISPOSAL OF SURPLUS MATERIALS

Unless otherwise shown on the Drawings, specified or directed, the Contractor shall legally dispose off the site all surplus materials and equipment from demolition and shall provide suitable off-site disposal site, or utilize a site designated by the Owner.

SECTION 01710-CLEANING

PART 2 PRODUCTS

2.01 CLEANING MATERIALS AND EQUIPMENT

Provide all required personnel, equipment and materials needed to maintain the specified standard of cleanliness.

2.02 COMPATIBILITY

Use only the cleaning materials, methods and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material or as approved by the PM/CM.

PART 3 EXECUTION

3.01 PROGRESS CLEANING

A. General

1. Do not allow the accumulation of scrap, debris, waste material and other items not required for construction of this Work.
2. Daily, completely remove all scrap, debris and waste material from the job site.
3. Provide adequate storage for all items awaiting removal from the job site, observing all requirements for fire protection and protection of the environment.

B. Site

1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris and waste material. Remove all such items to the place designated for their storage.
2. Restack materials stored on site weekly.
3. At all times maintain the site in a neat and orderly condition which meets the approval of the PM/CM.

C. Structures

1. Weekly, and more often if necessary, inspect the structures and pick up all scrap,

SECTION 01710-CLEANING

- debris and waste material. Remove all such items to the place designated for their storage.
2. Weekly, and more often if necessary, sweep all interior spaces clean. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by using a hand-held broom.
 3. As required preparatory to installation of successive materials, clean the structures or pertinent portions as recommended by the manufacturer of the successive material.
 4. Following the installation of finish floor materials, clean the finish floor daily. "Clean", for the purpose of this paragraph, shall be interpreted as meaning free from all foreign material which, in the opinion of the PM/CM, may be injurious to the finish floor material.
 5. Schedule cleaning operation so that dust and other contaminants resulting from cleaning operations will not fall on wet, recently painted surfaces.

3.02 FINAL CLEANING

- A. Definitions: Unless otherwise specifically specified, "clean" for the purpose of this Article shall be interpreted as the level of cleanliness generally provided by commercial building maintenance subcontractors using commercial quality building maintenance equipment and materials.
- B. General: Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris and waste. Conduct final progress cleaning as described in 3.01 above.
- C. Site: Unless otherwise specifically directed by the PM/CM, hose down all paved areas on the site and all public sidewalks directly adjacent to the site; rake clean other surfaces of the grounds. Completely remove all resultant debris.
- D. Structures
 1. Remove all traces of soil, waste material, splashed material, and other foreign matter to provide a uniform degree of exterior cleanliness. Visually inspect all exterior surfaces and remove all traces of soil, waste material, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. If necessary to achieve a uniform degree of exterior cleanliness, hose down the exterior of the structure. In the event of stubborn stains not removable with water, the PM/CM may require light sandblasting or other cleaning at no additional cost to the Owner.

SECTION 01710-CLEANING

2. Visually inspect all interior surfaces and remove all traces of soil, waste material, smudges and other foreign matter. Remove all paint droppings, spots, stains and dirt from finished surfaces.
 3. Clean all glass inside and outside.
 4. Polish all surfaces requiring the routine application of buffed polish. Provide and apply polish as recommended by the manufacturer of the material being polished.
- E. Post-Construction Cleanup: All evidence of temporary construction facilities, haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other evidence of construction, shall be removed as directed by the PM/CM.
- F. Restoration of Landscape Damage: Any landscape feature damaged by the Contractor shall be restored as nearly as possible to its original condition at the Contractor's expense. The PM/CM will decide what method of restoration shall be used.
- G. Timing: Schedule final cleaning as approved by the PM/CM to enable the Owner to accept the Project.

3.03 CLEANING DURING OWNER'S OCCUPANCY

Should the Owner occupy the Work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning of the occupied spaces shall be as determined by the PM/CM in accordance with the Supplementary Conditions of the Contract Documents.

END OF SECTION

SECTION 01720-PRODUCT HANDLING

**SECTION 01720
PRODUCT HANDLING**

PART 1 GENERAL

1.01 DESCRIPTION

- A. Work included: Protect products scheduled for use in the Work by means including, but not necessarily limited to, those described in this Section.

1.02 QUALITY ASSURANCE

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

1.03 MANUFACTURER'S RECOMMENDATIONS

- A. Comply with manufacturers' recommendations on product handling, storage and protection.

1.04 PACKAGING

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

1.05 PROTECTION

- A. Mechanical equipment subject to damage by the atmosphere if stored outdoors, shall be stored in a building with a controlled environment. The building may be a temporary structure on the site or a building off the site.
- B. PVC pipe shall be covered to protect it from UV degradation.

SECTION 01720-PRODUCT HANDLING

1.06 REPAIRS AND REPLACEMENTS

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

END OF SECTION

SECTION 01730-PROJECT RECORD DOCUMENTS

**SECTION 01730
PROJECT RECORD DOCUMENTS**

PART 1 GENERAL

1.01 SCOPE

- A. The work under this Section includes, but is not necessarily limited to, the maintenance, recording and submittal of project record documents as herein specified.
- B. Maintain at the site for the Owner one record copy of:
 - 1. Drawings,
 - 2. Specifications,
 - 3. Change orders and other modifications to the Contract,
 - 4. Engineer field orders or written instructions,
 - 5. Reviewed shop drawings, product data and samples,
 - 6. Field test records.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

- A. Storage
 - 1. Store documents and samples apart from documents used for construction.
 - 2. Provide files and racks for storage of documents.
 - 3. Provide locked cabinet or secure storage space for storage of samples.
- B. File documents and samples in accordance with format of these Specifications.
- C. Maintenance
 - 1. Maintain documents in a clean, dry, legible condition and in good order.
 - 2. Do not use record documents for construction purposes.
- D. Make documents and samples available at all times for inspection by Engineer.

1.03 RECORDING

- A. Label each document "PROJECT RECORD" in neat, large printed letters.
- B. Recording
 - 1. Record information concurrently with construction progress.
 - 2. Do not conceal any work until required information is recorded.

SECTION 01730-PROJECT RECORD DOCUMENTS

- C. Drawings: Record (or As-built) CADD drawings shall be as required per Rockdale Water and Wastewater Standards and Specifications Section 1.04.

Include the following:

1. Depths of various elements of foundation in relation to finish first floor datum.
2. Horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
3. Location of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
4. Field changes of dimension and detail.
5. Changes made by Requests for Information (RFI), field order or by change order.
6. Details not on original Contract Drawings.

- D. Specifications: Legibly mark each section to record:

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by Requests for Information (RFI), field order or by change order.

1.04 SUBMITTAL

- A. At Contract closeout, deliver record documents to Engineer for the Owner.

- B. Accompany submittal with transmittal letter, in duplicate, containing:

1. Date,
2. Project title and number,
3. Contractor's name and address,
4. Title and number of each record document,
5. Signature of Contractor or Contractor's authorized representative.

END OF SECTION

SECTION 02100 EROSION AND SEDIMENTATION CONTROL

DIVISION 2 – SITEWORK

SECTION 02100 EROSION AND SEDIMENTATION CONTROL

PART 1 GENERAL

1.01 SCOPE

A. Submittals and Permits

1. The Designer shall prepare a description, drawings and schedule for proposed temporary and permanent erosion and sedimentation controls. The description and drawings shall meet the requirements of the Georgia Erosion and Sedimentation Act of 1975 as amended in 1989 and local soil erosion and sedimentation control ordinances. The Owner will acquire Land Disturbance Permits from the appropriate authority and shall pay any fees for said permits. All fines imposed for improper erosion and the Contractor shall pay sedimentation control.
2. Land disturbance activity shall not commence until the Land Disturbance Permit is issued.

B. 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.

SECTION 02100 EROSION AND SEDIMENTATION CONTROL

C. Implementation

1. The Contractor is solely responsible for the control of erosion within the Project site and the prevention of sedimentation from leaving the Project site or entering waterways.
2. The Contractor shall install temporary and permanent erosion and sedimentation controls, which will ensure that runoff from the disturbed area of the Project site, shall pass through a filter system before exiting the Project site.
3. The Contractor shall provide temporary and permanent erosion and sedimentation control measures to prevent silt and sediment from entering the reels
4. The Contractor shall limit land disturbance activity to those areas shown on the Drawings.
5. The Contractor shall maintain the disturbed area on the entire site until acceptance of the Project at no additional cost to the Owner. Maintenance shall include mulching, re-seeding, clean-out of sediment barriers and sediment ponds, replacement of washed-out or undermined rip rap and erosion control materials, to the satisfaction of the Engineer.
6. All fines imposed for improper erosion and the Contractor shall pay sedimentation control.

D. 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.

E. 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.

SECTION 02100 EROSION AND SEDIMENTATION CONTROL

- 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, seed free 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.

PART 3 EXECUTION

3.01 GENERAL

Standards: 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 in 1989, 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.

SECTION 02100 EROSION AND SEDIMENTATION CONTROL

- 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.
- 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 seedlings. 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 seeding, 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 daily 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 and Section 02933 of these Specifications.
 - 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.

SECTION 02100 EROSION AND SEDIMENTATION CONTROL

3.04 GRASSING

A. General

1. All references to grassing, unless noted otherwise, shall relate to establishing permanent vegetative cover.
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. 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.

END OF SECTION 02100

SECTION 02110 CLEARING AND GRUBBING

SECTION 02110 CLEARING AND GRUBBING

PART 1 GENERAL

1.1 DESCRIPTION

- A. Work included: Clear and grub to the limits required by the Contract Documents. Clear and grub the areas to be occupied by the facilities to be constructed including all areas to be excavated, filled, paved or planted as shown on the Drawings and as specified herein.

1.2 RELATED WORK

- A. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.

1.3 DEFINITIONS

- A. Clearing: Clearing shall consist of the cutting and felling of trees and vegetation as per Section 3.03 of this Technical Specification and the satisfactory disposal of trees, limbs, rubbish, structures and other vegetation.
- B. Grubbing: Grubbing shall consist of the removal and disposal of roots, root mat, stumps, logs, footings, slabs, and other objectionable matter which could affect the quality of the subgrade or borrow material.
- C. Topsoil: Topsoil material is defined in Section 02210 - Site Grading.
- D. Disposal: Disposal of cleared and grubbed material shall be performed as indicated in 3.5 of this Technical Specification.

1.4 QUALITY ASSURANCE

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

SECTION 02110 CLEARING AND GRUBBING

1.5 COORDINATION

- A. Coordinate clearing and grubbing of the easements with the Owner.
 - 1. Obtain permission if working outside of the easement lines.

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.
- B. Flag limits of clearing.

3.2 PROTECTION

- A. Only trees and brush within the limits of the easement shall be cleared.
 - 1. Protect trees and shrubs, where indicated to remain, by providing a fence around the tree or shrub at its drip line and of sufficient height so trees and shrubs will not be damaged.
 - 2. All areas not designated to be cleared shall be protected from damage.
 - 3. Clearing operations shall be conducted so that cut trees are felled within the easement boundaries and existing trees designated to remain, are protected from damage.
 - 4. Protect control points, benchmarks and existing work.
 - 5. Maintain access to the site at all times.

3.3 CLEARING AND GRUBBING

- A. Within the area to be cleared:
 - 1. Fell trees and brush.
 - 2. Chip all wood and waste.
 - 3. Grub out all roots 1 inch in diameter and larger to a depth of at least 12 inches below the existing ground surface.
 - 4. Remove all stumps and other matter that cannot be removed by a root rake. Remove stumps to a minimum depth of 2 ft. below grade.

SECTION 02110 CLEARING AND GRUBBING

3.4 CONSERVATION OF TOPSOIL

- A. After the area has been cleared of vegetation, strip the existing top-soil.
 - 1. Stockpile in an area clear of new construction.
 - 2. Maintain the stockpile in a manner which will not obstruct the natural flow of drainage.
 - a. Maintain stockpile free from debris and trash.
 - b. Keep top-soil damp to prevent dust.
 - c. Place hay bales around stockpile.

3.5 REMOVAL AND DISPOSAL

- A. All debris, wood waste, trees, shrubs, brush, roots, stumps and etc. cleared and grubbed from the site shall be removed from the site and disposed of in accordance with Federal, State, and local codes.
 - 1. Burning and/or burial of cleared and grubbed material on the site shall not be permitted.
 - 2. Depressions remaining from the removal of stumps below finish grade shall be backfilled with compacted fill to the approximate density of the surrounding soil.

3.6 UTILITIES

- A. Protect existing utilities indicated or made known.
 - 1. Coordinate with utility companies and agencies as required.

END OF SECTION

SECTION 02160-SUPPORT OF EXCAVATION

**SECTION 02160
SUPPORT OF EXCAVATION**

PART 1 GENERAL

1.1 DESCRIPTION

1. Provide excavation support as required by the Contract Documents.
 1. In general this work shall consist of furnishing and placing timber and/or steel sheeting and shoring of the types and dimensions required for proper excavation support.

1.2 DEFINITIONS

1. Shoring shall mean the use of a steel trench box, steel sheeting, or timber sheeting braced as required.
2. Timber sheeting shall mean the use of tongue and groove wood sheeting or steel soldier beams with wood lagging braced as required.
3. Steel sheeting shall mean the use of steel sheet pilings with interlocking joints, braced by steel members as required.

1.3 RELATED WORK

1. Documents affecting the work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions and Sections in Division 1 of these Specifications.
- B. As established in the General Conditions of the Contract, the Contractor is solely responsible for means and methods of construction and for the sequence and procedures to be used.

1.4 QUALITY ASSURANCE

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

SECTION 02160-SUPPORT OF EXCAVATION

- A. The Contractor shall not perform excavations in unstable ground and shall employ a positive means of containing the unstable ground behind shoring, before excavation may proceed.
- 2. Employ a qualified professional engineer, properly permitted to provide such services at the location of the work, to design the shoring system and to inspect and report on the quality of its construction.
- 3. Comply with all pertinent requirements of governmental agencies having jurisdiction.

1.5 STANDARDS

- 1. The following Standards form a part of this Specification as referenced:
 - 1. ASTM A328, Specification for Steel Sheet Piling
 - 2. State of Georgia DOT Standard Specifications.
 - 3. Code of Federal Regulations (CFR), 29 CFR 1926, OSHA Standards - Excavation.

1.6 SUBMITTALS

- 1. Submit shoring design to Engineer for record purposes only.

PART 2 PRODUCTS

2.1 DESIGN

- A. Design a shoring system which will safely and adequately prevent collapse of adjacent materials and which will permit construction of the Work to the arrangement shown on the Drawings.
- B. All shoring systems shall be designed so as to support all vertical and lateral loads and other surcharge loads imposed on the system during construction, including earth pressures, utility loads and other surcharged loads in order to provide safe and expeditious construction of the permanent structures and prevent movement and/or damage to adjacent soil, buildings, structures and utilities.
- C. Secure all needed approvals, including those of governmental agencies having jurisdiction and of adjacent property owners if required, at no additional cost to the Owner.

SECTION 02160-SUPPORT OF EXCAVATION

2.2 MATERIALS

- A. Material shall include, but not necessarily be limited to sheet piling, soldier piles, lagging, bracing members such as wales, struts, shores and tieback anchors.
- B. Lumber for Timber Sheeting and Shoring.
 - 1. Shall be sound Spruce, Douglas Fir, white or yellow Lodgepole, Ponderosa pine, or western hemlock plank, planed on one side and either tongue and grooved or splined.
- C. Steel Sheeting
 - 1. Shall be of approved section and quality, either new or secondhand, conforming to the requirements of ASTM A328.

PART 3 EXECUTION

3.1 SURFACE CONDITIONS

- A. Examine the areas and conditions under which the work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the work. Do not proceed until unsatisfactory conditions are corrected.

3.2 INSTALLATION

- A. Construct and install the shoring system in strict accordance with the design engineer's requirements.
 - 1. When using soldier piles and lagging, where boulders or cobbles are encountered, soldier piles shall be installed in pre-augured holes over the full depth as required to prevent misalignment and damage.
 - 2. Vibration monitoring during installation and extraction of braced excavation shall be provided wherever the excavation is within 100 feet of existing structures.

3.3 SHEETING REMOVED

- A. All sheeting not left in place shall be carefully removed in such manner as to not endanger the construction or other structures, utilities, or property.

SECTION 02160-SUPPORT OF EXCAVATION

1. All voids left or caused by withdrawal shall be immediately refilled with approved material, and compacted with tools especially adapted to that purpose.
2. Vibratory extraction methods shall be used only when it can be demonstrated that settling of pipe and structures will not occur. If such settling occurs, it shall be corrected at the Contractor's expense.

3.4 TRENCH BOX OR SHIELD

- A. Use of a trench box or shield shall not relieve the Contractor of any liability for damages to persons or property growing out of a failure of the Contractor to leave in place sufficient sheeting and bracing to prevent the caving or moving of the ground or disturbance of the completed work.
 1. Care shall be taken, when a trench box or shield is moved ahead, so as not to pull apart the joints of pipe already placed or leave voids around the pipe wall.
 2. At no time shall the portable box or shield be allowed to be positioned below the spring line of the pipe.
 3. The width of the trench box or shield shall be such that a minimum 6 inch horizontal clearance is maintained between the pipe and shield at all times. The minimum width of the trench shall be in accordance with plans and specifications.
 4. If the pipe has moved, it shall be reset to the proper line and grade.
 5. Any voids between the trench box or shield and the undisturbed trench wall within the pipe zone (bottom of trench to top of cover material) shall be filled with crushed stone, bank run gravel, or approved material, immediately after the box or shield is positioned.

END OF SECTION

SECTION 02227-BORE AND JACK CASINGS

**SECTION 02227
BORE AND JACK CASINGS**

PART 1 GENERAL

1.01 SCOPE

- A. The work covered by this Section includes furnishing all labor, materials and equipment required to bore and jack casings and to properly complete pipeline construction as described herein and/or shown on the Drawings.
- B. Supply all materials and perform all work in accordance with applicable American Society for Testing and Materials (ASTM), American Water Works Association (AWWA), American National Standards Institute (ANSI) or other recognized standards. Latest revisions of all standards are applicable. If requested by the Owner, submit evidence that manufacturer has consistently produced products of satisfactory quality and performance over a period of at least two years.

1.02 SUBMITTALS

- A. Submit shop drawings, product data and installation experience.
- B. Material Submittals: The Contractor shall provide shop drawings and other pertinent specifications and product data as follows:
 - 1. Shop drawings for casing pipe showing sizes and connection details.
 - 2. Design mixes for concrete and grout.
 - 3. Casing Spacers.
- C. Experience Submittals: Boring and jacking casings is deemed to be specialty contractor work. If the Contractor elects to perform the work, the Contractor shall provide evidence as required by the General Conditions. A minimum of five continuous years of experience in steel casing construction is required of the casing installer. Evidence of this experience must be provided with the shop drawings for review by the Owner.

1.03 STORAGE AND PROTECTION

SECTION 02227-BORE AND JACK CASINGS

All materials shall be stored and protected in accordance with the manufacturer's recommendations and as approved by the Owner.

PART 2 PRODUCTS

2.01 MATERIALS AND CONSTRUCTION

A. Casing

1. The casing shall be new and unused pipe. The casing shall be made from steel plate having minimum yield strength of 35,000 psi. The steel plate shall also meet the chemical requirements of ASTM A 36.
2. The thickness of casing shown in paragraph B. below is minimum thickness. Actual thickness shall be determined by the casing installer, based on an evaluation of the required forces to be exerted on the casing when jacking. Any buckling of the casing due to jacking forces shall be repaired at no additional cost to the Owner.
3. The diameters of casing shown in paragraph B. below and shown on the Drawings are minimum. Larger casings, with the Owner's approval, may be provided at no additional cost to the Owner, for whatever reasons the Contractor may decide, whether casing size availability, line and grade tolerances, soil conditions, etc.

B. Casing Sizes

UNDER HIGHWAYS		
Pipe Diameter, inches	Casing Diameter, inches	Wall Thickness, inches
8	16	0.200

C. Casing Spacers: Casing spacers shall meet one of the following requirements:

1. Casing spacers shall be flanged, bolt-on style with a two-section stainless steel shell lined with a PVC liner, minimum 0.09-inch thick also having a hardness of 85-90 durometer. Runners shall be attached to stainless steel risers which shall be properly welded to the shell. The height of the runners and risers shall be

SECTION 02227-BORE AND JACK CASINGS

manufactured such that the pipe does not float within the casing. Casing spacers shall be Cascade Waterworks Manufacturing Company or Advanced Products & Systems, Inc.

2. Casing spacers shall be a two-section, flanged, bolt on style constructed of heat fused PVC coated steel, minimum 14 gauge band and 10 gauge risers, with 2-inch wide glass reinforced polyester insulating skids, heavy duty PVC inner liner, minimum 0.09-inch thick having a hardness of 85-90 durometer, and all stainless steel or cadmium plated hardware shall be Pipeline Seal and Insulator, Inc.
- D. Carrier Pipe: Carrier pipes shall meet requirements as specified in Section 02730 of these Specifications.
 - E. Surface Settlement Markers: Surface settlement markers within pavement areas shall be P.K. nails. Surface settlement markers within non-paved areas shall be wooden hubs.

2.02 EQUIPMENT

- A. A cutting head shall be attached to a continuous auger mounted inside the casing pipe.
- B. On casing pipe for gravity sewer over 60 feet in length, the installation equipment shall include a steering head and a grade indicator.
- C. The steering head shall be controlled manually from the bore pit. The grade indicator shall consist of a water level attached to the casing which would indicate the elevation of the front end of the casing or some other means for grade indication approved by the Owner.

PART 3 EXECUTION

3.01 GENERAL

- A. Interpretation of soil investigation reports and data, investigating the site and determination of the site soil conditions prior to bidding is the sole responsibility of the Contractor. The appropriate authority having jurisdiction over the site must approve any subsurface investigation by the Bidder or Contractor. Rock and/or water, if encountered, shall not entitle the Contractor to additional compensation.
- B. Casing construction shall be performed so as not to interfere with, interrupt or endanger roadway surface and activity thereon, and minimize subsidence of the surface, structures, and utilities above and in the vicinity of the casing. Support the ground

SECTION 02227-BORE AND JACK CASINGS

continuously in a manner that will prevent loss of ground and keep the perimeters and face of the casing, passages and shafts stable. The Contractor shall be responsible for all settlement resulting from casing operations and shall repair and restore damaged property to its original or better condition at no cost to the Owner.

- C. Face Protection: The face of the excavation shall be protected from the collapse of the soil into the casing.

- D. Casing Design: Design of the bore pit and required bearing to resist jacking forces is the responsibility of the Contractor. The excavation method selected shall be compatible with expected ground conditions. The lengths of the casing shown on the Drawings are the minimum lengths required. The length of the casing may be extended for the convenience of the Contractor, at no additional cost to the Owner. Due to restrictive right-of-way and construction easements, boring and jacking casing lengths less than the nominal 20-foot length may be necessary.

- E. Highway Crossings
 - 1. The Contractor shall be held responsible and accountable for the coordinating and scheduling of all construction work within the highway right-of-way.
 - 2. Work along or across the highway department rights-of-way shall be subject to inspection by such highway department.
 - 3. All installations shall be performed to leave free flows in drainage ditches, pipes, culverts or other surface drainage facilities of the highway, street or its connections.
 - 4. No excavated material or equipment shall be placed on the pavement or shoulders of the roadway without the express approval of the highway department.
 - 5. In no instance will the Contractor be permitted to leave equipment (trucks, backhoes, etc.) on the pavement or shoulder overnight. Construction materials to be installed, which are placed on the right-of-way in advance of construction, shall be placed in such a manner as not to interfere with the safe operation of the roadway.
 - 6. The Contractor shall be responsible for providing the Owner sufficient information in a timely manner for obtaining a blasting permit. Delays in obtaining the permit due to insufficient information furnished or review time by the DOT will not be grounds for additional compensation or delay claims.

SECTION 02227-BORE AND JACK CASINGS

3.02 GROUNDWATER CONTROL

- A. The Contractor shall control the groundwater throughout the construction of the casing.
- B. Methods of dewatering shall be at the option and responsibility of the Contractor. Maintain close observation to detect settlement or displacement of surface facilities due to dewatering. Should settlement or displacement be detected, notify the Engineer immediately and take such action as necessary to maintain safe conditions and prevent damage.
- C. When water is encountered, provide and maintain a dewatering system of sufficient capacity to remove water on a 24 hour basis keeping excavations free of water until the backfill operation is in progress. Dewatering shall be performed in such a manner that removal of soil particles is held to a minimum. Dewater into a sediment trap and comply with requirements specified in Section 02100 of these Specifications.

3.03 SAFETY

- A. Provide all necessary bracing, bulkheads and shields to ensure complete safety to all traffic, persons and property at all times during the work. Perform the work in such a manner as to not permanently damage the roadbed or interfere with normal traffic over it.
- B. Observe all applicable requirements of the regulations of the authorities having jurisdiction over this site. Conduct the operations in such a manner that all work will be performed below the level of the roadbed.
- C. Perform all activities in accordance with the Occupational Safety and Health Act of 1970 (PL-596), as amended, applicable regulations of the Federal Government, OSHA 29CFR 1926 and applicable criteria of ANSI A10.16-81, "Safety Requirements for Construction of Tunnel Shafts and Caissons".

3.04 SURFACE SETTLEMENT MONITORING

- A. Provide surface settlement markers, placed as specified and as directed by the Owner. The Contractor shall place settlement markers outside of pavement area, along the centerline of the casing at 20 foot intervals and offset 10 feet each way from the centerline of the tunnel. Markers shall also be placed at each shoulder of the roadway, at each edge of pavement, at the centerline of the pavement and at 10 and 25 feet in each direction from the centerline of the casing. Tie settlement markers to bench marks and indices sufficiently removed as not to be affected by the casing operations.

SECTION 02227-BORE AND JACK CASINGS

- B. Make observations of surface settlement markers, placed as required herein, at regular time intervals acceptable to the Owner. In the event settlement or heave on any marker exceeds 1-inch, the Contractor shall immediately cease work and using a method approved by the Owner and the authority having jurisdiction over the project site, take immediate action to restore surface elevations to that existing prior to start of casing operations.
- C. Take readings and permanently record surface elevations prior to start of dewatering operations and/or shaft excavation. The following schedule shall be used for obtaining and recording elevation readings: all settlement markers, once a week; all settlement markers within 50 feet of the casing heading, at the beginning of each day; more frequently at the Owner's direction if settlement is identified. Make all elevation measurements to the nearest 0.01 foot.
- D. The Contractor shall cooperate fully with jurisdictional personnel. Any settlement shall be corrected by, and at the expense of, the Contractor.
- E. Promptly report any settlement and horizontal movement immediately to the Owner and take immediate remedial action.

3.05 BORING AND JACKING

- A. Shaft
 - 1. Conduct boring and jacking operations from a shaft excavated at one end of the section to be bored. Where conditions and accessibility are suitable, place the shaft on the downstream end of the bore.
 - 2. The shaft shall be rectangular and excavated to a width and length required for ample working space. If necessary, sheet and shore shaft properly on all sides. Shaft sheeting shall be timber or steel piling of ample strength to safely withstand all structural loadings of whatever nature due to site and soil conditions. Keep preparations dry during all operations. Perform pumping operations as necessary.
 - 3. The bottom of the shaft shall be firm and unyielding to form an adequate foundation upon which to work. In the event the shaft bottom is not stable, excavate to such additional depth as required and place a gravel sub-base or a concrete sub-base if directed by the Owner due to soil conditions.
- B. Jacking Rails and Frame
 - 1. Set jacking rails to proper line and grade within the shaft. Secure rails in place to prevent settlement or movement during operations. The jacking rails shall cradle

SECTION 02227-BORE AND JACK CASINGS

and hold the casing pipe on true line and grade during the progress of installing the casing.

2. Place backing between the heels of jacking rails and the rear of the shaft. The backing shall be adequate to withstand all jacking forces and loads.
3. The jacking frame shall be of adequate design for the magnitude of the job. Apply thrust to the end of the pipe in such a manner to impart a uniformly balanced load to the pipe barrel without damaging the joint ends of the pipe.

The dry auger boring method without jetting, sluicing or wet boring shall accomplish C.
Boring and jacking of casing pipes.

- D. Auger the hole and jack the casing through the soil simultaneously.
- E. Bored installations shall have a bored-hole diameter essentially the same as the outside diameter of the casing pipe to be installed.
- F. Execute boring ahead of the casing pipe with extreme care, commensurate with the rate of casing pipe penetration. Boring may proceed slightly in advance of the penetrating pipe and shall be made in such a manner to prevent any voids in the earth around the outside perimeter of the pipe. Make all investigations and determine if the soil conditions are such as to require the use of a shield.
- G. As the casing is installed, check the horizontal and vertical alignment frequently. Make corrections prior to continuing operation. For casing pipe installations over 100 feet in length, the auger shall be removed and the alignment and grade checked at minimum intervals of 60 feet.
- H. Any casing pipe damaged in jacking operations shall be repaired, if approved by the Owner, or removed and replaced at Contractor's own expense.
- I. Lengths of casing pipe, as long as practical, shall be used except as restricted otherwise. Joints between casing pipe sections shall be butt joints with complete joint penetration, single groove welds, for the entire joint circumference, in accordance with AWS recommended procedures. Prior to welding the joints, the Contractor shall ensure that both ends of the casing sections being welded are square.
- J. The Contractor shall prepare a contingency plan, which will allow the use of a casing lubricant, such as bentonite, in the event excessive frictional forces jeopardize the successful completion of the casing installation.

SECTION 02227-BORE AND JACK CASINGS

- K. Once the jacking procedure has begun, it should be continued without stopping until completed, subject to weather and conditions beyond the control of the Contractor.
- L. Care shall be taken to ensure that casing pipe installed by boring and jacking method will be at the proper alignment and grade.
- M. The Contractor shall maintain and operate pumps and other necessary drainage system equipment to keep work dewatered at all times.
- N. Adequate sheeting, shoring and bracing for embankments, operating pits and other appurtenances shall be placed and maintained to ensure that work proceeds safely and expeditiously. Upon completion of the required work, the sheeting, shoring and bracing shall be left in place, cut off or removed, as designated by the Engineer.
- O. Trench excavation, all classes and type of excavation, the removal of rock, muck, debris, the excavation of all working pits and backfill requirements are included under this Section.
- P. All surplus material shall be removed from the right-of-way and the excavation finished flush with the surrounding ground.
- Q. Grout backfill shall be used for unused holes or abandoned pipes.

3.06 VENTILATION AND AIR QUALITY

Provide, operate and maintain for the duration of casing project a ventilation system to meet safety and OSHA requirements.

3.07 ROCK EXCAVATION

- A. In the event that rock is encountered during the installation of the casing pipe which, in the opinion of the Owner, cannot be removed through the casing, the Owner may authorize the Contractor to complete the crossing by a method established in a change order.
- B. At the Contractor's option, the Contractor may continue to install the casing and remove the rock through the casing at no additional cost to the Owner.

3.08 INSTALLATION OF PIPE

- A. After construction of the casing is complete, and has been accepted by the Owner, install the pipeline in accordance with the Drawings and Specifications.

SECTION 02227-BORE AND JACK CASINGS

- B. Check the alignment and grade of the casing and prepare a plan to set the pipe at proper alignment, grade and elevation, without any sags or high spots.
- C. The pipe shall be supported within the casing by use of casing spacers sized to limit radial movement to a maximum of 1-inch. Provide a minimum of two casing spacers per nominal length of pipe. Casing spacers shall be attached to the pipe at maximum 10 foot intervals.
- D. Close the ends of the casing with 4-inch brick walls.

3.09 SHEETING REMOVAL

Remove sheeting used for shoring from the shaft and off the job site. The removal of sheeting, shoring and bracing shall be done in such a manner as not to endanger or damage either new or existing structures, private or public properties and also to avoid cave-ins or sliding in the banks.

3.10 INTERSTATE RESTORATION

When boring and jacking operations encroach upon the right-of-ways of the federal interstate system, the Contractor shall restore all screening trees with seedlings of like species.

END OF SECTION

SECTION 02575-REMOVING AND REPLACING PAVEMENT

**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 sewers, manholes and all other sewer appurtenances and structures.

1.02 SUBMITTALS

- A. Provide certificates stating that materials supplied comply with Specifications. The asphalt producer and the Contractor shall sign certificates.
- B. Traffic paint manufacturer's application instructions and a description and other data relative to the Contractor's application equipment and methods shall be submitted to the Engineer for approval.

1.03 CONDITIONS

- A. Weather Limitations
 - 1. Apply bituminous prime and tack coats only when the ambient temperature in the shade has been at least 50 degrees F for 12 hours immediately prior to application.
 - 2. Do not conduct paving operations when surface is wet or contains excess of moisture, which would prevent uniform distribution and required penetration.
 - 3. 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.
 - 4. Place base course when air temperature is above 35 degrees F and rising.
- B. Grade Control: Establish and maintain the required lines and grades for each course during construction operations.

SECTION 02575-REMOVING AND REPLACING PAVEMENT

PART 2 PRODUCTS

2.01 MATERIALS AND CONSTRUCTION

- A. 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.
- B. 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.
- C. Binder Course: The binder course of all paved roadways shall conform to the requirements of Section 400, Type "B" of the Georgia Department of Transportation Standard Specifications.
- D. Surface Course: The surface course for all pavements, including prime or tack coat when required by the Engineer, shall conform to the requirements of Section 400, Type "F" of the Georgia Department of Transportation Standard Specifications.
- E. 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 in Section 02730 of these Specifications.
- F. Special Surfaces: Where driveways or roadways are disturbed or damaged which are constructed of specialty type surfaces, e.g., brick, stone or decorative sidewalks, these driveways and sidewalks shall be restored utilizing similar, if not original, materials. 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

- A. 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 Engineer. 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.

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- B. **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.
- C. **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.
- D. **Asphaltic Concrete Base, Binder and Surface Course:** Asphaltic concrete base, binder 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, and 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 Engineer. After compaction, the black base shall be smooth and true to established profiles and sections. Apply and compact binder and the surface course in a manner approved by the Engineer. 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.
- E. **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.
- F. **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, up to the existing pavement surface to

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provide support for the steel running plates. All pavement shall be replaced within seven calendar days of its removal.

PART 3 EXECUTION

3.01 REMOVING PAVEMENT

- A. General: Remove existing pavement as necessary for installing the pipe line and appurtenances.
- B. Marking: Before removing any pavement, mark the pavement neatly paralleling pipe lines and existing street lines. Space the marks the width of the trench.
- C. 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.
- D. Machine Pulling: Do not pull pavement with machines until the pavement is completely broken and separated from pavement to remain.
- E. 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.
- F. Sidewalk: Remove and replace any sidewalks disturbed by construction for their full width and to the nearest undisturbed joint.
- G. Curbs: Tunnel under or remove and replace any curb disturbed by construction to the nearest undisturbed joint.

3.02 REPLACING PAVEMENT

- A. Preparation of Subgrade: Upon completion of backfilling and compaction of the backfill, arrange to have the compaction tested by an independent testing laboratory selected by the Owner. After compaction testing has been satisfactorily completed, replace all pavements, sidewalks and curbs removed.
 - 1. 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

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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.

2. Trench backfill shall be compacted for the full depth of the trench as specified.
3. Temporary trench backfill along streets and driveways shall include 6-inches of crushed stone or cherty clay as a temporary surfacing of the trenches. The Contractor shall maintain this temporary surface carefully at grade and dust-free until the backfill of the trench has thoroughly compacted in the opinion of the Owner and permission is granted to replace the street pavement.
4. When temporary crushed stone or chert surface is considered by the Owner 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.

B. Pavement Replacement

1. 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.
2. 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.
3. 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.
4. 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.
5. 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

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

6. Where driveways or roadways, constructed of specialty type surfaces, e.g., brick, stone or decorated sidewalks are disturbed or damaged, these driveways, roadways or sidewalks shall be restored utilizing similar materials. 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.

D. 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 Engineer.

3.03 SIDEWALK AND CURB REPLACEMENT

A. Construction

1. All concrete sidewalks and curbs shall be replaced with concrete.
2. Preformed joints shall be 1/2-inch thick, conforming to the latest edition of AASHTO M59 for sidewalks and AASHTO M 123 for curbs.
3. 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.
4. 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.
5. Securely hold forms in place true to the lines and grades.

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6. Wood forms may be used on sharp turns and for special sections, as approved by the Owner. Where wooden forms are used, they shall be free from warp and shall be the nominal depth of the structure.
 7. All mortar and dirt shall be removed from forms and all forms shall be thoroughly oiled or wetted before any concrete is deposited
- B. 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.
- C. 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.
- D. 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.
- E. Joint for Curbs
1. Joints shall be constructed as indicated on the Drawings 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.
 2. Thoroughly spade and compact the concrete at the faces of all joints filling all voids.
 3. 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.
 4. 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

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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.

- F. 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.
- G. Finishing
1. 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.
 2. Finish the face of the curbs at the top and bottom with an approved finishing tool.
 3. Finish edges with an approved finishing tool having a 1/4-inch radius.
 4. Provide a final broom finish by lightly combing with a stiff broom after troweling is complete.
 5. The finished surface shall not vary more than 1/8-inch in 10 feet from the established grade.
- H. Driveway and Sidewalk Ramp Openings
1. Provide driveway openings of the widths and at the locations indicated on the Drawings and as directed by the Owner.
 2. Provide sidewalk ramp openings as indicated on the Drawings, in conformance with the applicable regulations and as directed by the Owner.
- I. 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,

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animals, rain, the Contractor's operations and the Contractor, at no additional expense to the Owner, shall repair the like.

3.04 MAINTENANCE

The Contractor 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 Engineer. Maintenance shall include sprinkling as may be necessary to abate dust from the gravel surfaces.

3.05 SUPERVISION AND APPROVAL

- A. Pavement restoration shall meet the requirements of the regulatory agency responsible for the pavement. Obtain agency approval of pavement restorations before requesting final payment.
- B. Obtain the Engineer's approval of restoration of pavement, such as private roads and drives that are not the responsibility of a regulatory agency.
- C. Complete pavement restoration as soon as possible after backfilling.
- D. 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.

3.06 CLEANING

The Contractor 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

SECTION 02665-WATER LINES & ACCESSORIES

SECTION 02665 WATER LINES & ACCESSORIES

PART 1 GENERAL

1.01 SCOPE

- A. This section describes products to be incorporated into the water lines and requirements for the installation and use of these items. Furnish all products and perform all labor necessary to fulfill the requirements of these specifications
- B. Supply all products and perform all work in accordance with applicable ASTM, AWWA, ANSI, or other standards. The latest revisions of all standards are applicable.
- C. All products shall be cast, fabricated and manufactured in the United States of America.

1.02 TRANSPORTATION, HANDLING, STORAGE AND PROTECTION

- A. Furnish equipment and facilities for transporting, unloading, handling, distributing, and storing pipe, fittings, valves, hydrants and accessories in accordance with manufacturer's written recommendations.
- B. The Owner will reject any mishandled product without further justification.

1.03 QUALITY ASSURANCE

The manufacturer shall provide written certification to the Owner that all products furnished comply with the specifications.

PART 2 PRODUCTS

2.01 PIPING AND ACCESSORIES

SECTION 02665-WATER LINES & ACCESSORIES

A. Ductile Iron Pipe & Fittings

1. AWWA C151, minimum Pressure Class 350 or Thickness Class 51 as shown in the Contract Documents or on the Drawings.
2. AWWA C104, cement lining for all pipe and fittings
3. AWWA C153 ductile iron fittings rated for 250 psi working pressure.
4. AWWA C111, push-on and mechanical joints; ANSI B16.1, Class 125 flange joints. Push-on fittings shall meet joint specification for ductile iron pipe.
5. Thrust collars shall be weld-on ductile iron body designed for thrust created by 250-psi internal pressure.
6. Restrained joints, where shown on the Drawings or specified, shall be push-on joints restrained by any of the following systems: American "Fast-Grip", "Flex-Ring" or "Lok-Ring", U S Pipe "Field-Lok", "T R Flex" or T R Flex Gripper Ring".
7. Mechanical joint fittings shall be restrained with "Mega-Lugs". Push-on joint fittings or valves shall be restrained with restrained joint gaskets or other restrained joint system.
8. Provide necessary bolts, nuts, gaskets, ductile iron glands and accessories to make joints.

B. High Density Polyethylene (HDPE) Piping

1. All water services two (2) inches in diameter and smaller shall be manufactured of PE3408, high density polyethylene in accordance with AWWA C901, ASTM D1248, ASTM D2239, ASTM D2737 and ASTM D3350. Tubing shall have a minimum working pressure of 200 PSI, shall be copper tube size SDR-9 and shall be blue in color. Couplings shall be made bronze with compression fittings on both ends suitable for connection to polyethylene tubing with inserts. Tubing shall be approved for use with potable water by the National Sanitation Foundation and shall be continuously marked at intervals of not more than four (4) feet with the nominal size, pressure rating, NSF seal, manufacturer's name, standard dimension ratio and ASTM specification.

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2. Service Saddle compatible with HDPE piping shall be used to connect 1" and 3/4" HDPE service to 2" HDPE.. The saddle shall have threaded outlet compatible with corporation stops specified. Use JCM tapped outlet model 103.

C. MISCELLANEOUS PIPING

1. Steel casing pipe shall be minimum 0.25-inch wall, ASTM A 36; coating is not required. Casing spacers shall be stainless steel equal to Cascade or Advance.
2. Copper tubing shall be ASTM B 88; Type K. Fittings shall be compression type equal to Dresser Style 88.
3. PVC casing pipe shall be minimum ASTM D 2241, PR 160 SDR 26.
4. Miscellaneous small diameter adapters or nipples shall be bronze. Galvanized pipe will not be accepted.

D. VALVES

1. Gate valves for buried service in diameters 2 through 12-inch shall meet AWWA C 509 rated for 250 psi working pressure, resilient seat with 2-inch square operating nut, open left. 2-inch end connections shall be NPT, diameters larger than 2-inch shall be mechanical joint restrained with "Mega Lugs" or push-on restrained joint. Acceptable manufacturers are American Darling Valve, Mueller, U S Pipe and M&H Valve.
2. Butterfly valves shall meet AWWA C504 rated for minimum 150 psi working pressure. Valve shall be equipped with mechanical joints and 2-inch square operating nut, open left. Acceptable manufacturers are Mueller, M&H, Clow, Dezurik or Pratt.
3. Tapping sleeves for connection to iron lines shall be split-sleeve, mechanical joint ends. Tapping sleeves for connection to PVC water lines shall be stainless steel, clamp-on type manufactured by Ford, Rockwell or Clow.

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4. Gate valves smaller than 2-inch shall be bronze, heavy duty, with threaded connections. Valves shall have hand wheel operator. Valves shall be equal to Mueller, Crane, Nibco or Milwaukee.
5. Corporation Stops and Curb Stops: Corporation stops and curb stops shall be ground key type or ball valve type; shall be made of bronze conforming to ASTM B 61 or B62; and shall be suitable for the working pressure of the system. Seat and ball shall be SS. The inlet connection shall be AWWA standard iron pipe (IPT) thread. The outlet connection shall be compression type for polyethylene tubing. Threaded ends for inlet and outlet of corporation stops shall conform to AWWA C800; Corporation stops and curb stops shall be manufactured by Mueller, Ford or Hays.
6. Backflow preventer shall be residential dual check valve, 3/4-inch, Watts No. 7, Wilkins, Mueller or equal. Provide meter connection as shown on the drawings.
7. Tapping valves shall be AWWA C509 resilient seat gate valve rated for 250 psi with air vent plug on the bonnet. Acceptable manufacturers shall be equal to American Flow Control or Mueller.

E. FIRE HYDRANTS

1. AWWA C 502 with minimum valve opening of 53-inches.
2. Minimum depth of bury shall be 42-feet. Hydrant shall open left and be equipped with two 8-inch and one 6-inch NST connections. Hydrants shall be red.
3. Design shall be non-freezing, traffic type, and breakaway barrel.
4. Acceptable manufacturers shall be Mueller (Super Centurion), M&H (929), American Flow Control (B84-B), U.S. Pipe Metropolitan 250, Model 94(only).

F. ACCESSORIES

1. Valve boxes shall be ductile iron, 2-piece threaded, adjustable 6-inches up or down. Cover shall have "WATER VALVE" legend. Bottom flange of box shall be sized to rest well below operator nut of valve.

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2. Valve markers shall be reinforced concrete with "WATER VALVE" legend. Bronze or aluminum insert shall be inscribed with distance to valve. Provide valve markers at all valves except at fire hydrants.
3. Cast-in place, reinforced concrete collars shall be formed and poured at each valve box.
4. Warning tape shall be buried 2-feet below finished grade over all water lines. Tape shall be mylar encased, aluminum foil, 3-inches wide color APWA blue with "BURIED WATER LINE" legend.
5. Meter Boxes shall equal to Brooks model 1914 with PVC bolt down cover and drilled for touch pad.
6. Water Meters shall be per Rockdale Water Resources Water and Wastewater Standards and Specifications.
7. Customer cut-off valve box shall be equal to DFW D-109 plastic turf box.

PART 3 EXECUTION

3.01 GENERAL

A. SOIL EROSION & SEDIMENT CONTROL

In general, temporary and permanent erosion and sediment control measures shall prevent soil erosion at the source; prevent silt and sediment from entering any waterway or causing property damage. The contractor shall install soil erosion and sediment control measures as required by Rockdale County.

Products used for erosion and sediment control shall conform to Georgia DOT specifications for same.

B. CLEARING WORK AREAS

1. Avoid cutting trees down if at all possible. Trim limbs as necessary. Carefully remove fencing, sod, shrubbery and landscaping features for

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later restoration. Water line location can be adjusted with verbal permission from Owner.

3.02 EXISTING UNDERGROUND UTILITIES AND OBSTRUCTIONS

- A. The Drawings shall indicate underground utilities or obstructions that are known to exist according to the best information available. The Contractor, as required by Georgia law, shall call the Utilities Protection Center (UPC) (800-282-7411) and those utilities, agencies or departments that own and/or operate utilities in the vicinity of the construction work site to verify the location of, and possible interference with, the existing utilities, arrange for necessary suspension of service and make arrangements to locate and avoid interference with said utilities. Where these or unforeseen underground utilities are encountered, the location and alignment may be changed, upon approval of the Owner.

3.03 CONSTRUCTION ALONG HIGHWAYS, STREETS, AND ROADWAYS

Install water lines and appurtenances along highways, streets and roadways in accordance with the applicable regulations of and permits issued by the Georgia Department of Transportation, Rockdale County, City of Conyers with reference to construction operations, safety, traffic control, road maintenance and repair.

- A. Traffic Control
1. The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights and other traffic control devices; shall provide qualified flag men where necessary to direct traffic; shall take all necessary precautions for the protection of the work and the safety of the public.
 2. Construction traffic control devices and their installation shall be in accordance with the current Georgia "Manual of Uniform Traffic Control Devices for Streets and Highways".
 3. Placement and removal of construction traffic control devices shall be coordinated with the Department of Transportation, Rockdale County and City of Conyers a minimum of 24 hours in advance.

Construction Operations: Perform all work along highways, streets and roadways to minimize interference with traffic.

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1. Stripping: Where the pipe line is laid along road right-of-way, strip and stockpile all sod, topsoil and other material suitable for right-of-way restoration.
 2. Trenching, Laying and Backfilling: Do not open the trench any further ahead of pipe laying operations than is necessary. Backfill and remove excess material immediately behind laying operations. Complete excavation and backfill for any portion of the trench in the same day.
 3. Shaping: Reshape damaged slopes, side ditches, and ditch lines immediately after completing backfilling operations. Replace topsoil, sod and any other materials removed from shoulders.
- C. Excavated Materials: Do not place excavated material along highways, streets and roadways in a manner which obstructs traffic. Sweep all excavated material off of the pavement in a timely manner.
- D. Drainage Structures: Keep all side ditches, culverts, cross drains, and other drainage structures clear of excavated material and free to drain at all times.
- E. Maintaining Highways, Streets, Roadways and Driveways: Maintain streets, highways, roadways and driveways in suitable condition for movement of traffic.

During the time period between pavement removal and replacement, maintain highways, streets and roadways by the use of steel running plates. The backfill above the pipe shall be compacted as specified elsewhere up to the existing pavement surface to provide support for the steel running plates.

Furnish a front-end loader for maintaining highways, streets, and roadways. Make the front-end loader available at all times.

Repair all driveways that are cut or damaged immediately. Maintain them in a suitable condition for use until completion and final acceptance of the work.

3.04 LAYING WATER LINES

A. TRENCH EXCAVATION & BACKFILL

1. Lay water lines with Type 2 trench unless shown otherwise on the Drawings.

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2. Lay water lines with 4-feet of cover below existing grade or edge of pavement, whichever is lower in elevation. Also, lay water lines with 3 feet of cover below ditch bottoms, whether parallel bar ditch or ditch crossings.
3. Bedding material shall be clean earth, free of rocks over 2-inches. Improved trenches shall utilize #57 crushed stone as bedding.
4. Trench rock is defined in Section 02227.
5. When blasting near structures, the Contractor will employ an independent, blasting sub-consultant to monitor blasting by use of seismograph, identify areas where light charges must be used, conduct pre-blast and post-blast inspections of structures, including photos or videos, and maintain a written log.
6. Excavate buried utilities at least 500 feet in advance of pipe laying to determine exact horizontal and vertical location.
7. Trenches along right-of-ways shall be compacted to 90% maximum dry density; trenches under roadways shall be compacted to 98% maximum dry density.

B. LINE CONSTRUCTION

1. Lay pipe in the location shown or indicated on the drawings. Excavate, lay and backfill as closely together as possible. Backfill and compact the trench as soon as possible after laying and jointing. Plug end of open pipe overnight. Backfill all trenches at end of workday.
2. Excavate connection points to confirm size and configuration of new connection. Immediately report discrepancies to the Owner.
3. Connect to existing lines as shown on the drawings. The Owner shall inspect all aspects of connection. Disinfect and pressure test tapping sleeves and valves to 200 psi water pressure before attaching cutting equipment. Do not operate valves or remove plugs without specific authorization from the Owner.

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4. Provide thrust restraint at all points where thrust may develop including tapping sleeves and reducers. Retainer glands, Mega-lugs and restrained joints shall be constructed in accordance with manufacturer's written instructions. Provide torque wrench to verify torque on set screws. Thrust rods shall be ASTM A 36, hot dip galvanized. Form and pour blocking and thrust collars as shown on the drawings. Thrust collars installed on existing lines shall be constructed with split Mega-lug glands torqued onto the existing pipe. New thrust collars shall be weld-on ring by pipe manufacturer.
5. All new work shall be pressure tested and disinfected in accordance with AWWA C 600 and C 651 respectively.
 - a. Test pressure shall be 200 psi measured at the lowest point for 2 hours. Provide temporary blocking, flanges, plugs or bulkheads to ensure all new pipe, valves, and appurtenances will be pressure tested. Expel air from pipe while filling lines. Provide corporation stops at high points if hydrants or service lines are not nearby.
 - b. Provide test pump, accurate pressure gage and water meter to measure pressure and leakage, if any.
 - c. Maintain test pressure within 5 psi of 200 psi for 2 hours. Should pressure drop more than 5 psi at any time, restore to 200 psi including at the end of 2 hours. Leakage is defined as the cumulative amount of water registering on the water meter.
 - d. Leakage cannot exceed amounts found in AWWA C 600. All visible leaks shall be repaired regardless of leakage test results. Tests shall be repeated until all sections of line pass.
 - e. After successful pressure test results, apply chlorine solution to achieve a concentration of at least 25 mg/l free chlorine in new lines and services. Retain for 24 hours.
 - f. Record concentration at every outlet along the line at beginning and end of 24 hour period. After 24 hours, all samples of water shall contain at least 10 mg/l free chlorine. Re-chlorinate if required results are not obtained on all samples.

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- g. De-chlorinate waste water to less than 1 mg/l if flushing to surface waters or to less than 2 mg/l if discharged to ground. Treat water with SO₂ or other reducing chemicals to neutralize chlorine residual.
- h. After final flushing and before water main is placed in service, collect samples from the line and have tested for bacteriological quality in accordance with the rules of the Georgia Department of Natural Resources, EPD. A laboratory certified by the State of Georgia shall perform testing. Re-chlorinate lines until required results are obtained.

C. PROTECTION AND RESTORATION OF WORK AREA:

- 1. General: Return all items and all areas disturbed, directly or indirectly by the work under this contract, to their original condition or better, as quickly as possible after work is started.
 - a. The Contractor shall plan, coordinate, and prosecute the work such that disruption to personal property and business is held to a minimum.
 - b. Restoration shall follow within 1000 feet of pipe laying at all times.
 - c. Handwork, including raking and smoothing, is required to ensure removal of roots, sticks, rocks and other debris.
- 2. Man-Made Improvements: Protect, or remove and replace with the Owner's approval, all fences, piers, docks, walkways, mail boxes, pipe lines, drain culverts, utilities and other improvements that may be encountered in the work.
- 3. Cultivated Growth: Do not disturb cultivated trees or shrubbery unless approved by the Owner. Any such trees or shrubbery, which must be removed, shall be heeled in and replanted.
- 4. Cutting of Trees: Do not cut trees for the performance of the work except as absolutely necessary. Protect trees that remain in the vicinity of the work from damage from equipment. Do not store spoil from excavation

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against the trunks. Remove excavated material stored over the root system of trees within thirty (30) days to allow proper natural watering of the root system. Repair any damaged tree over 3-inches in diameter. All trees and brush that require removal shall be promptly and completely removed from the work site and disposed of by the Contractor. No stumps, wood piles, or trash piles will be permitted on the work site.

5. Grassing: Replant grass removed or damaged in residential areas using the same variety of grass or sod and at the first appropriate season. Outside of residential areas, plant the entire area disturbed by the work in rye, fescue, Bermuda, clover or other suitable ground cover on completion of work in any area. In all areas, promptly establish successful stands of grass.
6. Erosion Control: Plan excavation work to prevent erosion and the washing of soil into adjacent streams. Limit the amount of open excavation at any one time. Place spoil in the proper place and keep natural water routes open.
7. Stream and Ditch Crossings: At all points where banks of streams or drainage ditches are disturbed by excavation or where natural vegetation is removed, 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 stream or drainage ditch. Place rip rap a distance of not less than 10 feet upstream and 10 feet downstream from any disturbed area. Extend rip rap from 1 foot below streambed to top of bank. Place to conform with the natural slope of the stream bank.

- a. Type 3 Rip Rap: Rip Rap size shall conform to Georgia DOT Section 805.01 Stone Dumped Rip Rap, Type 3.

Embed stone rip rap by hand so as to form a compact layer at least 12-inches thick. Place rip rap in such a way that the smaller stones are not segregated but evenly distributed. Place chinking stones in the crevices between the larger stones so that a dense, well graded mass is produced.

- b. Filter Fabric: The filter fabric shall be a monofilament, polypropylene woven fabric meeting the Specifications as established by Task Force 25 for the Federal Highway

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Administration. The filter fabric shall have an equivalent opening size of 70 and shall be manufactured by Mirafi, Amoco, Exxon, or Nicolon.

Filter fabric shall be provided for stream and ditch crossings. The fabric shall be overlaid with sand, or crushed stone as necessary due to stream flow, to maximize the contact area between the soil and fabric. Rip rap as specified above shall be placed on top of this fabric and its covering

8. Disposal of Rubbish: Dispose of all materials cleaned and grubbed during the construction of the project in accordance with the applicable codes and rules of the appropriate regulatory agencies, county, state and federal.

END OF SECTION

SECTION 03000-REINFORCED CONCRETE

DIVISION 3 – CONCRETE

**SECTION 03000
REINFORCED CONCRETE**

PART 1 GENERAL

1.01 WORK INCLUDED

Concrete, forms, placing of sleeves, pipes, and anchor bolts, finishing, curing, and all equipment and incidentals necessary to do all the concrete work as shown on the drawings or specified.

1.02 REFERENCE STANDARDS

All work hereunder shall comply with the following except as called for otherwise herein:

- A. ACI Standard 301- Latest Revision Specifications for Structural Concrete for Buildings.
- B. ACI Standard 318 - Latest Revision Building Code Requirements for Reinforced Concrete.
- C. ACI Standard 306R - Latest Revision Cold Weather Concreting.
- D. ACI Standard 305R - Latest Revision Hot Weather Concreting.
- E. ACI Standard 304R - Latest Revision Guide for Measuring, Mixing, Transporting and Placing Concrete.

1.03 SUBMITTALS

- A. Shop Drawings: Submit complete Shop Drawings including:
 - 1. Location of all proposed construction joints, keying, and water stops.
 - 2. Location of all openings, depressions, construction and control joints, trenches, sleeves, inserts, and other items affecting the reinforcement and placing of concrete.
- B. Product data: Submit complete product data on the following:

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1. Complete materials list of items proposed to be furnished and installed under this section.
2. Complete information on cement source of supply, physical and chemical characteristics, transportation and intermediate terminating procedures for mill-to-site handling, and site storage procedures.
3. Complete information on aggregate procurement, processing, and storage.
4. Complete information on proposed batching and mixing equipment and procedures, including water chilling or other devices or systems to reduce mix temperatures.
5. Complete information on concrete handling equipment proposed to be used, including capacities, for chutes, pumps, tremies, buckets, and all other equipment.
6. Complete description of proposed curing materials and methods.
7. Complete mix designs.
8. Remolded joint filler.
9. Waterstops.
10. Wedge inserts.
11. Expansion bolts.
12. Anchor bolts.
13. Foundation bolts.
14. Admixtures.
15. Hardening and dust-proofing compounds.
16. Form ties.
17. Any gang forming information.

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- C. Do not begin concrete production until all products and mix designs have been reviewed and approved by the Engineer.

1.04 SUBMITTALS

The following classes of concrete are included in these specifications and shall be used where specified herein or called for on the plans:

	Class "A" Concrete	Class "B" Concrete
Cement content - Minimum number of sacks (94 lb.) per cubic yard	6	5
Maximum water to cement ratio (gal. Water per sack cement)	5.1	6.5
Entrained air	3% - 6%	3% - 6%
Minimum Superplasticizer content per 100 lbs. of cement	45 oz.	0 oz.
Minimum 7 day compressive strength	2,400 psi	1,400 psi
Minimum 28 day compressive strength	4,000 psi	2,500 psi

- B. In the absence of contrary designation, concrete used for all construction shall be Class "A."

PART 2 PRODUCTS

2.01 CEMENT

Unless otherwise specified or shown on the plans, concrete shall be made with the Portland cement conforming to A.S.T.M. Specification C-150, Type I. The lightest colored Portland cement, competitively available shall be used, and the same brand of cement shall be used throughout the entire project. High early strength Portland cement shall conform to A.S.T.M. Standard Specification #C-150, Type III.

2.02 AGGREGATES

- A. General: All aggregates shall conform to requirements of ASTM C 33.
- B. Fine Aggregate
 - 1. The fine aggregate shall consist of clean, hard, durable, uncoated particles of sand. It shall be free from dust mica, shale, alkali, organic matter, and loam, soft or flaky particles.

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2. Deleterious Substances - The fine aggregate shall contain not more than one percent (1%) by weight of clay lumps of more than three percent (3%) by weight of material removed by decantation.

3. Grading - Fine aggregate shall conform to the following requirements:

<u>Total Passing</u>	<u>Percent by Weight</u>
3/8" sieve	100
No. 4 sieve	95 - 100
No. 16 sieve	45 - 95
No. 50 sieve	10 - 30
No. 100 sieve	2 - 8

4. Tests - Fine aggregate shall be subjected to the Colorimetric test for organic impurities and if it produces a color darker than the standard, it shall be rejected. It shall conform in all other respects to A.S.T.M. Designation C-33.

C. Coarse Aggregate

1. Composition and Quality - Coarse aggregate shall be washed gravel or crushed stone and shall consist of hard, tough, uncoated, durable particles. It shall contain no vegetable matter or soft, flaky, thin, or elongated particles. Deleterious substances shall not exceed the following amounts:

Soft fragments	0.20%
Coal and lignite	0.25%
Clay lumps	0.25%
Material passing No. 200 Sieve	1.50%
Thin or elongated pieces (length greater than 5 times the average thickness)	10.00%

The percentage of wear, by the Los Angeles test, shall not exceed 45.

2. Grading - Coarse aggregate shall be well graded between the limits specified below, and shall conform to the limits shown in the following table:

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<u>Total Passing</u>	<u>Percent by Weight</u>	
	2" Sieve	100
	1-1/2" Sieve	90 - 100
	1" Sieve	55 - 80
	3/4" Sieve	35 - 70
	1/2" Sieve	20 - 45
	3/8" Sieve	10 - 30
	No. 4 Sieve	0 - 15
	No. 16 Sieve	0 - 1

2.03 WATER

The water used in mixing concrete shall be fresh, clean, potable and free from oil, acid, alkali, organic matter, and deleterious amounts of chloride ion.

2.04 CONCRETE ADMIXTURES

- A. Admixtures shall conform to ASTM C494; Type F for high range water-reducing and Type G for high range water-reducing/set-retarding. Air entraining agents shall conform to ASTM C260. When more than one admixture is used the two products shall be compatible and have a single manufacturer.
- B. All Class "A" Concrete shall contain a (Daracem - 100 or an alternate approved by the Engineer) high range water-reducing agent. The dosage of the high range water reducing agent shall be at least 8 oz./100 lbs. of cement, but shall not produce a plasticized slump greater than 8". The high range water reducing agent shall be added at the site prior to concrete placement.
- C. Admixtures, if not specified, may be used only upon written approval of the Engineer and shall be used only as recommended by the Manufacturer. Admixtures shall, when added to the mixture, produce a concrete of specified strength in both 7 and 28 day tests. Documentary evidence of acceptability will be required when new or unknown admixtures are proposed for usage.
- D. Admixtures shall be Grace Construction Products or an alternate approved by the Engineer.

2.05 FORM WORK

- A. Forms shall result in a final structure which conforms to the shape, lines, and dimensions of the members as required by the plans and specifications, and shall be

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substantial and sufficiently tight to prevent leakage of mortar. They shall be properly braced or tied together so as to maintain position and shape. Forms and their supports shall be designed so that previously placed structure will not be damaged.

Form ties shall be so designed that when the forms are removed no metal shall be within 1-1/2 inches of the finished surface. Form ties shall have an approved type waterstop that is an integral part of the tie and made of the same material as the tie. Gang form ties shall be filled from one end with a compressible plug a minimum of 1 1/2 inches from the edge of wall, shall have a bentonite plug in the center of the wall and all voids filled with non-shrink grout. Removal of forms and shores - no construction loads exceeding the dead load plus live load shall be supported on any unshored portion of the structure under construction. No construction loads shall be supported on, nor any shoring removed from, any part of the structure under construction except when that portion of the structure in combination with the remaining forming and shoring system has sufficient strength to support safely its weight and the loads placed thereon. This strength may be demonstrated by job-cured test specimens and by a structural analysis considering the proposed loads in relation to these test strengths and the strength of the forming and shoring system. Such analysis and test data shall be furnished by the contractor to the Engineer when so required. In no case shall forms for walls or columns be removed in less than 36 hours. Form work supporting weight of concrete, such as beams and slabs shall remain until the concrete has attained a minimum of the 28 day design strength.

- B. The design and engineering of the form work, as well as its construction, shall be the responsibility of the Contractor. Except as specifically called for otherwise herein, all form work shall meet the "ACI Standard Recommended Practice for Concrete Form work (ACI 347 - Latest Revision)".
- C. Chamfer: Unless shown otherwise, form chamfers with 3/4" x 3/4" strips, accurately formed and surfaces to produce uniformly straight lines and tight edge joints on exposed concrete. Extend terminal edges to required limit and miter chamfer strips at changes in direction. All exposed corners shall be chamfered.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Before the placing of any concrete, the footing trenches shall be drained of water and mud film removed and any loose dirt lifted out. Any flow of water shall be diverted by side drains to a sump, or removed by other approved methods, while the concrete is being placed.

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- B. Before placing concrete in any forms, the forms shall be cleaned, and all debris shall be removed. All reinforcing shall be checked to be sure that no reinforcing is touching the form or pan sides.
- C. Before placing any concrete, it shall be determined that all work that is to be built into the concrete work is located and installed. All such items shall be placed so as not to interfere with the reinforcing steel.
- D. Wood board forms shall be soaked with water just before the concrete is poured.
- E. Special measures shall be taken in both severe cold and hot weather and shall be in accordance with ACI Recommended Practice (ACI 306 - Latest Revision and ACI 605 - Latest Revision).
- F. Before placing any new concrete on or against concrete which has set, the existing surfaces shall be thoroughly roughened and cleaned of all foreign matter and "Laitance." Forms shall be retightened and the existing surfaces slushed with a coat of grout. The new concrete shall be placed immediately after grouting, and the work shall be performed in such manner as to insure complete bonding of newly poured concrete to the existing work.

Grout for construction joints shall consist of a mixture of neat cement and water, and shall be applied to the old concrete surface immediately before the new concrete is poured. Grout for setting column bases, wall plates, and beams shall be composed of one part Portland cement two parts sand, and sufficient water to produce the consistency required.

- G. Where excavations exceeding a depth of five feet are prescribed to be made to install the foundations or any part of the structure, or any retaining walls on the site, the back slope of such excavation shall be at an incline not exceeding one vertical to one and one-half horizontal unless such back slope is sheeted and braced. If sheeting and bracing is to be provided, such sheeting and bracing shall be designed by an Engineer registered in the project state. The cost of such design work shall be paid for by the Contractor.

3.02 MIXING AND DELIVERY

- A. **Machine Mixing:** All mixing of concrete shall be done in a batch mixer of approved design, which will insure a uniform distribution of the material throughout the mass, so that the mixture is uniform in color and homogenous. The entire content of the mixer drum shall be discharged before recharging. All material to be mixed per batch shall not exceed the manufacturers' rated capacity of the mixer.

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- B. Time of Mixing: The mixing of each batch shall continue not less than one and one-half (1-1/2) minutes after all the materials, including water, are in the mixer, during which time the mixer shall rotate at a peripheral speed of about two hundred feet per minute.
- C. Mixing at Central Plant: Concrete mixed in a central plant, shall be conveyed to the work in approved mixer trucks which mix the concrete in route to the work. Plant layout and equipment shall meet the approval of the Engineer. Loading tickets shall be initialed and the time of loading stamped thereon. The loading tickets shall be handed to the resident inspector on the work before the load is placed, and no concrete will be accepted which has been in the mixer truck more than one and one-half (1-1/2) hours after the water has been added. In all other respects, ready-mixed concrete shall conform to A.S.T.M. Specification C-94.
- D. Waste concrete shall be deposited and mix trucks washed out only in areas designated by the owner or the engineer.

3.03 SLUMP

- A. The maximum slump allowed for the various types of construction are as follows: _

<u>Type of Construction</u>	<u>Maximum Slump</u>
Reinforced Foundation Walls & Footings	4"
Slabs, Beams, Reinforced Walls & Columns	4"
Heavy Mass Construction	2"
All Concrete Plasticized by Admixtures	8"

- B. Slump tests shall be made at the discretion of the Engineer, and concrete having greater slump than specified shall not be incorporated into the work. The Contractor shall furnish slump test cones conforming to the provisions of ASTM C-143.

3.04 PLACING CONCRETE

- A. All concrete shall be placed in daylight, and any portion of the concrete work started shall be started so that it can be completed in daylight. No concrete shall be placed until the foundation, forms, false-work, and the placing of the steel have been approved by the Engineer. Approval by the Engineer in no manner relieves the

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- Contractor of his obligation to produce finished concrete as required by the plans and specifications.
- B. The concrete shall be placed in such a manner as to avoid the possibility of segregation or separation of the aggregates, or the displacement of the reinforcement steel. The concrete shall be placed as near its final resting place as possible. If pipes, troughs, or chutes are used in placing the concrete, they shall be so arranged and used that the concrete is not separated, and shall be kept clean and free of hardened concrete at all times. Troughs and chutes shall be either made of metal or shall be metal lined, and shall extend as nearly as possible to the point of deposit. In walls and columns, the concrete shall not be dropped more than five feet (5') without the use of a tremie. Concrete shall be placed in continuous horizontal layers, approximately 10" to 12" thick, and the batches shall follow each other so closely that each one is placed and compacted before the preceding one has taken an initial set. Succeeding layers shall be placed before the underlying layer has become set, and shall be compacted in a manner that will entirely break up and obliterate the tendency to produce a cold joint between layers. Concrete in beams, girders, columns and walls shall be well spaded at the form surface and all concrete shall be compacted by an approved mechanical type vibrator having a frequency of not less than 3,000 vibrations per minute. The Contractor shall provide the necessary number of vibrators to properly execute the work, and shall have on the job at all times necessary spare vibrators to be used in case of mechanical failure. Construction joints shall be made only at the location as shown on the plans, except by approval of the Engineer.
- C. In making construction joints, the previous work shall be cleaned of all "laitance," and other objectionable material, and shall be brushed with a thin mixture of Portland cement and water immediately before the new concrete is placed.
- D. The operation of placing and compacting the concrete, shall be conducted so as to form a compact, dense, impervious artificial stone of uniform texture, with smooth faces on exposed surfaces. Any section of concrete that is porous, or has been plastered, or is otherwise defective, shall be removed and replaced, in whole or in part, entirely at the contractor's expense, as directed by the Engineer.
- E. Depositing Concrete Under Water: Concrete shall not be exposed to the action of water before setting, or deposited in the water, except upon the approval of the Engineer, and under his supervision.
- F. Cold Weather Placing
1. Comply with ACI 306 to protect all concrete work from physical damage and reduced strength which would be caused by frost, freezing actions, or low

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temperatures. No concrete shall be placed when the atmosphere temperature is below 40 degrees F.

2. If the temperature drops below 40 degrees F. after the concrete has been placed, the Contractor shall provide adequate means for maintaining concrete temperature of not less than 45 degrees F. for a period of five (5) days after the concrete is placed. The contractor shall assume all risk connected with placing concrete in cold weather, and any unsatisfactory work will be rejected. Recording thermometers shall be supplied by the contractor as required by the Engineer.
- G. Hot Weather Placing: When hot weather conditions exist which would seriously impair the quality and strength of concrete, place the concrete as follows:
1. Maintain concrete temperature at time of placement below 90 degrees F. Use chilled mixing water or chopped ice to control concrete temperature, provided the water equivalent of the ice is calculated to the total amount of water.
 2. Cover reinforcing steel with water-soaked burlap if the steel becomes too hot. Steel temperature shall not exceed the ambient air temperature immediately prior to placement of concrete.
 3. Wet forms thoroughly prior to placement of concrete.
 4. Use set-control admixtures in the mix subject to approval of the Engineer.

3.05 PROTECTION AND CORRECTIVE WORK

- A. Workmen shall not walk on concrete during placing or finishing with any earth or foreign matter footgear.
- B. All freshly placed concrete shall be protected from damage or injury due to water, falling objects, persons or anything that might mar or injure the finish surface of the concrete. Any surfaces that are damaged shall be removed and replaced with fresh concrete at the expense of the Contractor.
- C. Care shall be taken in the removal of the forms not to damage the surface of the concrete. Immediately after the forms are removed, all damaged or imperfect work shall be patched. If in the opinion of the Engineer, the patching does not restore the work to the quality specified, the Contractor shall remove and rebuild the work at his expense.

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- D. Where concrete or concrete work does not conform to these specifications and where patching is not approved by the Engineer or low strength concrete is not permitted to remain in place, procedures and plans covering all work to be rebuilt shall be submitted by the Contractor to the Engineer before removal and rebuilding is begun. The cost of such plans, as well as the cost of removal and rebuilding shall be at the Contractor's expense.

3.06 FINISHING

Floors, including slabs on ground, shall be finished as follows:

- A. The surfaces of all concrete shall be worked with a wood float in a manner which will compact the concrete and produce a surface free of depressions or inequalities of any kind. Test for grade (of level) and correct by removing excess or adding and compacting additional concrete.
- B. All interior floor slabs shall receive steel trowel finish as follows: After screeding, slab shall be wood floated to a smooth, plane surface. When concrete has hardened, to prevent excess fines from working to surface, steel trowel to a smooth surface free from defects. A second steel troweling shall be done producing a plane, hard, dense, finished surface. Interior slabs shall also receive a hardening and dust proofing treatment of a colorless aqueous solution of zinc or magnesium fluosilicate applied in strict accordance with manufacturer's recommendations.
- C. Troweling shall not begin until all surface water has disappeared. The drying of the surface moisture before troweling must proceed naturally and must not be hastened by sacking or dusting on of dry sand and cement.
- D. After exterior floors, platforms and steps requiring a broom finish are struck off smooth with a wood float and received a trowel finish, slightly roughen the concrete surface by brooming in the direction perpendicular to the main traffic route. Use a fiber bristle broom.
- D. Exposed concrete surfaces shall be finished as follows:
 - 1. The exterior surfaces of all concrete shall be thoroughly worked during the placing operation, by the use of a concrete spade of approved type. The working shall force all coarse aggregate from the faces, and work mortar against the forms to produce a smooth finish, free from water and air pockets, or honeycomb. As soon as the concrete has set sufficiently to permit, the forms shall be carefully removed and all depressions resulting from removal of the metal spacers, and all other holes and rough places, shall be carefully

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pointed with a mortar composed of one part cement and two parts sand. The surface film of all such pointed surfaces shall be carefully removed before setting occurs. The cement in the mortar used for pointing and filling holes shall be of the same brand as the cement incorporated in the concrete work.

2. Surface shall be rubbed smooth with carborundum brick or other abrasive within 36 hours after forms are removed. Surfaces shall be wetted and rubbed until a uniform color and texture is produced. No cement grout or slush shall be used other than the cement paste drawn from the green concrete itself by the rubbing process.

G. Unless otherwise directed the following schedule shall be used for concrete finishing:

Sidewalks:	Rough (Broomed)
Exposed Exterior Walls:	Medium (Rubbed)
Interior Structure Walls:	Fine (Rubbed)
Additional Wall Finish:	ThoroCoat applied per manufacturer's recommendations
Slabs - Interior:	Smooth (Troweled)
Slabs - Exterior:	Medium (Fine broomed)

Coordinate the required finish with the Engineer prior to application.

3.07 CURING

A. Curing Materials

1. Liquid curing and sealing compounds shall conform to ASTM C 309, Type 1.
2. Sheet materials shall conform to ASTM C 171.
3. Burlap cloth made from jute and weighing approximately 9 oz. per sq. yd for moist curing shall conform to AASHTO M 182 and shall use two layers.
4. Compounds shall be a combination sealer-hardener and dust-proofer.

B. Procedure

Freshly placed concrete shall be protected from wash caused by rain and flowing water. Concrete shall not be allowed to dry out from the time it is placed until seven (7) days thereafter. Curing shall be accomplished by the use of an approved membrane compound to seal the water in the concrete except for surfaces which are

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to receive future concrete, or mortar. The membrane shall be of a type which will retain ninety-seven (97%) percent of the moisture at a temperature of 135 degree F., with a relative humidity of thirty percent (30%) in the first twenty-four (24) hours. It shall be applied in accordance with the manufacturer's recommendations and in sufficient thickness to effectively hold the water in the concrete, and must have a record of successful use for at least two years.

3.08 JOINTS

A. Construction Joints:

1. Construction joints will not be permitted except as may be shown on the Drawings and on the Contractor's approved placement schedule.
2. If construction joints necessary for the progress of the Work are not shown on the Drawings, show them in complete detail on the Shop Drawings.
3. Provide keyways at least 1-1/2" deep where shown on the plans.

B. Isolation joints in slabs on grade:

Provide isolation joints in slabs on grade at points of contact between slabs on grade and vertical surfaces where indicated.

3.09 WATER TIGHTNESS

All structures for holding or carrying water, or pits below grade shall be watertight. Where the order of work requires "cold" joints (slab/wall intersections etc.), an approved, rigid waterstop shall be secured to the form work and remain imbedded in the concrete to form a watertight joint with the adjacent pour. Waterstop shall be expandable center bulb type 6 in. wide x 1/4 in. thick minimum unless otherwise specifically shown on the Plans.

3.10 TESTING OF CONCRETE

- A.** Testing of concrete will be done under the direction of a laboratory approved by the Engineer. Tests to be paid for by the Contractor.
- B.** Samples for strength tests will be taken not less than one per day nor less than once per one hundred (100) cubic yards and on less yardage when required by the Engineer. The tests shall be made in accordance with the procedure set forth in A.S.T.M. C172 for "Standard Method of Making and Storing Compression Test Specimens of

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Concrete in the Field", and C-39 for "Standard Methods of Test for Compressive Strength Concrete." Tests shall be made by a recognized laboratory approved by the Engineer.

Three certified copies of test results are to be furnished the Engineer with each test. Each test shall consist of at least four specimens, two for field control and two for laboratory control. Each set of four cylinders shall have a numerical designation and each cylinder an alphabetical sub-designation. Thus the first set of four cylinders shall be numbered 1A, 1B, 1C, and 1D.

- C. If the evaluation of the compressive test indicates the concrete has failed to meet the specified strength, core tests shall be made of the in-place concrete. The location and number of such tests to be at the Engineers direction. Tests shall be paid for by the Contractor.
- D. If the core tests fail to verify the strength specified, the Engineer shall effect one of the following procedures:
 - 1. Have the Contractor remove and reconstruct that portion of the structure found to be defective.
 - 2. Accept the concrete in place and issue a change order as set forth in the General Conditions of these specifications.
- E. Tests to determine the entrained air content will be made at the job site. Frequency of testing shall be at the Engineer's discretion as necessary to ensure proper air content. The testing apparatus shall be furnished by the Contractor, concrete supplier or testing laboratory at no cost to the Owner, and testing will be performed by the Contractor in the presence of the Engineer.

END SECTION

**SECTION 03200
CONCRETE REINFORCEMENT****1.00 DESCRIPTION**

- A. Work Included: Provide complete, in place, all steel required for reinforcement of cast-in-place concrete as shown on the drawings.

1.01 SUBMITTALS

- A. Shop Drawings: Submit complete shop drawings of all material proposed to be furnished and installed under this Section.
1. Show schedules, stirrup spacing, diagrams of bent bars and arrangement and assemblies.
 2. Make Shop Drawings in accordance with ACI 315.
- B. Mill Certificates: Accompanying the Shop Drawings, submit steel producer's certificates of mill analysis, tensile and bend tests for reinforcing steel.

1.02 PRODUCT HANDLING

- A. Delivery: Deliver reinforcement to the job site bundled, tagged and marked. Use tags indicating bar size, lengths, and other information corresponding to markings shown on placement diagrams.
- B. Storage: Store reinforcement above the surface of the ground on wooden platforms or other supports in a manner which will prevent damage and accumulation of dirt and excessive rust. The surface of the ground beneath all stored reinforcement shall be covered with plastic sheeting to further assure isolation from dirt and dust.

2.00 MATERIALS

- A. Reinforcing bars: Comply with ASTM A615-Latest Revision.
- B. Welded wire fabric: Comply with ASTM A185-Latest Revision.
- C. Supports for reinforcement: Bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcement in place:
1. Use wire bar type supports complying with CRSI recommendations, unless otherwise indicated. Do not use wood, brick and other unacceptable materials.

2. For slabs on grade, use supports with sand plates or horizontal runners where base material will not support legs.
3. For exposed-to-view concrete surfaces, where legs of supports are in contact with forms, provide supports with either hot-dip galvanized or plastic protected legs.

2.01 FABRICATION

- A. General: Fabricate reinforcing bars to conform to required shapes and dimensions, with fabrication tolerances complying with CRSI Manual. In case of fabricating errors, do not rebend or straighten reinforcement in a manner that will injure or weaken the material.
- B. Unacceptable Materials: Reinforcement with any of the following defects will not be permitted in the work.
 1. Bar lengths, depths and bends exceeding specified fabrication tolerances.
 2. Bend or kinks not indicated on Drawings or final Shop Drawings.
 3. Bars with reduced cross-section due to excessive rusting or other cause.

3.01 INSPECTION

Examine the foundation, formwork and the conditions under which concrete reinforcement is to be placed, and correct conditions which would prevent proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General
 1. Comply with the specified standards for details and methods of reinforcement placement and supports, and as herein specified.
 2. Clean reinforcement to remove loose rust and mill scale, earth and other materials which reduce or destroy bond with concrete.
 3. Position, support and secure reinforcement against displacement by formwork, construction or concrete placement operations. Locate and support reinforcing by metal chairs, runners, bolsters, spacers and hangers as required.
 4. Place reinforcement to obtain the minimum coverage for concrete protection. Arrange, space and securely tie bars and bar supports together with 16 gage wire to hold reinforcement accurately in position during concrete placement operations. Set wire ties

so that twisted ends are directed away from exposed concrete surfaces.

5. Install welded wire fabrics in as long lengths as practicable. Lap adjoining pieces at least one full mesh.
 6. Provide sufficient numbers of supports and of strength to carry reinforcements. Do not place reinforcing bars more than 2" beyond the last leg of any continuous bar support. Do not use supports as bases for runways for concrete conveying equipment and similar construction loads.
- B. Splices: Provide standard reinforcement splices by lapping ends, placing bars in contact, and tightly wire tying. See splice schedule on Drawings. Bars marked continuous shall be lapped as required by splice schedule, and at corners, corner bars shall be provided.

3.03 BAR COVER

Reinforcing bars shall be fabricated, tied and supported to ensure a protective concrete cover as shown on the structural drawings.

END OF SECTION