



**CITY OF FAIRHOPE
INVITATION TO BID**

SEALED BIDS will be received by the City of Fairhope of Baldwin County, Alabama, in the City of Fairhope's City Services and Public Utilities Building located at, 555 South Section St. Fairhope, Alabama, until 10:00 a.m., Local Time, April 19, 2023, and then publicly opened thereafter, for furnishing all labor and materials, and performing all work required by the City of Fairhope and described as follows:

Installation of a sanitary lift station at Planters Pointe.

The City of Fairhope is requesting responses to "Invitation to Bid No. 23-023, Planter's Pointe Lift Station".

Bid documents will be posted on the City of Fairhope Website: www.FairhopeAL.gov or a copy may be obtained by e-mailing: Purchasing@FairhopeAL.gov. Specifications are on file and may be seen in the Purchasing Department of the City of Fairhope, Alabama, 555 S. Section Street. Prior to opening, Bid packages may be picked up at that location during normal operation, between 7:00 am and 4:00 pm local time.

Questions or comments pertaining to this bid must be presented in writing, sent as e-mail to the attention of the Purchasing Manager, Erin Wolfe, 555 South Section St., Fairhope, AL 36532, e-mail: Purchasing@FairhopeAL.gov, by contacting the Project Engineer, Matthew C. Rogers, P.E., Thompson Engineering, 2970 Cottage Hill Road, Suite 190, Mobile, AL 36606, e-mail: mrogers@thompsonengineering.com, or will be forever waived.

There will be a non-mandatory pre-bid meeting on April 4, 2023, at 10:00 a.m. Local Time at the City of Fairhope's City Services and Public Utilities Building located at, 555 South Section St. Fairhope, Alabama.

The City of Fairhope is an Equal Opportunity Employer and requires that all **BIDDERS** comply with the Equal Employment Opportunity laws and the provisions of the CONTRACT Documents in this regard. The **CITY** also encourages and supports the utilization of Minority Business Enterprises on this and all public bids.

All bids must be on blank bid forms provided in the Bid Documents. All bids, with their guarantee (when required), must be enclosed in a sealed, opaque envelope, clearly identified on the outside as a "**Sealed Bid**" with **Item Name, Bid Number, City of Fairhope's Name and Address and CONTRACTOR's Name and Address**. Each bid must be in a separate envelope. Bids made out in pencil will not be accepted. Failure to observe the instructions contained herein will constitute grounds for rejection of your bid. The **City** reserves the right to accept or reject all bids or any portion thereof, and to waive informalities and to furnish any item of material or work to change the amount of the CONTRACT, whichever is in the best interest of the City of Fairhope.

No bids will be considered unless the **CONTRACTOR**, whether resident or non-resident of Alabama, is properly qualified to submit a proposal for this type of work in accordance with all applicable laws of the State of Alabama. Where applicable, this shall include evidence of holding a current license from the State Licensing board for General BIDDERS, Montgomery, Alabama, as required by Chapter 8 of Title 34, of the Code of Alabama, 1975. In addition, the Awarded Vendor, if non-resident of the State, and if a corporation, shall show evidence of having qualified with the Secretary of State to do business in the State of Alabama. **CONTRACTOR** must have a current business license or purchase a business license with the City of Fairhope prior to work performed. No bids shall be withdrawn for the period of thirty (30) days subsequent to the opening of proposals without the consent of the City of Fairhope, Baldwin County, Alabama. Once completed, a tabulation of the responsive and responsible bids will be available for public viewing by visiting the following web address: www.FairhopeAL.gov.



INVITATION TO BID
NO. 23-023
PROJECT:
PLANTER'S POINTE LIFT STATION

CITY OF FAIRHOPE
SHERRY SULLIVAN,
MAYOR

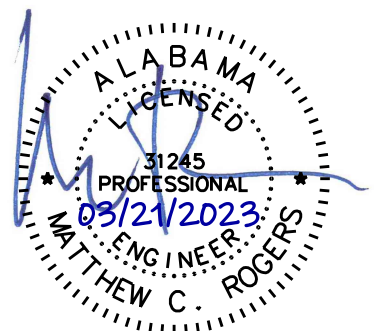


TABLE OF CONTENTS

Invitation and Instruction to Bidders	I
Scope of Work	II
Bid Response Form	III
Contractor Information	IV
Insurance	V
Sample Contract.....	VI
Standard Terms and Conditions.....	VII
Alabama Immigration Act Contract Requirements.....	VIII
Invitation Summary	IX
Bid Bond	X
Performance Bond	XI
Labor and Materials Bond	XII
Closeout Documents.....	XIII
Standard Specifications for Constructing Sanitary Sewer Facilities	XIV

**ITEM I
INVITATION AND INSTRUCTIONS TO BIDDERS**

1.00 BID INVITATION

Notice is hereby given that the **City of Fairhope (“CITY”)** will receive bids on the project described herein. Qualified **BIDDERS** are invited to bid on this CONTRACT.

1.01 BID NO.: 23-023
NAME: Planter’s Pointe Lift Station
LOCATION: City of Fairhope
City Services and Public Utilities Building
555 South Section Street
Fairhope, AL 36532

1.02 SUMMARY

The City of Fairhope is requesting responses to “Invitation to Bid No. 23-023, Planter’s Pointe Lift Station”, General Conditions, Special Provisions, Supplemental Specifications, Structural & Envelope Specifications, Project Material Specifications, and Bid Set Drawings can be found in SECTION II “SCOPE OF WORK”.

1.03 BID DEADLINE

Bids will be received until 10:00 a.m., Local Time, April 19, 2023 at the City Services and Public Utilities Building, 555 South Section St., Fairhope, Alabama, and publicly opened shortly thereafter.

1.04 AVAILABILITY OF DOCUMENTS

Bid Documents may be obtained on the City’s website at www.FairhopeAL.gov/departments/purchasing/bids or at the City Services and Public Utilities Building, 555 South Section Street, Fairhope, Alabama. One set of Bid Documents can be obtained free of charge.

1.05 INQUIRIES

Questions or comments pertaining to this bid must be presented in writing, sent as e-mail to the attention of the Purchasing Manager, Erin Wolfe, 555 South Section St., Fairhope, AL 36532, e-mail: Purchasing@FairhopeAL.gov, by contacting the Project Engineer, Matthew C. Rogers, P.E., Thompson Engineering, 2970 Cottage Hill Road, Suite 190, Mobile, AL 36606, e-mail: mrogers@thompsonengineering.com, or will be forever waived.

1.06 SITE EXAMINATION

There will be a non-mandatory pre-bid meeting on April 4, 2023, at 10:00 a.m. Local Time at the City of Fairhope’s City Services and Public Utilities Building located at, 555 South Section St., Fairhope, Alabama. This non-mandatory pre-bid meeting will serve as an opportunity for potential bidders to engage project stakeholders, review plans and ask questions. Bidders are not required to attend this meeting, but attendance is highly recommended.

The City of Fairhope will not furnish any labor, material, or supplies unless specifically stated in the CONTRACT Documents. **BIDDERS** must be properly licensed to perform the work as outlined in the Scope of Work. Awarded Vendor must have a current business license or purchase a business license with the City of Fairhope prior to bid being awarded.

Except for CONTRACTS funded in whole or in part by funds received from a federal agency, preference shall be given to resident **BIDDERS** on the same basis as the nonresident **BIDDERS** state awards CONTRACT to Alabama **BIDDERS** bidding under similar circumstances. Therefore, non-resident **BIDDERS** shall submit with their bid a written opinion of an attorney at

law licensed to practice law in the non-resident **BIDDERS** state of domicile as to preferences granted by that state to entities doing business in that state when letting public contracts.

1.07 BID SECURITY

Bids shall be accompanied by a Bid Security equal to 5% (percent) of the bid price, but in no event more than \$10,000.00. Bid Security shall be in the form of a Bid Bond or a cashier's check payable to The City of Fairhope. No Bid Security is required on bids less than \$10,000.00.

1.08 PERFORMANCE ASSURANCE AND INSURANCE

The **BIDDER** to whom award is made shall provide a Performance Bond equal to 100% of the CONTRACT Amount and a Labor and Material Bond equal to 50% of the CONTRACT amount.

The accepted **BIDDER** shall also provide insurance as required in ITEM V.

1.09 DURATION OF OFFER

Bids may be withdrawn in written or telegraphic request received from **BIDDER** prior to the time fixed for opening. No bid shall be withdrawn for a period of thirty (30) days subsequent to the opening of bids without the consent of the City Council of the City of Fairhope.

1.10 EQUAL OPPORTUNITY

The City of Fairhope is an Equal Opportunity Employer and requires that all **BIDDERS** comply with the Equal Employment Opportunity laws and the provisions of the CONTRACT Documents in this regard. The City of Fairhope also encourages and supports the utilization of Minority Business Enterprises on this and all public bids.

1.11 BID SUBMISSION AND PREPARATION

Sealed Bids, signed, executed, and dated, will be received by the City of Fairhope as noted in section 1.03 above. Submit one copy of the executed offer on the Bid Form provided, signed, and with the required Bid Security. **The bid shall be enclosed in a sealed opaque envelope approximately 9x12 inches or larger, clearly identified on the outside as a SEALED BID with the BID NAME, BID NUMBER, CITY'S NAME AND ADDRESS, CONTRACTOR'S NAME AND ADDRESS.**

Forms furnished, or copies thereof, shall be used, and strict compliance with the requirements of the invitation, these instructions, and the instructions printed on the forms is necessary. Special care should be exercised in the preparation of bids. **BIDDERS** must make their own estimates of the facilities and difficulties attending the performance of the proposed CONTRACT, including local conditions, uncertainty of weather, and all other contingencies. All designations and prices shall be fully and clearly set forth. The proper space in the bid and guaranty forms shall be suitably filled in.

Fill in all blanks on the bid form with non-erasable ink or type. Erasers or other changes must be explained or noted over the signature of the **BIDDER**.

The Bid Form may have a Contingency Allowance listed. Add this amount to the Base Bid to derive the Total Bid. The Contingency Allowance covers unforeseen conditions and shall not be used by the **BIDDER** without the written authorization of the **CITY**. At the conclusion of the project, the unused portion of the Contingency Allowance shall revert to the **CITY**.

Each bid must give the full business address of the **BIDDER** and must be signed by him with his usual signature. Bids by partnerships must furnish the full names of all partners and must be signed with the partnership name by one of the members of the partnership, or by an authorized representative, followed by the signature and designation of the person signing. Bids by corporations must be signed with the legal name of the corporation followed by the name of the State of Incorporation and by the signature and designation of the president, secretary, or other person authorized to bind it in the matter. The name of each person shall also be typed or

printed below the signature. A bid by a person who affixes to this signature the word “president,” “secretary,” “agent,” or other designation without disclosing his principal, may be held to be the bid of the individual signing. When requested by the **CITY** satisfactory evidence of the authority of the officer signing in behalf of the corporation shall be furnished.

Each project will be bid separately unless otherwise expressly requested in the CONTRACT document. Combination bids, that is bids on separate projects lumped together as a single bid or on all or none basis, will not be accepted unless the CONTRACT document expressly requests or permits same.

1.12 BID INELIGIBILITY

Bids that contain irregularities of any kind may be declared unacceptable at the discretion of the **CITY**. The **CITY** may waive any irregularities and may reject any or all bids. Bids received after the deadline will be returned to the **BIDDER** unopened.

1.13 CONTRACT TIME

The **BIDDER** agrees to the installation of a new sanitary sewer lift station at Planter’s Pointe as indicated on the bid documents pending funding availability to current code standards and deliver a complete project in 90 working days following a 15-day Notice to Proceed Period.

1.14 INQUIRIES/ADDENDA

All Addenda are part of the CONTRACT Documents. Include resultant costs in the Bid. Addenda will be issued by E-MAIL and posted on the City’s website: www.FairhopeAL.gov. It is the responsibility of the **BIDDER** to verify that all Addenda have been received.

Questions or comments pertaining to this bid must be presented in writing, sent via e-mail to Purchasing@FairhopeAL.gov and mrogers@thompsonengineering.com, or will be forever waived.

1.16 BID ACCEPTANCE

Bid with lowest Total Bid amount from a responsive and responsible **BIDDER** may be accepted if within the CONTRACT Budget. In the event that alternates are listed on the Bid Form, the lowest combination of Total Bid and Alternate Bids accepted by the **CITY** shall be the accepted bid. Alternates shall be awarded in the order in which they are listed on the Bid Form.

1.17 BIDDERS INTERESTED IN MORE THAN ONE BID

If more than one bid is offered by any one party, by or in a name of his clerk, partner, corporation in which he has a substantial interest, or in which he is an officer, or other person, all such bids may be rejected. A party who has quoted prices on materials to a **BIDDER** is not thereby disqualified from quoting prices to other **BIDDERS** or from submitting a bid directly for the materials or work. The **CITY** reserves the right to determine in its discretion whether the provisions of this clause have been violated by any **BIDDER**.

1.18 ERRORS IN BIDS

BIDDERS or their authorized agents are expected to examine the maps, drawings, specifications, and all other instructions pertaining to the work, which will be open to their inspection. Failure to do so will be at the **BIDDER’S** own risk. In case of error, in the extension of prices, the unit price will govern.

1.19 CONTRACT AND BOND

The **BIDDER** to whom award is made must, when requested, enter into written CONTRACT on the standard form as set out herein, with satisfactory security in the amount required, within the period specified, or, if no period be specified, within 15 days after the required forms are presented to him for signature.

1.21 COLLUSION

If there is any reason for believing that collusion exists among the **BIDDERS** any or all bids may be rejected, and those participating in such collusion may be barred from submitting bids on the same or other work with the **CITY**.

1.22 SUBLETTING OR ASSIGNING OF CONTRACT

Limitations: The **CONTRACTOR** shall not sublet, assign, transfer, convey, sell, or otherwise dispose of any portion of the **CONTRACT**, his right, title or interest therein, or his power to execute such **CONTRACT**, to any person, firm or corporation without written consent of the **CITY**, and such written consent shall not be construed to relieve the **BIDDER** of any responsibility for the fulfillment of the **CONTRACT**. Unless otherwise stipulated in the proposal or special provisions, the **BIDDER** shall perform with his own organization, and with the assistance of workmen under his immediate superintendence and reported on his payroll, all **CONTRACT** work of a value not less than 50 percent of the total **CONTRACT** amount, except that any items designated in the **CONTRACT** as "Specialty Items" so performed by **SUB-CONTRACTOR** may be deducted from the total **CONTRACT** amount before computing the amount of work required to be performed by the **BIDDER** with his own organization.

SUB-CONTRACTOR'S Status:

A **SUB-CONTRACTOR** shall be recognized only in the capacity of an employee or agent of the **CONTRACTOR** and the **CONTRACTOR** will be responsible to the **CITY** for all of the **SUB-CONTRACTOR'S** work, including failures or omissions; and his removal may be required by the Project Manager, as in the case of an employee.

1.23 PROSECUTION OF WORK

The **BIDDER** shall prosecute the work continuously and diligently in the order and manner set out in his schedule as approved by the **CITY**. He shall provide sufficient satisfactory materials, labor, and equipment to ensure that the work will be completed in a satisfactory manner within the time specified in the **CONTRACT**.

Should the **BIDDERS** fail to maintain a satisfactory rate of progress, the **CITY** may require that additional forces and/or equipment be placed on the work to bring the project up to schedule and maintain it at that level.

Should the **BIDDER** fail to furnish sufficient satisfactory equipment and/or labor for maintaining the quality and progress of the work at satisfactory level, the **CITY** may withhold all estimates that may become due until satisfactory quality and progress are maintained; or the **CONTRACT** may be annulled.

ITEM II SCOPE OF WORK

2.01 SUMMARY OF WORK

- A. This Contract covers the furnishing of all labor, materials, equipment, transportation, and appurtenances required to install a new pump station. In general, the work includes but is not limited to the following:
- i. Mobilization and demobilization to the site.
 - ii. Installing a new lift station in the City of Fairhope, Alabama as shown on the plans.
 - **The City shall provide two (2) end suction centrifugal submersible pumps complete and operational with motors, control panels, and float level controls as shown and specified herein and on the drawings.**
 - The Contractor shall furnish all labor, materials, equipment, and incidentals required to install end suction centrifugal submersible pumps complete and operational with motors, control panels, float level controls, access cover with fall through protection, and accessories as shown and specified herein and on the drawings.
 - iii. Site restoration and cleanup as described herein and as shown on the plans.
 - iv. Coordination of work with other on-site Contractors, City personnel, and Engineer.
- B. The intent and meaning of the Contract Documents require that the Contractor, under the terms of the Contract, shall take such action as necessary and/or required to provide labor, equipment, transportation, facilities, plants and appurtenances thereto, which are indicated, or reasonably implied by the Drawings (Plans), and each Section of the Specifications, all of which are collectively necessary and required for the execution of the Work.

2.02 PERMITS AND REGULATIONS

- A. Contractor shall be solely responsible for obtaining the necessary construction permits from the proper authorities.
- B. Contractor is responsible for compliance with all federal, state, and local regulations which affect implementation of the Project.
- C. If Contractor observes that the Contract Documents are at variance with any laws, ordinances, rules, and regulations applicable to the Work, he shall give the Owner written notice thereof. Necessary changes shall be addressed by an appropriate Change Order. Any Work performed by the Contractor which is contrary to such laws, ordinances, rules, and regulations and without written notice to the Owners shall be either dismantled and rebuilt or modified, with approval of the Owner, to comply with said laws, ordinances, rules and regulations. Costs arising from such shall be borne by the Contractor.

2.03 PROJECT CONSTRUCTION REQUIREMENTS

- A. General
- i. The CONTRACTOR shall have the required equipment and material needed for the required work before any work is commenced.
 - ii. The CONTRACTOR is advised that purchases of materials are to be scheduled so that items can be installed as required to assure project success. Purchase orders for any long lead items shall be placed as soon as possible after the receipt of

Notice of Award so as not to delay materials delivery. Delivery delay shall not excuse CONTRACTOR from liquidated damages.

- iii. All materials and/or equipment held in storage by the CONTRACTOR shall be protected from the weather, vandalism and/or flooding by suitable waterproof coverings or by placing in storage buildings until ready for installation or until equipment is to be turned over to the OWNER.
- iv. The CONTRACTOR shall make appropriate arrangements with the utility companies to provide for services necessary to complete the work. The CONTRACTOR shall comply with all protection requirements for the existing utilities.

2.04 EXISTING CONDITIONS

- A. The Contractor is advised that if he damages any facility outside the limits of construction, it shall be his responsibility to replace/restore the item(s) to their original condition. No additional compensation shall be provided for replacing damaged areas in kind outside the limits of construction.
- B. The Contractor shall contact all utility and municipal authorities prior to commencement of work and have them locate utilities that may be in the vicinity of the excavations prior to excavating the site.
- C. The Plans provide the approximate locations of underground utilities and related piping but not all utilities are identified. The Contractor shall protect all utilities while performing the Work. The Contractor shall repair, at his expense, any damages to utilities that occur as a result of the Contractor's negligence.

2.05 PLANNED SEQUENCE OF CONSTRUCTION

- A. The CONTRACTOR shall be responsible for submitting a planned sequence of construction prior to beginning work. Any necessary temporary utilities or facilities required during construction, or to operate or test new facilities until such time as permanent utilities are installed, shall be provided with no additional cost to the OWNER.
- B. Before starting work in any area of this project, the CONTRACTOR shall construct necessary or required soil erosion control measures in accordance with the plans and specifications and the Construction Best Management Practices Plan (CBMPP) prepared by CONTRACTOR.
- C. If, after award of the Construction Contract, a CONTRACTOR initiates or causes a change in the recommended construction sequence, said CONTRACTOR must bear any additional costs which are occasioned by the change, whether his own costs or those incurred by other CONTRACTORS. The ENGINEER's approval of such schedule or subsequent modifications thereto shall not relieve a CONTRACTOR from this responsibility.
- D. Notwithstanding any of the foregoing responsibilities for coordination, the ENGINEER will resolve disagreements which cannot be settled among the CONTRACTORS. The ENGINEER's decisions will be based on the solution which best serves the interests of the OWNER and this particular project. The ENGINEER's decision is final and not subject to CONTRACTOR claims for delay damages or time extensions.

2.06 CONTRACTOR'S USE OF SITE

- A. CONTRACTOR shall be responsible for coordination of all laydown areas. If private property is utilized, a copy this agreement shall be provided to the ENGINEER.

- B. CONTRACTOR shall:
 - i. Assume full responsibility for protection and safekeeping of products stored on or off the site.
 - ii. Obtain and pay for all additional storage or work areas required for its operations.
- C. Other construction projects are occurring on and near the site. Contractor shall coordinate his efforts with other contractors in the area to prevent conflicts between projects and resources.

2.07 MISCELLANEOUS ITEMS

- A. The CONTRACTOR shall inform his SUBCONTRACTORS of the conditions listed in this SUMMARY OF THE WORK, since the CONTRACTOR shall be held responsible for the action of their SUBCONTRACTORS.
- B. The exact location of the CONTRACTOR'S temporary facilities must be approved by the OWNER.

2.08 EASEMENTS AND RIGHTS-OF-WAY

- A. Easements and rights-of-way will be provided by OWNER. Confine construction operations within the limits indicated on the Drawings. Use due care in placing construction tools, equipment, excavated materials, and pipeline materials and supplies in order to avoid damage to property and interference with traffic. Do not enter any private property outside the designated construction easement boundaries without written permission from the OWNER of the property.
- B. The CONTRACTOR'S responsibility shall include compliance with all Federal, State, and Local regulations which in any way affect the work or implementation of the project.

2.09 NOTICES TO OWNERS AND AUTHORITIES OF PROPERTIES ADJACENT TO THE WORK

- A. Notify Owners of adjacent property and utilities when prosecution of the Work may affect them.
- B. When it is necessary to temporarily obstruct access to property, or when any utility service connection must be interrupted, give notices sufficiently in advance to enable the affected persons to provide for their needs. Conform notices to any applicable local ordinance and, whether delivered orally or in writing, include appropriate information concerning the interruption and instructions on how to limit inconvenience caused thereby.
- C. Utilities and other concerned agencies shall be notified at least 24 hours prior to cutting or closing streets or other traffic areas or excavating near underground utilities or pole lines.

2.10 SPECIFICATIONS CONCERNING CONSTRUCTION

- A. This project shall be constructed in accordance with the Alabama Department of Transportation Standard Specifications for Highway Construction, current non-metric edition, and any Supplemental Specifications and Special Provisions included herein.

ITEM IV

CONTRACTOR INFORMATION

This Section must be printed, completed, and turned in with your bid response to

Business Organization

Name of Contractor (exactly as it appears on W-9):

Doing-Business-As Name of CONTRACTOR:

Principal Office Address:

Telephone Number: _____ Fax Number: _____

Email Address: _____

Website: _____

Form of Business Entity [check one ("X")]

Corporation _____ Individual _____

Partnership _____ Joint Venture _____

Other (describe): _____

Corporate Statement

If a corporation, answer the following:

Date of incorporation: _____

Location of incorporation: _____

The corporation is held: Publicly _____ Privately _____

Partnership Statement

If a partnership, answer the following:

Date of organization: _____

Location of organization: _____

The partnership is: General _____ Limited _____

Joint Venture Statement

If a Joint Venture, answer the following:

Date of organization: _____

Location of organization: _____

JV Contract recorded? Yes _____ No _____

Contact: _____ Email: _____

Phone: _____ Fax: _____

END OF CONTRACTOR INFORMATION SECTION

ITEM V
INSURANCE

5.0 INSURANCE REQUIREMENTS

Awarded **CONTRACTOR**, at its sole expense, shall obtain and maintain in full force the following insurance to protect the **CONTRACTOR** and the City of Fairhope at limits and coverages specified herein. The City of Fairhope will be listed as an additional insured under the **CONTRACTOR'S** general liability insurance and automobile liability insurance policies, and all other applicable policies and certificates of insurance. These limits and coverages specified are the minimum to be maintained and are not intended to represent the correct insurance needed to fully and adequately protect the awarded **CONTRACTOR**.

5.01 All insurance will be provided by insurers by admitted carriers in the State of Alabama, shall have a minimum A.M. Best rating of A-VII and must be acceptable to the City. Self-insured plans and/or group funds not having an A.M. Best rating must be submitted to the City for prior approval.

5.02 NO WORK IS TO BE PERFORMED UNTIL PROOF OF COMPLIANCE WITH THE INSURANCE REQUIREMENTS HAS BEEN RECEIVED BY THE CITY.

5.03 Worker's Compensation and Employers Liability

Part One: Statutory Benefits as required by the State of Alabama

Part Two: Employers Liability	\$100,000 Each Accident
	\$100,000 Each Employee
	\$500,000 Policy Limit

5.04 U.S. Longshoreman & Harbor workers Act (USL&H)-

Required if CONTRACT involves work near a navigable Waterway that may be subject to the USL&H law.

5.05 Maritime Endorsement (Jones Act)-

Endorsement required if CONTRACT involves the use of a Vessel. Or include coverage for "Master or Members or Crew" under "Protection and Indemnity" coverage (P&I) unless crew is covered under Workers Compensation.

Bodily injury by accident	\$1,000,000 Each Accident
Bodily injury by disease	\$1,000,000 Aggregate

5.06 Commercial General Liability

Coverage on an Occurrence form with a combined single limit of (Bodily Injury and Property Damage combined as follows:

Each Occurrence	\$1,000,000
Personal and Advertising Injury	\$1,000,000
Products/Completed Operation Aggregate	\$2,000,000
General Aggregate	\$2,000,000

Coverage to include:

- Premises and operations
- Personal Injury and Advertising Injury
- Products/Completed Operations
- Independent BIDDERS
- Blanket Contractual Liability

Explosion, Collapse and Underground hazards
Broad Form Property Damage
Railroad Protective Liability Insurance if work involves construction, demolition or maintenance operations on or within 50 feet of a railroad.

5.07 Automobile Liability

Covering all Owned, Non-Owned, and Hired vehicles with a limit of no less than \$1,000,000 combined single limit of Bodily Injury and property damage per occurrence.

5.08 Certificate of Insurance

A Certificate of Insurance evidencing the above minimum requirements must be provided to and accepted by the City PRIOR to commencement of any work on the CONTRACT. Each policy shall be endorsed to provide ten (10) days written notice of cancellation to the CITY.

Such insurance as is afforded by the above policies covers the operations undertaken by the insured with respect to the construction of the project above designated. The insurance afforded by the above designated policies, specimen copies of which have been filed with the **CITY**, and to each of which is attached for following endorsement.

The insurer agrees with the insured as follows:

1. That it will furnish to said City of Fairhope a certificate of insurance in triplicate on a form approved for such purpose by said **CITY**, setting forth the pertinent information regarding the policy to which this endorsement is attached, for each project of said **CITY** to which the policy applies.
2. That it will attach to each said certificate of insurance executed copies of any endorsement other than this endorsement which are attached to said policy at the time said policy is issued, provided only that said endorsements affect the coverage of said policy in respect of operations involved in the construction of the projects of said **CITY** to which the policy applies.
3. That it will mail to the City Council of the City of Fairhope three executed copies of each endorsement subsequently issued to become a part of said policy provided only that endorsement affects the coverages of said policy in respect of operations involved in the construction of the project of said **CITY** which the policy applies, and provided further that such endorsement shall not be effective unless such notice is given to the **CITY** at the same time that notice thereof is given to the insured.
4. That it will mail to the City Council of the **CITY** of Fairhope at least ten days before the effective date thereof notice of cancellation of said policy, provided no cancellation shall be effective unless such notice is given to the **CITY**.

END OF INSURANCE REQUIREMENTS

ITEM VI



City of Fairhope
CONTRACT

This **CONTRACT** is made this _____ day of _____, 2023, by and between the City of Fairhope (hereinafter referred to as the "**OWNER**") and _____ (hereinafter referred to as the "**CONTRACTOR**"), for

Bid Number/Name

The **OWNER** and the **CONTRACTOR** agree as set forth below:

1. The **CONTRACT** consists of all the items contained within this **CONTRACT**, The Proposal Package, Proposal, Scope of Work and Specifications, drawings (if applicable), Addenda, Amendments, and City of Fairhope Standard Terms and Conditions, which are attached hereto and made a part hereof, as if fully contained herein; for the performance of all work and the furnishing of all labor and materials required for completion of the **WORK**.
2. The **CONTRACTOR** shall perform all the **WORK** described herein.
3. The **WORK** to be performed under this **CONTRACT** shall be commenced upon execution of this **CONTRACT** within number (DAYS) days of the date specified in the *Notice to Proceed* (NTP) to be issued to the **CONTRACTOR** by the **OWNER**, or its authorized representative. The work shall be completed, subject to authorized adjustments, within (DAYS) consecutive calendar days from and after the commencement date stipulated in said *Notice to Proceed*. Liquidated damages for non-completion of the work within this time limit will be assessed at the rate of (DOLLARS) per working day.
4. The **OWNER** shall pay the **CONTRACTOR** in current funds for the performance of the **WORK**, the **CONTRACT SUM** of _____ DOLLARS (\$ _____). This represents a LUMP SUM payment for performance of the **WORK**, which payment shall be issued after the Contract is fully performed and the **OWNER** has inspected the **WORK**.
5. **General Conditions**
 - a. **Indemnity:** The **CONTRACTOR** hereby agrees to indemnify and save harmless the **OWNER**, its officers, agent, and employees, from and against any and all liabilities, claims, demands, damages, fines, fees, expenses, penalties, suits, proceedings, actions and cost of actions, including reasonable attorneys' fees for trial and on appeal, of any kind and nature, arising or growing out of, or in any way connected with the performance of this **CONTRACT**, to the extent caused by a negligent act or omission of the **CONTRACTOR**, their agents, servants, employees, **SUB-CONTRACTORS**, or others associated with the **CONTRACTOR**. The **CONTRACTOR** shall be responsible for damage to any elevator equipment excluded from this agreement, or damage or injury caused by any equipment excluded from this agreement, to the extent that the damage or injury is caused by a negligent act or omission of the **CONTRACTOR**.
 - b. **Notification and Accident Reports:** In the event of accidents of any kind, the **CONTRACTOR** shall notify the **OWNER** immediately and furnish, without delay, copies of all such accident reports to the **OWNER**. If in the performance of their Work, the **CONTRACTOR** fails to immediately report an accident to the **OWNER**, of which the **CONTRACTOR** has knowledge of and which results in a fine

levied against the **OWNER** then the **CONTRACTOR** shall be responsible for all fines levied against the **OWNER**.

6. Termination of Agreement

- a. Termination for Default: Performance of Work under this Agreement may be terminated by the **OWNER**, in whole or in part, in writing, whenever the **OWNER** determines that the **CONTRACTOR** has failed to meet the requirements of this Agreement.
 - i. The Owner has a right to terminate for default if the contractor fails to make delivery of material or does not perform the work, or if the Contractor fails to perform the Work within the time specified in the Agreement, or if the Contractor fails to perform any other provision of the Agreement.
 - ii. Failure on the part of the Contractor to deliver or perform the Work within the time specified, or within a reasonable time as determined by the Owner, or failure on the part of the Contractor to make replacements of rejected articles, or Work when so requested, immediately or as directed by the Owner, shall constitute authority for the Owner to purchase in the open market, articles or Work of comparable grade to replace the articles or Work rejected, not delivered or completed. On all such purchases, the Contractor shall reimburse the Owner within a reasonable time specified by the Owner for any expense incurred in excess of Agreement prices.
 - iii. Such purchases shall be deducted from the Agreement sum. If public necessity demands it, the Owner reserves the right to utilize services or use and/or consume articles delivered, which are standard in quality, subject to an adjustment of price to be determined by the Owner.
- b. Termination for Convenience: The **OWNER** has the absolute right to terminate the Agreement upon "Award of Contract" another **CONTRACTOR**, to perform work referenced herein. In such event, payment of the monthly contract fee shall cease on the date of cancellation of the **CONTRACT** by the **OWNER**.

7. Warranty

- a. The **CONTRACTOR** warrants that the Work including equipment and materials provided shall conform to the professional standards of care and practice in effect at the time the Work is performed, be of the highest quality, and be free from all faults, defects, or errors. If the **CONTRACTOR** is notified in writing of a fault, deficiency or error in the Work, the **CONTRACTOR** shall at the **OWNER**'s option, either re-perform such portions of the Work to correct such fault, defect, or error, at no additional cost to the **OWNER**, or refund to the **OWNER** the charge paid by the **OWNER**, which is attributable to such portions of the faulty, defective or erroneous Work, including costs for re-performance or Work provided by other **CONTRACTORS**. All equipment and materials provided by the **CONTRACTOR** shall be merchantable and for the purpose intended and meet all industry quality standards.

8. Time of Completion

The **OWNER** and **CONTRACTOR** understand and agree that time is of the essence in the performance of this Agreement. The **CONTRACTOR** or **OWNER**, respectively, shall not be liable for any loss or damage, resulting from any delay or failure to perform its contractual obligations within the time specified, due to acts of God, actions or regulations by any governmental entity or representative, strikes, fire, water damage, loss of power, loss of funding or any other causes, contingencies, or circumstances not subject to the **OWNER** or **CONTRACTOR**'S control, respectively, whether of a similar or dissimilar nature, which prevent or hinder the performance of the **OWNER**'S or **CONTRACTOR**'S contractual obligations, respectively. Any such causes of delay, even though existing on the date of the **CONTRACT**, or on the day

of the start of Work, shall extend the time of the OWNER'S or CONTRACTOR'S performance respectively, by the length of the delays occasioned thereby, including delays reasonably incident to the resumption of normal Work schedules.

However, under such circumstances as described herein, the OWNER may, at their discretion, cancel this CONTRACT for their own convenience.

9. Insurance Requirements

See ATTACHMENT B

10. Acceptance of Work

The OWNER will be deemed to have accepted the Work after the OWNER agrees the Work is completed. In the event Work furnished under the CONTRACT is found to be defective or does not conform to the intent of the CONTRACT, the CONTRACTOR shall, within ten (10) days from receipt of notice from the OWNER, correct the deficiencies. Failure on the part of the CONTRACTOR to properly correct the deficiencies within the time period allowed will constitute the OWNER'S right to cancel the CONTRACT immediately, upon written notice to the CONTRACTOR.

11. Correction of Work

The CONTRACTOR shall promptly correct all Work rejected by the OWNER as faulty, defective or failing to conform to the CONTRACT, whether observed before or after completion of the Work. The CONTRACTOR shall bear all costs of correcting such rejected Work.

12. Right to Audit

The CONTRACTOR shall maintain documentation of all work performed. The CONTRACTOR shall make any and all documentation available to the OWNER at all reasonable times, for inspections and audit by the OWNER, during the entire term of the CONTRACT, and for a period of three (3) years after the expiration of this CONTRACT.

13. CONTRACT Rights and Remedies

The CONTRACTOR shall maintain documentation of all work performed. The CONTRACTOR shall make any and all documentation available to the OWNER at all reasonable times, for inspections and audit by the OWNER, during the entire term of the CONTRACT, and for a period of three (3) years after the expiration of this CONTRACT.

14. Time is of the Essence

The Owner and CONTRACTOR agree that time is of the essence in the performance of Work called for under this CONTRACT. The CONTRACTOR agrees that all work will be accomplished regularly, diligently and uninterrupted at such a rate of progress as will ensure full completion thereof within reasonable time periods.

15. Safety Measures

The CONTRACTOR shall take all necessary precautions for the safety of the OWNER'S and CONTRACTOR'S employees at the Work site, and shall erect and properly maintain at all times, all necessary safeguards for the protection of the workmen and the public. The CONTRACTOR shall post signs warning against hazards in and around the Work site.

16. Extra Work and Associated Costs

- a. Changes in the Work: The OWNER, without invalidating the CONTRACT, may order changes in the Work within the general scope of this CONTRACT, consisting of additions, deletions, or other revision, the CONTRACT price and time for execution of the Work being adjusted accordingly.
- b. All such changes in the Work shall be authorized by a written Amendment to the CONTRACT or a separate Change Order and shall be executed under the applicable conditions of the CONTRACT.

17. Familiarity with the Work

The CONTRACTOR, by executing this CONTRACT, acknowledges full understanding of the extent and character of the Work required and the conditions surrounding the performance thereof. The OWNER will not be responsible for any alleged misunderstanding of conditions surrounding the performance thereof. It is understood that execution of the CONTRACT by the CONTRACTOR serves as his stated commitment to fulfill all requirements and conditions referred to in this CONTRACT.

18. Scope of Work

See **ATTACHMENT B**

19. Contractor Liability

Nothing in this CONTRACT shall be construed to mean that the CONTRACTOR assumes any liability for damages or otherwise, on account of accidents to persons or property, except those resulting from negligence on the part of the CONTRACTOR or its agents, servants, employees, and subcontractors.

20. Miscellaneous Provisions

- a. The CONTRACTOR shall not employ SUB-CONTRACTORS without the express written permission of the OWNER.
- b. The CONTRACTOR shall not assign the CONTRACT or sublet it as a whole without the express written permission of the OWNER. The OWNER may assign the CONTRACT, or sublet it as a whole, without the consent of the CONTRACTOR.
- c. No waiver, alteration, consent, or modification of any of the provisions of the CONTRACT shall be binding unless in writing and signed by the OWNER and CONTRACTOR.
- d. The CONTRACTOR is to procure all permits, licenses, and certificates, or any approvals of plans or specifications as may be required by Federal, State, Local Laws, ordinances, rules, and regulations, for the proper execution and completion of Work covered under this CONTRACT.
- e. The CONTRACTOR shall at all times keep the Work area free from accumulation of waste materials or rubbish caused by his operations, and promptly remove any such materials to an area designated by the OWNER or remove to a waste site as directed by the OWNER. If the CONTRACTOR fails to clean up the Work site, the OWNER will complete the task and charge the CONTRACTOR for such services.
- f. This CONTRACT is considered a non-exclusive Agreement between the parties.
- g. This CONTRACT is deemed to be under and shall be governed by and construed according to the laws of the State of Alabama.
- h. Any litigation arising out of the CONTRACT shall be heard in the Courts of Baldwin County, Alabama.

IF INDIVIDUAL OR PARTNERSHIP

Individual or Partnership

Print Name of Partner

Print Name of Representative Authorized to Sign
Contracts for the firm

Print Name of Partner

Signature of Representative Authorized to Sign
Contracts for the firm

Print Name of Partner

Address

Address

City, State, Zip Code

Phone Number

Fax Number

Primary E-mail Address

AL General Contractor License No. (Attach Copy)

AL General Contractor License Major Categories

AL General Contractor Specialties

AL Foreign Corporation Entity ID (Required of Out of State Vendors)

IF CORPORATION OR LLC

Company

State of Incorporation

Company Representative

Print Name of Representative Authorized to Sign
Contracts for the firm

Signature of Representative Authorized to Sign
Contracts for the firm

Address

Address

City, State, Zip Code

Phone Number

Fax Number

Primary E-mail Address

AL General Contractor License No. (Attach Copy)

AL General Contractor License Major Categories

AL General Contractor Specialties

AL Foreign Corporation Entity ID (Required of Out of State Vendors)

NOTARY FOR INDIVIDUAL, PARTNERSHIP, CORPORATION, OR LLC

STATE OF _____ }
COUNTY OF _____ }

I, the undersigned authority in and for said State and County, hereby certify that _____ As
Name

_____ respectively of _____
Title Company Name

Whose name is signed in the foregoing document and who is known to me, acknowledged before me on this day, being informed of the contents of the document they executed the same voluntarily on the day the same bears date.

Given under my hand and Notary Seal on this _____ day of _____, 202_.

NOTARY PUBLIC _____

MY COMMISSION EXPIRES _____



ITEM VII

CITY OF FAIRHOPE

STANDARD TERMS AND CONDITIONS

1. ACCEPTANCE OF AGREEMENT

This Agreement contains all terms and conditions agreed upon by the Owner and Winning bidder. No other agreement, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind either party hereto. The Winning Bidder shall not employ Subcontractors without the express written permission of the Owner. No waiver, alteration, consent or modification of any of the provisions of the Agreement shall be binding unless in writing and signed by the Owner and Contractor. This Agreement shall not be construed against the party or parties preparing it. It shall be construed as if all the parties and each of them jointly prepared this Agreement, and any uncertainty or ambiguity shall not be interpreted against one or more parties.

2. ACCEPTANCE OF WORK

The City of Fairhope will be deemed to have accepted the Work after the City of Fairhope agrees the Work is completed by signature on delivery or service tickets. In the event Work furnished under the Contract / Agreement / Purchase Order is found to be defective or does not conform to the intent of the Contract / Agreement / Purchase Order, the awarded vendor shall, after receipt of notice from the City of Fairhope, correct the deficiencies. Failure on the part of the awarded vendor to properly correct the deficiencies within the time period allowed will constitute the City of Fairhope's right to cancel the Contract / Agreement / Purchase Order immediately, upon written notice to the awarded vendor.

3. ADDENDA

All Addenda are part of the Contract Documents. Include resultant costs in the Bid. Addenda will be issued by email to all Bidders on record and posted to the City of Fairhope website www.FairhopeAL.gov. It is the responsibility of the bidder to verify that all addenda have been received, and to include all signed addenda in the bid submission

4. ADDITIONAL ORDERS

Unless it is specifically stated to the contrary in the bid response, the City of Fairhope reserves the option to place additional orders against a contract awarded as a result of this solicitation at the same terms and conditions; to extend the renewal date until a new bid is in place, if it is mutually agreeable.

5. APPLICABLE LAW

This Agreement is deemed to be under and shall be governed by and construed according to the laws of the State of Alabama. Any litigation arising out of the Agreement shall be heard in the Courts of Baldwin County, Alabama.

6. ASSIGNMENT

The awarded vendor shall not assign the Contract / Agreement / Purchase Order or sublet it as a whole without the express written permission of the City of Fairhope. The awarded vendor shall not assign any payment due them hereunder, without the express written permission of City of Fairhope. The City of Fairhope may assign the Contract / Agreement / Purchase Order, or sublet it as a whole, without the consent of the awarded vendor.

7. ASSURANCE OF NON-CONVICTION OF BRIBERY

The bidder hereby declares and affirms that, to its best knowledge, none of its officers, directors, or partners and none of its employees directly involved in obtaining contracts has been convicted of bribery, attempted bribery, or conspiracy to bribe under the laws of any state or Federal government.

8. AWARD CONSIDERATION

The following factors will be considered in determining the lowest **responsible** bidder: Overall quality, Conformity with specifications both general and specific, Purposes for which materials or services are required, Delivery dates and time required for delivery, Unit acquisition cost, financial ability to meet the contract, previous performance, facilities and equipment, availability of repair parts, experience, delivery promise, terms of payments, compatibility as required, other costs, and other objective and accountable factors which are reasonable.

9. AWARD OR REJECTION OF BIDS

The Bid will be awarded to the lowest responsible bidder complying with conditions of the invitation for bids, provided his bid is reasonable and it is in the interest of the City of Fairhope to accept it. The bidder to whom the award is made will be notified at the earliest possible date. The City of Fairhope, however, reserves the right to reject any and all bids and to waive any informality in bids received whenever such rejection or waiver is in the interest to the City of Fairhope.

10. BACK ORDERS

If it is necessary to back order any items, the vendor must notify the Purchasing Department and advise as to the expected shipping or delivery date. If this date is not acceptable, the City of Fairhope may seek remedies for default.

11. BID AND PERFORMANCE SECURITY

If bid security is required, a bid bond or cashier's check in the amount indicated on the bid cover must accompany the bid and be made payable to The City of Fairhope of Baldwin County, AL. Corporate or certified checks are not acceptable. Bonds must be in a form satisfactory to the City and underwritten by a company licensed to issue bonds in the State of Alabama. If bid security fails to accompany the bid, it shall be deemed unresponsive, unless the Purchasing Manager deems the failure to be non-substantial. All checks will be returned to the bidders after the contract has been approved. If a performance bond is required, the successful bidder will be notified after the awarding of the contract.

12. BRAND NAMES

Reference to brand names and numbers is descriptive, but not restrictive, unless otherwise specified. Bids on equivalent items meeting the standards of quality thereby indicated will be considered, providing the bid clearly describes the article offered and indicates how it differs from the referenced brands. Descriptive literature or manufacturers specifications plus any supplemental information necessary for comparison purposes should be submitted with the bid or the bid on that item may be rejected. Reference to literature submitted with a previous bid or on file with the Division of Purchasing will not satisfy this requirement. The burden is on the bidder to demonstrate that the item bid is equivalent to the item specified in the ITB. Bids without sufficient documentation to fully support equality, may be considered non-responsive. Reference by the City of Fairhope in the ITB to available existing specifications shall be sufficient to make the terms of such specifications binding on the bidder. Unless the bidder specifies otherwise in its bid, it is understood the bidder is offering a referenced brand item as specified in the ITB or is bidding as specified when no brand is referenced. Failure to examine drawings, specifications and instructions will be at the bidder's risk.

13. BUSINESS LICENSE

The vendor selected to enter into a Contract / Agreement with the City of Fairhope must be licensed to do business in the City of Fairhope prior to commencement of any work under the contract. Delivery of goods or services to the City of Fairhope by Purchase Order have detailed and varied Business License requirements. In all instances that require a business license. Awarded vendor will provide proof of possessing a current City of Fairhope Business License. Prospective bidders will not be required to possess a City of Fairhope Business License prior to award.

14. CANCELLATION OF / CONTRACT / AGREEMENT / PURCHASE ORDER / LEASE

A purchase order can be canceled in whole or in part when awarded vendor fails to deliver or perform as specified. Cancellation of a purchase order can only be made by a written purchase order change (POC) from the City of Fairhope. A term contract, lease or agreement can be canceled by the City of Fairhope, for justifiable cause, or convenience, by written notice.

15. CERTIFICATION PURSUANT TO ACT NO. 2006-557

Alabama law (section 41-4-116, code of Alabama 1975) provides that every bid submitted and contract executed shall contain a certification that the vendor, contractor, and all of its affiliates that make sales for delivery into Alabama or leases for use in Alabama are registered, collecting, and remitting Alabama state and local sales, use, and/or lease tax on all taxable sales and leases into Alabama. By submitting this bid, the bidder is hereby certifying that they are in full compliance with act no. 2006-557, they are not barred from bidding or entering into a contract pursuant to 41-4-116, and acknowledges that the awarding authority may declare the contract void if the certification is false. All corporations must register to do business in Alabama with the Office of the Secretary of State. Their address is:

Office of the Secretary of State
P.O. Box 5616
Montgomery, AL 36103
(334) 242-5324
Fax: (334) 240-3138
<http://www.sos.state.al.us/index.aspx>

The Foreign Corporation form is online at <http://www.sos.state.al.us/downloads/dl1.cfm>.

16. COST OF REMEDYING DEFECTS

All defects, indirect and consequential costs of correcting, removing, or replacing any or all of the defective materials or equipment will be charged against the awarded vendor.

17. DELIVERY OF BID

Bids must be received in the Purchasing Office by the date and time specified on the bid cover. All bids will be accepted until the time and date stated on the bid cover. No bids will be accepted that extend past the time and date on the bid cover. The time of receipt shall be determined by the time clock stamp in the Purchasing Department. Bids submitted by U.S. Mail must be received by the City of Fairhope of Baldwin County, Alabama, in the City of Fairhope offices, 555 South Section St., Fairhope, Al., unless otherwise specified.

18. DELIVERY

The number of calendar days required for delivery after receipt of a purchase order shall be stated in the RFQ / ITB / RFP and /or Purchase Orders. When no time is stated in the document, the time shall be fourteen (14) calendar days after receipt of order. If a shipment is not made within the time period specified, the Purchase Order may be canceled.

19. ENVIRONMENTAL REQUIREMENTS

All products will be clearly labeled for their intended use. Each delivery of product or materials will include a Material Safety Data Sheet (MSDS) for all materials that require an MSDS. All manufacturers/distributors of hazardous substances, including any of the items listed on this bid/quote/ contract and subsequent award must include completed material safety data sheet (MSDS) for each hazardous material. Additionally, each container of hazardous materials must be appropriately labeled with:

- a) The identity of the hazardous material,
- b) Appropriate hazard warnings, and manufacturer, importer, or other responsible party.

20. EQUIPMENT DEMONSTRATION

The City of Fairhope may require equipment/ product materials or service techniques to be demonstrated at a time, date, and location to be specified by the City of Fairhope.

21. EQUIPMENT ELECTRICAL CERTIFICATION

All electrical equipment purchased shall conform to, and be identified in, the applicable standard(s), or otherwise be certified as applicable, as of the bid opening date and time, by Underwriters Laboratories, Inc., or other recognized laboratory facility. Bidder must provide satisfactory documentation with returned bid that all such equipment meets the applicable product standard or has otherwise been certified as outlined above. Unless indicated in the bid document, the above certification shall apply to the equipment itself, not the individual components of that equipment.

22. ERRORS IN BID

Bidders are assumed to be informed regarding conditions, requirements, and specifications prior to submitting bids. Failure to do so will be at the bidder's risk. Bids already submitted may be withdrawn without penalty prior to bid opening. Errors discovered after the bid opening may not be corrected.

23. FORCE MAJEURE

Neither the City nor the awarded vendor shall be deemed in breach of any contract / Purchase Order or Agreement which may result from this proposal submission if it is prevented from performing any of the obligations hereunder by reason of Acts of God, acts of the public enemy, acts of superior governmental authority, strikes or labor disputes, floods, riots, rebellion, sabotage, or any similar other unforeseeable causes beyond its control and not due to its fault or negligence. Each party shall notify the other immediately in writing of the cause of such after the beginning period thereof. The awarded vendor may request cancellation and the City of Fairhope may grant the request if performance is prevented by any of the above referenced causes, or other unavoidable circumstances not attributable to the fault or negligence of the vendor. The burden of proof for such relief rests with the vendor. All correspondence pertaining to cancellation of a purchase order or term contract must be addressed to the City of Fairhope Purchasing Manager.

24. HAZARDOUS AND TOXIC SUBSTANCES

Bidder must comply with all applicable Federal, State, County and City laws, ordinances and regulations relating to hazardous and toxic substances, including such laws, ordinances and regulations pertaining to information hazardous and toxic substances, and as amended from time to time. Bidder shall provide the City of Fairhope with a "Material Safety Data Sheet" for all goods that carry one.

25. INDEMNITY

Indemnity: The awarded vendor hereby agrees to indemnify and save harmless the City of Fairhope, its officers, agent, and employees, from and against any and all liabilities, claims, demands, damages, fines, fees, expenses, penalties, suits, proceedings, actions and cost of actions, including reasonable attorney fees for trial and on appeal, of any kind and nature, arising or growing out of, or in any way connected with the performance of this Contract / Agreement / Purchase Order, to the extent caused by a negligent act or omission of the awarded vendor, their agents, servants, employees, Subcontractors, or others associated with the awarded vendor. The awarded vendor shall be responsible for damage to any equipment excluded from this agreement, or damage or injury caused by any equipment excluded from this agreement, only to the extent that the damage or injury is caused by a negligent act or omission of the awarded vendor or caused by failure of the awarded vendor's supplied product to perform as specified.

26. INSPECTION

All materials, workmanship, equipment, and supplies are subject to inspection and test at any source or time. Final inspection, acceptance or rejection will be made at delivery destination. Goods that do not meet specifications will be rejected unless substitutions have been approved by the City of Fairhope. Failure to inspect or to reject upon receipt, however, does not relieve the awarded vendor of liability. When subsequent tests, after receipt, are conducted and when such tests reveal a failure to meet specifications, the City of Fairhope will reject the goods and the awarded vendor shall immediately supply goods meeting specifications or the City of Fairhope may seek damages including but not limited to the testing expense, regardless of whether a part of or all of the goods have been consumed through the testing process. Rejected goods shall be removed by the awarded vendor promptly after rejection, at his expense. If not removed in fourteen (14) calendar days, they may be disposed of at the discretion of the City of Fairhope. Disposal costs will be the awarded vendor's responsibility.

27. INSPECTION OF PREMISES

At reasonable times, the City may inspect those areas of the awarded vendor's place of business that are related to the performance of a Contract / Agreement / Purchase Order. If the City makes such an inspection, the awarded vendor must provide reasonable assistance. The City of Fairhope reserves the right on demand and without notice all the vendor's files associated with a subsequent Contract / Agreement / Purchase Order where payments are based on the awarded vendor's record of time, salaries, materials, or actual expenses. This same clause will apply to any subcontractors assigned to the Contract / Agreement / Purchase Order.

28. INSURANCE

If a Contract / Agreement / Purchase Order results from this RFQ / ITB / RFP, or other form of solicitation, the awarded vendor shall maintain such insurance as will indemnify and hold harmless the City of Fairhope from Workmen's Compensation and Public Liability claims from property damage and personal injury, including death, which may arise from the awarded vendor's operations under this Contract / Agreement / Purchase Order, or by anyone directly or indirectly employed by him/her.

29. INVITATION TO BID

Any provisions made in the RFQ / ITB / RFP, or other form of solicitation, supersedes any provisions outlined here in the General Terms and Conditions.

30. INVOICING, DELIVERY, PACKAGING

Invoices shall be prepared only after ordered materials have been delivered. All invoices must show the purchase order number. Unless otherwise specified in writing, vendors shall not ship any material without an authorized Purchase Order from the City of Fairhope Purchasing Department. All packages delivered must show the purchase order number. The awarded vendor will be required to furnish all materials, equipment and/or service called for at the bid price quoted. In the event the awarded vendor fails to deliver within a reasonable period of time, as determined by the City of Fairhope, the right is reserved to cancel the award and subsequent purchase order and purchase from the next lowest responsible bidder the items needed. The original awarded vendor will be back charged the difference between the original contract price and the price the City of Fairhope has to pay as a result of the failure to perform by the original awarded vendor. All bids will remain firm for acceptance for 60 days from the date of bid opening. Prices shall be net F.O.B., Prepaid and Allow, City of Fairhope chosen site, Baldwin County, Al. The title and risk of loss of the goods will not pass to the City of Fairhope until receipt and acceptance takes place at the F.O.B. point.

31. LABELING

Individual shipping cartons shall be labeled with the name "City of Fairhope", Purchase Order Number, and where applicable, Contract Number, date of manufacture, batch number, storage requirements, conditions, and recommended shelf life. Bidders are encouraged to offer product packaging with recycled content.

32. LOSS OR DAMAGE IN TRANSIT

Delivery by a vendor to a common carrier does not constitute delivery to the City of Fairhope. Any claim for loss or damage incurred during delivery shall be between the vendor and the carrier. The City of Fairhope accepts title only after satisfactory receipt at the delivery point. The City of Fairhope shall note all visible damages on the freight bill and may refuse the damaged goods. The vendor shall make immediate replacement of the damaged merchandise or be subject to damages for breach of contract. If damage is to a small portion of a total shipment and the City of Fairhope will not be inconvenienced because of the shortage, the vendor may be permitted by the Purchasing Manager to deduct the amount of damage or loss from its invoice, in lieu of replacement. Risk of loss during delivery is borne by the vendor until the goods have been accepted by the City of Fairhope, unless otherwise specified in the RFQ / ITB / RFP or other form of solicitation.

33. MANDATORY SITE VISIT

If the RFQ / ITB / RFP or other form of solicitation requires a mandatory site visit, bidders must inspect the site where installation or service is to take place to obtain a full understanding of scope of work outlined therein. Date of site visit will be determined by the City of Fairhope.

34. MONITORING OF SERVICES

Performance of services will be monitored by the requisitioning department and/or the Purchasing Department, and evaluation reports may be filed with the Purchasing Department. Performance not meeting specifications will result in cancellation of Contract / Agreement / Purchase Order and may result in vendor being removed from the vendor list.

35. NONCONFORMING MERCHANDISE

When merchandise received from the lowest responsible bidder is not in accordance with the purchase order, it will be returned to the bidder, at bidder's expense.

36. NON-DISCRIMINATION

The City of Fairhope is an Equal Opportunity Employer and requires that all contractors comply with the Equal Employment Opportunity laws and the provisions of the Contract / Agreement / Purchase Order documents in this regard. The City also encourages and supports the utilization of Minority Business Enterprises on this and all public bids.

37. NON-EXCLUSIVE

Unless otherwise specified, this Contract / Agreement / Purchase Order is considered a non-exclusive Contract / Agreement / Purchase Order between the parties.

38. NOTIFICATION AND ACCIDENT REPORTS

In the event of accidents of any kind, in the performance of a Contract / Agreement / Purchase Order, the awarded vendor shall notify the City of Fairhope immediately and furnish, without delay, copies of all such accident reports to the City of Fairhope. If in the performance of their Work, the awarded vendor fails to immediately report an accident to the City of Fairhope, of which the awarded vendor has knowledge of and which results in a fine levied against the City of Fairhope then the awarded vendor shall be responsible for all fines levied against the City of Fairhope.

39. PACKAGING

All goods must be packaged in new packing containers. Packing that meets the requirements of common carriers is acceptable, unless otherwise required. A packing slip or invoice must accompany all shipments and must reference the purchase order number. Unless otherwise specified, goods are to be packaged in cartons meeting federal specifications and shipped on non-returnable pallets.

40. PATENTS

Awarded Vendor guarantees that the sale and / or use of goods will not infringe upon any U.S. or foreign patent. Awarded vendor will at his / her own expense, indemnify, protect and save harmless the City of Fairhope, on any patent claims arising from the purchase of goods or services.

41. PAYMENT

Invoices -- Upon completion of service and delivery of materials specified in the applicable Contract / Agreement / Purchase Order, awarded vendor will submit an invoice and signed delivery ticket to:

City of Fairhope
Accounts Payable Department
P.O. Box 429
Fairhope, Al. 36533

All invoices must reference appropriate Purchase Order Numbers Payment of Invoice: All invoices received by the City of Fairhope are payable within thirty (30) days from the date of receipt by the City of Fairhope, provided they are approved by the City of Fairhope.

42. PAYMENT WITHHELD

Payment may be withheld until all items have been delivered and all requirements of the Contract / Agreement / Purchase Order have been fulfilled

43. PRODUCT TESTING

Vendor shall incur all cost involved in obtaining an Independent Laboratory Test if the City deems necessary during the term of the Contract / Agreement / Purchase Order. The City of Fairhope reserves the right to request a demonstration of any and all items bid before making the award.

44. PERMITS LICENSES AND CERTIFICATES

The awarded vendor is to procure all permits, licenses, and certificates, or any approvals of plans or specifications as may be required by Federal, State, Local Laws, ordinances, rules, and regulations, for the proper execution and completion of Work covered under the Contract / Agreement / Purchase Order.

45. PREPARATION OF BID

All bids / proposals shall be typewritten or in ink on the form(s) prepared by the City of Fairhope. Bids / proposals prepared in pencil will not be accepted. All bids / proposals must be signed by officials of the corporation or company duly authorized to sign bids / proposals. Any bid / proposal submitted without being signed will automatically be rejected. All corrections or erasures shall be initialed and dated by the person authorized to sign quotations /bids / proposals. If there are discrepancies between unit prices quoted and extensions, the unit price will prevail.

46. QUESTIONS / CONTACT

Commencing with the issuance of the RFQ / ITB / RFP, or other form of solicitation, no vendor or anyone acting on a vendor's behalf, shall make direct or indirect contact with City personnel or undertake any activities or take any action to otherwise promote its quotation / bid / proposal to the City or its personnel. All communications shall be made to the contact identified in the quotation / bid / proposal documents. Violation of this requirement may, at the City's sole and absolute discretion, be grounds for disqualifying a vendor from further consideration.

47. RECEIPT BY CITY OF FAIRHOPE

If not otherwise stated in the order, the City of Fairhope will be said to have received goods when they have been delivered, unloaded, and placed on the agency's dock or if there is no dock, inside an accessible building, and signed for by an authorized City employee. Shipments will be checked against the receiving copy of the Purchase Order. If the purchase order requires grading certificates, USDA Stamps, or any proof of quality, such proof must accompany the shipment.

48. REJECTION OF BIDS

The City of Fairhope reserves the right to accept or reject any or all bids in whole or in part for any reason, to waive technicalities or informalities, or to advertise for new proposals, if, in the judgment of the awarding authority, the best interest of the City of Fairhope will be promoted thereby. Bidders may be disqualified and rejection of proposals may be recommended for any of (but not limited to) the following causes: Failure to use the bid forms furnished by the City of Fairhope, Lack of signature by an authorized representative on the bid form, Failure to properly complete the bid form and vendor compliance, Evidence of collusion among bidders, Unauthorized alteration of the bid form.

49. RIGHT TO AUDIT

The awarded vendor shall maintain documentation of all work performed. The awarded vendor shall make any and all documentation available to the City of Fairhope at all reasonable times, for inspections and audit by the City of Fairhope for a period of Three (3) years after expiration of the Contract / Agreement / Purchase Order.

50. SAMPLES

Bidders will not be required to furnish samples at the time of bid opening, unless specifically called for. The City of Fairhope reserves the right to request samples after bid opening to assist in the evaluation of proposals submitted.

51. SAFETY MEASURES

The awarded vendor shall take all necessary precautions for the safety of the City of Fairhope's and awarded vendor's employees at the Work site, and shall erect and properly maintain at all times, all necessary safeguards for the protection of the workmen and the public. The awarded vendor shall post signs warning against hazards in and around the Work site.

52. SET-UP AND INSTALLATION

Unless otherwise specified, bid / quotation to include cost of all uncrating, disposal of shipping materials, set-up, testing and initial instruction to agency personnel.

53. SPILL CLEAN UP

The awarded vendor shall be responsible for spillage caused by their negligence, which occurs during transit or unloading operations. The awarded vendor shall immediately report and clean up any spillage. Upon failure to do so, the awarded vendor shall remain responsible for all actual related costs.

54. SUBSTITUTIONS

Substitutions on a purchase order shall require the approval of the Originating Buyer. The City of Fairhope reserves the right to reject at destination and hold at the vendor's risk and expense any goods supplied by the vendor which do not conform to the specification or description embodied in the order or are inferior in any respect to the good specified. Any good bought by sample which is inferior in quality to the sample submitted by vendor will be rejected. Any goods delivered that do not meet specifications may be returned to the vendor at its expense. When a good is returned, the vendor must make immediate replacement with acceptable merchandise, or the City of Fairhope may seek remedies for default.

55. TABULATION

Bid results are posted on The City of Fairhope's web site: www.FairhopeAL.gov. The awarded vendor will be sent a written notification.

56. TAXES

Prices quoted shall be delivered prices, exclusive of all federal or state excise, sales, and manufacturer's taxes. The City will assume no transportation or handling charges other than specified in the RFQ, ITB, RFP or other form of solicitation. The City is tax exempt by law – Code of Alabama 1975.

57. TERMINATION FOR CONVENIENCE

Any Contract / Agreement / Purchase Order may be terminated for convenience by the City of Fairhope, in whole or in part, by written notification to the awarded vendor.

58. TERMINATION FOR DEFAULT

Performance of Work under the Contract / Agreement / Purchase Order Agreement may be terminated by the City of Fairhope, in whole or in part, in writing, whenever the City of Fairhope determines that the awarded vendor has failed to meet the requirements of the Contract / Agreement / Purchase Order.

59. TERMINATION FOR NON-APPROPRIATION

Termination for Non-appropriation – The continuation of any financial obligation beyond the current fiscal year is subject to and contingent upon sufficient funds being appropriated, budgeted, and otherwise made available by the local source, State Legislature and/or federal sources. The City of Fairhope may terminate any financial obligation, and awarded vendor waives any and all claim(s) for damages, effective immediately upon receipt of written notice (or any date specified therein) if for any reason the City of Fairhope's funding from local, State and/or federal sources is not appropriated, withdrawn or limited.

60. TIME IS OF THE ESSENCE

The City of Fairhope and awarded vendor agree that time is of the essence in the performance of work called for under this Contract / Agreement / Purchase Order. The awarded vendor agrees that all work will be accomplished regularly, diligently, and uninterrupted at such a rate of progress as will ensure full completion thereof within reasonable time periods.

61. TITLE

All titles, fees, as well as other charges, are to be paid by awarded vendor. Awarded vendor is to furnish prepaid certificate of title in the name of the City of Fairhope, Title shall change upon acceptance of delivery at the City of Fairhope approved delivery location.

62. VENDOR LIST

A vendor may be removed from the City of Fairhope's Bidders List if a vendor fails to respond to three (3) consecutive ITB's. A properly submitted "No Bid" is considered as a response and the vendor will receive credit for the response.

63. WARRANTY

The awarded vendor expressly warrants that all articles, materials, and work offered shall conform to each and every specification, drawing, sample, or other description which is furnished to or adopted by the City of Fairhope, and that it will be fit and sufficient for the purpose intended, merchantable, of good material and workmanship, and free from defects. The awarded vendor further warrants all items for a period of one year, unless otherwise stated, from the date of acceptance of the items delivered and installed or work completed. All repairs, replacements, or adjustments during the warranty period will be at the awarded vendor's sole expense. Awarded vendor will provide written warranty for all parts and labor for a period of (1) one year commencing from date of written acceptance of delivery by City of Fairhope. Awarded vendor will provide written copies of all other applicable warranties, such as, Manufacturer's warranty. Those warranties, if any, will be in addition to the awarded vendor's warranty, and the terms of which will not be altered by the awarded vendor's warranty.

64. IMMIGRATION LAW

The Contractor agrees that it shall comply with all of the requirements of the **Beason-Hammon Alabama Taxpayer and Citizen Protection Act, Act No 2011-535**, Alabama Code (1975) Section 31-13-1, et. Seq., (also known as the Alabama Immigration Act) see Section 31-13-9, and the provisions of said Act, including all penalties for violation thereof, are incorporated herein.

ITEM VIII

ALABAMA IMMIGRATION ACT CONTRACT REQUIREMENTS

8.0 Background

The **Beason-Hammon Alabama Taxpayer and Citizen Protection Act, Act No 2011-535, as amended by Act No 2012-491, Code of Alabama (1975) Section 31-13-1 through Section 31-13-30** (also known as and hereinafter referred to as “the Alabama Immigration Act”) is applicable to CONTRACTs with the City of Fairhope, Alabama. All business entities entering into CONTRACTs with the City of Fairhope, Alabama will comply with the Alabama Immigration Act.

8.1 Definitions

ALIEN. Any person who is not a citizen or national of the United States, as described in 8 U.S.C. § 1101, et seq., and any amendments thereto.

BUSINESS ENTITY. Any person or group of persons employing one or more persons performing or engaging in any activity, enterprise, profession, or occupation for gain, benefit, advantage, or livelihood, whether for profit or not for profit. Business entity shall include but not be limited to the following:

- a. Self-employed individuals, business entities filling articles of incorporation, partnerships, limited partnerships, limited liability companies, foreign corporations, foreign limited partnerships, foreign liability companies authorized to transact business in this state, business trusts, and any business entity that registers with the Secretary of State.
- b. Any business entity that possesses a business license, permit, certificate, approval, registration, charter, or similar form of authorization issued by the state, any business entity that is exempt by law from obtaining such a business license, an any business entity that is operating unlawfully without a business license.

CONTRACTOR. A person, employer, or business entity that enters into a CONTRACT to perform any service or work or to provide a certain product in exchange for valuable consideration. This definition shall include, but not be limited to, a general CONTRACTOR, SUB-CONTRACTOR, independent CONTRACTOR, CONTRACT employee, project manager, or a recruiting or staffing entity.

EMPLOYEE. Any person directed, allowed, or permitted to perform labor or service of any kind by an employer. The employees of an independent CONTRACTOR working for a business entity shall not be regarded as the employees of the business entity, for the purposes of this chapter. This term does not include any inmate in the legal custody of the state, a county, or a municipality.

EMPLOYER. Any person, firm, corporation, partnership, joint stock association, agent, manager, representative, foreman, or other person having control or custody of any employment, place of employment, or of any employee, including any person or entity employing any person for hire within the State of Alabama, including a public employer. This term shall not include the occupant of a household contracting with another person to perform casual domestic labor within the household.

E-VERIFY. The electronic verification of federal employment authorization program of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, P.L. 104-208, Division c, Section 403 (a); 8 U.S.C. §1324(a), and operated by the United States Department of Homeland Security, or its successor program.

STATE-FUNDED ENTITY. Any governmental entity of the state or a political subdivision thereof or any other entity that receives any monies from the state or a political subdivision thereof; provided, however, an entity that merely provides a service or a product to any governmental

entity of the state or a political subdivision thereof, and receives compensation for the same, shall not be considered a state-funded entity.

SUB-CONTRACTOR. A person, business entity, or employer who is awarded a portion of an existing CONTRACT by a CONTRACTOR, regardless of its tier.

UNAUTHORIZED ALIEN. An alien who is not authorized to work in the United States as defined in 8 U.S.C. § 1324a (h) (3) .

8.2 Mandatory Clause

All CONTRACTS or CONTRACTS to which the state, a political subdivision, or state-funded entity are a party shall include the following clause:

"By signing this CONTRACT, the CONTRACTING parties affirm, for the duration of the CONTRACT, that they will not violate federal immigration law or knowingly employ, hire for employment, or continue to employ an unauthorized alien within the state of Alabama. Furthermore, a CONTRACTING party found to be in violation of this provision shall be deemed in breach of the CONTRACT and shall be responsible for all damages resulting therefrom."

For purposes of this section, "CONTRACT" shall mean a CONTRACT awarded by the state, any political subdivision thereof, or any state-funded entity that was competitively bid or would, if entered into by the state or an agency thereof, be required to be submitted to the CONTRACT Review Permanent Legislative Oversight Committee.

8.3 CONTRACTs Involving Business Entity, or Employer

As a condition for the award of any CONTRACT, grant, or incentive by the state, any political subdivision thereof, or any state-funded entity to a business entity or employer that employs one or more employees, the business entity or employer shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama.

As a condition for the award of any CONTRACT, grant, or incentive by the state, any political subdivision thereof, or any state-funded entity to a business entity or employer that employs one or more employees within the state of Alabama, **the business entity or employer shall provide documentation establishing that the business entity or employer is enrolled in the E-Verify program.** During the performance of the CONTRACT, the business entity or employer shall participate in the E-Verify program and shall verify every employee that is required to be verified according to the applicable federal rules and regulations.

8.4 CONTRACTS Involving Subcontracting

Any SUB-CONTRACTOR on a project paid for by CONTRACT, grant, or incentive by the state, any political subdivision thereof, or any state-funded entity shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien within the State of Alabama and shall also enroll in the E-Verify program prior to performing any work on the project. Furthermore, during the performance of the CONTRACT, the SUB-CONTRACTOR shall participate in the E-Verify program and shall verify every employee that is required to be verified according to the applicable federal rules and regulations. This subsection shall only apply to SUB-BIDDERS performing work on a project subject to the provisions of this section and not to collateral persons or business entities hired by the SUB -CONTRACTOR.

8.5 Proof of E-Verify documentation will be in the form of a copy of the signed Memorandum Of Understanding (MOU) generated upon completion of the E-Verify program.

END OF ALABAMA IMMIGRATION ACT CONTRACT REQUIREMENTS

ITEM IX

INVITATION SUMMARY

**Bid No.
23-023**

Bid Name:	Planter's Pointe Lift Station
Issue Date:	March 17, 2023
Certificate of Insurance Requirements:	See Item V
Non-Mandatory Pre-Bid Meeting:	April 4, 2023 at 10:00 a.m. Local Time
Deadline for Questions Date:	April 17, 2023 at 12:00 p.m. Local Time
Bid Due Date:	April 19, 2023 at 10:00 a.m. Local Time
City Internet Site:	www.FairhopeAL.gov
SEALED Bid Response Copies to submit:	One (1) Original and One (1) Identical Copy
Purchasing Department Contact for questions:	Purchasing@FairhopeAL.gov (251) 928-8003

END OF INVITATION SUMMARY

ITEM X
BID BOND

The PRINCIPAL (Bidder's name and address)

The OWNER
City of Fairhope
P.O. Drawer
429 Fairhope,
Al 36533

The PROJECT for which the Principal's Bid is submitted: (Project name as it appears in the Bid Documents)

PROJECT NO. 21-1101-0257
PROJECT NAME: Planter's Pointe Lift Station

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned Principal and Surety, jointly and severally, hereby bind ourselves, our heirs, executors, administrators, successors, and assigns to the OWNER in the PENAL SUM of five percent (5%) of the amount of the Principal's bid, but in no event more than TEN THOUSAND DOLLARS (\$10,000.00).

THE CONDITION OF THIS OBIGATION is that the Principal has submitted to the OWNER the attached bid, which is incorporated herein by reference, for the Project identified above.

NOW, THEREFORE, if, within the terms of the Bid Document, the OWNER accepts the Principal's bid and the Principal thereafter either:

- (a) executes and delivers a Construction Contract with the required Performance and Payment Bonds (each in the for contained in the Bid Documents and properly completed in accordance with the bid) and delivers evidence of insurance as prescribed in the Bid Documents, or fails to execute and deliver such Construction Contract with such Bonds and evidence of insurance, but pays the OWNER the difference, not to exceed the Penal Sum of this Bond, between the amount of the Principal's Bid and the larger amount for which the OWNER may award a Construction Contract for the same Work to another Bidder, then, this obligation shall be null and void, otherwise it shall remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that the obligation of the Surety under this Bond shall not in any manner be impaired or affected by any extension of the time within which the OWNER may accept the Principal's bid, and the Surety does hereby waive notice of any such extension.

SIGNED AND SEALED this ____ day of _____, 2023.

(Principal Company)

ATTEST

By _____

Print Name and Title

SURETY ATTEST

By _____

Print Name and Title

CORPORATION

Name of Corporation, Partnership, or Joint Venture

Business Mailing Address

Email

Phone

By _____
(Signature of Officer Authorized to Sign Bids
and Contracts for the Firm)

(Position or Title)

(General Contractor's License Number)

Foreign Corporation Entity ID
(Required for out-of-state vendors)

ATTEST

(Secretary)

(Name of State under the laws
of which incorporated)

(Name of Surety)

By _____
(Attorney in Fact)

**ITEM XI
PERFORMANCE BOND**

KNOW ALL MEN: That _____ as Principal,
(name & address of legal title of contractor)

and _____ and
(name & address of legal title of one or more sureties)

(name & address of legal title of one or more sureties)

Hereinafter called the Surety or Sureties, are held and firmly bound unto the CITY OF FAIRHOPE, ALABAMA, hereinafter called the OWNER in the sum of _____ Dollars (\$_____), for the payment whereof the Principal and the Surety or Sureties bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS, The Principal has, by means of a written agreement, dated ____/____/____, entered into a contract with the OWNER for **Bid No. 23-023, Planter's Pointe Lift Station**, which agreement is by reference made a part hereof.

NOW THEREFORE, the conditions of this obligation is such that if the Principal shall faithfully perform the contract on his part, and satisfy all claims and demands, incurred for the same, and shall fully indemnify and save harmless the OWNER from all cost and damage which he may suffer by reason of failure to do so, and shall reimburse and repay OWNER all outlay and expense which the OWNER may incur in making good for any such default thence this obligation shall be null and void: otherwise, it shall remain in full force and effect.

PROVIDED, HOWEVER, that no suit, action or proceedings, by reason of any default whatever be brought on his Bond after twelve months from the day on which the final payment under the Contract falls due.

PROVIDED, further, that the said surety or sureties, for value received hereby stipulate and agree that no change, extension of time, or addition to the terms of the Contract or to the work to be performed thereunder of the specifications thereof shall in any way effect their obligations on this bond, and they do hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract, or to the work, or to the Specifications.

WITNESS our hands this _____ day of _____, 2023.

IF INDIVIDUAL

_____, Doing Business As, _____
(SIGNATURE of Individual Bidder) (Business Name)

Business Mailing Address _____

IF CORPORATION

(Name of Corporation, Partnership, or Joint Venture)

Business Mailing Address _____

By: _____
(SIGNATURE of officer authorized to sign Bids and Contracts for the company) (Position or Title)

ATTEST:

(Secretary) (Name of State of incorporation)

(Name of Surety) By: _____
(Attorney in Fact)

**ITEM XII
LABOR AND MATERIAL BOND**

KNOWN ALL MEN BY THESE PRESENTS, that we, _____
(hereinafter called the "Contractor") of _____ as principal and
(hereinafter called the "Surety"), as Surety, do hereby acknowledge ourselves indebted and
firmly bound and held unto the City of Fairhope, Alabama, (hereinafter called the "**City**"), a
municipal corporation, existing under and by virtue of the Laws of the State of Alabama, for the
use and benefit of those entitled thereto, in the penal sum of
_____ (\$ _____) for the payment of which well and
truly to be made in lawful money of the United States, we do hereby bind ourselves, or
successors, assigns and personal representatives, jointly and severally, firmly by these presents.

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

WHEREAS, the **City** has entered into a certain written contract with said Contractor for
Bid No. 23-023, Planter's Pointe Lift Station, in accordance with contract documents heretofore
on file in the Office of the **City of Fairhope** at the price of, to- wit: _____ (\$ _____)
as more fully appears in said written Contract bearing date of _____, 2023, which Contract
is hereby referred to and made a part hereof to the same extent as if set out herein in full.

NOW, THEREFORE, if said Principal and all subcontractors to whom any portion of the
work provided for in said contract is sublet and all assignees of said Principal and of such
subcontractors shall promptly make payment to all persons supplying him or them with labor,
foodstuffs, or supplies for or in the prosecution of the work provided for in such contract, or in
any amendment or extension of or addition to said contract, and for the payment of reasonable
attorney's fees, incurred by the claimant or claimants in suits on said bond, then the above
obligation shall be void; otherwise, it shall remain in full force and effect.

PROVIDED, however, that this bond is subject to the following conditions and limitations:

(a) Any person, firm or corporation that has furnished labor, foodstuffs, or supplies
for or in the prosecution of the work provided for in said contract, payment for which has not
been made, shall have a direct right of action in his or their name or names against the principal
and surety on this bond, which right of action shall be asserted in a proceeding, instituted in the
county in which the work provided for in said contract is to be performed and in any county in
which said Principal or Surety does business. Such right of action shall be asserted in a
proceeding instituted in the name of the claimant or claimants for his or their use and benefit
against said Principal and Surety or either of them (but not later than one year after the final
settlement of said Contract) in which action such claim or claims shall be adjudicated and
judgment rendered thereon.

(b) In addition to any other legal mode of service, service of summons and other
process in suits on this bond brought in Baldwin County may be had on the Principal or the
Surety in accordance with Title 27, Chapter 3, Section 24 of the Ala. Code (1975) by serving
a copy of the summons and complaint or other pleading or process, with the Commissioner
of Insurance of the State of Alabama or his/ her designee and the Principal and Surety agree to
be bound by such mode of service above described and consents that such service shall be the
same as personal service on the Principal or Surety.

(c) The Surety shall not be liable hereunder for any damages or compensation
recoverable under any workmen's compensation or employer's liability statute.

(d) In no event shall the Surety be liable for a greater sum than the penalty of this bond, or subject to any suit, action or proceeding thereon that is instituted later than one year after the final settlement of said contract.

(e) This bond is given pursuant to the terms of Title 39, Chapter 1, Section 1 of the Ala. Code (1975), and all the provisions of law with reference to this character of bond as set forth in said section or as may hereinafter be enacted are hereby made a part hereof to the same extent as if set out herein in full.

IN WITNESS WHEREOF, the said Contractor has hereunder affixed its signature and said Surety has hereunto caused to be affixed its corporate signature and seal, by its duly authorized officers on the ____ day of _____, 2023.

Principal

By:

Title

Surety

ATTEST:

By:

Title

ITEM XIII



CITY OF FAIRHOPE CLOSEOUT DOCUMENTS

CONSENT OF SURETY COMPANY TO FINAL PAYMENT

CONTRACTOR'S AFFIDAVIT OF PAYMENT

FINAL RELEASE OF LIENS

NOTICE OF COMPLETION ADVERTISEMENT



CITY OF FAIRHOPE
CONSENT OF SURETY COMPANY TO FINAL PAYMENT

COF PROJECT NO: _____

COF PROJECT NAME: _____

OWNER: **City of Fairhope**
 P.O. Drawer 429
 Fairhope, AL 36533

CONTRACTOR: _____

In accordance with the provision of the Contract between the OWNER and the CONTRACTOR as indicated above, the _____, Surety Company on bond of _____ CONTRACTOR, hereby approved the final payment to the CONTRACTOR and agrees that final payment to the CONTRACTOR shall not relieve the Surety Company of any of its obligations to the City of Fairhope as set forth in said Surety Company's bond dated the _____ day of _____, 202__.

IN WITNESS WHEREOF

The Surety Company has hereunto set its hand this _____ day of _____, 202__.

ATTEST
(Seal)

Surety Company

Signature of Authorized Representative

Title



**CITY OF FAIRHOPE
CONTRACTOR'S AFFIDAVIT OF PAYMENT
OF CLAIMS & DEBTS**

COF PROJECT NO: _____

COF PROJECT NAME: _____

OWNER: **City of Fairhope**
P.O. Drawer 429
Fairhope, AL 36533

CONTRACTOR: _____

STATE OF: _____

COUNTY OF: _____

The undersigned hereby certified that, except as listed below, he has paid in full or otherwise satisfied all obligations for all materials and equipment furnished, for all work, Labor and services performed, and for all known indebtedness and claims against the CONTRACTOR for damages arising in any manner in connection with the performance of the Contract referenced above for which the OWNER or his property might in any way be held responsible.

EXCEPTION: (If none, write NONE) _____

CONTRACTOR

By: _____ Title: _____

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

NOTARY PUBLIC

My Commission expires ___/___/___



**CITY OF FAIRHOPE
FINAL RELEASE OF LIENS**

KNOW ALL MEN BY THESE PRESENTS: In consideration of, and contingent upon the receipt of total payments in the amount of _____

Under and pursuant to the following contract:

COF PROJECT NO: _____

COF PROJECT NAME: _____

The undersigned hereby releases _____, its officers, agents, and employees, of and from all liabilities, obligations, and claims whatsoever in law and in equity under or arising out of said contract. We do hereby certify that all labor, materials, equipment, supplies, etc. for this project have been paid in full and there is no outstanding indebtedness.

IN WITNESS WHEREOF, this release has been executed this _____ day of _____, 202__.

CONTRACTOR

By: SIGNATURE

PRINTED NAME

Title

**STATE OF ALABAMA
COUNTY OF BALDWIN**

I, the undersigned authority, a Notary Public in and for said County and State, hereby certify that _____, whose name is signed to the foregoing instrument and who is known to me, acknowledged before me on this day that, being informed of the contents of the within instrument, he executed the same voluntarily on the day the same bears date.

Given under my hand and seal on this the _____ day of _____, 202__.

NOTARY PUBLIC

My Commission Expires: ____/____/____



**CITY OF FAIRHOPE
NOTICE OF COMPLETION LEGAL NOTICE**

Bid Number: _____

Bid Name: _____

In accordance with Chapter 1, Title 39, Code of Alabama, 1975, for contracts over \$50,000 and less than \$500,000, Notice is hereby given that

_____, CONTRACTOR, has completed the Contract for the above referenced bid for the City of Fairhope, Alabama, OWNER, and has made request for final settlement of said Contract. Any claims for labor, materials or otherwise in connection with this project should be itemized, notarized, and presented to:

OWNER:

**CITY OF FAIRHOPE
555 South Section Street
P.O. Drawer 429
Fairhope, AL 36533**

On or before (30 days) or same will be barred.

Contractor:

Dates ad was run (one time): _____

Newspapers in which ad run (dates): _____

Contractor to provide Proof of Publication of the Notice of Completion to the City by affidavit of the publisher and a printed copy of the notice published.

ITEM XIV
STANDARD SPECIFICATIONS FOR CONSTRUCTING
SANITARY SEWER FACILITIES

DIVISION III - CONSTRUCTION SPECIFICATIONS
SECTION 2

GENERAL SPECIFICATIONS FOR SEWAGE PUMPING STATION

2.01 SCOPE:

These Specifications form a part of the Contract Documents and shall govern for the construction of sewage pumping stations. The Work covered by this Section includes the furnishing of all labor, equipment, and materials, and performing all operations in connection with the construction and installation of Sewage Pumping Stations complete with pumps, piping, wet well, electrical work and all necessary auxiliary equipment. The station shall be complete and in strict accordance with this section of the specifications and the applicable plans, the standard practices and ordinances of the City of Fairhope, Alabama, and subject to the terms and conditions of the Contract. Sewage pumping stations shall be designed to remain fully operational and accessible during a one hundred (100) year flood event.

2.02 MATERIALS:

Materials of this Section shall be as specified herein.

2.03 INTENT OF PLANS AND SPECIFICATIONS:

The intent of the plans and specifications associated with this Section is to provide a completed sewage pumping station which will function as intended and is ready for operation in accordance with the City of Fairhope standard practices.

It shall be the responsibility of the Contractor as a part of this Work through careful quality control and coordination with the Engineer to avoid all conflicts occurring during construction such as available space, routings, mismatched or otherwise incompatible component selection, incomplete systems, substitutions, etc.

Where inter-system components, devices, adapters, etc. are not specified or noted in the design, but required to complete the system, it shall be the responsibility of the Contractor to provide such items and material as a part of this Work.

Unless otherwise noted, items specified herein by manufacturer or trade name shall be used as a guide to quality and inherent features.

Special drawings and specifications shall be submitted by the Contractor for the Engineer's evaluation covering all equipment, controls, material, and construction procedures.

The actual field installation shall reflect only that material and equipment submitted and approved by the Engineer/Owner. Any work performed without an approved submittal and considered not acceptable by the Engineer shall be removed and reworked at the Contractor's expense.

2.04 SUBMITTALS AND TESTS:

A. Submittals:

Prior to installation of any material or equipment, the Contractor shall submit for approval of the Engineer, five sets of required submittal material indicating item identification, manufacturer, type, size, ratings, and other descriptive information required for adequate evaluation. Pumps submittals should include Catalog cuts sheets reflecting characteristics for major items of equipment, materials of construction, major dimensions, motor and v-belt drive data, pump characteristic curves showing the design duty point capacity (GPM), head (FT), net positive suction head required (NPSH), and hydraulic brake horsepower (BHP). Electrical components used in the motor branch and liquid level control shall be fully described.

Submittal drawings shall provide layout of mechanical equipment and anchor bolt locations for station. Contractor piping connections and station access clearances shall be dimensioned relative to the station centerline. The electrical ladder logic drawings shall illustrate motor branch and liquid level control circuits to extent necessary to validate function and integration of circuits to form a complete working system. Wiring diagrams shall be submitted where item function description necessitates, and as required by the Engineer. Submittals shall be conspicuously marked to denote departures from the design references shown on the plans or specified. Incomplete submittals will not be evaluated.

Submittals shall bear a stamp or specific written indication that the Contractor has satisfied his responsibilities under the Contract with respect to the Contractor's review of the submission.

Omissions and/or design revisions made in submittals shall not relieve the Contractor from the responsibility of providing the omitted item or required material as a part of this Work. Approval by the Engineer shall not constitute acceptance of an erroneous or incomplete system submittal.

1. Material submittals shall be manufacturer's catalog sheets or similar published data marked to denote only the item or items covered by the submittal. Materials of unique production shall have special submittal attention to give complete identification of the materials being proposed.
2. Equipment submittals shall present the equipment for evaluation as a unit piece including all component parts by manufacturer's designation. Submittals shall be marked to denote only the equipment being proposed and shall be complete including electrical, physical, and operational data. Additional supporting data shall be provided where necessary.
3. Fabrications assemblies, and special productions shall have submittals of unique preparation to present the finished item completely identified. Such shop drawings shall include all material, components and assembly work.
4. Systems composed of multiple component parts or subsystems shall have submittals to denote the system as a completed composite. All component parts and subsystems shall be identified.

5. Documentation of the finished installation shall be made as a part of final acceptance and shall include corrected submittals, operation and maintenance publications, and other data necessary to accurately define the final field installation.

B. Tests, Instructions and Reports:

The following listed items shall be required in addition to other special requirements within these Specifications.

1. Written conductor insulation resistance test.
2. Written ground rod resistance test.
3. Local public electrical inspector's certificate.
4. Operational demonstration test.
5. Certified pump curves.
6. Operation and maintenance manuals.

2.05 SITE WORK:

In general, clearing shall consist of the removal and disposal of all undergrowth, brush, logs, trash and other objectionable obstructions. All materials cleared from the site shall be disposed of off the site by the Contractor. It is the intent that the entire area within the limits of the sewage pumping stations as shown on the plans shall be cleared, backfilled, and graded with four (4) inches of crushed stone surfacing for proper storm water drainage in accordance with the specifications contained herein. All areas surrounding the sewage pumping station shall be grassed.

- A. Access Driveways: The Contractor shall include in the sewage pumping station construction a Bituminous Pavement Access Driveway including select backfill, eight (8) inches of crushed aggregate, and one and a half (1½) inches of Bituminous Wearing Surface Mix 416-A. These access driveways shall be constructed in accordance with the Alabama Department of Transportation Standard Specifications, latest edition.
- B. Fencing: The Contractor shall include in the sewage pumping station construction a six (6) foot high wood privacy fence. The wood privacy fence shall be constructed of first class wood to the lines indicated on the plans and shall include treated 4" x 4" wood posts set a minimum of 36 inches deep in the ground in concrete and spaced no greater than 8 feet on center, three (3) treated 2" x 4" wood stringers between each set of posts, treated number 2 pine or better 6" x 3/4" fence boards with dog eared tops, galvanized fasteners and hardware, 12 foot double leaf swing type heavy duty service traffic gate matching the fence, and a brass weatherproof padlock (4-pin tumbler type, minimum) and keys.
- C. Water Service: One (1) each 3/4" water service with hose bibb shall be located within the fenced area.

2.06 EXCAVATION FOR PIPES AND STRUCTURES:

- A. General: The Contractor shall perform excavation of every description regardless of the nature of the materials encountered. Trenches or foundations for pipes or structures shall be excavated to the lines, grades, and elevations shown on the plans. Trench and structure excavations shall be of sufficient size to permit the placing of pipes and forms.
- B. Overcuts: If at any point in excavating for structures, material is excavated beyond the neat lines upon or against which concrete is to be placed, the overcut shall be filled with reef shell, crushed slag or crushed stone fill properly compacted, or with concrete, as directed by the Engineer. The proposed elevations and positions for the different structures are shown on the plans. However, the Engineer reserves the right to make such modifications as in his opinion are necessary to carry out the intent of the plans or specifications. No payment will be made for overcuts or reef shell, crushed slag or crushed stone fill in overcuts. Reef shell, crushed slag or crushed stone shall be as specified in the Board's Standard Specifications.
- C. Dewatering: The Contractor shall remove any water which may be found or may accumulate in the trenches and shall perform all work necessary to keep them clear of water while the foundations are being laid, the masonry being constructed, or pipe laying is in progress. Such removal shall be accomplished by means of a well point system or other approved means. Comprehensive plans for dewatering operations, if used, shall be submitted prior to installation. No extra payment will be made for dewatering.

2.07 CONCRETE:

The minimum compressive strength required at 28 days is 3,000 pounds per square inch. Field specimens and laboratory tests shall be made in accordance with the standards of the American Society of Testing Materials. The minimum amount of water shall be used to produce a workable mix and shall not exceed six U.S. gallons per sack of cement. Concrete and associated materials shall also be in accordance with those specified for manhole structures.

2.08 WET WELL:

The foundation of the wet well shall consist of a reinforced concrete slab poured on undisturbed earth in accordance with details shown on the plans.

The barrel of the wet well shall be constructed of sections of reinforced concrete pipe conforming to ASTM 3 Specification Designation C76, Class II. Concrete for pipe shall be Type II Portland Cement with 100 percent calcareous aggregate.

The diameter, height, opening and other details shall be as shown on the plans.

Joints shall be made with rubber gaskets or an approved equal.

The wet well concrete interior shall be coated with a lining material in accordance with the manhole lining methods and products approved by the City of Fairhope. Lining shall be performed in accordance with the lining product manufacturer's recommendations.

Alternative wet well material, such as fiberglass, must be preapproved by the City of Fairhope dependent upon type, water table, and depth.

2.09 CONTINUITY OF OPERATIONS:

The Contractor, as a part of this work, shall provide all stand-by facilities, power systems, etc. in order to maintain the operations of existing facilities throughout the construction phases of the new work. The Contractor shall schedule his work with that of the Owner in order to coordinate all interruptions of the existing facilities operations to suit the Owner's schedule. All temporary facilities and provisions shall be made after being submitted to the Owner and approved thereby.

2.10 ELECTRIC POWER METERING:

The Contractor shall provide all labor and materials required for a complete installation to meter electrical power usage in accordance with the power company's detailed requirements. Meter location shall be as shown on the plans.

The Contractor, at his own expense, shall provide power and all necessary temporary wiring as required to perform his work. After completion of the permanent electrical connections, the Contractor shall be required as a part of this work to secure all utility services from the respective utility companies and shall pay all monthly bills until such time as acceptance of the equipment is made by the Owner. Upon acceptance, the Contractor can have the respective utility companies transfer their billing to the Owner's name.

2.11 ELECTRICAL SERVICE:

When required and as instructed by the Owner, the Contractor shall request three-phase power service from the utility company and shall make arrangements for the utility company to bill the Owner directly for any installation charges, other than those associated with power metering, for the service.

2.12 DEFINITION OF ACCEPTANCE:

System acceptance shall be defined as the point in time in addition to the requirements of Section 5 when all of the following requirements have been fulfilled:

- A. All submittals and documentation have been submitted, reviewed and approved.
- B. Two (2) copies of all Operations and Maintenance Manuals shall have been submitted on all equipment items.
- C. The complete system has successfully completed all testing requirements.
- D. All fees, permits, and reports have been satisfactorily completed.
- E. All Owner's staff personnel training programs have been completed.
- F. Beneficial use by the Owner has occurred following the two-year warranty period.

2.13 CLEAN-UP:

After final operation tests, the interior and exterior of the station shall be cleared of all trash and debris and left in final operating condition. Final grading of the site and restoration of surfaces with grass shall be in strict accordance with the applicable drawings.

2.14 SELF-PRIMING PUMPS:

- A. Where design conditions allow for self-priming pumps, and approved by owner, this type of pump can be installed. All self-priming pumps of the same type, frame and size shall be of the same manufacturer and shall have interchangeable parts and shall be a type and brand listed as approved by the City of Fairhope, Alabama. The station shall be complete with all equipment specified herein, factory assembled on a common steel base.
- B. Pumps shall be horizontal, self-priming centrifugal type, designed specifically for handling raw, unscreened, domestic sanitary sewage. Principal items of equipment shall include two horizontal, self-priming, centrifugal sewage pumps, V-belt drives, motors, piping, valves, motor control panel, automatic liquid level control system, and integral wiring.
- C. Pumps must be designed to handle raw, unscreened, domestic sanitary sewage. Pumps shall have properly sized suction and discharge connections. Each pump shall be selected to perform under following operating conditions:

Capacity (GPM)	<u>1300</u>
Total Dynamic Head (FT)	<u>39.57</u>
Total Dynamic Suction Lift (FT)	<u>NA</u>
Maximum Repriming Lift (FT)	<u>NA</u>
Minimum TDH (FT)	<u>NA</u>
Maximum TDH (FT)	<u>NA</u>
Maximum Static Suction Lift (FT)	<u>NA</u>
Total Discharge Static Head (FT)	<u>18.72</u>
Minimum Submergence Depth (FT)	<u>3.50</u>

- D. Site power furnished to pump station shall be in accordance with the City of Fairhope's standard for phase, hertz, volts, and wire. Control voltage shall not exceed 128 volts.
- E. Operations Maintenance Manuals: Installation shall be in accordance with written instructions provided by the pump station manufacturer. Comprehensive instructions supplied at time of shipment shall enable personnel to properly operate and maintain all equipment supplied. Content and instructions shall assume operating personnel are familiar with pumps, motors, piping and valves, but lack experience on exact equipment supplied.

Documentation shall be specific to the pump station supplied and collated in functional sections. Each section shall combine to form a complete system manual covering all aspects of equipment supplied by the station manufacturer. Support data for any equipment supplied by others, even if mounted or included in overall station design, shall be provided by those supplying the equipment. Instructions shall include the following as a minimum:

1. Functional description of each major component, complete with operating instructions.
2. Instructions for operating pumps and pump controls in all modes of operation.

3. Calibration and adjustment of equipment for initial start-up, replacement of level control components, or as required for routine maintenance.
 4. Support data for commercially available components not produced by the station manufacturer, but supplied in accordance with the specifications, shall be supported by literature from the prime manufacturer and incorporated as appendices.
 5. Electrical schematic diagram of the pump station circuits shall be in accordance with NMTBA and JIC standards. Schematics shall illustrate, to the extent of authorized repair, pump motor branch, control and alarm system circuits including interconnections. Wire numbers and legend symbols shall be shown. Schematic diagrams for individual components, not normally repairable by the station operator, need not be included. Details for such parts shall not be substituted for an overall system schematic. Partial schematics, block diagrams, and simplified schematics shall not be provided in lieu of an overall system diagram.
 6. Mechanical layout drawing of the pump station and components, prepared in accordance with good commercial practice, shall provide installation dimensions and location of all pumps, motors, valves and piping.
 7. Operation and maintenance instructions which rely on vendor cut-sheets and literature which include general configurations, or require operating personnel to selectively read portions of the manual shall not be acceptable. Operation and maintenance instructions must be specific to equipment supplied in accordance with these specifications.
- F. The manufacturer of the pump station shall have a quality management system in place and shall be ISO 9001 certified. The pump station system integrator shall have a quality management system in place and shall be ISO 9001 certified.
- G. All internal passages, impeller vanes, and recirculation ports shall pass a 3" (2.5" on 3" pumps) spherical solid. Smaller internal passages that create a maintenance nuisance or interfere with priming and pump performance shall not be permitted. Upon request from the engineer, manufacturer's certified drawings showing size and location of the recirculation port(s) shall be submitted for approval.
- H. Reprime Performance:
1. Consideration shall be given to the sanitary sewage service anticipated, in which debris is expected to lodge between the suction check valve and its seat, resulting in the loss of the pump suction leg, and siphoning of liquid from the pump casing to the approximate center line of the impeller. Such occurrence shall be considered normal, and the pump must be capable of automatic, unattended operation with an air release line installed.
 2. During unattended operation, the pump shall retain adequate liquid in the casing to ensure automatic repriming while operating at its rated speed in a completely open system. The need for a suction check valve or external priming device shall not be required.

3. Pump must reprime the necessary vertical feet at the specified speed and impeller diameter. Reprime lift is defined as the static height of the pump suction above the liquid, while operating with only one-half of the liquid remaining in the pump casing. The pump must reprime and deliver full capacity within five minutes after the pump is energized in the reprime condition. Reprime performance must be confirmed with the following test set-up:
 - a. A check valve to be installed downstream from the pump discharge flange. The check valve size shall be equal (or greater than) the pump discharge diameter.
 - b. A length of air release pipe shall be installed between pump and the discharge check valve. This line shall be open to atmosphere at all times duplicating the air displacement rate anticipated at a typical pump station fitted with an air release valve.
 - c. The pump suction check valve shall be removed. No restrictions in the pump or suction piping will prevent the siphon drop of the suction leg. Suction pipe configuration for reprime test shall incorporate a 2 feet minimum horizontal run, a 90-degree elbow and vertical run at the specified lift. Pipe size shall be equal to the pump suction diameter.
 - d. Impeller clearances shall be set as recommended in the pump service manual.
 - e. Repeatability of performance shall be demonstrated by testing five consecutive reprime cycles. Full pump capacity (flow) shall be achieved within five minutes during each cycle.
 - f. Liquid to be used for repriming test shall be water.
 4. Upon request from the engineer, certified reprime performance test results, prepared by the manufacturer, and certified by a registered professional engineer, shall be submitted for approval prior to shipment.
- I. Factory System Test: All components including the pumps, motors, valves, piping and controls will be tested as a complete working system at the manufacturer's facility. Tests shall be conducted in accordance with Hydraulic Institute Standards at the specified head, capacity, rated speed and horsepower. Factory operational test shall duplicate actual performance anticipated for the complete station.

The manufacturer's technical representative shall inspect the completed installation, correct or supervise the correction of any defect or malfunction, and instruct operating personnel in the proper operation and maintenance of the equipment as described in Part 3 of this section.

- J. Unit Base: The unit base shall comprise a base plate, perimeter flange, and reinforcements. Base plate shall be fabricated of steel not less than 1/4" thick and shall incorporate openings for access to all internal cavities to permit complete grouting of unit base after installation. Perimeter flange and reinforcements shall be designed to prevent flexing or warping under operating conditions. Base plate and/or flange shall be drilled for hardware used to secure unit base to concrete pad as shown on the contract drawings. Unit base shall contain provisions for lifting the complete pump unit during shipping and installation.
- K. Materials and Construction Features:
1. Pump casing: Casing shall be cast iron Class 30 with integral volute scroll. Casing shall incorporate following features:
 - a. Mounting feet sized to prevent tipping or binding when pump is completely disassembled for maintenance.
 - b. Fill port cover plate, 3 1/2" diameter, shall be opened after loosening a hand nut/clamp bar assembly. In consideration for safety, hand nut threads must provide slow release of pressure, and the clamp bar shall be retained by detente lugs. A Teflon gasket shall prevent adhesion of the fill port cover to the casing.
 - c. Casing drain plug shall be at least 1 1/4" NPT to insure complete and rapid draining.
 - d. Liquid volume and recirculation port design shall be consistent with performance criteria specified herein.
 2. Cover plate: Cover plate shall be cast iron Class 30. Design must incorporate following maintenance features:
 - a. Retained by hand nuts for complete access to pump interior. Cover plate removal must provide ample clearance for removal of stoppages, and allow service to the impeller, seal, wear plate or check valve without removing suction or discharge piping.
 - b. A replaceable wear plate secured to the cover plate by weld studs and nuts shall be AISI 1015 HRS.
 - c. In consideration for safety, a pressure relief valve shall be supplied in the cover plate. Relief valve shall open at 75-200 PSI.
 - d. Two O-rings of Buna-N material shall seal cover plate to pump casing.
 - e. Pusher bolt capability to assist in removal of cover plate. Pusher bolt threaded holes shall be sized to accept same retaining cap screws as used in rotating assembly.
 - f. Easy-grip handle shall be mounted to face of cover plate.

3. Rotating Assembly: A rotating assembly, which includes impeller, shaft, mechanical shaft seal, lip seals, bearings, seal plate and bearing housing, must be removable as a single unit without disturbing the pump casing or piping. Design shall incorporate following features:
- a. Seal plate and bearing housing shall be cast iron Class 30. Separate oil filled cavities, vented to atmosphere, shall be provided for shaft seal and bearings. Cavities must be cooled by the liquid pumped. Three lip seals will prevent leakage of oil.
 - 1) The bearing cavity shall have an oil level sight gauge and fill plug check valve. The clear sight gauge shall provide easy monitoring of the bearing cavity oil level and condition of oil without removal of the fill plug check valve. The check valve shall vent the cavity but prevent introduction of moist air to the bearings.
 - 2) The seal cavity shall have an oil level sight gauge and fill/vent plug. The clear sight gauge shall provide easy monitoring of the seal cavity oil level and condition of oil without removal of the fill/vent plug.
 - 3) Double lip seal shall provide an atmospheric path providing positive protection of bearings, with capability for external drainage monitoring.
 - b. Impeller shall be ductile iron, two-vane, semi-open, non-clog, with integral pump out vanes on the back shroud. Impeller shall thread onto the pump shaft and be secured with a lock screw and conical washer.
 - c. Shaft shall be AISI 4140 alloy steel unless otherwise specified by the Engineer, in which case AISI 17-4 pH stainless steel shall be supplied.
 - d. Bearings shall be anti-friction ball type of proper size and design to withstand all radial and thrust loads expected during normal operation. Bearings shall be oil lubricated from a dedicated reservoir. Pump designs which use the same oil to lubricate the bearings and shaft seal shall not be acceptable.
 - e. Shaft seal shall be oil lubricated mechanical type. The stationary and rotating seal faces shall be tungsten titanium carbide alloy. Each mating surface shall be lapped to within three light bands flatness (35 millionths of an inch), as measured by an optical flat under monochromatic light. The stationary seal seat shall be double floating by virtue of a dual O-ring design; an external O-ring secures the stationary seat to the seal plate, and an internal O-ring holds the faces in alignment during periods of mechanical or hydraulic shock (loads which cause shaft deflection, vibration, and axial/radial movement). Elastomers shall be Viton. Cage and spring to be AISI 316 stainless steel. Seal shall be oil lubricated from a dedicated reservoir. The same oil shall not lubricate both shaft seal and shaft

bearings. Seal shall be warranted in accordance with requirements specified herein.

- f. Pusher bolt capability to assist in removal of rotating assembly. Pusher bolt threaded holes shall be sized to accept same cap screws as used for retaining rotating assembly.
4. Adjustment of the impeller face clearance (distance between impeller and wear plate) shall be accomplished by external means.
 - a. Clearances shall be maintained by external shimless cover plate adjustment, utilizing collar and adjusting screw design for incremental adjustment of clearances by hand. Requirement of realignment of belts, couplings, etc., shall not be acceptable. Cover plate shall be capable of being removed without disturbing clearance settings.
 - b. There shall be provisions for additional clearance adjustment in the event that adjustment tolerances have been depleted from the cover plate side of the pump. The removal of stainless-steel shims from the rotating assembly side of the pump shall allow for further adjustment as described above
 - c. Clearance adjustment which requires movement of the shaft only, thereby adversely affecting seal working length or impeller back clearance, shall not be acceptable.
 5. Suction check valve shall be molded Neoprene with integral steel and nylon reinforcement. A blow-out center shall protect pump casing from hydraulic shock or excessive pressure. Removal or installation of the check valve must be accomplished through the cover plate opening, without disturbing the suction piping. Sole function of check valve shall be to save energy by eliminating need to reprime after each pumping cycle. Pumps requiring a suction check valve to assist reprime will not be acceptable.
 6. Spool flanges shall be one-piece cast iron, class 30 fitted to suction and/or discharge ports. Each spool shall have one 1-1/4" NPT and one 1/4" NPT tapped hole with pipe plugs for mounting gauges or other equipment.
- L. Serviceability: No special tools shall be required for replacement of any components within the pump.
- M. Drive Unit: Pump motors shall be horizontal ODP, 1800 RPM, NEMA design B with cast iron frame with copper windings, induction type, with normal starting torque and low starting current characteristics, suitable for continuous service. The motors shall not overload at the design condition or at any head in the operating range as specified.
- N. Drive Transmission:
1. Power to pumps transmitted V-belt drive assemblies. The sheave/belt combination shall provide the speed ratio needed to achieve the specified pump operating conditions.

2. Each drive assembly shall utilize at least two V-belts providing minimum a combined safety factor of 1.5. Single belt drives or systems with a safety factor of less than 1.5 are not acceptable. Computation of safety factors shall be based on performance data published by the drive manufacturer.
3. The pump manufacturer shall submit power transmission calculations which document the following:
 - a. Ratio of pump/motor speed.
 - b. Pitch diameter of driver and driven sheaves.
 - c. Number of belts required per drive.
 - d. Theoretical horsepower transmitted per belt, based on vendor's data.
 - e. Center distance between pump and motor shafts.
 - f. Arc-length correction factor applied to theoretical horsepower transmitted.
 - g. Service factor applied to established design horsepower.
 - h. Safety factor ratio of power transmitted/brake horsepower required.
4. Belt guards:
 - a. Pump drives to be enclosed on all sides by a guard constructed of fabricated steel or combination of materials including expanded, perforated, or solid sheet metal. No opening to a rotating member shall exceed 1/2 inch.
 - b. Guards must be completely removal without interference from any unit component and shall be securely fastened and braced to the unit base.
 - c. Metal to be free from burrs and sharp edges. Structural joints shall be continuously welded. Rivet spacing on panels shall not exceed five inches. Tack welds shall not exceed four inch spacing.
 - d. The guard shall be finished with one coat of gray W.R. non-lift primer and one coat of orange acrylic alkyd W.R. enamel in accordance with section 3, Color Definitions of ANSI Z535.1: Safety Color Code for Marking Physical Hazards.
- O. Pumps, piping, and exposed steel framework shall be cleaned prior to painting. Exposed surfaces to be coated with one coat gray W.R. non-lift primer and one coat white acrylic alkyd W.R. enamel. Paint shall be low VOC, alkyd based, high solids, semi-gloss white enamel for optimum illumination enhancement, incorporating rust inhibitive additives. The finish coat shall be 1.0 to 1.2 MIL dry film thickness (minimum), resistant to oil mist exposure, solvent contact, and salt spray. The factory finish shall allow for over-coating and touch up after final installation.
- P. Station Accessories:

Drain Kit: - Pumps to be supplied with a drain kit for ease of maintenance. The kit shall contain 10' length of reinforced plastic hose with a female quick connect fitting at one end, and factory installed drain fittings in each pump. Fittings include a stainless-steel pipe nipple, stainless steel bushing, stainless steel gate valve and aluminum male quick connect fitting.

Spare Parts Kit: The following minimum spare parts shall be furnished with the pump station:

- a) One pump mechanical seal
- b) Required cover plate O-Ring(s)
- c) One rotating assembly O-Ring
- d) One set of impeller clearance adjustment shims (if required)

Gauge Kit: A gauge kit shall be supplied for each pump. Suction pressure must be monitored by a glycerin-filled compound gauge, and discharge pressure by a glycerin-filled pressure gauge. Gauges to be at least 4 inches in diameter, graduated in feet water column. Rated accuracy shall be 1% of full-scale reading. Compound gauge shall be graduated -34 to +34 feet water column minimum. Pressure gauge to be graduated 0 to 140 feet water column minimum. Gauges to be factory mounted on a resilient panel with frame assembly secured to pumps or piping. Gauge installations shall be complete with all hoses and stainless-steel fittings, including a shutoff valve for each gauge line at the point of connection to suction and discharge pipes.

- Q. Installation: Contractor shall off-load equipment at installation site using equipment of sufficient size and design to prevent injury or damage. Station manufacturer shall provide written instruction for proper handling. Immediately after off-loading, contractor shall inspect complete pump station and appurtenances for shipping damage or missing parts. Any damage or discrepancy shall be noted in written claim with shipper prior to accepting delivery. Validate all station serial numbers and parts lists with shipping documentation. Notify the manufacturer's representative of any unacceptable conditions noted with shipper.

Install, level, align, and lubricate pump station as indicated on project drawings. Installation must be in accordance with written instructions supplied by the manufacturer at time of delivery. Suction pipe connections are vacuum tight. Fasteners at all pipe connections must be tight. Install pipe with supports and thrust blocks to prevent strain and vibration on pump station piping. Install and secure all service lines (level control, air release valve or pump drain lines) as required in wet well. Check motor and control data plates for compatibility to site voltage. Install and test the station ground prior to connecting line voltage to station control panel. Prior to applying electrical power to any motors or control equipment, check all wiring for tight connection. Verify that protective devices (fuses and circuit breakers) conform to project design documents. Manually operate circuit breakers and switches to ensure operation without binding. Open all circuit breakers and disconnects before connecting utility power. Verify line voltage, phase sequence and ground before actual start-up. After all anchor bolts, piping and control connections are installed, completely fill the grout dam in the pump station base with non-shrink grout.

- R. Operational Test: Prior to acceptance by owner, an operational test of all pumps, drives, and control systems shall be conducted to determine if the installed equipment meets the purpose and intent of the specifications. Tests shall demonstrate that all equipment is electrically, mechanically, structurally, and otherwise acceptable; it is safe and in optimum working condition; and conforms to the specified operating characteristics.

After construction debris and foreign material has been removed from the wet well, contractor shall supply clear water volume adequate to operate station through several pumping cycles. Observe and record operation of pumps, suction and discharge gage readings, ampere draw, pump controls, and liquid level controls. Check calibration of all instrumentation equipment, test manual control devices, and automatic control systems. Be alert to any undue noise, vibration or other operational problems.

2.15 SELF PRIMING PUMPS PIPING AND VALVES:

- A. Each pump shall be equipped with a full flow type check valve, capable of passing a 3" spherical solid, with flanged ends and be fitted with an external lever and spring. The valve seat shall be constructed of stainless steel and shall be replaceable. The valve body shall be cast iron and incorporate a 3" cleanout port. Valve clapper shall have a molded neoprene seating surface incorporating low pressure sealing rings. Valve hinge pin and internal hinge arm shall be stainless steel supported on each end in brass bushings, sealing bushing shall have double O-rings. O-rings shall be easily replaceable without requiring access to interior of valve body. Valve shall be rated at 175 PSI water working pressure, 350 PSI hydrostatic test pressure. Valves other than full flow type or valves mounted in such a manner that prevents the passage of a 3" spherical solid shall not be acceptable.
- B. A 3-way plug valve must allow either or both pumps to be isolated from the force main. Valve shall pass 3" spherical solids. The plug valve shall be non-lubricated, tapered type. Valve body shall be semi-steel with flanged end connections drilled to 125-pound standard. The drip-tight shutoff plug shall be mounted in stainless steel bearings and shall have a resilient facing bonded to the sealing surface. Valve shall be operated with a single lever actuator providing lift, turn, and reseal action. The lever shall have a locking device to hold the plug in the desired position.
- C. Automatic Air Release Valves: An automatic air release valve shall be furnished for each pump designed to permit the escape of air to the atmosphere during initial priming or unattended repriming cycles. Upon completion of the priming cycle or repriming cycle, the valve shall close to prevent recirculation. Valves shall provide visual indication of valve closure and shall operate solely on discharge pressure. Valves which require connection to the suction line shall not be acceptable.

All valve parts exposed to sewage shall be constructed of cast iron, stainless steel, or similar corrosion resistant materials. Diaphragms, if used, shall be of fabric reinforced neoprene or similar inert material.

A cleanout port, three inches in diameter, shall be provided for ease of inspection, cleanout, and service. Valves shall be field adjustable for varying discharge heads. Connection of the air release valves to the station piping shall include stainless steel fittings.

- D. Piping: Flanged header pipe shall be centrifugally cast, ductile iron, complying with ANSI/AWWA A21.51/C115 and minimum class 52 thickness. Flanges shall be cast iron class 125 and comply with ANSI B16.1. Pipe and flanges shall be threaded, and suitable thread sealant applied before assembling flange to pipe.

Bolt holes shall be in angular alignment within 1/2 degrees between flanges. Flanges shall be faced with a gasket finish having concentric grooves a minimum of 0.01-inch-deep by approximately 0.03 inch wide, with a minimum of three grooves on any given surface spaced a maximum of 1/4 inch apart.

- E. Supports and Thrust Blocks: Contractor must ensure all pipes connected to the pump station are supported to prevent piping loads from being transmitted to pumps or station piping. Pump station discharge force main piping shall be anchored with thrust blocks where shown on the contract drawings.

2.16 SELF-PRIMING PUMPS ELECTRICAL:

- A. The pump station control panel will be tested as an integral unit by the pump station manufacturer. The control panel shall also be tested with the pump station as a complete working system at the pump station manufacturer's facility.
- B. Panel Enclosure:
 - 1. Electrical control equipment shall be mounted within a NEMA 1 stainless steel, dead front type, control enclosure. Door shall be hinged and sealed with a neoprene gasket and equipped with captive closing hardware. Control components shall be mounted on a removable steel back panel secured to enclosure with collar studs.
 - 2. All control devices and instruments shall be mounted using threaded fasteners and shall be clearly labeled to indicate function.
- C. Branch Components:
 - 1. Motor branch components to be of highest industrial quality, secured to the sub-plate with machine screws and lock washers. Mounting holes shall be drilled and tapped; self-tapping screws shall not be used to mount any component.
 - 2. Circuit Breakers and Operating Mechanisms:
 - a. A properly sized heavy-duty circuit breaker, with RMS interrupting rating for adequate amperes at design volts, shall be furnished for each pump motor. The circuit breakers must be sealed by the manufacturer after calibration to prevent tampering.
 - b. An operating mechanism installed on each motor circuit breaker shall penetrate the control panel door. A pad lockable operator handle shall be secured on the exterior surface. Interlocks must prevent opening the door until circuit breakers are in "OFF" position.
 - 3. An open frame, across-the-line, NEMA rated magnetic starter with under-voltage release, and overload protection on all three phases, shall be furnished for each pump motor. Starters of NEMA size 1 and above shall allow addition of at least two auxiliary contacts. Starters rated "0", "00", or fractional size are not acceptable. Power contacts to be double-break type made of cadmium oxide silver. Coils to be epoxy molded for protection from moisture and corrosive atmospheres. Contacts and coils shall be easily

replaceable without removing the starter from its mounted position. Each starter shall have a metal mounting plate for durability.

4. Overload relays shall be solid-state block type, having visual trip indication with trip-free operation. Electrically resetting the overload will cause one (1) normally open and one (1) normally closed isolated alarm/control contact to reset, thus re-establishing a control circuit. Trip setting shall be governed by solid-state circuitry and adjustable current setting. Trip classes shall be 10, 15 and 20. Additional features to include phase loss protection, selectable jam/stall protection and selectable ground fault protection.
5. An overload reset pushbutton, mounted through the control panel door, shall permit resetting the overload relays without opening the control panel door.

D. Control Circuit:

1. A normal duty thermal-magnetic circuit breaker shall protect all control circuits by interrupting control power.
2. Pump mode selector switches shall permit manual start or stop of each pump individually or permit automatic operation under control of the liquid level control system. Manual operation shall override all shutdown systems, except the motor overload relays. Selector switches to be heavy duty, oil-tight design with contacts rated NEMA A300 minimum.
3. Pump alternator relay to be electro-mechanical industrial design. Relay contacts to be rated 10 amperes minimum at 120 volts non-inductive. A switch shall permit the station operator to select automatic alternation of pumps, to select pump number one to be "lead" for each pumping cycle, or to select pump number two to be "lead" pump for each pumping cycle.
4. Six-digit elapsed time meter (non-reset type) shall be connected to each motor starter to indicate total running time of each pump in "hours" and "tenths of hours". An integral pilot light shall be wired in parallel to indicate that the motor is energized and should be running.
5. A high pump temperature protection circuit shall override the level control and shut down the pump motor(s) when required to protect the pump from excessive temperature. A thermostat shall be mounted on each pump casing and connected to a high pump temperature shutdown circuit. If casing temperature rises to a level sufficient to cause damage, the thermostat causes the pump shutdown circuit to interrupt power to the motor. A visible indicator located on the control panel door shall indicate motor stopped due to high pump temperature. The motor shall remain locked out until the pump has cooled and circuit has been manually reset. Automatic reset of this circuit is not acceptable.
6. A duplex ground fault receptacle providing 115 VAC, 60 Hz, single phase current, will be mounted on the side of the control enclosure. Receptacle circuit shall be protected by a 15-ampere thermal-magnetic circuit breaker.

7. Wiring:

- a. The pump station, as furnished by the manufacturer, shall be completely wired, except for power feed lines to the branch circuit breakers and final connections to remote alarm devices.
- b. All wiring, workmanship, and schematic wiring diagrams shall comply with applicable standards and specifications of the National Electric Code (NEC).
- c. All user serviceable wiring shall be type MTW or THW, 600 volts, color coded as follows:
 - 1) Line and Load Circuits, AC or DC power Black
 - 2) AC Control Circuit Less Than Line Voltage..... Red
 - 3) DC Control CircuitBlue
 - 4) Interlock Control Circuit from external source Yellow
 - 5) Equipment Grounding ConductorGreen
 - 6) Current Carrying GroundWhite
 - 7) Hot with Circuit Breaker OpenOrange
- d. Control circuit wiring inside the panel, with exception of internal wiring of individual components, shall be 16 gauge minimum, type MTW or THW, 600 volts. Power wiring to be 14 gauge minimum. Motor branch wiring shall be 10 gauge minimum.
- e. Motor branch and other power conductors shall not be loaded above 60 degrees C temperature rating, on circuits of 100 amperes or less, nor above 75 degrees C on circuits over 100 amperes. Wires must be clearly numbered at each end in conformance with applicable standards. All wire connectors in the control panel shall be ring tongue type with nylon insulated shanks. All wires on the sub-plate shall be bundled and tied. All wires extending from components mounted on door shall terminate at a terminal block mounted on the back panel. All wiring outside the panel shall be routed through conduit.
- f. Control wires connected to door mounted components must be tied and bundled in accordance with good commercial practice. Bundles shall be made flexible at the hinged side of the enclosure. Adequate length and flex shall allow the door to swing full open without undue stress or abrasion. Bundles shall be held on each side of hinge by mechanical fastening devices.

8. Conduit:

- a. Factory installed conduit shall conform to following requirements:
 - 1) All conduit and fittings to be UL listed.
 - 2) Liquid tight flexible metal conduit to be constructed of smooth, flexible galvanized steel core with smooth abrasion resistant, liquid tight polyvinyl chloride cover.

- 3) Conduit to be supported in accordance with articles 346, 347, and 350 of the National Electric Code.
- 4) Conduit shall be sized according to the National Electric Code.

9. Grounding:

- a. Station manufacturer shall ground all electrical equipment inside the pump station to the control panel back plate. All paint must be removed from the grounding mounting surface before making final connection.
- b. The contractor shall provide an earth driven ground connection to the pump station at the main grounding lug in accordance with the National Electric Code (NEC).

10. Equipment Marking:

- a. Permanent corrosion resistant name plate(s) shall be attached to the control and include following information:
 - 1) Equipment serial number
 - 2) Supply voltage, phase and frequency
 - 3) Current rating of the minimum main conductor
 - 4) Electrical wiring diagram number
 - 5) Motor horsepower and full load current
 - 6) Motor overload heater element
 - 7) Motor circuit breaker trip current rating
 - 8) Name and location of equipment manufacturer
- b. Control components shall be permanently marked using the same identification keys shown on the electrical diagram. Labels shall be mounted adjacent to device being identified.
- c. Switches, indicators, and instruments mounted through the control panel door shall be labeled to indicate function, position, etc. Labels shall be mounted adjacent to, or above the device.

- E. Liquid Level Control: This specification is intended to cover a complete and operational automatic pump and alarm control system that responds to the wet well level excursions. It is the specific intention of this functional requirement that a standard controller will be employed with features as herein described and that it be a fully integrated assembly.

Pump controller shall be a MPE 1000 Lift Station Controller or approved equivalent. Including a minimum of the following specifications:

The Controller shall control up to three pumps to perform liquid level control. The Controller shall be capable of alternating the pumps and shall provide lag pump delays and high- and low-level alarms and shall perform both pump-down and pump-up operation.

The Controller shall be standard “off the shelf” equipment with published literature and fully tested hardware and operating program. The Controller must be field configurable from the front of the unit and require no special tools or software to set-up or operate.

The Controller shall be UL listed as Industrial Control Equipment, UL 508.

The Controller shall accept an input signal in the following forms: a 4-20 mA analog signal, inputs from a Conductance Level Probe, or Float Switches.

All connections to the Controller shall be made to be removable, “Phoenix” style combination connector/plugs.

The Controller shall be a microcontroller-based device and not require a battery to maintain the operating program. All set-up values shall be stored in non-volatile memory.

A numerical level display shall be provided on the front of the unit. It shall have a 3-digit, 7 segment LED display and show levels in feet and tenths of feet. All setup parameter values shall be viewed or changed from the front of the Controller.

The Controller shall not require an external power supply or any external I/O modules to be a fully functioning unit. An analog input (4-20mA) with zero and span adjustments shall be provided for the scaling of the wet-well level input.

The Controller shall have 12 discrete inputs. Inputs shall be transient protected and be programmable for the following functions:

- Pump disable with HOA in OFF, or pump fault
- Freeze wet well level during a bubbler tube purge
- External Alternator Selector Switch
- Limit number of pumps called to run on emergency power
- All Pump Disable – for connection to Phase Monitor
- Sequence Input for Lead Lag Select Switches
- High- and Low-Level Alarms
- Pump disable upon low level – for connection to low level float switch
- Float switch backup
- Low Level Pump Cutoff
- Start Flush Cycle
- Inputs for user selectable SCADA functions

The status of all the discrete inputs shall also be viewable from the front of the unit.

All electrical connections, for power or I/O, shall be by quick disconnect Phoenix style connectors.

The Controller shall have a connector for a conductance level probe of ten sensor points.

Relay outputs shall be provided as standard for high- and low-level alarms and for the control of up to three pumps.

If not being used, the ten conductance level probe inputs shall be available for

use as ten additional discrete SCADA inputs, or for control via float switches.

The Controller shall remember which pump was in the lead position during a power outage.

The Controller shall include a fault indicator on the front of the unit and retrievable fault codes to aid in troubleshooting.

A level simulation feature shall also be available from the front of the unit. The Controller shall automatically return to monitoring wet well level after sixty seconds, if left in simulation mode.

An RS232 serial port with the Modbus RTU protocol shall be provided for SCADA. Programming shall be in place to collect and transmit the station status, and to allow for the remote control of the pumps.

The Controller shall provide an RS232 Serial Port as a standard feature and shall have an Ethernet port available as an option.

The Pump On/Off levels, high level alarm, and low-level alarm setup values shall be viewable and changeable from a remote location.

Pump elapsed time meters shall be viewable and resettable remotely and shall be stored in non-volatile memory during a power outage.

The Controller shall be able to perform float back-up using from two to six floats. The Controller shall have adjustable lag pump(s) delay.

The Controller shall have a parameter setting to select the number of pumps to control.

The Controller shall have a parameter setting to select the number of pumps to run at one time.

The Controller shall have a parameter setting to select the number of pumps allowed to run while on generator power.

Menu selectable alternation modes shall include:

Standard Alternation

Jockey Pump (Pump 1 stays on when other pumps turn on)

Jockey Pump (Pump 1 turns off when other pumps turn on)

Split alternation (Pumps 1 & 2, Pump 3)

Fixed sequence (Pump 1 always lead)

Stepped on/off (Only one pump runs at a time)

Menu selectable First-On/First-Off or First-On/Last-Off alternation sequences shall be available.

The Controller shall contain a parameter setting to allow the disabling of the automatic alternation.

The Controller shall contain a parameter to allow the Controller to be used in either a Pump Up or a Pump Down configuration.

The Controller shall have parameters for calibrating the zero and span of the

level input signal.

The Controller shall contain a parameter for setting the slave address of the Controller when used in a SCADA application.

The Controller shall contain parameter registers for the setup of the RS232 port.

The Controller shall contain a parameter to limit malicious attempts to control the pumps remotely or to change the setup parameters.

The Controller shall be able to force lead pump position by parameter selection.

The Controller shall be able to perform an automatic flush cycle to reduce sludge build up within the wet well.

The Controller shall have a wet well flush cycle that is able to be remotely controlled via SCADA.

The Controller shall contain a flow calculator that provides the following:

Latest Inflow Rate

Average Daily Flow (Average of the last 7 days)

Pump Outflow Rate (Latest Rate for each pump)

The Controller shall have a parameter selection to select time for time-based forced alternation.

The Controller shall contain pump disable discrete inputs shall cause the alternation routine to skip over disabled pumps. These pumps disable discrete inputs shall be able to be inverted by a parameter setting.

The Controller shall contain registers for quick verification of the firmware revision level.

The Controller shall have a fault code register to aid in troubleshooting.

The Controller shall also have parameters to allow level probe to be a back-up to the analog transducer input.

The Controller shall have parameter-based setup for the 12 discrete inputs.

The Controller shall contain a discrete input for connection to an external time clock to force pump alternation.

The Controller shall have a parameter setting to allow the analog input level to be a 4-20mA signal from a transducer, a conductance level probe, or a remote level input signal from SCADA.

The Controller shall have a parameter to select the level probe type by the selection of the distance between the electrodes.

The Controller shall have a level offset parameter to enable the transducer or conductance level probe to be placed off the bottom of the wet well, while maintaining an accurate representation of the wet well depth.

The Controller shall have a choice of sensitivity settings for use with a

conductance probe.

The Controller's unused output relays shall be able to be programmed through SCADA for additional control uses.

The Controller shall contain parameters to view the status of the Level Probe electrodes.

The Controller shall monitor the square wave signal at the Level Probe inputs and shall create a fault code if an improper square wave is detected.

The Controller shall contain the ability to perform the following SCADA features

Monitor the status of:

- Wet well Level
- All Discrete Inputs
- Pump On, Pump Off, High and Low Alarm Levels
- Individual Pump Disable Status
- All Pump Disable Status
- Float Backup Status
- On Generator Status
- Level Probe Backup Status
- Pump Forced On Status
- ETMs
- Relay Remote Control Status
- Forced Alternation Status
- Pump Run Status
- Current Lead Pump Status
- Level Probe Electrode Status
- Fault Code Status
- Last Fault Code Status
- Internal 5V Power Supply Status
- Internal 24V Power Supply Status
- Controller Program Revision Number
- Flush Cycle Operation
- Flow Calculator, Latest Inflow Rate
- Flow Calculator, Average Daily Flow
- Flow Calculator, Outflow Rate per Pump
- Flow Calculator, Daily Inflow Total for last 7 days

Control:

- Remotely Change Pump On, Pump Off, High and Low Alarm Levels
- Remotely Reset ETM's
- Remotely Force Pumps On
- Remotely Disable Pumps
- Remotely Force Alternation
- Remotely Select Lead Pump
- Remotely Reset Fault Code Register
- Remotely Reset Last Fault Code Register
- Remotely Control Unused Relays
- Remotely Start Wet Well Flush Cycle
- Remotely Stop Wet Well Flush Cycle

Fault Codes:

The following Fault Codes shall be available for Controller Troubleshooting
Communication Fault

Parameter Setup Faults
Normal Operation Disabled
Pump Operation on Float Backup
Backup Float Out-of-Sequence
All Pump Disable
Level Probe Fault
Level Probe Out-of-Sequence
Pumps called to run by Level Probe Back-Up
Flow Calculator Setup Fault

The Controller shall offer the following optional features:

4-20mA Analog Level input may be ordered as an isolated input

F. Level Sensor:

1. The liquid level of the wet well shall be sensed by a VEGAPULS C21 or preapproved equivalent.
2. The sensor assembly shall be installed and connected with other system elements and placed in successful operation. It shall be provided with input power and output signal transient protection, associated control elements as specified herein and in accordance with manufacturer's instructions.
3. The sensor shall be suspension-mounted using manufacturer's recommended mounting hardware. All hardware, bolts, nuts, and screws shall be Stainless Steel.

G. Secondary Lightning Arrestor: The control panel shall be equipped with a secondary lightning arrestor to minimize damage to the pump motors and control from transient voltage surges. The arrestor shall utilize silicon-oxide varistors encapsulated in a non-conductive housing. The arrestor shall have a current rating of 60,000 Amps, and a Joule rating of 1500. Arrestors provided shall be listed on the materials and approved manufacturers.

H. Phase Monitor: The control panel shall be equipped to monitor the incoming power and shut down the pump motors when required to protect the motor(s) from damage caused by phase reversal, phase loss, low voltage, and voltage unbalance. An integral time delay shall be provided to minimize nuisance trips. The motor(s) shall automatically restart when power conditions return to normal. Phase monitors shall be listed on the materials and approved manufacturers.

2.17 SUBMERSIBLE PUMPS:

A. Where design conditions allow for submersible pumps, this type of pump shall be installed. All submersible pumps of the same type, frame and size shall be of the same manufacturer and shall have interchangeable parts and shall be a type and brand listed as approved by the City of Fairhope, Alabama. All screws, small bolts, nuts, washers and miscellaneous items normally subjected to corrosion shall be constructed of Everdur, Monel, bronze, or stainless-steel exceeding 12% chrome and 7% nickel. All completed and installed operating pump units and accessories shall be suitable for the intended location and service shall be

free of operating problems, unusual vibrations and noise throughout the entire operating range of the equipment. Undesirable operation, vibration, or noise in a pump unit or accessories shall be corrected, and if necessary, the entire unit shall be replaced at no additional cost to the Owner.

- B. General: Motors shall be rated as to full load horsepower values shown on the plans (see Appendices) and shall have electrical characteristics corresponding to the electrical power system at the installation. The motor shall be designed for continuous as well as intermittent operation and shall be non-overloading over the entire operational range of the pump.

Thermal sensors shall be used to monitor stator temperatures. The stator shall be equipped with three thermal switches, embedded in the end coils of the stator winding (one switch in each stator phase).

The motor shall have bearings designed for a minimum B-10 life of 15,000 hours and shall be equipped with moisture sensors located between two mechanical seals in an oil filled seal chamber for external seal failure alarm.

The motor shall be labeled by Underwriters Laboratory, Inc. or Factory Mutual as approved for use in Class I, Division I, Group D hazardous locations and rated as suitable for submergence in raw sewage.

Unless otherwise specifically noted, not less than 30 feet of heavy-duty grease resistant submersible multi-conductor electrical power and pilot cable with grounding conductor shall be provided connected to the motor ready for operation.

Provide not less than four copies of technical information and parts listing, including recommended maintenance, describing pumps and motors including pump performance curve, minimum submersion head for pumps and range of available impeller sizes and their power requirements.

Provide written guarantee for replacement of pump and motor for failure of satisfactory performance and for defective parts of assembly.

Pumps provided for variable speed duty shall, in addition to requirements specified herein and elsewhere, be provided with the following written documentation by the pump manufacturer.

1. The pumps furnished shall be suitable for the variable speed duty at the conditions encountered at the installation location.
2. Equal pumping units shall have been in satisfactory variable speed service for a minimum of one year.

- C. Pump Installation: Pumps shall be installed in accordance with the manufacturer's recommendations and as approved. Where guide bars are indicated, pumps shall be mounted on guide bars as shown on the plans. Coat bolt thread projections with lubricant to facilitate future nut removal.

- D. The Contractor shall provide in a suitable substantial case any special tools or adjustment devices necessary for the proper maintenance and adjustment of the equipment furnished. This shall include all special or unusual items necessary for the dismantling and assembling of all furnished equipment.

- E. Four instruction manuals, clean and unused, shall be delivered to the Owner for the pumps, motors, and all accessories. Each instruction manual shall carry the serial number of the piece of equipment to which it applies, design data, operating instructions, lubricating instructions, maintenance instructions, assembly drawings showing location of parts and test curve. Each instruction manual shall be bound in a stiff black folder with the name of the pumping station and the unit numbers or name embossed on the outside.
- F. The Contractor shall furnish and install all necessary break-in lubricants and all final lubricants as recommended by the manufacturer for all pumps, motors and accessories.
- G. Supplier's/Manufacturer's Services: The Contractor shall furnish the services of qualified technical personnel representing the manufacturer or group of manufacturers for each equipment grouping or system within the project, for checking the installation, making the necessary adjustments, placing the equipment in operation, and during acceptance tests. The representatives shall be available and scheduled with the Owner to instruct operating personnel in the use, operation, and maintenance of the equipment during the initial on-line operating period. All components and equipment shall be installed in accordance with the recommendations of the manufacturer.

Operating tests shall be performed by the manufacturer's representative on all equipment in the presence of the Owner and the Engineer or their representatives in order to demonstrate the entire facility to be complete, functional, and ready to be placed in operation.

Operating instructions shall be given to the Owner's regular operating personnel by the equipment manufacturer's representative where complex equipment is provided and by the Contractor for other equipment in order to thoroughly familiarize the operators in the correct procedures and functions for operating and maintaining the facility.

- H. Pump Identification Plate: A 16-gauge stainless steel identification plate shall be securely mounted on each pump in a readily visible location. The plate shall bear the 1/4-inch die-stamped equipment identification number that is assigned each pump in the Pump Specification Sheets.
- I. Lifting Lugs: Equipment weighing over 100 pounds shall be provided with lifting lugs.
- J. Performance Tests: The Contractor shall perform field tests on all completed pump and control system assemblies, as required by the Pump Specification Sheets, to demonstrate their conformance to the specifications to the satisfaction of the Engineer. A test log shall be presented to the Engineer upon the completion of each test that records the following:
 - 1. Flow, in gallons per minute.
 - 2. Pump discharge pressures as measured by calibrated gauges, converted to feet of the liquid pumped and corrected to pump datum as defined by Hydraulic Institute Standards, calculated velocity heads at the discharge flanges, and total head, all tabulated in feet.
 - 3. Applied voltage and amperage measured for each phase.

4. Complete nameplate data.

Factory Tests:

5. Pumps: A factory test certified by the pump manufacturer's test representative shall be performed on all pumps furnished and written notice of the same shall be furnished to the Engineer. Information required to be furnished at the time of test is as necessary to show conformance to specified performance. Tests shall conform to the Hydraulic Institute Standards test code.
 6. Motor Tests and Test Reports: As specified in Pump Specification Sheets, pump drivers shall not be overloaded within a 1.0 service factor rating at any point on the pump curve.
 7. Balance of Vibration: The rotating parts of each pump and its driving unit shall be dynamically balanced before final assembly. The driving unit alone shall operate without vibration in excess of the limits stated in the latest revision of NEMA MG 1.
- K. Functional Test: Prior to plant startup or field performance test, all equipment described in the Pump Specification Sheets following shall be inspected for proper alignment, quiet operation, proper connection, and satisfactory performance by means of a functional test.
- L. Spare Parts for pumps shall be furnished to provide 12 months of full-time service and special tools required for that service shall be suitably boxed and marked for shipment and storage.

NOTE: See attached Pump Specification Sheets for pump system and performance warranty requirements. All pumps shall be on the City's list of materials and approved manufacturers.

2.18 SUMBERSIBLE PUMP VALVES AND PIPING:

Valves and piping shall be located as shown on the drawings. Gate valves, check valves, and flanged ductile iron piping shall be in accordance with the City's accepted materials.

2.19 SUBMERSIBLE PUMPS ELECTRICAL:

- A. All electrical material and equipment provided by the Contractor shall be new and free of defects. All work performed under this section of the specifications shall be carried out by skilled workers regularly engaged in the performance of such duties. The entire electrical installation shall be not less than that required by the latest edition of the National Electrical Code, the Occupational Safety and Health Act, and all electrical codes locally enforced in the project area. The Contractor shall obtain all permits required by local ordinances and after completion of the work, shall give the Engineer a certificate of final inspection and approval from the local Electrical Inspection Office. Any expenses connected with such inspection and certificate shall be borne by the Contractor.

Electrical material and equipment shall be designed in accordance with the latest requirements of applicable standards such as NEMA, ANSI, IEEE, and where listings are available for such items, shall be approved by the Underwriters Laboratories, Inc. Equipment, components, material, etc., rated by other standards and agencies including but not limited to IEC, VDE, and DIN will not be considered equal to NEMA, ANSI, IEEE, and UL. Electrical items shall be standard cataloged products of manufacturers regularly engaged in the manufacture of such products, unless otherwise noted.

B. Grounding:

1. Non-current carrying metal parts of electrical items such as cabinets, enclosures, frames, etc., and the neutral conductor shall be grounded in accordance with the National Electrical Code unless additional grounding requirements are indicated. Grounding conductors shall be copper, sized as noted. Special grounding system features shall be provided as indicated.
2. All conduit runs installed for lighting and power loads shall contain a grounding conductor throughout the entire length of the run forming a part of the grounding system. The grounding system shall be electrically continuous throughout the electrical system and shall be connected to earth ground at the point of power service and as otherwise indicated.
3. Ground rods shall be copper welded steel type, 3/4-inch diameter, 20'-0" length, minimum. Ground rods shall be driven to 1'-0" (minimum) below finished grade unless otherwise indicated and shall be electrically connected with suitable cast type ground clamps or exothermic welding.
4. Resistance to ground of each ground rod shall not exceed 5 ohms when measured during dry weather. In the event this value is not obtained, one additional rod or rod section equal to that tested shall be driven. Should the additional rod or section fail to achieve the required value, the Engineer shall be immediately notified. A written record of all resistance measurements and test dates shall be submitted to the Engineer prior to completion of the project.

C. Lightning and Surge Protection:

1. Lightning protector units shall be provided for power circuit protection at the main service connection point and elsewhere as noted on the plans. Lightning protectors provided shall be listed on the materials and approved manufacturers for three- and single-phase circuits, respectively.

D. Insulation Tests:

1. Circuit insulation tests shall be performed to prove each circuit free of faults after all wiring is completed prior to equipment and fixture connections, and again after the installation is complete and ready for use.
2. Tests shall be made at the main electrical service connection between all conductors and between line conductors and ground. Tests shall be made with a 1,000 Vdc instrument capable of accurately measuring the resistance involved. Readings shall be taken in the presence of the

Engineer or his representative for each test and the written results of each test shall be submitted to the Engineer.

E. Conductors:

1. Single conductors installed in raceways shall be copper with AWG sizes as noted and shall have 600 volts rated, type THW/THHN/THWN or XHHW, 75°C (minimum) insulation. Conductors requiring special consideration shall have insulation material and ratings noted on the plans and as required by the National Electrical Code. Type TW insulation shall not be used for any purpose in this contract except ground wire identification only.
2. Lighting and power conductors shall be minimum size No. 12 AWG, with AWG No. 8 and larger to be stranded, and AWG No. 10 and smaller to be solid unless otherwise noted. Conductors shall be stranded where movement, vibration, or other flexing occurs in order to prevent conductor fatigue. Control conductors may be AWG No. 14 stranded, unless otherwise noted.
3. Insulation colors shall be green for ground; white for neutral; and black for single phase line conductor. "Stinger" phase conductor of 120/240 V systems shall be orange as per NEC 215.8. Unless otherwise noted, a uniform insulation color scheme for all new three phase systems shall be established as black for phase A, red for phase B, and blue for phase C. Control circuit insulation shall be yellow. Conductors size AWG 10 and larger may be black with entire exposed ends taped with "Scotch #35" or equal by Plymouth, in accordance with color schemes mentioned herein.
4. Direct buried grounding system conductors shall be bare copper, sized as noted.

F. Splices and Terminations:

1. 600 volt system conductors shall be spliced with "Ideal Wire-Nuts" or equal by T & B for AWG No. 10 and smaller for dry areas and machine crimped or bolted connectors with "Scotch 88" or equal by Plymouth, full coverage tape for all other splices. Soldered and taped splices will not be acceptable. Terminations shall be made with mechanical lugs or other acceptable termination features of the equipment supplied.
2. Control conductors shall terminate on box clamp, binding post screw, or set screws only. Soldered, taped and free-standing connections will not be acceptable.

G. Conduit:

1. Steel conduit shall be provided unless otherwise indicated and shall be heavy-wall, rigid galvanized type bearing the Underwriters Laboratories, Inc. label of approval. Conduit minimum size shall be 1/2 inch. Fittings for rigid steel conduit shall be threaded types made up with conductive waterproof compound. Seal-off fittings shall be provided as required by the National Electrical Code.

2. All conduit shall be clean and free from dents, scars, or other deformities. Connections shall be made watertight and bushings shall be provided where smooth hubs are not encountered. Changes in directions shall be made with symmetrical bends or conduit boxes. Field made bends shall be made with an approved hickey or conduit bending apparatus. Conduit runs shall be installed parallel or perpendicular to structural members. Conduit hangers and supports shall be provided at intervals recommended by the manufacturer and the National Electrical Code. Underground conduit runs shall be installed at least 1'-6" below finished grade unless other depths are indicated. Plain earth used for backfilling shall be free from objectionable material such as rocks, glass, metal, wood, etc. and shall be tamped to surrounding earth density.

H. Cable Connectors and Supports:

1. Conduit runs into the wet well for cable protection shall be positioned to suit field conditions to achieve an unobstructed passage for removal and installation of pumping units and shall provide close accessibility to allow removal of the cable connector by maintenance personnel from outside and above the wet well.
2. Cables entering conduit protection and as otherwise notified shall be fitted with connectors sized to suit the cable and conduit installed. Connectors shall be plastic body and threaded cap type with neoprene or equal internal gas-tight compression gland. Connectors shall be CGB type manufactured by Thomas & Betts, Hubbell or Daniel.
3. Cable grips shall be provided as strain relief for cables and shall be wire mesh offset eye, closed mesh type, all fabricated with 304 stainless steel and shall be sized to suit the cable installed. Cable grips shall be Kellems 024-01-XXX series or equal by Daniel Woodhead.

I. Receptacles:

1. Duplex convenience receptacles shall be rated 15 amps, 125 volts, two pole, three wire, grounding type, specification grade, GFI configuration unless otherwise noted. Receptacles shall be brown for unfinished areas and ivory for finished walls. Where installed in damp locations, receptacles shall be installed in weatherproof enclosures.
2. Special receptacles shall be provided as noted and shall have electrical ratings, pole configuration, and number of poles as shown or required. Enclosures, receptacle types, and other special features shall be suitable for the duty and conditions encountered.

J. Switches:

1. Safety switches shall be provided where indicated and elsewhere as required by the National Electrical Code. Safety switches shall be heavy-duty type, with voltage, current, fuses, number of poles, and enclosure types as noted. All switches requiring security including main power service, transfer, and switches installed out-of-doors shall be provided with padlocks as hereinafter specified. NEMA 4X switches shall be installed out-of-doors.

K. Fuses:

1. Unless otherwise noted, fuses provided for motor protection and other general-purposeloads shall be dual-element type, "Buss Fusetron" or equal by Shawmut, with voltage and current ratings as required.
2. Control circuit fuses shall be "Buss FNM" for 120-volt circuits and "Buss KTK" for 480-volt circuits or equal by Shawmut. Unless otherwise noted, control circuit fuses shall be installed in terminal strip mounted switch action fuse blocks rated for 15 amps at 600 volts.

L. Circuit Breakers:

1. Branch and feeder circuit breakers shall be thermal-magnetic, molded case, industrial type, unless otherwise noted, and shall be listed by the Underwriters Laboratories, Inc. for not less than 14,000 amps symmetrical interrupting at 480 volts. Voltage, trip and frame current ratings, and number of poles shall be as indicated or required. Circuit breakers shall have trip- free operating handles with trip current rating permanentlymolded therein.
2. Circuit breakers provided as an integral part of combination motor starters may be as specified herein or may be magnetic only type manufactured specifically for motor protection duty and set for the actual motor nameplate data.
3. Circuit breakers provided to serve 120-volt lighting, receptacles, and other small loads shall be rated by Underwriters Laboratories, Inc. for not less than 10,000 amps symmetrical interrupting and otherwise shall be as specified herein. Multiple circuit breakers shall be factory assembled and sealed. Tandem type breakers and bailed tied handles of single unit breakers are not acceptable for this work.

M. Motor Starters:

1. Starters shall be sized in whole increment NEMA designation with voltage rating poles and enclosure as noted or otherwise required. Starters shall be Furnace ESP-100. Starters shall be approved by the Underwriters Laboratories; Inc. Ambient temperature compensated overcurrent protection shall be provided in each ungrounded phase of the circuit and shall be sized to suit the motor provided. Auxiliary equipment including contacts, selector switches, pushbuttons, lights, control power transformer, fuses, etc. shall be provided as noted or otherwise required.
2. Starters shall be designed and rated in accordance with NEMA Table 2-321-1. Ratings by IEC, VDE, DIN, etc. will not be considered for this work. Terminal temperature rise rating shall not exceed 50° C. Operating coils and overcurrent sensors shall be readily and independently replaceable in the field without requiring complete starter exchange.
3. Starters indicated as being combination type shall be circuit breaker type motor circuit protector combination type set to suit the motor provided.
4. Starters shall be magnetic type, full voltage, non-reversing, NEMA Size 1 minimum with wiping style contacts, unless otherwise noted.

N. Special Control Panel:

1. Control panel shall be surface mounted NEMA 4X 304 stainless steel Hoffman style A-SSLP type construction. Control components shall be as indicated on the plans. Control panels shall be provided with padlocks as specified hereinafter. Dimensions shall be as shown on the plans. Stainless steel cabinets shall be brushed finished. All drilling and cutting shall be smooth and escutcheon plates or bezel rings shall be provided on all openings.
2. Control components and associated items shall be as shown on the plans and in accordance with other applicable paragraphs of this specification. Component arrangements shall be as shown on the plans. Panel manufacturer shall completely wire the panel using AWG No. 14 (minimum) conductors rated XHHW, 75° C (minimum). Each end of all conductors shall be identified with permanent type markers corresponding to shop drawing wiring diagram submitted for the control panel. All field wiring shall be connected to terminal strip or lugs of starters, contractors, or other larger components. Each conductor within the panel shall be labeled at each end for identification.
3. Shop drawings showing physical dimensions, component placement, and complete coordinated composite control diagrams and elementary diagrams shall be submitted to the Engineer for approval and shall show the individual control components by manufacturer's catalog number and the wire numbers actually connected in the completed installation. Complete coordinated drawings are to include all devices internal and external to the control panel.

2.20 SUBMERSIBLE PUMPS CONTROLS:

A. Control Components:

1. Selector switches, pushbuttons, and indicator lights, unless otherwise noted, shall be round style, heavy-duty, oil-tight type equal to Square D Class 9001, Type K or Cutler-Hammer Type T and shall have nameplate lettering as noted on the plans. Miniature style units will not be acceptable unless otherwise noted on the plans. Operator mechanism including locking ring and legend plate shall be a corrosion resistant material. Operators installed exposed to corrosive atmospheres or wet areas shall be NEMA 4X rated. Switch contacts shall be arranged for the configuration and duty as indicated and operating handles shall be easily operated by hand without the use of tools. Pushbuttons shall be momentary or maintained contact type as indicated. Switches and pushbuttons located remotely from the controller shall be with lockout features. Indicator light lenses shall be glass type with color as noted. Lamp replacement shall require removal of the front mounted lens cap only. Where control unit exhibits corrosion or other physical failure during the contract time frame, the Contractor shall replace the entire item at the expense of the Contractor.

2. Control relays shall be equal to Square D, Type X, 300-volt, fixed mounting type, molded case frame industrial type, with number of poles, contact arrangements, and operating voltages indicated. Contacts shall be convertible type. Relays noted to have time delay actions shall be adjustable type with time delay values as notes. Contacts shall be convertible type and shall be readily replaceable without requiring complete relay exchange. Open style, "Ice Cube" style, and plug-in type relays will not be considered for this work unless specifically noted on the plans. Relays shall be NEMA rated and Underwriters Laboratories, Inc. approved. Ratings by IEC, VDE, DIN, etc. will not be considered for this work. Relays with special voltage ratings or designated as special purpose relays shall be provided where indicated.
3. Power failure relays shall be plug-in type with special fixed mounted socket and shall be rated for the voltage supplied to the facility. The relay shall have a 20% (minimum) adjustable range below normal voltage rating and output contacts rated for 3 amps at 115 volts. Relay shall be Time-Mark No. 258B or equal by General Manufacturing Company.
4. Running time meters shall be non-reset type, 2-inch nominal diameter semi- flush mounted, synchronous a.c. motor driven type with sealed case and shall have a six-digit register for direct reading of hours and tenths. Meters installed in corrosive or wet atmospheres shall be of corrosion resistant material and gasketed for water tightness. Meters shall be rated for 60 Hz and voltage as indicated.
5. Liquid Level Control: This specification is intended to cover a complete and operational automatic pump and alarm control system that responds to the wet well level excursions. It is the specific intention of this functional requirement that a standard controller will be employed with features as herein described and that it be a fully integrated assembly.
6. Pump controller shall be a MPE 1000 Lift Station Controller or approved equivalent. See 2.16-E

B. Level Sensor:

1. The Liquid Level of the wet well shall be sensed by a VEGAPULS C221 or preapproved equivalent.
2. The sensor assembly shall be installed and connected with other system elements and placed in successful operation. It shall be provided with input power and output signal transient protection, associated control elements as specified herein and in accordance with manufacturer's instructions.
3. The Sensor shall be suspension-mounted using manufacturer's recommended mounting hardware. All hardware, bolts, nuts, and screws shall be Stainless Steel.

D. Special Hardware:

1. Nameplates provided to identify component duty or associated equipment on control centers, special panels, etc. shall be black laminated plastic type with white engraved characters as indicated and shall be fastened with screws. Adhesive attachment methods will not be acceptable.
2. Legend plates for pilot lights, switches, etc. shall reflect wording shown on the plans and shall be non-corrosive metal types fastened by the device locking ring.
3. Concrete masonry inserts shall be self-driven expansion type "Phillips Red Head" or equal by Star.
4. Padlocks shall be brass weatherproof padlock for the gate, of the four-pin tumbler type (minimum) and the Owner shall be provided with keys as noted in the Board's Standard Specifications. Padlocks shall be provided on all lockable items including:
 - a. Service disconnect and transfer switches.
 - b. Control panels.
 - c. Access hatches

E. Miscellaneous: All devices, equipment, and materials not definitely specified or noted, that are required for complete installations, shall be furnished and manufactured for the purpose intended and shall be installed in conformance with good accepted practice for the conditions encountered. All hardware such as straps, supports, bolts and nuts shall be a minimum of 304 stainless steel.

2.21 SUBMERSIBLE PUMP SPECIFICATION SHEET:

PUMP SPECIFICATION SHEET:

Service: Sewage

Type of Pump: Submersible Non-Clog Sewage Pump Solids Handling

Capability: Raw, unscreened sewage. Discharge connection 4" (min) diameter.

Materials of Construction:

Casing: Cast iron, Class 35B with smooth surfaces

All exposed bolts & nuts: 316 stainless steel

Pump exterior: Factory sprayed with an acrylic zinc phosphate primer with a polyester resin paint finish. All surfaces in contact with sewage including the impeller other the stainless-steel surfaces shall be protected by the same factory applied primer.

Shaft: Stainless steel ANSI 431. Mechanical rotating shaft seal system. Seals shall run in an oil reservoir. Lapped seal faces must be hydrodynamically lubricated at a constant rate. The lower seal unit, between the pump and oil chamber, shall contain one stationary and one positively driven tungsten carbide ring. The upper seal unit, between the oil sump and

SUBMERSIBLE PUMP SPECIFICATION SHEET Cont.

motor housing shall contain one stationary tungsten carbide ring and one positively driven rotating carbon ring. Each interface shall be held in contact by its own spring system. The seals shall require neither maintenance nor adjustment but shall be easily inspected and replaceable. The pump shaft shall rotate on two permanently lubricated bearings with a B-10 bearing life of 40,000 hours when operating at or near the best efficiency point.

Impeller: Cast iron, Class 35 B, dynamically balanced, double shrouded, non-clogging, single vane design.

Guide rails: Stainless steel, 1" (min.) diameter, or Engineer approved pump removal system.

Volute & Wear Ring: Volute shall be single piece design capable of passing any size solid which can pass through the impeller. Wear ring shall be stationary ring made of nitrile rubber molded with a steel ring insert.

Upper Bearing: Single row deep groove ball bearing.

All mating surfaces where watertight sealing is required shall be machined and fitted with nitrile rubber O-rings. Fitting shall be such that sealing is accomplished by metal-to-metal contact between machine surfaces. This will result in controlled compression of nitrile rubber O-rings without the requirement of a specific torque limit.

Installation: The pump shall have a discharge connection elbow connected to a vertical discharge pipe. The discharge connection elbow shall be permanently installed in the wet well along with the discharge piping. The pump shall be automatically aligned and connected to the discharge connection elbow when lowered into place and shall be easily removed for inspection or service without a need for personnel to enter the wet well.

Sealing of the pumping unit to the discharge connection elbow shall be accomplished by a simple linear downward motion of the pump. A sliding guide bracket shall be an integral part of the pump unit. The entire weight of the pumping unit shall be guided by no less than two guide bars and pressed tightly against the discharge connection elbow with metal-to-metal contact. Sealing of the discharge interface by means of a diaphragm, O-ring, or other devices will not be acceptable. No portion of the pump or the guide support system other than the discharge connection shall bear directly on the floor of the sump. The pump, with its appurtenances and cable, shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 40 ft.

A 4" (min.) cast iron discharge connection with anchor bolts, upper guide bar bracket, 20 feet of galvanized lifting chain, and 40 feet of Hypalon jacketed type SPC cable, P-MSHA approved and sized according to N.E.C. and ICEA standards shall also be provided.

