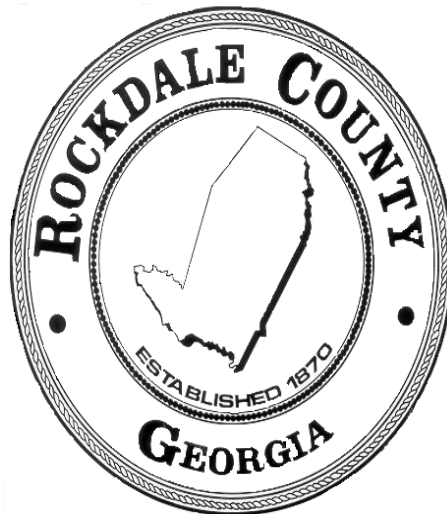


# **ROCKDALE COUNTY, GEORGIA**

**February 9, 2015**

## **HIGHTOWER WATER STORAGE TANK MIXING SYSTEM**

**INVITATION TO BID  
#15-04**



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

**INTRODUCTION:**

This is an Invitation to Bid for the installation of **ITB# 15-04: HIGHTOWER WATER STORAGE TANK MIXING SYSTEM 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 invitation and all questions arising subsequent to award are to be addressed to the Procurement Officer at the following address:

Rockdale County Finance Department  
Attn: Tina Malone, CPPO, CPPB  
958 Milstead Avenue  
Conyers, GA 30012  
Phone: (770) 278-7552, Fax (770) 278-8910  
E-mail: [tina.malone@rockdalecounty.org](mailto:tina.malone@rockdalecounty.org)

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) CD's in Adobe PDF format will be required for review purposes. (*With the original clearly marked "Original" and the Copies clearly marked "Copies."*). CD's that are blank or have incorrect information on them will not be acceptable and may be justification for disqualification. Check your disk(s) to ensure that they have the appropriate material on it before submitting.

**CONTRACT TERM:**

180 Days from 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 26, 2015**. Bids received after this time will not be accepted.

**PRE-BID/BID CONFERENCE:**

There will be a **NON-MANDATORY** pre-bid conference held at the **Rockdale County High Tower Pump Station, 1055 Pleasant Hill Road, NW, Conyers, GA 30012** at **1:00 P.M., local time, Wednesday, March 11, 2015**.

**QUESTIONS AND CLARIFICATIONS:**

You should submit your questions and/or requests for clarifications about this Bid Request no later than **5:00 P.M., local time, Friday, March 13, 2015.** Written responses from the County to the questions it receives will be issued in an addendum. Any questions and/or misunderstandings that may arise from this RFP must be submitted in writing and forwarded to the Purchasing Department at the above address or by email. It shall be the Bidders responsibility to seek clarification as early as possible prior to the due date and time.

Answers to questions submitted that materially change the conditions and specifications of this Bid Request will be addressed in an addendum. Any discussions or documents will be considered non-binding unless incorporated and issued in an addendum.

**ADDENDA:**

Answers to questions submitted that materially change the conditions and specifications of this RFP/ bid will be issued as an addendum. Any discussions or documents will be considered non-binding unless incorporated and issued in an addendum.

Bidders should check with the Procurement Office frequently during the bidding process to verify that they have received all issued addenda. Bidders have the responsibility of making sure that they have received all issued addendums. Addenda are posted on the website at [www.rockdalecounty.org](http://www.rockdalecounty.org), Bid Announcements, Current Bids.

**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 vendors 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 (3) three references from projects with similar experience using the materials and process in this Invitation to Bid.

**SILIENCE 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 makes 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:**

The Company shall maintain in full force and effect the following insurance during the term of the Agreement.

Coverage	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	
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 to contain policy number, policy limits and policy expiration date of all policies issued in accordance with this contract.

**BONDS:**

A Bid Bond in the amount of (5%) of the bid will be required at the time of bid submittal.

A Payment (and/or) Performance Bond in the amount of 100% of the contract will be required after the award is made and before notice to proceed is given.

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**

Vendors submitting a Qualification package in response to this RFP must complete the Contractor Affidavit under O.C.G.A. §13-10-91(b)(1) which is provided with the RFP 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.

**LOCAL VENDOR PREFERENCE POLICY**

The Rockdale County Board of Commissioners adopted a Local Vendor Preference Policy on March 26, 2013. The policy will apply to all qualified Invitations to Bids and Request for Proposals after May 1, 2013. The Local Vendor Preference Policy allows Rockdale County vendors to get an extra 5 points on the evaluation criteria scoring for Request for Proposal. The Policy will give the local bidder the opportunity to match the price of a non-local vendor's bid price if they are low and within 5% of the low bidder's price on Invitation to Bids. A copy of the Policy may be downloaded from the County website at [www.rockdalecounty.org](http://www.rockdalecounty.org), Under Finance/Purchasing.

The Local Vendor Preference Policy: **will**  / will not  - apply to this ITB.

**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 vendor 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# 15-04 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, Telegraphic or Facsimile bids will not be accepted.
10. 1No 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 and on the attached pages:

**General:**

Purchase Price shall include delivery, F.O.B. Rockdale County, Conyers, GA 30012.

Include any brochures and specifications that pertain to the equipment that you are proposing.

List any options and the cost for the options separately.

Warranty information must be provided with the submittal of bid.

All manuals associated with the equipment must be delivered with the equipment at no additional charge to Rockdale County. Manuals included but not limited to: Electrical, Pump, Wiring, Mechanical, Operational, Parts, Service, etc.

## SECTION 2 – GENERAL REQUIREMENTS

### SECTION 01010

#### Summary of Work

#### PART 1 GENERAL

##### 1.01 DESCRIPTION

- A. The Work to be performed under this Contract shall consist of furnishing all labor, materials, tools, equipment and incidentals and performing all work required to install Mixing System in Hightower Water Storage Tank.
- B. All Work described above shall be performed as specified in Section 09800 and warranted for one year.

##### 1.02 PROJECT LOCATION

The equipment and materials to be furnished will be installed at the RWR – Hightower Water Storage Tank, located at 1055 Pleasant Hill Rd. NW, Conyers GA 30012

##### 1.03 QUANTITIES

The Owner reserves the right to alter the quantities of work to be performed or to extend or shorten the improvements at any time when and as found necessary, and the Contractor shall perform the work as altered, increased or decreased. Payment for such increased or decreased quantity will be made in accordance with the Instructions to Bidders. No allowance will be made for any change in anticipated profits nor shall such changes be considered as waiving or invalidating any conditions or provisions of the Contract and Bond.

END OF SECTION 01010

## 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 in the Specifications.

#### 1.02 DESCRIPTIONS

- A. Measurement of an item of Work will be by the unit indicated 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 related 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.
- 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.

## 1.04 CASH ALLOWANCES

### A. General

1. The Contractor shall include in the Bid Total all allowances stated in the Contract Documents. These allowances shall cover the net cost of the services provided by a firm selected by the Owner. The Contractor's handling costs, labor, overhead, profit and other expenses contemplated for the original allowance shall be included in the items to which they pertain and not in allowances.
2. No payment will be made for nonproductive time on the part of testing personnel due to the Contractor's failure to properly coordinate testing activities with the work schedule or the Contractor's problems with maintaining equipment in good working condition. The Contractor shall make all necessary excavation and shall supply any samples of materials necessary for conducting compaction and density tests.
3. No payment shall be provided for services which fail to verify required results.

B. Should the net cost be more or less than the specified amount of the allowance, the Contract will be adjusted accordingly by change order. The amount of change order will not recognize any changes in handling costs at the site, labor, overhead, profit and other expenses caused by the adjustment to the allowance.

### C. Documentation

1. Submit copies of the invoices with each periodic payment request from the firm providing the services.
2. Submit results of services provided which verify required results.

**SECTION 01060  
REGULATORY REQUIREMENTS****PART 1 GENERAL****1.01 SCOPE**

- A. Permits and Responsibilities: The Contractor shall, without additional expense to the Owner, be responsible for obtaining all necessary licenses and permits, including building permits, and for complying with any applicable federal, state, county and municipal laws, codes and regulations, in connection with the prosecution of the Work.
- B. The Contractor shall take proper safety and health precautions to protect the Work, the workers, the public and the property of others.
- C. The Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the Work, except for any completed unit of construction thereof which may heretofore have been accepted.

END OF SECTION 01060

## 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
MSS	Manufacturers Standardization Society
NCPI	National Clay Pipe Institute
NSF	National Sanitation Foundation
PPI	Plastic Pipe Institute
	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	Society for Protective Coatings

## 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
CRSI	Concrete Reinforcing Steel Institute
NRMA	National Ready-Mix Association
PCA	Portland Cement Association
PCI	Pre-stressed 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
SI	Salt Institute
SPI	The Society of the Plastics Industry, Inc.
USDC	United States Department of Commerce
WEF	Water Environment Federation

## 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
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	SBCC 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

### **1.03 SYMBOLS**

Symbols and material legends shall be as scheduled on the Drawings.

END OF SECTION 01091

**SECTION 01200  
Project Meetings****PART 1 GENERAL****1.01 SCOPE**

- A. Work under this Section includes all scheduling and administering of pre-construction and progress meetings as herein specified and necessary for the proper and complete performance of this Work.
- B. Scheduling and Administration by CM/PM:
  - 1. Prepare agenda.
  - 2. Make physical arrangements for the meetings.
  - 3. Preside at meetings.
  - 4. Record minutes and include significant proceedings and decisions.
  - 5. Distribute copies of the minutes to participants.

**1.02 PRECONSTRUCTION CONFERENCE**

- A. The CM/PM shall schedule the pre-construction conference prior to the issuance of the Notice to Proceed.
- B. Representatives of the following parties are to be in attendance at the meeting:
  - 1. Owner.
  - 2. PM/CM
  - 3. Contractor and superintendent.
  - 4. Major subcontractors.
  - 5. Representatives of governmental or regulatory agencies as appropriate.
- C. The agenda for the pre-construction conference shall consist of the following as a minimum:
  - 1. Distribute and discuss a list of major subcontractors and a tentative construction schedule.
  - 2. Critical work sequencing.
  - 3. Designation of responsible personnel and emergency telephone numbers.
  - 4. Processing of field decisions and change orders.
  - 5. Adequacy of distribution of Contract Documents.
  - 6. Schedule and submittal of shop drawings, product data and samples.
  - 7. Pay request format, submittal cutoff date, Pay-date and retainage.
  - 8. Procedures for maintaining record documents.
  - 9. Use of premises, including office and storage areas and Owner's requirements.
  - 10. Major equipment deliveries and priorities.
  - 11. Safety and first aid procedures.
  - 12. Security procedures.
  - 13. Housekeeping procedures.
  - 14. Work hours.

**1.03 PROJECT COORDINATION MEETINGS**

- A. Schedule meetings as directed by the PM/CM ( as needed).
- B. Hold called meetings as the progress of the Work dictates.
- C. The meetings shall be held at the location indicated by the PM/CM.
- D. Representatives of the following parties are to be in attendance at the meetings:
  - 1. PM/CM.
  - 2. Contractor and superintendent.
  - 3. Major subcontractors as pertinent to the agenda.
  - 4. Owner's representative as appropriate.
  - 5. Representatives of governmental or other regulatory agencies as appropriate.
- E. The minimum agenda for progress meetings shall consist of the following:
  - 1. Review and approve minutes of previous meetings.
  - 2. Review work progress since last meeting.
  - 3. Note field observations, problems and decisions.
  - 4. Identify problems which impede planned progress.
  - 5. Review off-site fabrication problems.
  - 6. Review Contractor's corrective measures and procedures to regain plan schedule.
  - 7. Review Contractor's revision to the construction schedule as outlined in the Supplementary Conditions.
  - 8. Review submittal schedule; expedite as required to maintain schedule.
  - 9. Maintenance of quality and work standards.
  - 10. Review changes proposed by Owner for their effect on the construction schedule and completion date.
  - 11. Complete other current business.

END OF SECTION 01200

**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 2000 by Microsoft Corporation for scheduling. 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 1 day after receipt.
- B. Updating: Submit an update of the project 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.

END OF SECTION 01310

## SECTION 01340

### Shop Drawings, Product Data and Samples

#### PART 1 GENERAL

##### 1.01 SCOPE

- A. The work under this Section includes submittal to the PM/CM of shop drawings, product data and samples required by the various sections of these Specifications.
- B. Submittal Contents: The submittal contents required are specified in each section.
- C. Definitions: Submittals are categorized as follows:
  - 1. Shop Drawings
    - a. Shop drawings shall include technical data, drawings, diagrams, procedure and methodology, performance curves, schedules, templates, patterns, test reports, calculations, instructions, measurements and similar information as applicable to the specific item for which the shop drawing is prepared.
    - b. Provide newly-prepared information, on reproducible sheets, with graphic information at accurate scale (except as otherwise indicated) or appropriate number of prints hereof, with name or preparer (firm name) indicated. The Contract Drawings shall not be traced or reproduced by any method for use as or in lieu of detail shop drawings. Show dimensions and note which are based on field measurement. Identify materials and products in the work shown. Indicate compliance with standards and special coordination requirements. Do not allow shop drawing copies without appropriate final "Action" markings by the Designer to be used in connection with the Work.
    - c. Drawings shall be presented in a clear and thorough manner. Details shall be identified by reference to sheet and detail, specification section, schedule or room numbers shown on the Contract Drawings.
    - d. Minimum assembly drawings sheet size shall be 24 x 36-inches.
    - e. Minimum detail sheet size shall be 8-1/2 x 11-inches.
    - f. Minimum Scale:
      - (1) Assembly Drawings Sheet, Scale: 1-inch = 30 feet.
      - (2) Detail Sheet, Scale: 1/4-inch = 1 foot.
  - 2. Product Data
    - a. Product data includes standard printed information on materials, products and systems, not specially prepared for this Project, other than the designation of selections from among available choices printed therein.
    - b. Collect required data into one submittal for each unit of work or system, and mark each copy to show which choices and options are applicable to the Project. Include manufacturer's standard printed recommendations for application and use, compliance with standards, application of labels and seals, notation of field measurements which have been checked and special coordination requirements.

### 3. Samples

- a. Samples include both fabricated and un-fabricated physical examples of materials, products and units of work, both as complete units and as smaller portions of units of work, either for limited visual inspection or, where indicated, for more detailed testing and analysis.
  - b. Provide units identical with final condition of proposed materials or products for the work. Include "range" samples, not less than three units, where unavoidable variations must be expected, and describe or identify variations between units of each set. Provide full set of optional samples where the Designer's selection is required. Prepare samples to match the Designer's sample where indicated. Include information with each sample to show generic description, source or product name and manufacturer, limitations and compliance with standards. Samples are submitted for review and confirmation of color, pattern, texture and "kind" by the Designer. The Designer will note "test" samples, except as otherwise indicated, for other requirements, which are the exclusive responsibility of the Contractor.
4. Miscellaneous submittals related directly to the Work (non-administrative) include warranties, maintenance agreements, workmanship bonds, project photographs, survey data and reports, physical work records, statements of applicability, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operating and maintenance materials, overrun stock, security/protection/safety keys and similar information, devices and materials applicable to the Work but not processed as shop drawings, product data or samples.

#### 1.02 SPECIFIC CATEGORY REQUIREMENTS

- A. General: Except as otherwise indicated in the individual work sections, comply with general requirements specified herein for each indicated category of submittal. Submittals shall contain:
1. The date of submittal and the dates of any previous submittals.
  2. The Project title.
  3. Numerical submittal numbers, starting with 1.0, 2.0, etc. Revisions to be numbered 1.1, 1.2, etc.
  4. The Names of:
    - a. Contractor
    - b. Supplier
    - c. Manufacturer
  5. Identification of the product, with the Specification section number, permanent equipment tag numbers and applicable Drawing No.
  6. Field dimensions, clearly identified as such.
  7. Relation to adjacent or critical features of the Work or materials.

8. Applicable standards, such as ASTM or Federal Specification numbers.
9. Notification to the PM/CM in writing, at time of submissions, of any deviations on the submittals from requirements of the Contract Documents.
10. Identification of revisions on re-submittals.
11. An 8 x 3-inch blank space for Contractor and Designer stamps.
12. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of products, field measurements and field construction criteria and coordination of the information within the submittal with requirements of the Work and of Contract Documents.
13. Submittal sheets or drawings showing more than the particular item under consideration shall have all but the pertinent description of the item for which review is requested crossed out.

### **1.03 ROUTING OF SUBMITTALS**

- A. Submittals and routine correspondence shall be routed as follows:
1. Supplier to Contractor (through representative if applicable)
  2. Contractor to PM/CM
  3. PM/CM to Designer
  4. Designer to PM/CM
  5. PM/CM to Contractor and Owner
  6. Contractor to Supplier

## **PART 2 PRODUCTS**

### **2.01 SHOP DRAWINGS**

- A. Unless otherwise specifically directed by the PM/CM, make all shop drawings accurately to a scale sufficiently large to show all pertinent features of the item and its method of connection to the Work.
- B. Submit all shop assembly drawings, larger than 11 x 17-inches, in the form of one reproducible transparency with two opaque prints or blue lines.
- C. Submit all shop drawings, 11 x 17-inches and smaller, in the form of six opaque prints or blue lines.
- D. One reproducible for all submittals larger than 11 x 17-inches and no more than three prints of other submittals will be returned to the Contractor.



**2.02 MANUFACTURER'S LITERATURE**

- A. Where content of submitted literature from manufacturers includes data not pertinent to this submittal, clearly indicate which portion of the contents is being submitted for the Designer's review.
- B. Submit the number of copies which are required to be returned (not to exceed three) plus four copies which will be retained by the PM/CM.

**2.03 SAMPLES**

- A. Samples shall illustrate materials, equipment or workmanship and established standards by which completed work is judged.
- B. Unless otherwise specifically directed by the PM/CM, all samples shall be of the precise article proposed to be furnished.
- C. Submit all samples in the quantity which is required to be returned plus one sample which will be retained by the PM/CM.

**2.04 COLORS**

- A. Unless the precise color and pattern is specifically described in the Contract Documents, wherever a choice of color or pattern is available in a specified product, submit accurate color charts and pattern charts to the PM/CM for review and selection.
- B. Unless all available colors and patterns have identical costs and identical wearing capabilities, and are identically suited to the installation, completely describe the relative costs and capabilities of each.

**PART 3 EXECUTION****3.01 CONTRACTOR'S COORDINATION OF SUBMITTALS**

- A. Prior to submittal for the Designer's review, the Contractor shall use all means necessary to fully coordinate all material, including the following procedures:
  - 1. Determine and verify all field dimensions and conditions, catalog numbers and similar data.
  - 2. Coordinate as required with all trades and all public agencies involved.
  - 3. Submit a written statement of review and compliance with the requirements of all applicable technical Specifications as well as the requirements of this Section.
  - 4. Clearly indicate in a letter or memorandum on the manufacturer's or fabricator's letterhead, all deviations from the Contract Documents.

- B. Each and every copy of the shop drawings and data shall bear the Contractor's stamp showing that they have been so checked. Shop drawings submitted to the PM/CM without the Contractor's stamp will be returned to the Contractor for conformance with this requirement.
- C. The Owner may backcharge the Contractor for costs associated with having to review a particular shop drawing, product data or sample more than two times to receive a "No Exceptions Taken" mark.
- D. Grouping of Submittals
  - 1. Unless otherwise specifically permitted by the PM/CM, make all submittals in groups containing all associated items.
  - 2. No review will be given to partial submittals of shop drawings for items which interconnect and/or are interdependent. It is the Contractor's responsibility to assemble the shop drawings for all such interconnecting and/or interdependent items, check them and then make one submittal to the PM/CM along with Contractor's comments as to compliance, non-compliance or features requiring special attention.
- E. Schedule of Submittals: Within 30 days of Contract award and prior to any shop drawing submittal, the Contractor shall submit a schedule showing the estimated date of submittal and the desired approval date for each shop drawing anticipated. A reasonable period shall be scheduled for review and comments. Time lost due to unacceptable submittals shall be the Contractor's responsibility and some time allowance for resubmittal shall be provided. The schedule shall provide for submittal of items which relate to one another to be submitted concurrently.

### **3.02 TIMING OF SUBMITTALS**

- A. Make all submittals far enough in advance of scheduled dates for installation to provide all required time for reviews, for securing necessary approvals, for possible revision and re-submittal, and for placing orders and securing delivery.
- B. In scheduling, allow sufficient time for the Designer's review following the receipt of the submittal.

### 3.03 REVIEWED SHOP DRAWINGS

#### A. PM/CM Review

1. Allow a minimum of 30 days for the PM/CM's initial processing of each submittal requiring review and response, except allow longer periods where processing must be delayed for coordination with subsequent submittals. The PM/CM will advise the Contractor promptly when it is determined that a submittal being processed must be delayed for coordination. Allow a minimum of two weeks for reprocessing each submittal. Advise the PM/CM on each submittal as to whether processing time is critical to progress of the Work, and therefore the Work would be expedited if processing time could be foreshortened.
  2. Acceptable submittals will be marked "No Exceptions Taken". A minimum of four copies will be retained by the PM/CM for PM/CM's, Designer's and the Owner's use and the remaining copies will be returned to the Contractor.
  3. Submittals requiring minor corrections before the product is acceptable will be marked "Make Corrections Noted". The Contractor may order, fabricate and ship the items included in the submittals, provided the indicated corrections are made. Drawings must be resubmitted for review and marked "No Exceptions Taken" prior to installation or use of products.
  4. Submittals marked "Amend and Resubmit" must be revised to reflect required changes and the initial review procedure repeated.
  5. The "Rejected - See Remarks" notation is used to indicate products which are not acceptable. Upon return of a submittal so marked, the Contractor shall repeat the initial review procedure utilizing acceptable products.
  6. Only two copies of items marked "Amend and Resubmit" and "Rejected - See Remarks" will be reviewed and marked. One copy will be retained by the PM/CM and the other copy with all remaining unmarked copies will be returned to the Contractor for re-submittal.
- B. No work or products shall be installed without a drawing or submittal bearing the "No Exceptions Taken" notation. The Contractor shall maintain at the job site a complete set of shop drawings bearing the Designer's stamp.
- C. Substitutions: In the event the Contractor obtains the Designer's approval for the use of products other than those which are listed first in the Contract Documents, the Contractor shall, at the Contractor's own expense and using methods approved by the Designer, make any changes to structures, piping and electrical work that may be necessary to accommodate these products.
- D. Use of the "No Exceptions Taken" notation on shop drawings or other submittals is general and shall not relieve the Contractor of the responsibility of furnishing products of the proper dimension, size, quality, quantity, materials and all performance characteristics, to efficiently perform the requirements and intent of the Contract Documents. The Designer's review shall not relieve the Contractor of responsibility for errors of any kind on the shop drawings. **Reviews**

intended only to assure conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site. The Contractor is also responsible for information that pertains solely to the fabrication processes or to the technique of construction and for the coordination of the work of all trades.

### **3.04 RESUBMISSION REQUIREMENTS**

- A. Shop Drawings
  - 1. Revise initial drawings as required and resubmit as specified for initial submittal, with the resubmittal number shown.
  - 2. Indicate on drawings all changes which have been made other than those requested by the Designer.
- B. Project Data and Samples: Resubmit new data and samples as specified for initial submittal, with the resubmittal number shown.

END OF SECTION 01340

**SECTION 01540  
Job Site Security****PART 1 GENERAL****1.01 BARRICADES, LIGHTS AND SIGNALS**

- A. The Contractor shall furnish and erect such barricades, fences, lights and danger signals and shall provide such other precautionary measures for the protection of persons or property and of the Work as necessary. Barricades shall be painted in a color that will be visible at night. From sunset to sunrise, the Contractor shall furnish and maintain at least one light at each barricade and sufficient numbers of barricades shall be erected to keep vehicles from being driven on or into any Work under construction.
- B. The Contractor will be held responsible for all damage to the Work due to failure of barricades, signs and lights and whenever evidence is found of such damage, the Contractor shall immediately remove the damaged portion and replace it at Contractor's cost and expense. The Contractor's responsibility for the maintenance of barricades, signs and lights shall not cease until the Project has been accepted by the Owner.

END OF SECTION 01540

**SECTION 01610**  
**Transportation and Handling****PART 1 GENERAL****1.01 SCOPE**

- A. The Contractor shall provide transportation of all equipment, materials and products furnished under these Contract Documents to the Work site. In addition, the Contractor shall provide preparation for shipment, loading, unloading, handling and preparation for installation and all other work and incidental items necessary or convenient to the Contractor for the satisfactory prosecution and completion of the Work.
- B. All equipment, materials and products damaged during transportation or handling shall be repaired or replaced by the Contractor at no additional cost to the Owner prior to being incorporated into the Work.

**1.02 TRANSPORTATION**

- A. All equipment shall be suitably boxed, crated or otherwise protected during transportation.
- B. Where equipment will be installed using existing cranes or hoisting equipment, the Contractor shall ensure that the weights of the assembled sections do not exceed the capacity of the cranes or hoisting equipment.
- C. Small items and appurtenances such as gauges, valves, switches, instruments and probes which could be damaged during shipment shall be removed from the equipment prior to shipment, packaged and shipped separately. All openings shall be plugged or sealed to prevent the entrance of water or dirt.

**1.03 HANDLING**

- A. All equipment, materials and products shall be carefully handled to prevent damage or excessive deflections during unloading or transportation.
- B. Lifting and handling drawings and instructions furnished by the manufacturer or supplier shall be strictly followed. Eyebolts or lifting lugs furnished on the equipment shall be used in handling the equipment. Shafts and operating mechanisms shall not be used as lifting points. Spreader bars or lifting beams shall be used when the distance between lifting points exceeds that permitted by standard industry practice.
- C. Under no circumstances shall equipment or products such as pipe, structural steel, castings, reinforcement, lumber, piles, poles, etc., be thrown or rolled off of trucks onto the ground.
- D. Slings and chains shall be padded as required to prevent damage to protective coatings and finishes.

## **SECTION 01611**

### **Storage and Protection**

#### **PART 1 GENERAL**

##### **1.01 SCOPE**

The work under this Section includes, but is not necessarily limited to, the furnishing of all labor, tools and materials necessary to properly store and protect all materials, equipment, products and the like, as necessary for the proper and complete performance of the Work.

##### **1.02 STORAGE AND PROTECTION**

###### **A. Storage**

1. Maintain ample way for foot traffic at all times, except as otherwise approved by the PM/CM.
2. All property damaged by reason of storing of material shall be properly replaced at no additional cost to the Owner.
3. Packaged materials shall be delivered in original unopened containers and so stored until ready for use.
4. All materials shall meet the requirements of these Specifications at the time that they are used in the Work.
5. Store products in accordance with manufacturer's instructions.

###### **B. Protection**

1. Use all means necessary to protect the materials, equipment and products of every section before, during and after installation and to protect the installed work and materials of all other trades.
2. All materials shall be delivered, stored and handled to prevent the inclusion of foreign materials and damage by water, breakage, vandalism or other causes.
3. Substantially constructed weather tight storage sheds, with raised floors, shall be provided and maintained as may be required to adequately protect those materials and products stored on the site which may require protection from damage by the elements.

- C. Replacements:** In the event of damage, immediately make all repairs and replacements necessary for the approval of the PM/CM and at no additional cost to the Owner.

- D. Equipment and products stored outdoors shall be supported above the ground on suitable wooden blocks or braces arranged to prevent excessive deflection or bending between supports. Items such as pipe, structural steel and sheet construction products shall be stored with one end elevated to facilitate drainage.
- E. Unless otherwise permitted in writing by the PM/CM, building products and materials such as cement, grout, plaster, gypsum board, particleboard, resilient flooring, acoustical tile, paneling, finish lumber, insulation, wiring, etc., shall be stored indoors in a dry location. Building products such as rough lumber, plywood, concrete block and structural tile may be stored outdoors under a properly secured waterproof covering.
- F. Tarps and other coverings shall be supported above the stored equipment or materials on wooden strips to provide ventilation under the cover and minimize condensation. Tarps and covers shall be arranged to prevent ponding of water.

### **1.03 EXTENDED STORAGE**

In the event that certain items of major equipment such as air compressors, pumps and mechanical aerators have to be stored for an extended period of time, the Contractor shall provide satisfactory long-term storage facilities which are acceptable to the PM/CM. The Contractor shall provide all special packaging, protective coverings, protective coatings, power, nitrogen purge, desiccants, lubricants and exercising necessary or recommended by the manufacturer to properly maintain and protect the equipment during the period of extended storage.

END OF SECTION 01611



## **SECTION 01630**

### **Substitutions and Options**

#### **PART 1 GENERAL**

##### **1.01 SCOPE**

This Section outlines the restrictions and requirements for substitutions, product and manufacturer options, and construction method options.

##### **1.02 DEFINITIONS**

- A. For the purposes of these Contract Documents, a "substitute item" shall be defined as one of the following:
  - 1. A product or manufacturer offered as a replacement to a specified product or manufacturer.
  - 2. A product or manufacturer offered in addition to a specified product or manufacturer.
- B. For the purposes of these Contract Documents, a "substitute construction method" shall be defined as one of the following:
  - 1. A mean, method, technique, sequence or procedure of construction offered as a replacement for a specified mean, method, technique, sequence or procedure of construction.
  - 2. A mean, method, technique, sequence or procedure of construction offered in addition to a specified mean, method, technique, sequence or procedure of construction.

##### **1.03 GENERAL**

- A. An item or construction method, which is offered where no specific product, manufacturer, mean, method, technique, sequence or procedure of construction is specified or shown on the Drawings, shall not be considered a substitute and shall be at the option of the Contractor, subject to the provisions in the Contract Documents for that item or construction method.
- B. For products specified only by a referenced standard, the Contractor may select any product by any manufacturer, which meets the requirements of the Specifications, unless indicated otherwise in the Contract Documents.
- C. If the manufacturer is named on the Drawings or in the Specifications as an acceptable manufacturer, products of that manufacturer meeting all requirements of the Specifications and Drawings are acceptable.

- D. Whenever the Designer's design is based on a specific product of a particular manufacturer, that manufacturer will be shown on the Drawings and/or listed first in the list of approved manufacturers in the Specifications. Any Bidder intending to furnish products of other than the first listed manufacturer, or furnish substitute items, shall
1. Verify that the item being furnished will fit in the space allowed, perform the same functions and have the same capabilities as the item specified.
  2. Include in its Bid the cost of all accessory items which may be required by the other listed substitute product,
  3. Include the cost of any architectural, structural, mechanical, piping, electrical or other modifications required, and
  4. Include the cost of required additional work by the PM/CM, if any, to accommodate the item.
- E. Whenever a product specification includes minimum experience requirements which the manufacturer selected by the Contractor cannot meet, the manufacturer shall furnish the Owner with a cash deposit, or bond acceptable to the Owner in an amount equal to the cost of the product, which shall remain in effect until the experience requirement has been met.

#### **1.04 APPROVALS**

- A. Approval, of a substitution as an acceptable manufacturer, of the PM/CM is dependent on determination that the product offered
1. is essentially equal in function, performance, quality of manufacture, ease of maintenance, reliability, service life and other criteria to that on which the design is based, and
  2. will require no major modifications to structures, electrical systems, control systems or piping systems.

#### **1.05 SUBSTITUTIONS AND OPTIONS**

- A. No substitutions will be considered for the manufacturers listed in the Bid.
- B. After Notice to Proceed
1. Substitute items will be considered only if the term "equal to" precedes the names of acceptable manufacturers in the Specification.
  2. Where items are specified by referenced standard or specified as indicated in Article 1.03, Paragraph A. above, such items shall be submitted to the PM/CM for review.
  3. The Contractor shall submit shop drawings on the substitute item for the PM/CM's review in accordance with the Section 01340.

C. Prior to Opening of Bids

1. No consideration or approvals will be made for products specified by a referenced standard, or specified as indicated in Article 1.03, Paragraph A. above. Such consideration may occur only after the Notice to Proceed.
2. No consideration or approvals will be made for products being offered where the term "equal to" precedes the name of an approved product. Such substitution consideration may occur only after the Notice to Proceed.

END OF SECTION 01630

**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, 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 of 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.

**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, 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.
  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 01710

**SECTION 01720  
Record Documents****PART 1 GENERAL****1.01 SCOPE**

- A. The work under this Section includes, but is not necessarily limited to, the compiling, maintaining, recording and submitting of project record documents as herein specified.
- B. Record documents include, but are not limited to:
  - 1. Drawings;
  - 2. Specifications;
  - 3. Change orders and other modifications to the Contract;
  - 4. Field orders or written instructions, including Requests for Information (RFI) and Clarification Memorandums;
  - 5. Reviewed shop drawings, product data and samples;
  - 6. Test records.
- C. The Contractor shall maintain on the Project site throughout the Contract Time an up to date set of Record Drawings.

**1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES**

- A. Storage
  - 1. Store documents and samples in the Contractor's field office, 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.
  - 3. Maintain at the site for the Owner one copy of all record documents.

- D. Make documents and samples available at all times for inspection by PM/CM.
- E. Failure to maintain the Record Documents in a satisfactory manner may be cause for withholding of a certificate for payment..

### **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.

### **1.04 RECORD DRAWINGS**

- A. Record Drawings shall be reproducible, shall have a title block indicating that the drawings are Record Drawings, the name of the company preparing the Record Drawings, and the date the Record Drawings were prepared. The Contractor will be provided paper sepias of the Drawings, or it may elect to provide reproducible drawings via another method. Reproducible shall be defined as being translucent so as to allow a blue line print to be produced.
- B. Legibly mark drawings to record actual construction, including:
  - 1. All Construction
    - a. Changes of dimension and detail.
    - b. Changes made by Requests for Information (RFI), field order, clarification memorandums or by change order.
    - c. Details not on original Drawings.
  - 2. Site Improvements, Including Underground Utilities
    - a. Horizontal and vertical locations of all exposed and underground utilities and appurtenances, both new facilities constructed and those utilities encountered, referenced to permanent surface improvements.
    - b. Location of and dimensions of roadways and parking areas, providing dimensions to back of curb when present.
    - c. The locations shall be referenced to at least two easily identifiable, permanent landmarks (e.g., power poles, valve markers, etc.) or benchmarks.
  - 3. Structures
    - a. Depths of various elements of foundation in relation to finish first floor datum or top of wall.
    - b. Location of internal and buried utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.



**1.05 SPECIFICATIONS**

A. 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, clarification memorandums, or by change order.

**1.06 SUBMITTAL**

A. At contract closeout, deliver Record Documents to the PM/CM 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 01720

## **SECTION 01740**

### **Warranties and Bonds**

#### **PART 1 GENERAL**

##### **1.01 PROJECT MAINTENANCE AND WARRANTY**

- A. Maintain and keep in good repair the Work covered by these Drawings and Specifications until acceptance by the Owner.
- B. The Contractor shall warrant for a period of three years from the date of Owner's written Final Acceptance of certain segments of the Work and/or Owner's written Final Acceptance of the Project, as defined in the Contract Documents, that the completed Work is free from all defects due to faulty products or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects. The Owner will give notice of observed defects with reasonable promptness. In the event that the Contractor should fail to make such repairs, adjustments or other work that may be made necessary by such defects, the Owner may do so and charge the Contractor the cost thereby incurred.
- C. The Contractor shall not be obligated to make replacements which become necessary because of ordinary wear and tear, or as a result of improper operation or maintenance, or as a result of improper work or damage by another Contractor or the Owner, or to perform any work which is normally performed by a maintenance crew during operation.
- D. The Contractor shall, at Contractor's own expense, furnish all labor, materials, tools and equipment required and shall make such repairs and removals and shall perform such work or reconstruction as may be made necessary by any structural or functional defect or failure resulting from neglect, faulty workmanship or faulty materials, in any part of the Work performed by the Contractor. Such repair shall also include refilling of trenches, excavations or embankments which show settlement or erosion after backfilling or placement.
- E. Except as noted on the Drawings or as specified, all structures such as embankments and fences shall be returned to their original condition prior to the completion of the Contract. Any and all damage to any facility resulting from the Contractor's operations, shall be promptly repaired by the Contractor at no cost to the Owner.

- F. The Contractor shall be responsible for all road and entrance reconstruction and repairs and maintenance of same for a period of one year from the date of final acceptance. In the event the repairs and maintenance are not made immediately and it becomes necessary for the owner of the road to make such repairs, the Contractor shall reimburse the owner of the road for the cost of such repairs.
- . In the event the Contractor fails to proceed to remedy the defects upon notification within 15 days of the date of such notice, the Owner reserves the right to procure the required materials and perform the work as described in the Drawings and Specifications, and to hold the Contractor and the sureties on Contractor's bond liable for the cost and expense thereof.
- H. Notice to Contractor for repairs and reconstruction will be made in the form of a registered letter addressed to the Contractor at Contractor's home office.
- I. Neither the foregoing paragraphs nor any provision in the Contract Documents, nor any special guarantee time limit implies any limitation of the Contractor's liability within the law of the place of construction.

END OF SECTION 01740

## **SECTION 09800**

### **Mixing System**

#### **1.01 Summary**

- 1.1. The Work covered by this Section includes furnishing all labor, materials and equipment required to install the Hydrodynamic Mixing System (HMS) in a water storage reservoir.
- 1.2. The Hydrodynamic Mixing System (HMS) is defined as a supplemental system installed within a potable water storage reservoir which passively utilizes the energy provided by the inlet water supply (via pumped or gravity head) and generates a sufficient inlet momentum to achieve a complete homogeneous blending of the water volume within the reservoir with the inlet supply flow. Determination of Complete Homogeneous Blending shall be defined by the modeling requirements and supporting hydraulic analysis as conducted by each individual manufacturer for their specific system configuration as defined within these specifications. System submittals not providing this validation shall not be considered as a viable Hydrodynamic Mixing System (HMS) and shall not be accepted as an equivalent to this system specification.
- 1.3. The specifications in this section include all components of the Reservoir Hydrodynamic Mixing System (HMS) consisting of a bi-directional flow manifold equipped with variable orifice duckbill inlet nozzles that are NSF61 certified. The HMS manufacturer shall be responsible for designing the system in accordance with the hydrodynamic criteria defined within these specifications and submit design calculations verifying compliance in accordance with the submittal requirements. The following is a description of the Hydrodynamic Mixing System.
- 1.4. All modeling and hydraulic and mixing calculations pertaining to the HMS shall originate from the duckbill valve manufacturer. Modeling and calculations provided by parties other than the duckbill valve manufacturer are not allowed.
- 1.5. The complete Hydrodynamic Mixing System shall be supplied by the variable orifice nozzle manufacturer to maintain single source responsibility for the system. The complete system shall be defined as all piping and appurtenances within the tank downstream of the tank penetration. Appurtenances include pipe, fittings, horizontal and vertical pipe supports, expansion joints, and any other equipment specified within this section of the specifications. Approved manufacturer is Tideflex Technologies, Carnegie, PA 15106. Local Representative is Kazmier and Associates.
- 1.6. The following describes the design principles of the Hydrodynamic Mixing System and the validation of its effectiveness:
  - 1.6.1. To only require one tank penetration for reservoirs that operate in fill-then-draw unless a separate outlet pipe is required. When a separate outlet pipe is required, the HMS shall function as an inlet diffuser.
  - 1.6.2. To not have any horizontal piping that requires bracing to the tank shell other than at the bottom of the reservoir.

- 1.6.3. To be passive operating and not require any outside energy source.
- 1.6.4. To achieve complete mixing via multiple turbulent inlet jets (Jet-induced mixing). Scale modeling has shown that multiple ports provide faster mixing than a single inlet port [Roberts, et al (2005)].
- 1.6.5. To utilize variable orifice inlet nozzles that provides a non-linear jet velocity vs. flow characteristic. This maximizes the inlet momentum at all flow rates. The inlet momentum is the kinetic energy solely responsible for mixing. This also ensures the rise height of negatively buoyant inlet jets will be maximized when the inlet water is colder than the tank water.
- 1.6.6. To have less than ten (10) inlet ports. Scale modeling has shown diminishing returns with greater port quantities [Roberts, et al (2005)].
- 1.6.7. To have inlet ports that discharge an elliptically shaped jet that provides faster mixing and dilution of the inlet water into the tank water.
- 1.6.8. To have a configuration based on Computational Fluid Dynamics (CFD) modeling, conducted by the manufacturer, of a similar configuration in the same tank style.
- 1.6.9. To have multiple sampling studies conducted by water utilities that have conducted “before” and “after” spatial sampling of disinfectant residual and/or temperature that have proven the effectiveness of the HMS. Data can be submitted based upon the request of the engineer.

## 2.0 Referenced Standards

### American National Standards Institute (ANSI)

B16.1 – Cast Iron Pipe Flanges and Flanged Fittings

B16.5 – Pipe Flanges and Flanged Fittings

B36.10 – American National Standard Weights and Dimensions of Welded and Seamless Wrought Steel Pipe

### American Society for Testing and Materials (ASTM)

A53 – Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless

A234 – Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service

**A240 – Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications**

A351 – Standard Specification for Castings, Austenitic, Austenitic-Ferritic (Duplex), for Pressure-Containing Parts

A536 – Standard Specification for Ductile Iron Castings

C110 – Ductile Iron and Gray-Iron Fittings, 3 In. through 48 In. for Water

D1330 – Standard Specification for Rubber-Sheet Gaskets

D1784 – PVC/CPVC Pipe Compounds

D1785 – PVC Pipe, Schedules 40, 80 & 120

D2466 – PVC Solvent Cement

D2855 – PVC Solvent Joints  
 D3261 – Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Fittings  
 D3915 – PVC Pipe Fitting Compounds

#### **American Iron and Steel Institute (AISI)**

AISI 304 – 304 Stainless Steel Plate  
 AISI 316 – 316 Stainless Steel Plate  
 AISI 1040 – Carbon Steel Plate

#### American Water Works Association (AWWA)

C104 – Cement-Mortar Lining of Ductile Iron Pipe and fittings for Water  
 C110 – Ductile-Iron and Gray-Iron Fittings, 3 In. through 48 In. for Water  
 C115 – Flange Ductile Iron Pipe with Ductile Iron or Gray Iron Threaded Flanges  
 C200 - AWWA Standard for Steel Water Pipe 6” and Larger  
 C207 – Standard for Steel Pipe Flanges for Waterworks Service – Size 4 In. to 144 In.  
 C220 – AWWA Standard for Stainless Steel Pipe, 4” and Larger  
 C900 – AWWA Standard for Polyvinyl Chloride (PVC) Pressure Pipe, 4 In. Through 12 In. for Water Distribution  
 C905 – AWWA Standard for Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 In Through 48 In. for Water Transmission and Distribution  
 C906 – AWWA Standard for Polyethylene (PE) Pressure Pipe and Fittings, 4 In. Through 63 In. for Water Distribution

#### American Water Works Association Research Foundation (AwwaRF)

Project No. E20-J08 – Physical Modeling of Mixing in Water Storage Tanks (Forthcoming)

#### National Sanitation Foundation (NSF)

NSF Standard 14 – Plastic Piping System Components and Related Materials  
 NSF Standard 61 – Drinking Water System Components – Health Effects

### **3.0 Variable Orifice Duckbill Inlet Nozzles**

- 3.1. Inlet ports/nozzles shall be duckbill-style check valves that allow fluid to enter the reservoir during fill cycles and prevent flow in the reverse direction through the nozzle during draw periods. Inlet ports/nozzles may not be fixed-diameter ports or pipes.
- 3.2. The duckbill valves shall be NSF61 Certified. NSF61 approved/Certified materials will not be accepted in lieu of valve certification.
- 3.3. Inlet ports/nozzles shall have a variable diameter vs. flow hydraulic profile that provides a non-linear jet velocity vs. flow characteristic and a linear headloss vs. flow characteristic. The hydraulic characteristics of the duckbill valves shall be defined by “Hydraulic Code”.
- 3.4. The inlet ports/nozzles shall discharge an elliptically shaped jet. The nozzle must have been modeled by an independent laboratory using Laser Induced Fluorescence (LIF).

- 3.5. Manufacturer shall have conducted independent hydraulic testing to determine headloss and jet velocity characteristics on a minimum of eight (8) sizes of duckbill valves ranging from 2" through 48". The testing must include multiple constructions (stiffness) within each size and must have been conducted for free discharge (discharge to atmosphere) and submerged conditions.
- 3.6. Manufacturer shall have conducted an independent hydraulic test where multiple valves (at least four) of the same size and construction (stiffness) were tested to validate the submitted headloss characteristics and to prove the repeatability of the manufacturing process to produce the same hydraulic characteristics.
- 3.7. Manufacturer shall have conducted independent hydraulic testing to study the flow distribution characteristics of duckbill valves installed on multiport manifolds.
- 3.8. Manufacturer to have conducted Finite Element Analysis (FEA) on various duckbill valves to determine deflection, stress, and strain characteristics under various load conditions. Modeling must have been done for flowing conditions (positive differential pressure) and reverse differential pressure.
- 3.9. Manufacturer must have conducted in-house backpressure testing on duckbill valves ranging from ¾" to 48".
- 3.10. Manufacturer shall have at least fifteen (15) years experience in the manufacturing of "duckbill" style elastomeric valves.
- 3.11. Manufacturer must have duckbill valves installed on manifold piping systems in at least 100 distribution system reservoirs.
- 3.12. Manufacturer must have representative inspection videos showing the duckbill valves discharging water into the reservoir during an initial fill (unsubmerged). Manufacturer must also have representative underwater inspection videos showing the operation of the valves when submerged. Representative videos can be submitted upon request from the engineer.
- 3.13. The duckbill style nozzles shall be one-piece elastomer matrix with internal fabric reinforcing designed to produce the required discharge velocity and minimum headloss requirements as stipulated in the Submittals section. The flange portion shall be an integral portion of the nozzle with fabric reinforcing spanning across the joint between the flange and nozzle body.
- 3.14. The elastomer used in construction of the duckbill valves must have been tested by an accredited independent laboratory that confirmed there is no degradation in the elastomer when exposed to chlorine and chloramine per the ASTM D471-98 "Standard Test Method for Rubber Property – Effect of Liquids."
- 3.15. The manufacturer's name, plant location, serial number and product part number which designates nozzle size, material and construction specifications shall be bonded onto the surface of the nozzle.

#### **4.0 High Density Polyethylene (HDPE) Pipe and Fittings**

- 4.1. Two (2) Inches and Smaller – Pipe shall be manufactured from a PE3408 resin listed with the Plastic Pipe Institute (PPI) as TR-4. The resin material will meet the specifications of ASTM D3350-99 with a cell classification of PE345464C. Pipe shall have a manufacturing standard of ASTM D2737 (CTS). Pipe shall be DR 9 (200psi WPR) unless otherwise specified on the plans. The pipe shall contain no recycled compounds except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. All pipes shall be suitable for use as pressure conduits, and per AWWA C901, have nominal burst values of three (3) times the Working Pressure Rating (WPR) of the pipe. Pipe shall also have the following agency listing of NSF 14.
- 4.2. Four (4) Inches and Larger - Pipe shall be manufactured from a PE3408 resin listed with the Plastic Pipe Institute (PPI) as TR-4. The resin material will meet the specifications of ASTM D3350-99 with a cell classification of PE345464C. Pipe shall have a manufacturing standard of ASTM F714. Pipe O.D. sizes 4" to 24" shall be available in steel pipe sizes (IPS) and ductile iron pipe sizes (DIPS). Pipe O.D. sizes 26" to 54" shall be available in steel pipe sizes (IPS). Pipe shall be DR 17 (100psi WPR) for pipe sizes up to 36" unless otherwise specified on the plans. The pipe shall contain no recycled compounds except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. All pipes shall be suitable for use as pressure conduits, listed as NSF 14, and per AWWA C906 Pressure Class (PC) 100 have a nominal burst value of three and one-half (3 ½) times the Working Pressure Rating (WPR) of the pipe.
- 4.3. Pipe fittings and flanged connections, to be joined by thermal butt-fusion, shall be of the same type, grade, and class of polyethylene compound and supplied from the same raw material supplier.
- 4.4. Sidewall fusions for connections to outlet piping shall be performed in accordance with HDPE pipe and fitting manufacturer's specifications. The heating irons used for sidewall fusion shall have an inside diameter equal to the outside diameter of the HDPE pipe being fused. The size of the heating iron shall be ¼ inch larger than the size of the outlet branch being fused.
- 4.5. Field fusion welding will not be allowed unless specified or approved by the Engineer.
  - 4.5.1. Socket fusion, hot gas fusion, threading, solvents, and epoxies will not be used to join HDPE pipe.
- 4.6. Butt Fusion Fittings - Fittings shall be PE3408 HDPE, Cell Classification of PE345464C as determined by ASTM D3350-99, and approved for AWWA use. Butt Fusion Fittings shall have a manufacturing standard of ASTM D3261. Molded & fabricated fittings shall have a pressure rating equal to the pipe unless otherwise specified in the plans. Fabricated fittings are to be manufactured using Data Loggers. Temperature, fusion pressure and a graphic representation of the fusion cycle shall be part of the quality control records. All fittings shall be suitable for use as pressure conduits, and per AWWA C906, have nominal burst values of three and one-half (3 ½) times the Working Pressure Rating (WPR) of the fitting.



- 4.7. Electrofusion Fittings - Fittings shall be PE3408 HDPE, Cell Classification of PE345464C as determined by ASTM D3350-99. Electrofusion Fittings shall have a manufacturing standard of ASTM F1055. Fittings shall have a pressure rating equal to the pipe unless otherwise specified on the plans. All electrofusion fittings shall be suitable for use as pressure conduits, and per AWWA C906, have nominal burst values of three and one-half (3 ½) times the Working Pressure Rating (WPR) of the fitting.
- 4.8. Flanged pipe sections for mechanical joining shall be comprised of HDPE flange adapters and Stainless Steel 316 slip-on backup rings. Flange adapters shall conform to PE3408 HDPE, Cell Classification PE345464C as determined by ASTM D3350-99. Stainless Steel 316 slip-on backup rings shall conform to ASTM A351CF8M.

## 5.0 Coatings

- 5.1. Following installation of the manifold system, ductile iron pipe, fittings, bolted connections, pipe supports, and appurtenances shall be coated according to the interior tank paint specification as specified by the Engineer.
- 5.2. Surface preparation and coating procedures shall be provided by the Engineer and the coating supplier.
- 5.3. **Variable Orifice Inlet Nozzles shall not be coated.** The valves shall either be masked or be mounted after coating of the tank and piping. Contractor to ensure masking materials are removed after coating.

## 6.0 Sequencing and Scheduling

- 6.1. Coordinate and sequence work with Engineer and Owner to minimize disruption to the facility and downtime to storage tank operation.

## 7.0 Delivery, Storage, and Material Handling

- 7.1. Individual nozzles shall be packaged separately from the piping equipment.
- 7.2. All flanges shall be protected by using plastic inserts or plank wood, pipe sections are to be fully supported to prevent pipe deflection or damage to fittings or connections.
- 7.3. All equipment shall be shipped on pallets capable of fully supporting the pipe sections across their entire length. Pallets should be accessible for fork lift transport or strap and hoist means without causing any load to the pipe equipment.
- 7.4. All stainless steel components shall be stored separately away from any carbon steel components or other materials that could stain or deface the stainless steel finish from run-off of oxidized ferrous materials.

- 7.5. All pipe equipment should be covered and stored in areas free from contact with construction site sediment erosion to prevent accumulation of materials within the pipe and fittings.
- 7.6. Duckbill nozzles should be protected from contact with rigid objects during handling and storage. The contractor shall be responsible for replacing any duckbill nozzles or elastomeric components that are damaged after arrival on the site through installation and start-up of the system.
- 7.7. If valves, pipe, or fittings become damaged before or during installation, it shall be repaired as recommended by the manufacturer or replaced as required by the Engineer at the Contractor's expense, before proceeding further.
- 7.8. Deliver, store and handle other materials as required to prevent damage.

## **8.0 Submittals**

- 8.1. Independent CFD Modeling Validation
  - 8.1.1. The mixing system designer/supplier must supply data or report from at least one project where an independent company conducted CFD modeling on their mixing system design and the modeling results verified the design achieved complete mixing.
- 8.2. Full Scale Tracer Study Validation
  - 8.2.1. The mixing system designer/supplier must supply data or report from at least one project where a full scale tracer study using calcium chloride was conducted on a circular reservoir and the tracer study verified their mixing system design achieved complete mixing.
- 8.3. NSF61 Certification
  - 8.3.1. Copy of the NSF61 Certified listing for the valves used in the Hydraulic Mixing System (HMS).
  - 8.3.2. The valves themselves must be NSF61 certified, not just the elastomer used in construction of the valves. NSF61 approved/certified materials will not be accepted in lieu of valve certification.
- 8.4. Test Report on Elastomer Exposure to Chlorine and Chloramine
  - 8.4.1. Copy of test report from an accredited independent laboratory that confirmed there is no degradation in the elastomer when exposed to chlorine and chloramine per the ASTM D471-98 "Standard Test Method for Rubber Property – Effect of Liquids."

## 8.5. System Installation Drawings

- 8.5.1. The HMS manufacturer shall be responsible for providing engineering installation drawings of the complete manifold piping system as supplied by the manufacturer. These drawings shall include plan view piping arrangement, sections and elevations as required, support bracket installation details, duckbill nozzle orientation details, and all dimensions required for locating the system within the specified dimensions of the tank.
- 8.5.2. Six (6) sets of plans shall be provided to the Engineer for review and approval.
- 8.5.3. Two (2) sets of final fabrication and installation drawings shall be included with the shipment of the manifold piping equipment.

## 8.6. Design Calculations

- 8.6.1. All Design Calculations, curves, and reference information listed below must originate and be submitted by the duckbill valve manufacturer. **Calculations, curves, and reference information provided by contractors relating to the HMS are not allowed.** The duckbill valve manufacturer MUST include within the submittal package the following design calculations, curves, and reference information:
- 8.6.1.1. Calculations showing the fill time required, under isothermal conditions, for the HMS system to achieve complete mix of the reservoir volume at minimum, average and peak fill rates. Complete mixing defined as 95% homogenous solution. The theory and equations used in calculating the mixing times must be from a published AWWA reference manual or paper. The reference document(s) must be submitted with the equations and calculations.
- 8.6.1.2. Calculations showing the water level drawdown required to achieve complete mixing on the fill cycles at minimum, average, and peak flow rates.
- 8.6.1.3. Calculations of average storage tank water age for both fill-then-draw, and simultaneous fill and draw scenarios. Theory used in calculating water age must be submitted with the calculations.
- 8.6.1.4. A representative Computational Fluid Dynamics (CFD) model evaluation of the proposed HMS system configuration applied within a reservoir of similar geometry. Model output documentation shall include all design variables applied for the simulation, plot of the 3-D geometry showing the mesh definition, velocity magnitude vector and contour plots at different cross-sections throughout the water volume, simulated tracer animations showing the spatial and temporal distribution of inlet water in real time during the fill cycle.
- 8.6.1.5. Hydraulic calculations showing the resulting jet velocities of each inlet nozzle at minimum, average, and peak fill rates.

- 8.6.1.6. Hydraulic calculations showing the flow distribution among all inlet ports at minimum, average, and peak fill rates.
- 8.6.1.7. Manifold hydraulic calculations showing the total headloss of the HMS at minimum, average, and peak fill and draw rates. Headloss shall include all minor losses and headloss of nozzles.
- 8.6.1.8. Hydraulic curves showing thrust vs. flow for the inlet nozzles.
- 8.6.1.9. Calculations showing the terminal rise height of the jets that discharge at an angle above horizontal. The terminal rise height shall be calculated assuming 10°F and 20°F colder inlet water and calculated at minimum, average and peak fill rates. The theory and equations used to calculate the terminal rise height shall be included.
- 8.6.1.10. If the calculations and supporting data provided do not show compliance with the hydrodynamic requirements of the system as interpreted by the Engineer or Owner then the submittal shall be rejected.
- 8.6.1.11. Installation, Operation and Maintenance Manuals
- 8.6.2. Within 30 days of final approval of the installation drawings, by the Engineer, the HMS valve manufacturer shall provide four (4) sets of the installation portion of the Installation, Operation and Maintenance (IOM) Manuals for the applicable system. Within 30 days of final approval, by the Engineer, of the installed system the manufacturer shall provide six (6) copies of the complete Installation, Operation and Maintenance (IOM) Manual for final review and approval.
- 8.6.3. The manuals shall be in the following format and include the listed required information as a minimum:
- Enclosed in a 3-ring binder with project title and system designation shown on the front cover and side binder.
  - Table of contents
  - Copy of design calculations for the manifold system as defined in the previous section.
  - Copy of complete set of the installation plans.
  - Copy of NSF61 Certified Listing for the valves

Parts and equipment list with specification numbers for ordering of replacement parts.

Product specification sheets for nozzles, expansion joints, concrete anchors, and any other specialized items supplied with the system.

Installation guidelines for the HMS manifold system.

Operational procedures for the HMS manifold system.

Guidelines for repair of system components.

Schedule for suggested periodic maintenance of the manifold system.

## **9.0 Installation**

- 9.1. Installation of the manifold system shall be in accordance with the installation plans and
- 9.2. guidelines provided by the HMS manufacturer and as specified in the installation section of the IOM manual. Refer to section on Submittals for quantities and delivery schedules of the documents.

## **10.0 Installation, Inspection, Disinfection and Start-Up Testing Procedures**

- 10.1. The TMS manufacturer's authorized representative shall provide one (1) day inspection to verify that the system has been installed in accordance with the design specifications and installation drawings.
- 10.2. Start-Up Flow Testing
  - 10.2.1. Following installation of the complete manifold piping system, the contractor shall open the upstream isolation valve to allow flow into the tank through the manifold system. The isolation valve must be opened slowly to prevent surge or over-pressurization of the manifold system. The isolation valve must be fully opened to inspect the flow characteristics of the manifold system.
  - 10.2.2. The contractor and factory representative shall visually inspect the entire piping system for leakage.
  - 10.2.3. The contractor and factory representative shall visually inspect all of the inlet nozzles to ensure flow is being discharged into the tank through all nozzles.
  - 10.2.4. Disinfection of the installed pipe shall be conducted according to the RWR Construction Standards. The method of disinfection must be approved by the Engineer. The Contractor shall be responsible for all costs associated with the required disinfection.
  - 10.2.5. All tanks taken out of service for installation of hydrodynamic mixing system and connection to the new transmission main shall be disinfected prior to placing back into service. Tanks shall be disinfected in accordance with AWWA C652 Standard for

Disinfection of Water Storage facilities using Chlorination Method Submit proposed procedures for disinfecting the tanks to the ENGINEER for approval.

Prior to disinfecting, all construction materials and debris shall be removed from the tank and the tank interior shall be cleaned with high pressure water jet in accordance with AWWA C652. Disinfection by Chlorination Method 2 includes the application of a solution of 200 mg/L available chlorine applied directly to the surfaces of all parts of the storage facility that will be in contact with water when the storage facility is full to the overflow elevation. The disinfected surfaces shall remain in contact with chlorine solution for a minimum of 1 hour.

Rinse surfaces thoroughly and flush water from the tank. OWNER will fill the tank from the water supply. Water flushed from the disinfected tank shall be neutralized by treating with one of chemicals listed in AWWA C652. CONTRACTOR shall obtain OWNER's approval of discharging point for disposal water.

The CONTRACTOR must notify ENGINEER 24 hours before the reservoir is to be disinfected so that representative from Rockdale Water Resources can obtain a sample for testing. The CONTRACTOR is urged to schedule the disinfection as early in the week as possible. Failure of the BAC-T test will require CONTRACTOR to re-disinfect the reservoir until such time as the test passes and the reservoir can be returned to service. Coordinate disinfection of the waterlines connecting to the tank to prevent contamination of the tanks after disinfection has been completed.

The CONTRACTOR shall provide the necessary de-chlorination facilities and equipment to dispose of the disinfection water used in disinfecting the reservoir.

- 11.2.7 The CONTRACTOR shall reimburse Rockdale Water Resources all expenses and costs associated with additional sampling and analysis for failure of BAC-T tests including costs associated with additional filling and disinfecting.

Rockdale Water Resources will provide water for initial disinfection and BAC-T testing at no cost to CONTRACTOR. Should the tank fail BAC-T testing, the CONTRACTOR will reimburse Rockdale Water Resources for the water required for each retest at a rate of \$4.07 per 1,000 gallons.

## **11.0 Spare Parts**

- 11.1. Spare parts are not required, unless otherwise specified.

## **12.0 Warranty**

- 12.1. The complete manifold piping system shall be supplied by the HMS manufacturer to maintain single source responsibility for the system. The complete system shall be defined as all
- 12.2. piping and appurtenances within the tank downstream of the tank penetration. Appurtenances include pipe, fittings, horizontal and vertical pipe supports, expansion joints, duckbill valves, and any other equipment specified within this section of the specifications.
- 12.3. All piping, pipe support brackets, joint connections, expansion joints, and anchors shall be warranted by the HMS manufacturer against failure under design conditions for a period on one (1) year from the date of final installation approval by the Engineer.
- 12.4. Inlet nozzles shall be warranted by the manufacturer against failure under design operating conditions for a period of one (1) year from the date of final installation approval by the Engineer. Elastomer components damaged as a result of maintenance activities, foreign debris, or excessive exposure to direct ultraviolet and thermal radiation shall be excluded warranted coverage.

END OF SECTION 09800

# BID FORM – ITB# 15--04

Instructions: Complete all THREE parts of this bid form.

## PART I: Bid Summary

### COMBINED BID TOTAL for the FULLY INSTALLED, TESTED SYSTEM

**BID AMOUNT**

- IN DOLLARS ( \$ \_\_\_\_\_ )
- ( Amount written out) \_\_\_\_\_

**10% Contingency (using Base Bid)**

- IN DOLLARS ( \$ \_\_\_\_\_ )
- ( Amount written out) \_\_\_\_\_

**TOTAL**

- IN DOLLARS ( \$ \_\_\_\_\_ )
- ( Amount written out) \_\_\_\_\_

## PART II: Addenda Acknowledgements (if applicable)

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

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

## PART III: Vendor Information:

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



**ROCKDALE COUNTY BOARD OF COMMISSIONERS**  
**NON-COLLUSION AFFIDAVIT OF VENDOR**

State of \_\_\_\_\_)

County of \_\_\_\_\_)

\_\_\_\_\_, being first duly sworn, deposes and says that:

(1) He is \_\_\_\_\_ (owner, partner officer, representative, or agent) of \_\_\_\_\_, the Vendor that has submitted the attached RFP;

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

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

(4) Neither the said Vendor 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 Vendor, firm or person to submit a collusive or sham RFP in connection with the Contract for which the attached RFP 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 Vendor, firm or person to fix the price or prices in the attached RFP or of any other Vendor, or to fix any overhead, profit or cost element of the proposing price or the proposing price of any other Vendor, 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 Vendor 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 \_\_\_\_\_, 20

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 RFP;

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

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

(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 Vendor, firm or person to submit a collusive or sham RFP in connection with the Contract for which the attached RFP 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 Vendor, firm or person to fix the price or prices in the attached RFP or of any other Vendor, or to fix any overhead, profit or cost element of the proposing price or the proposing price of any other Vendor, 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 \_\_\_\_\_, 20 \_\_\_\_.

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 \_\_\_\_\_, \_\_\_\_, 201\_\_ in \_\_\_\_\_(city), \_\_\_\_\_(state).

\_\_\_\_\_  
Signature of Authorized Officer or Agent

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

SUBSCRIBED AND SWORN BEFORE ME  
ON THIS THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 201\_\_.

\_\_\_\_\_  
NOTARY PUBLIC  
My Commission Expires:  
\_\_\_\_\_

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

By executing this affidavit, the undersigned subcontractor verifies its compliance with O.C.G.A. § 13-10-91, stating affirmatively that the individual, firm or corporation which is engaged in the physical performance of services under a contract with (name of contractor) on behalf of (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 \_\_\_\_\_, \_\_\_\_, 201\_\_ in \_\_\_\_\_(city), \_\_\_\_\_(state).

\_\_\_\_\_  
Signature of Authorized Officer or Agent

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

SUBSCRIBED AND SWORN BEFORE ME  
ON THIS THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 201\_\_.

\_\_\_\_\_  
NOTARY PUBLIC  
My Commission Expires:  
\_\_\_\_\_

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

By executing this affidavit, the undersigned sub-subcontractor verifies it 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 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 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 \_\_\_\_\_, \_\_\_\_, 201\_\_ in \_\_\_\_\_(city), \_\_\_\_\_(state).

\_\_\_\_\_  
Signature of Authorized Officer or Agent

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

SUBSCRIBED AND SWORN BEFORE ME  
ON THIS THE \_\_\_\_\_ DAY OF \_\_\_\_\_, 201\_\_.

\_\_\_\_\_  
NOTARY PUBLIC  
My Commission Expires: \_\_\_\_\_

### 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 \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
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.

\_\_\_\_\_

**CONTRACTOR’S QUALIFICATION STATEMENT AND QUESTIONNAIRE**

**NAME OF PROPOSED CONTRACTOR:** \_\_\_\_\_

**I. INSTRUCTIONS**

- A. For the purposes of this Questionnaire, “Contractor” refers to the company presenting a proposal for the purposes and scope of work outlined in the bid documents where said company would be hired as a contractor of the County for goods, services, and/or labor whether in the form of contracting, consulting, or vendor services.
- B. 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. 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).

3. \_\_\_\_\_

\_\_\_\_\_

C. BONDING (IF APPLICABLE)

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 and/or references of reasonably similar nature, scope, and duration to that requested in the bid documents that your company has performed 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 Project:

\_\_\_\_\_

Type of Project:

\_\_\_\_\_

Cost of Project:

\_\_\_\_\_

Client contact info:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Other contact info:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Reference/Project #2:**

Name and Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date of Project:

\_\_\_\_\_

Type of Project:

\_\_\_\_\_

Cost of Project:

\_\_\_\_\_

Client contact info:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Other contact info:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Reference/Project #3:**

Name and Address:

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Date of Project:

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Type of Project:

---

Cost of Project:

---

Client contact info:

---



---



---

Other contact info:

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**V ARBITRATIONS, LITIGATIONS, AND OTHER PROCEEDINGS**

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

Has your company been involved in any 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 by the Occupational Safety and Health Administration concerning the project  
safety practices in the last seven years?

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

Have any criminal proceedings or investigations been brought \_\_\_\_\_  
against your company 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):

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**VI COMMENTS**

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

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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:  
\_\_\_\_\_