

BID DOCUMENTS
CITY OF LAKE WALES
SKID MOUNTED RECLAIMED WATER
BOOSTER PUMPING STATION

Intersection of Simone Drive and Roberta Road, Lake Wales, Florida
Section 12, Township 30 South, Range 27 East

Prepared for:

City of Lake Wales
201 W. Central Avenue
Lake Wales, Florida, 33853
Phone: 1-863-678-4182 Ext. 271

Prepared by:

Kimley-Horn and Associates, Inc.
Lakeland, Florida
04614900

February 16, 2010

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FOR
THE CITY OF LAKE WALES

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NOTICE OF INTENT TO AWARD
NOTICE TO PROCEED
CONTRACT CLOSEOUT
CONSTRUCTION DRAWINGS

Cut along border and affix this label to your sealed bid envelope to identify it as a “Sealed Bid”. Be sure to include the name of the company submitting the bid where requested.

| | |
|---------------------------------|---|
| SEALED BID – DO NOT OPEN | |
| SEALED BID NO: | 10-195 |
| BID TITLE: | SKID MOUNTED RECLAIMED WATER BOOSTER PUMPING STATION |
| DUE DATE/TIME: | MONDAY, MARCH 15, 2010 2:00 P.M. |
| SUBMITTED BY: | _____ |
| | Name of Company |

DELIVER TO: PURCHASING DEPARTMENT
CITY OF LAKE WALES
201 W CENTRAL AVE.
LAKE WALES, FL 33853

Please Note: From time to time, addenda may be issued to this bid. Any such addenda will be posted on the same Website, www.cityoflakewales.com, from which you obtained this bid. Before submitting your bid/proposal you should check our Website to download any addenda that may have been issued. Please remember to sign and return addendum acknowledgement form with completed bid package if applicable

**SECTION 00100
INVITATION TO BID**

February 16, 2010

10-195

NOTICE IS HEREBY GIVEN that the City of Lake Wales is accepting sealed bids for:

SKID MOUNTED RECLAIMED WATER BOOSTER PUMPING STATION

At 2:00 P.M., EST on March 15, 2010, in the City Commission Chambers at the Municipal Administration Building, 201 Central Ave. W., Lake Wales, Florida, bids will be opened and read aloud.

An original and **two (2) copies** of all bids, including all executed documents and needed attachments, shall be placed in a sealed envelope, marked "10-195": **SEALED BIDS FOR "SKID MOUNTED RECLAIMED WATER BOOSTER PUMPING STATION,** and delivered prior to the bid opening deadline, 2:00 P.M., EST on **Monday, March 15, 2010.**

Intent

The City of Lake Wales is seeking proposals from qualified companies to provide a Skid Mounted Reclaimed Water Booster Pumping Station with a 10.5' x 9' reinforced concrete pad with treadplate top; cutting an existing 8" reclaimed water line in two locations and installing five valves at the two connection points; trenching and reinforcing approximately 277 L.F. of new 8" AWWA C-900 DR 18 purple pipe; providing and installing two Aurora 383-A 4x4x12 pumps with 20 HP 1800 RPM motors and a flow meter . An electrical connection to a new 480 3 Phase Power source near the pump control panel will also be required. Additionally, the existing reclaimed water master meter for the Whispering Ridge Subdivision will be relocated under this contract. See specifications Section 00900 and drawings.

A mandatory pre-proposal conference will be held at the City of Lake Wales, City Commission Chambers located at 201 Central Avenue West, Lake Wales, Florida, at 2:30 P.M., on Friday, March 5, 2010. Questions pertaining to the construction or bidding documents must be addressed to the Engineer, Elisa H. Turner, P.E., Kimley-Horn and Associates, Inc., 3675 Innovation Drive, Lakeland, Florida 33812 in writing prior to 5:00 P.M. February 3. Response of the questions from the Engineer will be provided to the Proposers during the pre-proposal conference.

Responding to the Invitation to Bid

All persons and firms wishing to submit bids **must** obtain a complete copy of the Invitation to Bid document.

PROJECT SPECIFICATIONS AND DRAWINGS: Available for review and purchase at the office of the Engineer:

Kimley-Horn and Associates, Inc.
3675 Innovation Drive
Lakeland, Florida 33812
(863) 701-8702

Bids shall be prepared using the Project Specifications and Drawings. Addenda will be sent by electronic mail, to all holders of complete Bidding Documents up to seventy-two (72) hours before the Bid closing time. Brief Addenda may be issued between seventy-two (72) hours and twenty-four (24) hours before Bid closing time by electronic mail to all holders of complete Bidding Documents. The City/Engineer is not responsible for delivery of addenda to prospective bidders.

A payment will be required for each complete set of Bidding Documents. This payment represents reproduction costs and is non-refundable.

- A. Complete set of Bidding Documents \$100.00 per set
(Project Manual and Drawings)

All persons or firms must submit a City of Lake Wales Vendor Application, a W-9 and a current Public Entity Crimes Statement with their response. These forms are available on our website, www.cityoflakewales.com, go to City Departments, Purchasing, Forms and Documents or contact Bonnie Hodge, Purchasing Agent, (863) 678-4182, extension 264 to obtain these items.

Responses may be hand delivered, mailed, or delivered via courier service to the following address. Faxed or e-mailed responses will not be accepted.

DELIVERY ADDRESS

City of Lake Wales
City Manager's Office
Attn: Bonnie Hodge, Purchasing Agent
201 Central Ave. W
Lake Wales, Florida 33853-4013

MAILING ADDRESS

City of Lake Wales
City Manager's Office
Attn: Bonnie Hodge, Purchasing Agent
P. O. Box 1320
Lake Wales, Florida 33859-1320

General Information and Requirements

1. In accordance with Chapter 119, Florida Statutes, all bids received, and all materials contained therein, once opened are **public record**, and subject to disclosure to any person, organization, or firm, including other firms responding to this invitation to bid.
2. In accordance with section 287.133, Florida Statutes, a person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid or proposal on a contract to provide any goods or services to a public entity and may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity, and may not transact business with any public entity in excess of the threshold amount provided in section 287.017-for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.
3. The City reserves the right to accept or reject any or all bids, or part thereof, to waive any informalities or technicalities, or to award contracts in the best interest of the City. In all instances, the City's decision shall be final.
4. The City of Lake Wales is exempt from taxes imposed by the State and Federal Government. Bids shall not include any taxes or fees.
5. Prospective firms must submit proposals strictly in accordance with the specifications outlined in the Invitation to Bid. Each variance, if any, to the specifications shall be specifically stated in the bid.
6. Prospective firms warrant by virtue of submission of bids that all prices, terms, and conditions stated shall be honored for a period of ninety (90) days after the opening of bids. **Any** changes at the time an order is placed shall result in automatic disqualification of the vendor.
7. The original bid shall be signed, in blue ink, by a corporate officer, partner, or proprietor.

8. The City reserves the right to reject any or all items if in its judgment the item does not meet the needs of the City, or for any reason it deems suitable.
9. Prospective firms are hereby warned not to contact any City employee or official on matters relating to this Invitation to Bid, except as indicated herein. Any attempt to do so, or engaging in lobbying or any other activity interfering with the evaluation process may result in immediate disqualification of the vendor from **any** City business.
10. Per City ordinance, agreements and contracts with a term in excess of one year shall include the following language: "The performance of the City of Lake Wales and its obligation to pay under this contract is contingent upon annual appropriation by the City Commission of Lake Wales." Vendors are warned that this requirement is written into the Code of Ordinances of the City, a public document, and is binding upon all vendors whether or not referenced in any agreement.
11. Prospective firms quoting State of Florida contract pricing must provide the state contract number and date of expiration in their bids or proposals. Firms will be required to provide a copy of the entire contract prior to the placing of orders by the City.
12. Prospective firms hereby warrant by virtue of submission of bids that any and all terms, conditions, and requirements as stated in this document are valid, enforceable, and binding upon the selected vendor.

Specific Information and Requirements

1. Answers to questions submitted about this Invitation to Bid or the Project will be provided to all known prospective bidders.
2. The selected firm may not discriminate against any employee employed in the performance of services, or against any applicant for employment because of race, religion, color, handicap, national origin, age, gender, or marital status.
3. Bids shall include all information required in the Invitation to Bid. Bidders shall use City standard forms as included in the Invitation to Bid to submit all information, or shall follow the format dictated or include the information required herein where no form is provided. Bid documents shall be arranged in order as indicated on the Bid Contents Form.
4. Each firm must directly perform 100 percent (100%) of the total contract dollar value of the project with its in house personnel, labor and equipment.

Evaluation of Bids

This sealed bid shall be evaluated on the basis of price, from all bidders deemed qualified to perform the work, in accordance with City Ordinance. The City shall evaluate and analyze all of its potential options as available and select the options that, in the City's sole and final judgment, represent the best fiscal and overall solution for the City. The City reserves the right to seek clarification from prospective firms on any issue in a bid, or take any other action it feels necessary to properly evaluate the bids and construct a solution in the City's best interest.

**SECTION 00110
BIDDER INSTRUCTIONS AND GENERAL
INFORMATION**

BIDDER INSTRUCTIONS: To ensure acceptance of this bid, follow these instructions.

BID DOCUMENTS MUST BE DELIVERED TO THE PURCHASING DIVISION PRIOR TO 2:00 P.M. ON THE DATE SPECIFIED. THERE WILL BE NO EXCEPTIONS.

1. **EXECUTION OF BID:** Bid must contain an original signature of an authorized representative in the space provided on the signature page. Bid must be typed or printed in blue ink. Erasable ink is not permitted. Corrections made by bidder to any bid entry must be initialed by the person who signs the bid.
2. **NO BID:** Bidder not interested in submitting a bid should return a “no bid,” with an indication of the reason for no bid and the interest in future bid solicitations.
3. **BID OPENING:** It is the responsibility of the bidder to assure that their bid is delivered at the proper time and place prior to the bid opening. All bid openings shall be public, at 2:00 p.m., on the date specified in the Notice to Bidders. Bids, which for any reason are not so delivered, will not be considered. **BID SUBMITTAL FORMS USING FACSIMILE OR E-MAIL WILL NOT BE ACCEPTED.**

NOTE: Bidders may call the Purchasing Agent only for bid results. The telephone number is (863) 678-4182 extension 264. The bid recap will be posted to the City of Lake Wales website at <http://www.cityoflakewales.com> within ten (10) working days after the bid opening date. The bid analysis will also be posted to the City’s website as soon as possible after the bid opening Date. Bid files may be examined during normal working hours by appointment.

4. **CITY AS GATEKEEPER OF DOCUMENTS:** This document is issued by City of Lake Wales and as such shall be the sole distributor of all addendum’s and/or changes to these documents. It is the responsibility of the bidder to determine issuance of documents directly with the Purchasing Division. The City is not responsible for any solicitations issued through subscriber, publications, or other sources not connected with the City and the Bidder should not rely on such sources for information regarding the solicitation.
5. **TAXES:** Bidders are responsible for the payment of any applicable taxes that are connected to the purchase of any materials or subcontractors used in the execution of this bid.
6. **DISCOUNTS:** Bidders may offer a cash discount for prompt payment; however, such discounts Shall NOT be considered in determining the lowest net cost for bid evaluation purposes. Bidders Are encouraged to reflect cash discounts in the unit price quoted.
7. **MISTAKES:** Bidders are required to examine the specifications, delivery schedule, bid prices And all instructions pertaining to the requirements of this bid. Failure to do so will be at bidder’s risk. In case of a mistake in extension of a unit price, the unit price will govern. Corrections made by bidder to any bid entry must be initialed by the person who signs the bid.
8. **INVOICING AND PAYMENT:** The successful bidder shall submit a properly certified invoice to the City at the prices bid. **An original invoice shall be submitted to the appropriate Division at their drawer number, P.O. Box 1320, Lake Wales, Florida 33853.** The vender shall include the bid number and/or the purchase order number on all invoices. Invoices will be processed for payment when approved by the user division.

9. **CONFLICT OF INTEREST:** All bidders must disclose, with their bid, the name of any elected or appointed official, employee, or agent, who is also an employee of the City or any of their agencies. Furthermore, all bidders must disclose the name of any City employee who owns, directly or indirectly, any interest of any amount in the bidder's firm or any of their branches. Award of this bid shall be subject to the provisions of Chapter 112, Florida Statutes.
10. **WARRANTY:** Unless otherwise specified, the bidder agrees that the services furnished under this bid shall be covered by the most favorable commercial warranty the bidder gives to any customer for comparable services, and that the rights and remedies provided herein are in addition to and do not limit any rights afforded to the City by any provision of this bid.
11. **ADDENDUM:** Any changes in the bid shall be made in the form of a written addendum by the Purchasing Director or his representative. No other person shall be authorized to make changes verbally or in writing. If an addendum is issued, the addendum sheet must be signed by the bidder and faxed to (863) 678-4182 extension 264.
12. **LIABILITY:** The vendor shall hold and save the City, Its Officers, agents and employees harmless from liability of any kind in the performance of this bid and against claims by third parties resulting from the supplier's breach of contract or the supplier's negligence.
13. **PATENTS AND ROYALTIES:** The bidder, without exception, shall indemnify and save Harmless the City, it's elected and appointed officials, employees, and agents from liability of any nature or kind, including cost and expenses for, or on account of, any copyrighted, patented or non-patented invention, process, or article manufactured and used in the performance of this bid. If the bidder uses any design, device or material coved by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include all royalties or cost arising from the use of such design, device or material in any way involved in the work.
14. **BID PROTEST:** Any bidder desiring to file a bid protest, with respect to a recommended award of any bid, shall do so by filing a written protest. The written protest must be in the possession of the Purchasing Division within three (3) working days of the Notice of Recommended Award, unless only one bid was received. A copy of the bid protest procedures may be obtained from the City of Lake Wales Purchasing Division or can be downloaded from the City's website at www.cityoflakewales.com.

FAILURE TO FOLLOW BID PROTEST PROCEDURE REQUIREMENTS WITHIN THE TIME FRAMES PRESCRIBED HEREIN AS ESTABLISHED BY THE CITY OF LAKE WALES, FLORIDA, SHALL CONSTITUTE A WAIVER OF THE BIDDER'S RIGHT TO PROTECT AND ANY RESULTING CLAIM.

15. **SUMMARY OF TOTAL SALES:** At the end of each quarter, the successful vendor is required to furnish the Purchasing Division with a summary of sales, in total dollars, for the work performed as a result of this bid.
16. **INDEMNIFICATION:** In consideration of Ten Dollars (\$10.00) and other valuable Considerations, Seller shall defend (by counsel reasonably acceptable to City), indemnify and hold Harmless the City, its employees and agents from and against, including, but not limited to, all liability, claims, suits, demands, damages, losses and costs, including attorney fees, arising out of or resulting from the performance of its services, provided that any such liability, claims, suit, demand, damage, loss or expense is (a) attributable to bodily injury, sickness, disease or death, or injury to or destruction of tangible property (other than the service itself), including the loss of use resulting there from; and (b) caused in whole in part by an act or omission of the contractor, any subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, whether or not it is caused in whole or in part by the negligence or other fault of a part indemnified hereunder. The contractor shall indemnify and hold harmless the

City, its elected and appointed officials, employees and agents, and anyone directly or indirectly employed by it from and against all claims, suits, demands, damages, losses and expenses (including attorney fees) arising out of any infringement or patent rights or copyrights held by others and shall defend all such claims in connection with any alleged infringement of such rights.

17. **PUBLIC ENTITY:** A person or affiliate who has been placed on the convicted vendor list Following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to a public entity, may not submit a bid on a contract with a public entity for construction or repair of a public building or public work, may not submit bids on leases of real property to a public entity, may not be awarded or perform public entity in excess of the threshold amount provided in Section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list. When submitting this bid, the bidder hereby certifies that they complied with said statute.
18. **PREFERENCE FOR DRUG FREE WORKPLACE:** Whenever two or more bids, which are equal with respect to price, quality and service, are received, preference shall be given to a bid received from a business that certifies that it has implemented a drug free workplace program in accordance with Section 287.087, Florida Statutes. In order to receive preference, a signed certification of compliance must be submitted with the bid response.
19. **SEALED BIDS:** All bid submittals must be completed and submitted in a sealed parcel. **(DO NOT INCLUDE MORE THAN ONE BID SUBMITTAL PER ENVELOPE. BID SUBMITTAL SHALL INCLUDE ONE (1) COPY OF ORIGINAL).** The **Original** bid submittal (s) shall be submitted on the forms provided by the City. All bids are subject to the conditions herein; failure to comply will subject bid to rejection.
20. **PRICES, TERMS AND PAYMENT:** Firm prices shall be bid and include all packing, handling, Shipping charges and delivery to any point within the City. Discount time will be computed from the date of satisfactory delivery at place of acceptance. Prices bid shall be firm for forty-five (45) days.
21. **SAFETY STANDARDS:** Unless otherwise stipulated in the bid, all manufactured items and fabricated assemblies shall comply with applicable requirements of Occupational Safety and Health Act (OSHA) and carry evidence of Underwriters Laboratories' Listings (UL).
22. **PACKAGING:** All containers shall be suitable for storage or shipment, and all prices should include standard commercial packaging.
23. **MEETS SPECIFICATIONS:** It is understood and agreed that any item offered or shipped as a result of this bid shall be new (current model at the time of this bid) unless otherwise specified in the specifications. The bidder represents that all equipment offered under this specification should meet or exceed the minimum requirements specified. Bidder shall strictly adhere to delivery specifications.
24. **SILENCE OF SPECIFICATIONS:** The apparent silence of this specification and any Supplemental specifications to any details or the omission from same of any detailed description concerning any point shall be regarded as meaning that only the best commercial practices are to prevail and those only materials of first quality and correct type, size and design are to be used. All Workmanship is to be first quality. All interpretations of these specifications shall be made upon the basis of this statement.
25. **GOVERNMENTAL RESTRICTIONS:** In the event that any governmental restrictions may be imposed which would necessitate alteration of the material, quality, workmanship or performance of the items offered on this bid/proposal prior to delivery, it shall be the responsibility of the supplier to notify the Purchasing Division at once. Their letter shall indicate the specific

regulation, which requires an alteration. The City reserves the right to accept any such alteration, including any price adjustments, or to cancel the contract at no expense to the City.

26. **TOXIC SUBSTANCE:** Notice of successful vendor (s) to provide to City toxic substances (As listed in Chapter 442, Appendix "G" of the FS) if applicable.
- a. Chapter 442 of the FS states that manufacturers, importers or distributors of any toxic Substance shall prepare and provide each direct purchaser of such toxic substance with Material Safety Data Sheet (s), herein referred to as MSDS, which to the best of manufacturer's, importer's or distributor's knowledge, is current, accurate and complete based on information then reasonably available to the manufacturer, importer or distributor. Upon notification of a new or revised MSDS the manufacturer, importer or distributor, on a timely basis not to exceed three (3) months after notification, shall provide the City with the revised information as it becomes available to the manufacturer, importer or distributor.
 - b. Failure to provide the MSDS, when applicable, shall be cause of rejection of bid.
27. **INSPECTION, ACCEPTANCE AND TITLE:** Inspection and acceptance will be at the designated facility unless otherwise indicated. Title and risk of loss or damage to all items shall be the responsibility of the contract supplier until accepted by the City, unless loss or damage results from negligence by the City.
28. **SAMPLES:** Samples of items, when called for, must be furnished free of expense and may, upon request be returned at the bidder's expense. Each individual sample must be labeled with bidder's name, manufacturer's brand name and number, bid number and item reference. Sample of successful bidder's items may remain on file with Purchasing for the term of the contract. Request for return of samples shall be accompanied by instructions, which include shipping authorization and name of carrier, and must be received within ninety (90) days after bid opening date. If instructions are not received within this time, the Purchasing Division shall dispose of the samples.

GENERAL INFORMATION

1. **DEFINITIONS:** The term "City" means the City of Lake Wales, a Florida municipal corporation and it's authorized designees, agents or employees.
2. **AWARD (S):** The award of this bid shall be based on low bid meeting specifications and other criteria as specifically called out in this document. As the best interest of the City may require, the right be reserved to make award(s) by individual item, group of items or as indicated in the bid form; to reject all bids or waive any minor irregularities or technicalities in bids received. In determining the lowest responsive and responsible bidder, in addition to price, the following may be considered:
 - Contractor's evaluation – quality of performance on previous projects. The contractor shall demonstrate experience in installing a skid-mounted booster pumping station. The contractor shall provide a minimum of three letters of reference.
 - The ability, capacity, equipment and skill of the bidder to fulfill the contract.
 - Whether or not the bidder can fulfill the contract within the time specified, without delay or interference.
 - The character, integrity, reputation, judgement, experience and efficiency of the bidder.
 - The previous and existing compliance by the bidder with laws and ordinances relating to the contract.
 - The sufficiency of the financial resources to fulfill the contract to provide the goods and/or services.

- The quality, availability and adaptability of the suppliers or contractual services to the particular use required.
 - The ability of the bidder to provide future maintenance and service, as required or needed.
 - The number and scope of conditions attached to the bid.
3. **LOCAL PREFERENCE:** It is policy of the Board of Commissioners to afford local preference to City entities in the award of bids. Preference shall be administered in accordance with the following:
- **.Ordinance 2009-07, Sec 2.418. Commodities or contractual services in excess of the threshold amount for Category Two – Twenty-five thousand dollars (\$25,000.00).**
 - The contract shall be awarded with reasonable promptness by written notice to the qualified and responsive bidder who submits the lowest responsive bid after the city manager obtains the formal approval of the city commission for the bid award. This bid must be determined in writing to meet the requirements and criteria set forth in the invitation to bid. Preference shall be given to a local vendor when the bid is not more than two percent (2%) higher than the low bid.
 - Local Vendor: Any person who, or place of business which, provides or proposes to provide a commodity or contractual service when such person or business has a principal place of business located within Lake Wales, Florida.
 - If a contract is being funded in whole or in part by assistance of any federal, state or local agency, which disallows local preference, the City will adhere to those requirements by not applying this section.
4. **NON-CONFORMANCE TO BID CONDITIONS:** Services not delivered as per delivery date in bid and purchase order may result in bidder being found in default, in which event any and all re-procurement costs may be charged against the defaulting vendor. This non-conformance to bid conditions may result in immediate cancellation of the purchase order.
- **ASSIGNMENT:** Any purchase order issued pursuant to this bid and the monies, which may become due herein are not assignable, except with the prior written approval of the Purchase Director.
5. **DISPUTES:** In the event of any doubt or difference of opinion as to the methods provided herein, or the level of performance rendered, the decision of the Engineer and the Public Works Director shall be final and binding on both parties.
6. **BID PROTEST.**
- (1) Any actual or prospective bidder, offerer, or contractor who is aggrieved in connection with the solicitation or award of contract may protest to the city commission. Protestors shall seek resolution of their complaints initially with the city manager prior to protesting to the city commission.
 - (2) Protests must be in writing and received within ten (10) days of the bid opening by the city manager. The written protest shall identify the protestant and the solicitation involved; include a plain, clear statement of the grounds on which the protest is based; and refer to the statutes, laws, ordinances, or other legal authorities which the protestant deems himself entitled by application of such authorities to such grounds.
 - (3) The city manager will meet with the protestant to review the matter and shall render a written settlement decision within twenty-one (21) days of the written protest. If the settlement decision is unacceptable to the protestant, the protestant may then make the protest directly to the city commission.

(4) In no case will the protesting bidder or offerer be entitled to any costs incurred with the solicitation, including bid preparation costs and attorney's fees.

(5) In the event of a timely protest under this section, the city manager shall not proceed further with the solicitation or award of the contract until all administrative remedies have been exhausted or until the city manager makes a written determination that the award of a contract without delay is necessary to protect the substantial interest of the city.

FAILURE TO FOLLOW BID PROTEST PROCEDURE REQUIREMENTS WITHIN THE TIME FRAMES PRESCRIBED HEREIN AS ESTABLISHED BY THE CITY OF LAKE WALES, FLORIDA, SHALL CONSTITUTE A WAIVER OF THE BIDDER'S RIGHT TO PROTECT AND ANY RESULTING CLAIM.

6. **FACILITIES:** The City reserves the right to inspect the bidder's facilities at any time, with reasonable prior notice.
7. **PLACING OF ORDERS:** The award of this bid does not constitute an order. Before any services can be performed, the successful bidder must receive written or oral notification in accordance with the practices of the User Division.
8. **PRECEDENCE:** Any requirement set forth in any section of the bid documents shall be binding as if called for by all sections. If there is a difference in the terms anywhere in this document, the most restrictive shall prevail.
9. **ADDITIONS/REVISIONS/DELETIONS:** Additions, revisions or deletions to the general conditions, specifications or bid price sheets that change the intent of the bid will cause the bid to be non-responsive and the bid will not be considered. The Purchasing Director shall be the sole Judge as to whether or not any addition, revision or deletion changes the intent of the bid.
10. The Purchasing Director reserves the right to terminate or suspend the award of this bid, in whole or in part, when it is in the best interest of the City to do so. The Purchasing Director will notify the Vendor, in writing, of any such action with notice of the effective date of termination or suspension. This notice shall also specify the state of the work at the time of termination or suspension.
11. **PRICE ADJUSTMENTS:** Any price decrease executed during the contract period, either by reason of market change or on the part of the contractor to other customers, shall be passed on to the City.
12. **CANCELLATION:** All annual bid obligations shall prevail for at least one hundred eighty (180) Days after effective date of the bid, unless bid conditions are breached as specified herein, after that period, for the protection of both parties, either party may cancel this bid in whole or part by giving thirty (30) days prior notice in writing to the other party. The City reserves the right to cancel any bid after reasonable written notice to the successful bidder should the service not be in the best interest of the City. Should the service rendered for any bid cause or threaten endangerment to public safety or welfare, the Purchasing Director may cancel the bid immediately.
13. **MANUFACTURER'S NAMES AND APPROVED EQUIVALENTS:** Any manufacturer's names, trade names or brand names are for information only and are not intended to limit competition. The bidder may offer any brand for which they are an authorized representative that meets or exceeds the specification for any item(s). If bids/proposals are based on equivalent products, indication should be made on the bid/proposal, cuts, sketches, descriptive literature and/or complete specifications. Reference to literature submitted with a previous bid will not satisfy this provision. The bidder shall also explain in detail the reason(s) why the proposed equivalent will meet the specification(s) and not be considered an exception thereto.

Bids/proposals, which do not comply with these requirements, are subject to rejection. Bids/proposals lacking any written indication of intent to bid an alternate brand will be received and considered in complete compliance with the specifications as listed on the bid form. The Purchasing Division shall be notified of any proposed changes in the following.

- a. Materials used;
- b. Manufacturing process; and
- c. Construction.

Changes shall not be binding upon the City unless evidenced by a Change Notice issued and signed by the Purchasing Director.

14. **PLANS AND SPECIFICATIONS:** The specifications and other bid documents upon which the prices in the Vendor's bid proposal are based on, are hereby made a part of the purchase order by reference hereto.

SECTION 00120

SPECIAL CONDITIONS

1. Award of bids will be based on an overall low average of markups meeting specifications. The City reserves the right to reject any or all bids and/or waive any minor irregularities in the bids received, whichever would be in the best interest of the City.
2. **ANNUAL APPROPRIATIONS:** The vendor acknowledges that the City, during any fiscal year, shall not expend money, incur any liability, or enter into any agreement which, by its terms, involves the expenditure of money in excess of the amounts budgeted or the reduction of revenues for those budgeted agreements that may be available for expenditure during such fiscal year. Any agreement, verbal or written, made in violation of this subsection is null and void, and no money may be paid on such agreement. Nothing herein contained shall prevent the making of agreement for a period exceeding one year, but any agreement so made shall be executory only for the value of the services to be rendered or agreed to be paid for in succeeding fiscal years. Accordingly, the City's performance and obligation to pay under this agreement is contingent upon annual appropriation.
3. **TERM & PRICING:** This contract shall commence beginning on the date of approval of the City Commission. No agreement or contract shall be executed which binds the city for the purchase of services or commodities for a period in excess of one (1) fiscal year, unless the following statement is included in the contract: "The performance of the City of Lake Wales and its obligation to pay under this contract is contingent upon annual appropriation by the City Commission of Lake Wales."
4. All prices bid shall remain unchanged during the period of performance, as specified herein.
5. **SEALED BIDS:** All bid submittals must be completed and submitted in a sealed parcel. **(DO NOT INCLUDE MORE THAN ONE BID SUBMITTAL PER ENVELOPE. BID SUBMITTAL SHALL INCLUDE ONE (1) ORIGINAL.)** The **Original** bid submittal(s) shall be submitted on the forms provided by the City. All bids are subject to the conditions herein; failure to comply will subject bid to rejection.
6. If it becomes necessary to revise or amend any part of this bid, an addendum will be issued and will be posted on the City's website at www.cityoflakewales.com "Purchasing & Bids". It is the sole responsibility of the bidders to check the website to ensure that all available information has been received prior to submitting a bid.
7. Bidders are advised that in the interests of waste reduction and maximizing the potential for recycling, they are asked to abide by the following in preparing their bids:
 - Return only the required bid submittal pages
 - Avoid comb, velo binding, and plastic binders
 - Avoid plastic dividers and/or plastic tabs
 - Print and/or copy double-sided to the extent feasible
 - Use at least 30% post-consumer recycled content paper to the extent practicable
8. Venders must possess either a City Local Business Tax Receipt (f/k/a Business License) or an Occupational License from any other government entity located within the state of Florida in order to do business with the City of Lake Wales. A copy of such license must be submitted with your bid submittal.

10. For further bid information, contact Bonnie Hodge, Purchasing Director via email: **[hodgeb@cityof lakewales.com](mailto:hodgeb@cityoflakewales.com)** or fax (863) 678-4180. Or Elisa Turner, P.E., via e-mail at elisa.turner@kimley-horn.com.

SECTION 00300

BID FORM

1. The undersigned Bidder does hereby declare that he has carefully examined the Invitation to Bid, the Plans, and drawings and the Contract Documents and Specifications relating to the above entitled matter and the work, and has also examined the site.
2. The undersigned Bidder hereby declares that he has based his proposal on the conditions as they exist on site and has noted all items of work required of the project that is not illustrated on the plans.
3. The undersigned does hereby offer and agree to furnish all materials, to fully and faithfully construct, perform and execute all work in the above titled matter in accordance with the Plans, Drawings and Specifications relating thereto.
4. The undersigned does hereby declare that the prices so stated cover all expenses of every kind incidental to the completion of said work, and the contract therefore, including all claims that may arise through damages or any other causes whatsoever.
5. The undersigned does hereby declare and agree that he will accept the following lump sum prices for the various items of the work for additions to or deductions from the approximate quantities.
6. The undersigned does hereby declare that he shall make no claim on account of minor variation of the approximate estimate in the QUANTITIES or work to be done, nor on account of any misunderstanding or misconception of the nature of the work to be done or the grounds or place where it is to be done.
7. The undersigned does also declare and agree that he will commence the work within ten (10) days after notification by the ENGINEER to do so and will complete the work fully and in every respect on or before the time specified in said contract.
8. The undersigned further agrees that the UNIT PRICES submitted on the Bid Form shall govern all errors in extension or addition and shall void the total base bid submitted on the attached sheet. The corrected extension and addition of all items shall be considered to be the correct base bid for comparison purposes.
9. The undersigned further agrees that the UNIT PRICES submitted on the Bid Form will expire if a contract is not executed within ninety (90) days from the date of bid deadline, and that the Contractor will be fully released from any obligations of this Bid Form.
10. The undersigned agrees that this bid is based on substantially completing the project within ninty (90) calendar days from the date of Notice To Proceed. The Contractor further agrees to pay, as liquidated damages, the sum of two-hundred (\$200) dollars for each consecutive calendar day thereafter.

11. By submission of this bid, each bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, that this bid has been arrived at independently, without consultation, communication or agreement as to any matter relating to this bid with any other bidder or with any competitor.

| Item | Description | Quantity | Unit | Unit Price | Amount |
|-------------|--------------------|-----------------|-------------|-------------------|---------------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

TOTAL PROJECT COST \$ _____

Grand Total amounts are to be shown in both words and figures. In case of discrepancies, the amount in words will govern.

GRAND TOTAL: \$ _____

WORDS: _____

THIS PROPOSAL DATED THIS ____ day of _____, ____

ATTEST:

Witness

Printed Name

By: _____
Authorized Signature
(Principal)

Printed Name, Title

Company Name

Address: _____

Employee I.D. No.

Fla. State Certified General
Contractors License Number

Phone No. _____

END OF SECTION

SECTION 00310
SIGNATURE ACKNOWLEDGEMENT
(SUBMITTAL PAGE)

To The City of Lake Wales, a Political Subdivision of the State of Florida

Date: _____

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same construction, service or material and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I have read and understand the bidding documents. I have completed and submitted all bid submittal forms, and I am authorized to sign this bid for the bidder. In submitting a bid to the City, the bidder offers and agrees that if the bid is accepted, the bidder will convey, sell, assign or transfer to the City all rights, titles and interests in and to all causes of action it may now or hereafter acquire under the Anti-Trust Laws of the United States and the State of Florida for price fixing relating to the particular commodities or services purchased or acquired by the City. At the City's discretion, such assignment shall be made and become effective at the time the City tenders final payment to the bidder.

VENDOR NAME

AUTHORIZED SIGNATURE (MANUAL)

MAILING ADDRESS

NAME (TYPED OR PRINTED)

CITY, STATE AND ZIP CODE

TITLE (TYPED OR PRINTED)

(AREA CODE) TELEPHONE NUMBER

TOLL FREE NUMBER

(AREA CODE) FAX NUMBER

E-MAIL ADDRESS

Any other Government Agency may use this bid. [] YES [] NO [] N/A

A City check will be accepted as method of payment. [] YES [] NO

NOTE: If Bidder checks "yes" above, Bidder agrees that the City will use a City check for the payment of any and all invoices submitted as a result of the performance of this bid.

SECTION 00320
NON-COLLUSIOIN AFFIDAVIT OF PRIME BIDDER
(SUBMITTAL PAGE)

State of _____

County of _____

_____, Being first
Duly sworn, deposes and says that:

1. he/she is _____ of _____, the Bidder that has submitted the attached Bid;
2. he/she is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid;
3. Such Bid is genuine and is not a collusive or sham Bid;
4. Neither the said Bidders nor any of its officers, partners, owners, agents, representatives, employees or parties in interest, including this affiliate has in any way colluded, conspired, connived or agreed, directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with such Contract or has in any manner, directly or indirectly, sought by agreement or collusion of communication or conference with any other Bidder, firm or person to fix the price or prices in the attached bid of any other Bidder, or to fix any overhead, profit or cost element of the Bid Price or the Bid Price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the City or any person interested in the proposed Contract; and
5. The price or prices quoted in the attached Bids are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees or parties in interest, including this affiliate.

Signed: _____

Title: _____

Subscribed and sworn to before me this ____ day of _____, 20____

(Title)

My Commission Expires: _____

SECTION 00400
DRUG-FREE WORKPLACE FORM
(SUBMITTAL PAGE)

The undersigned vendor in accordance with Florida Statute 287.087 hereby certifies

That _____ does:
(Name of Business)

1. Publish a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employee for violations of such prohibition
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation programs, employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection (1).
4. In the statement specified in subsection (1), notify the employee that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the Terms of the statement and will notify the employer of any conviction of, plea of guilty or nolo Contender to, any violation of Chapter 1893 or of any controlled substance law of United States any state, for a violation occurring in the workplace no later than five (5) days after such Conviction.
5. Impose a sanction on or require the satisfactory participation in a drug abuse assistance or Rehabilitation program, if such is available in the employee's community, by any employee Who is so convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign the statement, I certify that this firm complies fully with the above requirements.

Bidder's Signature

Date

SECTION 00500
PERFORMANCE AND PAYMENT BOND

The successful Bidder, simultaneously with the execution of the Agreement, shall furnish a Performance and Payment Bond in an amount equal to 100 percent (100%) of the Contract Price. The Bond shall be secured from a Surety Company listed on the Treasury Department's most current list and acceptable to the City.

Performance and Payment Bonds may be submitted on a standard form used by the Bidder's Surety Company. The City reserves the right to accept or reject the style and content of the Performance Bond Form submitted by the Bidder.

Performance and Payment Bonds shall be submitted with the executed Agreement.

END OF SECTION

SECTION 00600 AGREEMENT

This Agreement made this ____ day of _____, ____ by and between The City of Lake Wales hereinafter called "City", and _____ doing business as a corporation hereinafter call "Contractor", for the construction of a skid mounted reclaimed water Booster Pumping Station as described in the Construction Documents and Specification Manual provided by Kimley-Horn and Associates, Inc. and approved by the City.

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The Contractor will furnish all of the material, supplies, tools, equipment, labor and other services necessary for construction and completion of the work described in the Contract Documents and comply with the terms therein for the sum of \$ _____ as detailed in the Bid Schedule.
2. The Contractor will furnish a Performance and Payment Bond, in an amount equal to 100 percent (100%) of the Contract Price, and submit such Bond to the City within ten (10) calendar days from the date of the Notice of Award.
3. The Contractor will purchase and maintain such comprehensive general liability and other insurance such as required by the General and Supplementary Conditions and furnish Certificates of Insurance to the City within ten (10) calendar days from the date of the Notice of Award.
4. The Contractor will commence the work required by the Contract Documents within ten (10) calendar days after the date of the Notice to Proceed, and will achieve Substantial Completion (**operational**) within 90 calendar days. The date of Final Completion will be 10 days following the date of Substantial Completion. Unless the period for Substantial Completion is extended otherwise by the Contract Documents, the Contractor will be assessed liquidated damages in the amount of \$200 per calendar day past the date of Substantial Completion. In addition, for Final Completion, the Contractor will be assessed liquidated damages in the amount of \$200 per calendar day past the date of Final Completion.
5. The City will pay to the Contractor in the manner and at such times as set forth in the General Conditions such amounts as required by the Contract Documents.
6. Progress payments will be made in an amount equal to 90% (ninety percent) of the value of work completed, and may include 90% (ninety percent) of the value of materials and equipment not incorporated into the work, but delivered and suitably stored, less, in each case, the aggregate of payments previously made. At the sole discretion of the City, monthly progress payments may be increased after 50% (fifty percent) of the work is completed to 95% (ninety-five percent) of the value of work completed and materials and equipment not incorporated but delivered and suitably stored (less the aggregate of previous payments) provided that:
 - (a) Contractor is making satisfactory progress, and
 - (b) There is no specific cause for greater withholding.

However, the City may subsequently resume retaining 10% (ten percent) of the value of work completed and materials delivered if, in sole determination of the City, the Contractor is not performing according to the Contract Documents or not complying with the current progress schedule.

7. The Contractor will provide the City with a list of all Sub-contractors and Suppliers used by the Contractor in performing the work covered by this Contract. The Contractor will be required to submit to the City appropriate partial Release of Lien from the appropriate Suppliers and Sub-contractors with each Application for Payment before payment is made by the City. Final payment will be paid to the Contractor when the Contractor and all Sub-contractors and Suppliers have provided the City with their final Release of Lien.
8. The term "Contract Documents" means and includes the following:
 - A. Invitation For Bids
 - B. Bid
 - C. Bid Bond
 - D. Agreement
 - E. Performance and Payment Bond
 - F. Certificate of Insurance
 - G. General Conditions
 - H. Special Provisions
 - I. Notice Of Award
 - J. Notice To Proceed
 - K. Change Order Form
 - L. Application For Payment Form
 - M. Certificate of Substantial Completion
 - N. Release of Lien Forms
 - O. Technical Specifications prepared or issued by Kimley-Horn and Associates, Inc. dated February 9, 2010.
 - P. Drawings prepared by Kimley-Horn and Associates, Inc., Sheets C100 through C500 dated February 9, 2010. Drawings prepared by J.H. Ham and Associates, Sheets E01 through E07 dated February 5, 2010. Drawing prepared by Rapid Surveying, Inc. dated December 10, 2009.
9. This Agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.
10. The Contractor agrees that all materials, techniques, methods and safety is exclusively the responsibility of the Contractor and not the Engineer or City.
11. Contractor agrees to immediately notify the City if Contractor is adjudged as bankrupt or insolvent, or makes a general assignment for the benefit of its creditors, or if a trustee or receiver is appointed for the Contractor or for any of its property, or if Contractor files a petition or take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws.
12. The Contractor shall indemnify and save harmless The City of Lake Wales, its elected and appointed officials, employees and agents from all suits, actions or claims of any character, name and description brought for, or on account of any injuries, deaths or damages received or sustained by any person, persons or property by or from the Contractor, his agents or employees, or by, or in consequence of, any neglect in safeguarding the work or through the use of unacceptable materials in the construction of the improvement, or by, or on account of, any act or omission, neglect, or misconduct of the Contractor, his agents or employees, or by, or on account of, any claims or amounts recovered for any infringement of patent, trademarks, or copyright or from any claims or

amounts arising or recovered under the Workmen's Compensation Law or any other laws, by-laws, ordinances, order or other decree, and so much of the money due to Contractor under any virtue of his contract as shall be considered necessary to the Engineer, may be retained for use of the City, or in case of money is due, his Surety shall be held until such suit or lawsuits, action or actions, claim or claims, for injuries, deaths or damages, as aforesaid, shall have been settled and suitable evidence to that effect furnished to the City. The Contractor agrees to furnish insurance coverage in the type and amounts stipulated by the Specifications and Contract Documents.

13. The breach of any provision of this contract shall entitle the City to collect damages against Contractor and if necessary, to seek injunctive relief against Contractor, and to collect costs and attorney's fees through all appeals.

IN WITNESS WHEREOF, the parties thereto have executed, or caused to be executed by their duly authorized officials, this Agreement in triplicate each of which shall be deemed an original on the date first above written.

OWNER:

BY: _____
NAME: _____
Please Type/Print

TITLE: _____
DATE: _____

ATTEST:

NAME: _____
Please Type/Print

TITLE: _____

CONTRACTOR: _____
BY: _____
NAME: _____
Please Type/Print

ADDRESS: _____

DATE: _____

ATTEST:

NAME: _____
Please Type/Print

TITLE: _____

END OF SECTION

**SECTION 00700
INSURANCE
(SUBMITTAL PAGE)**

By signing below the Bidder is stating that they fully understand the insurance requirements for the project and if awarded the bid will provide all insurance coverage as required in Bid #10-195.

The requirements are as follows:

- Bidder is insured with a company licensed to do business in the State of Florida
- The insurance company is rated A VIII or better by A.M. Best Rating Company (Workers Compensation, General and Automobile policies)
- The City will be named as an additional insured for general and automobile liability
- The certificate will contain a 30-day written notice of cancellation and a 10-day written notice of non-payment
- The General Liability and Worker's Compensation policies will contain waiver of subrogation in favor of The City

Company Name

Bidder (signature)

SECTION 00710 INSURANCE REQUIREMENTS

The successful vendor shall purchase and maintain in force during the contract period the insurance as specified with an insurer licensed to do business in the State of Florida; rated "A VIII" or better by A.M. Best Rating Company for Class VIII financial size category. The City of Lake Wales, a political subdivision of the State of Florida, must be named as an additional insured with respect to liability arising from the work as described in Bid 10-195, Purchase of Gasoline and Diesel Fuel, for Automobile and General Liability policies of insurance. A 30-day prior written notice of cancellation and a 10-day prior written notice of non-payment are required and must be stated on the insurance form. The certificate holder must be the City of Lake Wales, a political subdivision of the State of Florida, 201 West Central Avenue, Lake Wales, Florida 33853. Workers' Compensation insurance is required to provide statutory benefits, including those may be required by any applicable federal statute. Coverage is to apply for all employees for statutory limits in compliance with the applicable state and federal laws. The policy must include Employer's Liability with a limit of \$3,000,000 each accident, \$1,000,000 each employee, \$1,000,000 policy limit for disease. Any sole proprietor or partner actively engaged in the construction industry, and any corporate officer of a construction or non-construction law must provide either a workers' compensation exemption certificate (construction industry) or a letter stating the exemption status and number of employees (non-construction industry). Commercial General Liability insurance \$3,000,000. If such CGL insurance contains a general aggregate limit, it shall apply separately to this location/project in the amount of \$6,000,000. Products and completed operations aggregate shall be \$6,000,000. Combined single limit of liability for bodily injuries, death, and property damage, and personal injury resulting from any one occurrence, including the following coverages: Pollution Liability Coverage: \$2,000,000. Comprehensive Automobile Liability insurance \$3,000,000; combined single limit of liability for bodily injuries, death and property damage resulting from any one occurrence, including all owned, hired and non-owned, hired and non-owned vehicles. The general liability and Worker's Compensation policies shall contain a waiver of subrogation in favor of the City. An original certificate of insurance must be on file in the Purchasing Division before a purchase order will be issued. Any questions regarding insurance requirements may be directed to Bonnie Hodge, Purchasing Agent, City of Lake Wales Purchasing Division, at (863) 678-4182 Extension 264.

**SECTION 00800
GENERAL CONDITIONS**

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1.0 GENERAL

The purpose of this section is to identify terms, clarify the intent of the plans and specifications, designate liabilities and warranties, specify the schedule of payment, and describe bonding and insurance requirements. These general conditions apply to the work as a whole and to each and all branches of the work. The subcontractor shall be supplied with a copy of these general conditions and no arrangements with the subcontractor are to be such as to conflict with the general conditions. They shall also apply to any extra work or modifications.

2.0 DEFINITIONS

- A. **ADDENDA** – Written or graphic instruments issued prior to the execution of the Agreement that modify or interpret the Contract Documents, Drawings and Specifications, by additions, deletions, clarifications, or corrections.
- B. **BID** – The offer or proposal of the **BIDDER** submitted on the prescribed form setting forth the price for the **WORK** to be performed.
- C. **BIDDER** – Any person, firm, or corporation submitting a **BID** for the **WORK**.
- D. **BONDS** – Bid, Performance-Payment Bond, and other instruments of surety, furnished by the **CONTRACTOR** and the **CONTRACTOR'S** surety in accordance with the **CONTRACT DOCUMENTS**.
- E. **CHANGE ORDER** – A written order to the **CONTRACTOR** authorizing an addition, deletion, or revision in the **WORK** within the general scope of the **CONTRACT DOCUMENTS**, or authorizing an adjustment in the **CONTRACT PRICE** or **CONTRACT TIME**.
- F. **CONTRACT DOCUMENTS** – The contract, including Advertisement for **BIDS**, Information for **BIDDERS**, **BID**, **BID BOND**, Agreement, Performance Payment Bond, **NOTICE OF AWARD**, **NOTICE TO PROCEED**, **CHANGE ORDER**, **DRAWINGS**, **SPECIFICATIONS**, and **ADDENDA**.
- G. **CONTRACT PRICE** – The total monies payable to the **CONTRACTOR** under the terms and conditions of the **CONTRACT DOCUMENTS**.
- H. **CONTRACT TIME** – The number of calendar days stated in the **CONTRACT DOCUMENTS** for the completion of the **WORK**.
- I. **CONTRACTOR** – The person, firm, or corporation with whom the **CITY** has executed the Agreement.
- J. **DRAWINGS** – The parts of the **CONTRACT DOCUMENTS** which show the characteristics and scope of the **WORK** to be performed and which have been prepared or approved by the **ENGINEER**.
- K. **ENGINEER** – The person, firm, or corporation designated by the City as consultant, who shall represent the City in the inspection, monitoring, and administration of the work. The word Engineer shall include officers, agents and employees of the Engineer.

- L. FIELD ORDER – A written order effecting a change in the WORK not involving an adjustment in the CONTRACT PRICE or an extension of the CONTRACT TIME, issued by the ENGINEER to the CONTRACTOR during construction.
- M. NOTICE OF AWARD – The written notice of the acceptance of the BID from the CITY to the successful BIDDER.
- N. NOTICE TO PROCEED – Written communication issued by the CITY to the CONTRACTOR authorizing him/her to proceed with the WORK and establishing the date for commencement of the WORK.
- O. OWNER – A public or quasi-public body or authority, corporation, association, partnership, or an individual for whom the WORK is to be performed.
- P. PROJECT – The undertaking to be performed as provided in the CONTRACT DOCUMENTS.
- Q. SHOP DRAWINGS – All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the CONTRACTOR, a SUBCONTRACTOR, manufacturer, SUPPLIER or distributor, which illustrate how specific portions of the WORK shall be fabricated or installed.
- R. SPECIFICATIONS – A part of the CONTRACT DOCUMENTS consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.
- S. SUBCONTRACTOR – An individual, firm, or corporation having a direct contract with CONTRACTOR or with any other SUBCONTRACTOR for the performance of a part of the WORK at the site.
- T. SUPPLIER – Any person or organization who supplies materials or equipment for the WORK, including that fabricated to a special design, but who does not perform labor at the site.
- U. WORK – All labor necessary to produce the construction required by the CONTRACT DOCUMENTS, and all materials and equipment incorporated or to be incorporated in the PROJECT.
- V. WRITTEN NOTICE – Any notice to any party of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at their last given address or delivered in person to said party or their authorized representative on the WORK.

3.0 SUPERVISION AND INSPECTION

The supervision by the Engineer of the work is for the purpose of assuring the City of Lake Wales that the terms of the contract documents are being properly executed and while the Engineer is instructed to give the Contractor all possible assistance, it is not intended to relieve the Contractor from responsibility for the work and any work which proves faulty must be made right by him.

It is not incumbent upon the Engineer to notify the Contractor to begin, to stop, to resume, or to give early notice or rejection of faulty materials or workmanship, or in any case to superintend to the extent of relieving the Contractor of responsibility or of any consequences of neglect or carelessness of himself or his subordinates.

It is mutually agreed that the Engineer shall decide all questions, difficulties, and disputes of whatever nature, which may arise relative to the interpretation of the plans, construction, prosecution and fulfillment of this contract, and as to type, quantity and value of any work done, the materials furnished under or by means of this contract; and their estimates and decisions upon all claims, questions and disputes shall be final and conclusive upon the parties hereto.

The Engineers and their representatives shall at all times have safe access to the work, wherever it is in preparation or progress, and the Contractor shall provide proper facilities for such access and inspection.

If the specifications, the Engineer's instruction, laws or ordinances of any public authority require any work to be specially tested or approved, the Contractor shall give the Engineer timely notice of its readiness for inspection, and if the inspection is by another authority than the Engineer, of the date fixed for such inspection. Inspections by the Engineer shall be promptly made and where practicable at the source of supply.

All work done and materials furnished shall be subject at all times to inspection by the Engineer and any part condemned by them shall be, as soon as possible, removed and replaced at the Contractor's expense. If the Contractor refuses to replace or delays an unwarranted length of time in replacing such condemned work, the Engineer may stop the Contractor and the work, and all expenses pertaining thereto shall be deducted from the amount due, or to become due to the Contractor from the City.

Inspectors may be appointed to see that instructions of the Engineer are carried out and that the plans and specifications are so complied with. The Engineer shall not be barred from re-inspecting at any time, work passed on by the inspector, and making additional rejections for causes which may have been existent but not formerly apparent.

If any work should be covered up without the approval or consent of the Engineer, it must, if required by the Engineer, be uncovered for examination at the Contractor's expense. Re-examination of questioned work may be ordered by the Engineer, and if so ordered, the work must be uncovered by the Contractor. If such work is found to be in accordance with the Contract Documents, the City shall pay the cost of uncovering and replacement. If said work is found to be not in accordance with the Contract Documents, the Contractor shall pay the cost.

4.0 SUPERINTENDENCE - SUPERVISION

The Contractor shall keep on his work during its progress a competent Superintendent and any necessary assistants all satisfactory to the Engineer. The superintendent shall not be changed except with the consent of the Engineer, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor. Other directions shall be confined on written request in each case. The Contractor shall give efficient supervision of the work, using his best skill and attention. The superintendent shall be

present on the site at all times, as required, to perform adequate supervision and coordination of the work to the Engineer's satisfaction.

If the Contractor, in the course of the work, finds any discrepancy between the drawings and the physical conditions of the locality, or any errors or omissions in drawings or in layout as given by points and instruction, it shall be his duty to immediately inform the Engineer, in writing, and the Engineer shall promptly verify the same. Any work done after such discovery shall be done at the Contractor's risk.

5.0 TESTING

Unless specified otherwise the Contractor will designate an independent testing laboratory to be used for testing of materials and quality of construction on the project, and will pay the costs incurred by that testing laboratory. The Contractor shall pay the cost for any re-tests due to failures. The Contractor shall be responsible for causing to be performed all tests required in the specifications, prior to advancing to the next phase of construction. It shall be the responsibility of the Contractor to notify the Engineer at least 48 hours in advance of any testing which he has scheduled so that the Engineer may witness the test or the taking of test samples. The Engineer may select the location of the entity to be tested or may leave it to the discretion of the technician employed by the laboratory if he so chooses. The Contractor shall cause the City to be furnished with all certified test reports which verify satisfactory completion of the work.

6.0 SURVEY

From the Boundary Survey provided by the City, unless otherwise specified in the contract documents, the Contractor shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pipe locations and other working points, lines, elevations, and cut sheets. The Contractor shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, shall be charged with the resulting expense and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance. The Engineer shall have such monuments restored and/or replaced by approved and qualified personnel, at the Contractor's expense. Sufficient monies will be withheld from payments to the Contractor to pay these costs. If the work requires the relocation or movement of such a monument, the Contractor shall notify the Engineer of such requirements, and the Contractor shall reference and re-set any monuments at no cost to the City.

The Contractor shall employ a competent surveyor satisfactory to the City and the Engineer to lay out the work from the bench marks, grade, dimensions, points and lines noted on the working drawings, established at the site, or supplied by the Engineer. All work of every description shall be laid out and checked by the Contractor who will be held solely responsible for its correctness, and all expenses in connection with this work shall be paid for by the Contractor. The work may be checked by the Engineer and, in the event of discrepancy, his decision shall be final.

No special compensation will be made to the Contractor to defray costs of any of the work or delays occasioned by making surveys and measurements, but such costs shall be considered as having been included in the price stipulated for the several items of the work to be done under this contract.

7.0 DRAWINGS AND SPECIFICATIONS

The intent of the Drawings and Specifications is that the Contractor shall furnish all labor, materials, tools, equipment, and transportation necessary for the proper execution of the Work in Accordance with the contract documents and all incidental work necessary to complete the Project in an acceptable manner, ready for use by the City. In case of conflict between the Drawing and Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scaled dimensions.

Any discrepancies found between the Drawings and Specifications and site conditions or any inconsistencies or ambiguities in the Drawings or Specifications shall be immediately reported to the Engineer, in writing, who shall promptly correct such inconsistencies or ambiguities in writing. Work done by the Contractor after discovery of such discrepancies, inconsistencies or ambiguities shall be done at the Contractor's risk.

The Contractor shall be furnished three (3) copies of the plans and specifications upon notice to begin work. Should the Contractor desire more than three (3) sets of these plans, he may obtain these by paying the cost of reproduction. The Contractor shall keep one (1) copy of all drawings and specifications at the site in good order, available to the Engineer and his representatives.

8.0 SHOP DRAWINGS

The Contractor shall promptly submit six (6) copies of all shop drawings and schedule required for the work of the various trades and the Engineer shall pass upon them with reasonable promptness making any desired corrections that are necessary in order to meet the intent of the plans and specifications. The Contractor shall make any corrections required by the Engineer, file with him six (6) corrected copies and furnish such other copies as may be needed. The Engineer's approval of such drawings or schedules shall not relieve the Contractor of his responsibility for deviation from drawings or specifications unless he has called the Engineer's attention to such deviation at

the time of submission, nor shall it relieve him from responsibility for errors of any sort in the shop drawings or schedules.

When submitted for the Engineer's review, Shop Drawings shall bear the Contractor's certification that he has reviewed, checked and approved the Shop Drawings and that they are in conformance with the requirements of the Contract Documents.

9.0 MATERIALS, SERVICES, AND FACILITIES

It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature, and all other services and facilities of any nature whatsoever necessary to execute, complete, and deliver the Work within the specified time.

Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the Work. Stored materials and equipment to be incorporated in the Work shall be located so as to facilitate prompt inspection.

Manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer.

Materials, supplies, or equipment to be incorporated into the Work shall not be purchased by the Contractor or the Subcontractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which interest is retained by the seller.

10. SUBSTITUTIONS

Whenever a material, article, or piece of equipment is identified on the Drawings or Specifications by reference to brand name or catalog numbers, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products or equal capacities, quality and function shall be considered. The Contractor may recommend the substitution of a material, article or piece of equipment of equal substance and function for those referred to in the Contract Documents by reference to brand name or catalog number, and if, in the opinion of the Engineer, such material, article, or piece of equipment is of equal substance and function to that specified, the Engineer may approve its substitution and use by the Contractor. Any cost differential shall be deductible from the Contract Price and the Contract Documents shall be appropriately modified by Change Order. The Contractor warrants that if substitutes are approved, no major changes in the function or general design of the Project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the Contract Price or Contract Time.

11.0 COMPLIANCE WITH STATUTES

The Contractor and all subcontractors shall secure all licenses and permits and comply with all laws, regulations and building codes as required by the State, City or Town, and County or agencies thereof, in which the project is to be constructed, also with all regulations for the protection of workers and in respect to wages and hours which may be promulgated by the Federal Government, and Laws of Florida, relating to prevailing wage rate for laborers, mechanics and apprentices on certain public works when said law is applicable.

12.0 PROTECTION OF WORK, PROPERTY, AND PERSONS

The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and all materials or equipment to be incorporated therein, whether stored on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadway, structures and utilities not designated for removal, relocation or replacement in the course of construction.

The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. The Contractor will erect and maintain, as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. The Contractor will notify owners of adjacent utilities when prosecution of the Work may affect them. The Contractor will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or part, by the Contractor, any Subcontractor or anyone directly or indirectly employed by any of them or anyone of whose acts any of them be liable, except damage or loss attributable to the fault of the Contract Documents or to the acts or omissions of the City, of the Engineer or anyone employed by either of them or anyone whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Contract.

In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instructions or authorization from the Engineer or City, shall act to prevent threatened damage, injury or loss. The Contractor will give the Engineer promptly, written notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved.

13.0 CHANGES IN THE WORK

The City, without invalidating the contract, may order extra work to be done, or make changes by altering, adding to or deducting from the work, the Contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such changes.

In giving instructions, the Engineer shall have the authority to make minor changes in the work, not involving extra cost, and not consistent with the purpose of the work, but otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the Engineer, and no claim for additions to the contract sum shall be valid unless so ordered.

14.0 CHANGES IN CONTRACT PRICE

The Contract Price may be changed only by a Change Order. The value of any Work covered by a Change Order or of any claim for increase or decrease in the Contract Price shall be determined by one or more of the following methods in the order of precedence listed below:

- A. By unit price named in Contract and subsequently agreed upon.
- B. By a lump sum mutually agreed upon by the Engineer and Contractor; or
- C. If no such unit prices are set forth and if the parties cannot agree upon a lump sum, then by the actual net cost in money to the Contractor of the wages of applied labor (including premiums for Workmen's Compensation Insurance, and Social Security taxes); plus twenty per centum (20%) as compensation or all items of profit, administration, overhead, superintendence, insurance other than Workmen's Compensation Insurance, materials used in temporary structures, allowances made by the Contractor to Subcontractors, additional premiums upon the performance bond of the Contractor and the use of small tools; plus the net cost to the Contractor for the materials required in the extra work; plus the cost of rental for plant equipment (other than small tools) required and approved for the extra work.

The City may at any time, by a written order, without notice to the Sureties, and without invalidating the Contract, require the performance of such extra work or substantial changes in the work as it may find necessary or desirable, and the Contract amount shall be adjusted by Change Order as discussed above.

If the Contractor claims that any instruction or drawings or otherwise involve extra cost under this contract, he shall give the Engineer written notice thereof within a reasonable time after the receipt of such instruction, and in any event before proceeding to execute the work, except in emergency endangering lives or property, and the procedure shall then be as provided for in this section.

15.0 TIME FOR COMPLETION AND LIQUIDATED DAMAGES

The date of beginning and time for completion of the Work are essential conditions of the Contract Documents and the Work embraced shall be commenced on a date specified in the Notice to Proceed.

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

If the Contractor shall fail to complete the Work within the Contract Time, or extension of time granted by the City, then the Contractor will pay to the City the amount for liquidated damages as specified in the Bid for each calendar day that the Contractor shall be in default after the time stipulated in the Contract Documents.

The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the Work is due to the following and the Contractor has promptly given Written Notice of such delay to the City or Engineer.

- A. To any preference, priority, or allocation under duly issued by the City.
- B. To unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, acts of God, or of the public enemy, acts of the City, acts of another Contractor in the performance of a contract with the City, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather.

16.0 CORRECTION OF WORK

The Contractor shall promptly remove from the premises all Work rejected by the Engineer for failure to comply with the Contract Documents, whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the Work in accordance with the Contract Documents and without expense to the City and shall bear the expense of making good all Work of other Contractors destroyed or damaged by such removal or replacement.

All removal and replacement work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected work within ten (10) days after receipt of Written Notice, the City may remove such work and store the materials at the expense of the Contractor.

17.0 SUB-SURFACE DATA

All sub-surface data shown on the plans, such as; ground water elevation, soil conditions, underground structure locations, sewer lines, water lines, telephone cables, conduit, electric cables, and etc., are shown on plans for the Contractor's general information only, and such information shown is not warranted or guaranteed by the Engineer.

The Contractor will be required, at his own expense, to do everything necessary to locate, (including excavation of test pits where directed by the Engineer) protect, support, and sustain water, gas and service pipe, storm and sanitary sewers, existing structures, electric light and power lines, telephone poles, conduits, roads and other fixtures on the site of the work. In case any of the said water, gas, and service pipes, storm and sanitary sewers, existing structures, electric light and power lines, telephone poles, conduits, road and other fixtures be damaged, they shall be repaired, but the cost thereof shall be considered as having been included in the prices stipulated for the various items of work to be done under contract.

The Contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the City by Written Notice of:

- A. Sub-surface or latent physical conditions at the site differing materially from those indicated in the Contract Documents; or
- B. Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in the Contract Documents.

The City shall promptly investigate the conditions, and if it is found that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for,

performance of the Work, an equitable adjustment shall be made and the Contract Documents shall be modified by a Change Order. Any claim of the Contractor for adjustment hereunder shall not be allowed, unless the required Written Notice has been given; provided that the City may, if the City determines the facts so justify, consider and adjust any claims asserted before the date of final payment.

18.0 SUSPENSION OF WORK, TERMINATION AND DELAY

The City may suspend the Work or any portion thereof for a period of not more than ninety (90) days or such further time as agreed upon by the Contractor, by Written Notice to the Contractor and the Engineer which shall fix the date on which work shall be resumed. The Contractor will resume that work on the date so fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension.

If the Contractor is adjudged as bankrupt or insolvent, or makes a general assignment for the benefit of its creditors, or if a trustee or receiver is appointed for the Contractor or for any of its property, or if the Contractor files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment or disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction of the Work or disregards the authority of the Engineer, or otherwise violates any provision of the Contract Documents, then the City may, without prejudice to any other right or remedy and after giving the Contractor and its surety a minimum of ten (10) days from delivery of a Written notice, terminate the services of the Contractor and take possession of the Project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor, and finish the Work by whatever method the City may deem expedient. In such case the Contractor shall not be entitled to receive any further payment until the Work is finished. If the unpaid balance of the Contract Price exceeds the direct and indirect costs of completing the Project, including compensation for additional professional services, such excess SHALL BE PAID TO THE CONTRACTOR. If such cost exceeds such unpaid balance, the Contractor will pay the difference to the City. Such costs incurred by the City will be determined by the Engineer and incorporated in a Change Order.

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

After ten (10) days from delivery of a Written Notice to the Contractor and the Engineer, the City may, without cause and without prejudice to any other right or remedy, elect to abandon the Project and terminate the Contract. In such case the Contractor shall be paid for all Work executed and any expense sustained plus reasonable profit.

If, through no act or fault of the Contractor, the Work is suspended for a period of more than ninety (90) days by the City or under an order of court or other public authority, or the Engineer fails to act on any request for payment within thirty (30) days after it is submitted, or if the City fails to pay the Contractor substantially the sum approved by the Engineer, or awarded by arbitrators within thirty (30) days of its approval and presentation, then the Contractor may, after ten (10) days from delivery of a Written Notice to the City and the Engineer, terminate the Contract and recover from the City payment for all Work executed and all expenses sustained. In addition and in lieu of terminating the Contract, if the Engineer has failed to act on a request for payment or if the City has failed to make any payment as aforesaid, the Contractor may upon ten (10) days Written Notice to the City and the Engineer, stop the Work until paid all amounts then due, in which event and upon resumption of the Work, Change Order shall be issued for adjusting the Contract Price or extending the Contract Time or both to compensate for the costs and delays attributable to the stoppage of the Work.

If the performance of all or any portion of the Work is suspended, delayed, or interrupted as a result of a failure of the City or Engineer to act within the time specified in the Contract Documents, or if no time is specified, within a reasonable time, an adjustment in the Contract Price or an extension of the Contract Time, or both, shall be made by Change Order to compensate the Contractor for the costs and delays necessarily caused by the failure of the City or Engineer.

19.0 PAYMENTS TO THE CONTRACTOR

If a pay request is submitted by the Contractor no later than the 1st day of each calendar month, then no later than the 30th day of each calendar month, the City will make partial payments to the Contractor on the basis of a certified estimate of the work performed during the preceding calendar month by the Contractor. Upon such estimate being made and certified by the Engineer and approved by the City, the City will pay to the Contractor ninety (90) percent of the amount established in such an estimate as the value of the work completed. Such payment shall be considered, however, only as an advance payment and not as part of the final payment to the Contractor.

All payment requests for materials and Work requiring testing shall be accompanied by certified test reports which must be approved by the Engineer as being in compliance with the Specifications before payment will be authorized.

Materials in reasonable quantities which are delivered for incorporation in the work but not yet so used may be included on monthly estimates for payment. The Contractor shall submit with the monthly estimate to reflect the unincorporated material an original and one (1) copy of itemized receipted invoices certifying to the delivery of the quantity set forth on the estimate to the site of the work, upon the property of the City.

The Contractor shall mark or identify such material and shall be solely responsible for its safekeeping and usability at the time it is to be incorporated in the structure or project and shall, at his own expense, care for and protect the same and take out insurance against theft, loss from any other cause, damage, destruction and/or such other risks as may be involved, which would render the aforesaid materials unfit or unavailable for incorporation into the Project.

Payment for materials stored at the site shall be based on actual cost for same as shown by the receipted invoices and shall not exceed the cost of materials as indicated on the approved "breakdown sheet" for the particular items involved. It is understood and agreed that should the City at any time during the progress of the work consider the amount withheld on monthly estimates for payment to be in excess of the amount necessary to complete the work or necessary for the full and ample protection of the City, then the City, with the written consent of the Contractor's Surety, may reduce the percentage retained to an amount sufficient for the City's proper protection.

No estimate given, nor payments made, shall be conclusive of the performance of the contract either wholly or in part, and no estimates, payments or certificates of final payment shall be construed to be an acceptance of inferior or defective work or materials.

The City may withhold or, on account of subsequently discovered evidence, multiply the whole or a part of any certificate to such extent as may be necessary to protect himself from loss on account of:

- A. Defective work not remedied.
- B. Claims filed or reasonable evidence indicting probable filing of claims.
- C. Failure of the Contractor to make payments promptly to subcontractors or for material, labor, or equipment.
- D. A reasonable doubt that the contract can be completed for the balance then unpaid.

- E. Damage to another Contractor.
- F. Failure of Contractor to clean-up or restore the project site or right-of-ways.
- G. Insolvency of Contractor.
- H. Manifest intent of Contractor not to proceed diligently or to complete this Contract.

When the above grounds are removed, payment shall be made for amounts withheld because of them.

20.0 LIENS AND FINAL PAYMENT

Neither the final payment nor any part of the retained percentage shall become due until the Contractor, if required, shall deliver to the City a complete release of all liens arising out of this Contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as he has knowledge or information the releases and receipts include all the labor and material for which alien could be filed, but the Contractor may if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Engineer, to indemnify the City against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the City all monies that the latter may be compelled to pay in discharging such a lien, including all costs including administrative costs and a reasonable attorney's fee.

The final payment shall not become due and payable until the Contractor shall have furnished the City with satisfactory evidence that all labor, materials, outstanding claims and indebtedness of whatsoever nature arising out of the performance of the Contractor have been paid, and until the Contractor shall have furnished a written statement to such effect executed by the Contractor and Sureties, which will further provide that payment to the Contractor of the final estimate, shall not relieve any Surety of its obligation to the City as set forth in the Surety Bonds. Where one or more claims against the Contractor, which are in controversy, appear unsatisfied, the City shall have the discretion to direct final payment to be made, or a partial payment to be made, from the retained percentage, should it be determined that the withholding of the entire final payment would work a hardship on the Contractor or delay the final payments of other Contractors or Subcontractors on the Project. In such cases, the Contractor and Sureties shall provide the evidences and statements required under this paragraph, but shall itemize the claims which remain unsatisfied, giving the reason therefore, and the statements of the Surety Companies shall provide that the final payment or partial payment, as the case may be, shall not relieve any Surety of any obligations to the, as set forth in the Surety Bonds. If only partial payment is permitted under this paragraph from the retained percentage, the final payment shall not be made until the Contractor shall have furnished satisfactory evidence and a statement from the Surety that all claims against the Contractor have been paid and that payment to the Contractor shall have furnished satisfactory evidence and a statement from the Surety that all claims against the contractor have been paid and that payment to the Contractor of the Contract balance shall not relieve the Surety of any of its obligations to the City as provided in the Surety's Bond.

21.0 ACCEPTANCE OF THE WORK, GUARANTEE, AND RELEASE

Following the completion of this contract, as such completion is defined in the specifications and as soon thereafter as practicable, the City, his representative or the Engineer will inspect the work and the Engineer will make a final estimate of the amount and value of work done by the Contractor. If the said work appears to be satisfactory and appears to be done in accordance with the provisions and terms of the Contract Documents, the City, upon notice of completion from the Engineer, and within thirty-six (36) days after the final estimate of work is made and certified by the Engineer as correct and unpaid and is approved, will pay to the Contractor the full value of the work done under this Contract, less any amounts previously paid and less any advances whatsoever, and the City will certify the work as completed and will accept it. Said acceptance will, however, be in all events conditional upon the subsequent remedying by the Contractor of defects in workmanship or materials which may become apparent within a period of one (1) year

following the date of acceptance as herein required. In the event the City refuses or declines to certify the work as completed and accepted and make final payment therefore within thirty-six (36) days after notice and certification from the Engineer as provided for herein, the City shall immediately set forth in writing to the Contractor and the Engineer the reasons for such non-acceptance of the Work. After all valid reasons for non-acceptance have been removed, the City shall execute the final certificate of completion and acceptance and shall make final payment hereunder.

All prior estimates and payments, including those relating the extra work, shall be subject to correction or adjustment by the final cost estimate. Such final payment, however, shall not serve as a release of the Contractor or of his Sureties from the previously required guarantee against defects in contract performance for a period of one (1) year following the date of acceptance of the Work by the City.

The acceptance by the Contractor of the final payment, made as aforesaid, shall operate as and shall be released to the City and to the Engineer and every member and agent of both said parties from all claims and liabilities to the Contractor for anything done or furnished for, or relating to the Work, or for any act of neglect of the City or the Engineer or of any person relating to or effecting the work, but this final payment shall not relieve the Contractor from his indemnity, guarantee and/or warranty obligations under the terms of the contract.

As soon as is practical after twelve (12) months have elapsed from the date of completion as herein defined, and as certified by the Engineer, the City shall make a review and re-inspection of the Work and performance of this Contract, or cause the same to be made. If the said performance and work shall be found satisfactory and the work not to have deteriorated through defects in workmanship or materials, the City shall certify the release of the surety on the bond for performance of contract. If however, the review and re-inspection, or any prior inspection, discloses defects due to the non-fulfillment of this contract, or non-compliance with its requirements, the City shall so notify the Contractor in writing, and thereupon the Contractor shall, at his own expense, repair or replace and shall make good all defects in workmanship, materials, and guarantee, and shall rectify any non-compliance and such repairs and fulfillment shall be a prerequisite to the release of the Surety on the bond. If, however, the Contractor shall, after due notice, refuse or neglect to make good the defects to the satisfaction of the City, then the City may, and is hereby empowered to, proceed in the manner prescribed in the event of abandonment or forfeiture of the work by the Contractor, in which case completion by the City and the payment of claims for material and labor and other expense as provided in such procedures, shall be a prerequisite to the release of the surety on the Bond for Performance of Contract. Within thirteen (13) months after the date of acceptance of the work, or as soon thereafter as practical, as herein before provided, following a re-inspection, and provided further that any repairs necessitated by defects in material or workmanship as determined by the City in the re-inspection shall have been made, the City will in writing finally release the Contractor, his sureties and all parties hereunder.

22.0 INSURANCE

The Contractor shall purchase and maintain such insurance as will protect it from claims set forth below which may arise out of, or result from, the Contractor's execution of the Work, whether such execution be by the Contractor, any Subcontractor, or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

- A. Claims under workmen's compensation, disability benefits and other similar benefit acts;
- B. Claims for damages because of bodily injury, occupational sickness or disease, or death of employees;
- C. Claims for damages because of bodily injury, sickness or disease or death of any person other than employees;

- D. Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person;
- E. Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

Certificates of Insurance acceptable to the City shall be filed with the City prior to commencement of the Work. These Certificates shall contain a provision that coverages afforded under the policies will not be cancelled unless at least fifteen (15) days prior Written Notice has been given to the City.

The Contractor shall procure and maintain, at the Contractor's own expense, during the Contract Time, Liability Insurance as hereinafter specified.

Contractor's General Public Liability and Property Damage Insurance, including vehicle coverage, issued to the Contractor and protecting the Contractor from all claims for personal injury, including death, and all claims for destruction of or damage to property, arising out of or in connection with any operations under the Contract Documents, whether such operations be by the Contractor or by a Subcontractor employed by the Contractor. Insurance shall be written with a limit of liability of not less than \$500,000 for all damages arising out of bodily injury, including death, at any time resulting therefrom, sustained by any one person in any one accident; and a limit of liability of not less than \$500,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than \$200,000 for all property damage sustained by any one person in any one accident; and a limit of liability of not less than \$200,000 aggregate for any such damage sustained by two or more persons in any accident.

The Contractor shall procure and maintain, at the Contractor's own expense, during the Contract Time, in accordance with the provisions of the laws of the state in which the Work is performed, Workmen's Compensation Insurance, including occupational disease problems, for all of the Contractor's employees at the site of the Project and in case any Work is sublet, the Contractor shall require such Subcontractor similarly to provide Workmen's Compensation Insurance, including occupational disease provisions, for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. In case any class of employees engaged in hazardous work under this Contract at the site of the Project is not protected under Workmen's Compensation statute, the Contractor shall provide, and shall cause each Subcontractor to provide, adequate and suitable insurance for the protection of it employees not otherwise protected.

The Contractor shall secure, if applicable, "All Risk", type Builder's Risk Insurance for Work to be performed. Unless specifically authorized by the City, the amount of such insurance shall not be less than the Contract Price totaled in the Bid. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the Contract Time, and until the work is accepted by the City. The policy shall name as the insured the Contractor, and the City.

23.0 CONTRACT SECURITY

The bidder to who the contract is awarded must, within ten (10) calendar days following notice of award, present himself for signing of the contract and the plans, and to substitute for the bid security, a surety performance-payment bond in the amount of one hundred percentum (100%) of the contract price, conditioned that the Contractor will faithfully perform all work of this contract and promptly pay for all materials furnished and labor supplied or performed in the prosecution of all work. All bonds and insurance shall be issued by companies authorized to transact business in the State of Florida

SECTION 00850 SPECIAL PROVISIONS

PART 1 – GENERAL

The Special Provisions of these specifications are intended as modifications or supplements to Information for Bidders; General Conditions; or Technical Specifications, in the intent that any provisions of this section shall govern. If at any time the plans or specifications for this project are unclear, the Contractor shall contact the Engineer immediately. For those situations where details are not included in the plans or miscellaneous work arises during the project which is not covered by the plans or specification for this project, the Construction shall be performed in accordance with *FDOT Standard Specifications for Road and Bridge Construction* and *FDOT Roadway and Traffic Design Standards (latest edition)*.

1.01 CONSTRUCTION STAKEOUT

Base lines and benchmarks shall be established by the project surveyor for the Contractor's use. The Contractor will be responsible for performing construction stakeout.

1.02 INSPECTION AND TESTING:

- A. **GENERAL** –The Project Engineer or representative inspector under the Engineer's direct supervision shall provide periodic construction observation.

During construction and at the time periodic inspections are required, the City shall be notified by telephone at least forty-eight (48) hours in advance of all required system tests.

The Engineer, City or authorized representative shall be present to observe and witness each test, unless agreed otherwise ahead of time.

In case of dispute between the Contractor and the Project Engineer regarding the quality of the construction or interpretation of these standards, the matter shall be referred to the City for resolution and the decision of the City shall govern both parties.

- B. **INSPECTIONS** – Construction inspections will periodically be conducted by the Project Engineer or an authorized representative. The Contractor shall complete each specified item of work listed below which pertains to the project and notify the project engineer or his representative at least forty-eight (48) hours in advance of a request for inspection. The Contractors project superintendent shall be present at all inspections and upon request by the inspector, furnish construction equipment to aid in the inspection.

The following are mandatory inspections which shall be conducted when the item of work applies to the subject project.

1. **Substantial Completion Inspection** – When all construction is completed. The Contractor, Inspector and Engineer shall prepare a punch list indicating any unfinished items at this time.
2. **Final Inspection** – Final inspection will be conducted following the correction of the punch list items.

All inspections shall be conducted and approved by the Project Engineer or his representative prior to approval of the payment request for the item of work.

1.03 LEGAL REQUIREMENTS:

The Contractor's attention is directed to the safety regulations promulgated by the State of Florida, Department of Commerce and to the provisions of Chapter 403, Florida Statutes, regarding control of air and water pollution as well as the Rules and Regulations of the Department of Environmental Regulation.

The Contractor shall be responsible for obtaining all permits and obeying all Federal, State, County and City laws, by-laws, ordinances, resolutions, and regulations which pertain to his work.

The Contractor shall take care to strictly observe all applicable OSHA, State, Local or other Federal Standards with respect to the safety of persons during construction.

1.05 ROADWAY WORK:

All roadway work including asphalt milling, subbase, base and surface preparation, stormwater, curbing, roadway marking, and maintenance of traffic shall be performed in accordance with the FDOT Standards for Road and Bridge Construction (latest edition) and FDOT Design Standards Booklet (2008).

1.06 TRAFFIC MAINTENANCE:

The Contractor shall be responsible for Maintenance of Traffic. Traffic Maintenance shall be in conformance with the Manual of Traffic Control and Safe Practices of the Florida Department of Transportation. The Public shall, at all times, be protected by barricades, flashers and other safety devices.

1.07 PRIVATE PROPERTY PROTECTION:

The Contractor shall not trespass onto private property outside of the right-of-way and easements shown on the plans without the written permission of the individual property owner. The Contractor shall be solely responsible for any claims that may arise out of damage to private property resulting from trespass onto private property. The Contractor shall promptly settle all such claims without delay. The written permission of the private property's owner shall be available for inspection by the Engineer or the City upon request.

For customer service connection and septic tank abandonment, the City will obtain Rights of Entry from the property owners. The Contractor will be responsible for contacting the City or the Engineer to verify a Right of Entry has been granted prior to entering onto private property.

1.08 AS-BUILTS

The Contractor shall be responsible to provide as-built information to the Engineer at the time of project completion. As Built information shall include pipe material and size, location and depth, slab location and size, fence location, and any other site improvements made by the contractor.

Final as-built information shall be submitted in AutoCAD format and on 24" x 36" bond paper (three sets). All final as-built information shall be signed and sealed by a professional surveyor, registered in the State of Florida. As-built information must be submitted prior to final pay request approval.

SECTION 00900
SKID MOUNTED BOOSTER PUMP STATION SPECIFICATIONS

PART 1 - GENERAL

1. **DESCRIPTION:** This section gives a general description of a prefabricated, skid-mounted, turn-key, pressure controlled package pumping system built by a single manufacturer. All equipment shall be mounted on a single base.

2. **SUBMITTALS:** At a minimum, submittals shall include the following:
 - a) Shop drawings showing details of construction and dimensions;
 - b) Descriptive literature, bulletins, catalogues, etc. of the equipment;
 - c) Detailed description of the system operation, including pressure and flow ranges, pump sequencing, and controller functionality;
 - d) Submit manufacturer's reports on hydrostatic tests and performance tests;
 - e) Submit guaranteed performance curves and data sheets on the pumps showing head, capacity, efficiency, NPSHR, and maximum horsepower;
 - f) Submit structural drawings showing the design of the fabricated skid unit. Show support systems for pumps, appurtenances, and panels. Show welding, bolting, or other assembly arrangements;
 - g) Electrical information, including control schematic and panel layout; UL approved;
 - h) Complete bill of materials for the system, including total weight,
 - i) Submit data as a single complete package for pumps and motors, discharge piping, structural support framing, valves, motor control center components, instrumentation components, and power and instrumentation wiring; and
 - j) Submit complete assembly, foundation, and installation drawings, together with detailed specifications and data covering materials used, parts, devices, and other accessories forming a part of the equipment furnished.

3. **OPERATION AND MAINTENANCE MANUALS:** Six (6) complete sets of operation and maintenance manuals shall be provided. At a minimum, the manuals shall include;
 - a) Shop drawings showing important details of construction and dimensions. Materials of construction shall show ASTM reference and grade.
 - b) Descriptive literature, bulletins, and/or catalogs of the equipment.
 - c) A detailed description of the system operation, including pressure and flow ranges, pump staging, and controller functionality.
 - d) Guaranteed performance curves and data sheets on the pumps showing head, capacity, efficiency, NPSHR, and design and maximum horsepower.
 - e) Total weight of the equipment.
 - f) Complete Bill of Materials for the system.
 - g) Electrical information, including control schematic and panel layout.
 - h) Manufacturer's Operation and Maintenance Manuals with parts cross-sections.
 - i) Recommended spare parts.
 - j) Contact phone numbers for trouble shooting and service.

4. **MANUFACTURER SERVICES:**
 - a) The packaged pumping system manufacturer shall provide factory direct service personnel for the set, start-up, preventative maintenance, and general service of the system. A factory direct service technician must be located within 100 miles of the project site. The packaged pumping system manufacturer must have service technicians on-call twenty hours per day, seven days a week.
 - b) Two labor days for the package pumping station service to check the installation and advise during start-up, testing, and adjustment of the equipment.
 - c) One labor day to instruct City's personnel in the overall operation and maintenance of the pumping station system.

5. **WARRANTY:** The packaged pumping system shall be covered against defects in material and workmanship for a period of twelve (12) months from startup or eighteen (18) months from shipment, whichever comes first.

PART 2 – MATERIALS

1. **SYSTEM BASE:** A structurally sound fabricated steel base with provisions for secure and proper mounting and support of all equipment. Main support members shall be of a standard structural shape like channel, wide flange or I-beam. Provisions, such as properly sized eye lifts, shall be made in the system base for off-loading and handling at the installation site. The structural base shall be covered with tread plate; minimum thickness shall be 3/16", to provide a safe surface for maintenance personnel. Skip welding of the top surface of the tread plate to the frame is not acceptable. The base shall be fabricated of ASTM A-36 steel.

2. **MAIN PUMPS:**
 - a) The pumps shall be vertical, in-line, single-stage, as manufactured by Aurora or equal.
 - b) The casing material shall be ASTM A48 Class 30 cast iron. The casing shall be designed to permit back pullout to remove the pump internals without

disturbing the system piping. Flanged connections shall conform to ANSI B16.1 specifications with a minimum 125 lbs rating. All flanges shall be flat-faced.

- c) The impeller material shall be ASTM B62 bronze. The impeller shall be of the enclosed design, statically and hydraulically balanced. The impeller shall be firmly secured to the shaft by a key. Balance holes shall be provided through the impeller hub to minimize axial and thrust loads and to keep seal chamber pressures to a minimum.
- d) An ASTM B62 bronze, renewable shaft sleeve that extends through the stuffing box shall be provided. The sleeves shall be securely keyed and held in place with the shaft nut. The shaft sleeve shall employ an o-ring seal between the sleeve and the shaft.
- e) The pump casing/shaft assembly shall be sealed by means of a mechanical seal. The mechanical seal shall be the bellows, non-pusher type secured to the sleeve. Seal faces shall be carbon vs. ceramic. Seal water for the stuffing box shall be piped from the pump volute. Taps for seal water drain shall be provided.
- f) Pumps shall be painted pantone purple 522C.

3. CONTROL PANEL:

For all pumps 20HP, the motor starters shall be NEMA rated three (3) pole devices with three-(3) pole overload relay protection. They shall provide the electrical start/stop control and running overload protection for each pump and have 120 volt operating coils. The thermal overload unit heater coils shall be ampacity rated per the specific nameplate ampere rating of the pump motor and checked upon final inspection prior to system start up. Starters shall be Square D, Westinghouse, or Allen Bradley.

4. MOTORS:

- a) Electric motors shall be vertical, squirrel cage design in all cast iron construction. The motor shall be TEFC, premium efficiency and be constructed for use in corrosive environments. The motor shall include a 1.15 service factor and be rated for a Class B temperature rise with Class F insulation. Motors shall be manufactured by US Motors, Baldor or approved equal.
- b) Motors shall be painted pantone purple 522C.

5. BOLTS All bolts, nuts, and miscellaneous hardware shall be stainless steel for corrosion resistance. Bolts shall be grade 5, minimum.

6. PIPING

- a) All piping shall be designed based on the maximum working pressure of the system. Piping shall be the standard schedule S steel sized per drawings. Steel pipe flanges shall conform to ANSI/AWWA C207-07 Class D; or ANSI/AWWA C207-07 Class E and/or ANSI/ASME B16.5 based on system pressure. The pipe shall be given a hydrostatic test to the greater of 150 psi or 125% of the maximum pump shut-off. If the pumps are not fitted with suction and discharge gage taps, the provision for such shall be made in the piping system. Steel piping shall be internally coated with a NSF 61 approved epoxy paint as manufactured by Devco Series Bar-Rust 233H; color shall be white.
- b) Piping shall be painted pantone purple 522C.

7. CHECK VALVES:

- a) Check valves shall be of the silent operating design that incorporates a center guided spring loaded poppet, guided at opposite ends and having a short linear stroke that generates a flow area equal to the pipe. The body shall be a full flange design in cast iron construction with bronze seat and disc and a stainless steel spring. The valve leakage rate shall not exceed one-half the allowable rate by the American Water Works Association. The valves shall be wafer or lug-style as appropriate. Lug style valves up to 10" shall be able to be bolted directly to a butterfly valve. Check valves shall be APCO series 100 or approved equal.
- b) Check Valves shall be painted pantone purple 522C.

8. ISOLATION VALVES:

- a) Gate valves two (2) inches and over shall be of the resilient wedge type epoxy coating on the interior and exterior and shall be in accordance with AWWA C509 with O-ring type stem seal and two inch square operating nut for buried services. Valves shall be mechanical joints unless otherwise noted and open left (counter clockwise). Gate valves for above-ground service shall be outside screw and yoke (OS&Y), rising stem type with cast iron hand wheels.
- b) All valves shall be American made, minimum 150-PSI cold water rated, and shall be cast with manufacturer's name and pressure rating.
- c) Underground valve identification (UVI) markers shall be provided at each valve location as shown in the details. Gate valves operation nut shall always be a depth of no more than 4-feet. In areas where depth of the operating nut is greater than 4 feet, allowances should be made to install extensions, to maintain the required 4 foot depth for easy accessibility.

9. **PRESSURE GAGES:** Gages shall have a liquid-filled 316 SS stainless steel case with a 316 SS welded bourdon tube and socket. The gage shall have a 1% full-scale ASME Grade 1A accuracy over the entire range and have a 4" face diameter. The gage shall be provided with a stainless steel isolation valve. Gauges shall have ½" nipple and a solid brass ball valve shall be provided for the attachment of the pressure gauge on the discharge side of the booster station. Gages shall be manufactured by Ashcroft, Daughtridge, Ametek or equal.

10. **FLEXIBLE CONNECTORS:** Flexible connectors shall be of the flanged, single arch type, designed for pressure and vacuum service. The tube shall be a single, chlorobutyl piece extending from flange to flange. The internal reinforcement shall be of the nylon, tire cord type. The flanges shall be drilled to standard ANSI 125/150 lbf dimensions. The connector shall be rated for a minimum temperature of 250 °F. Pressure rating shall be from full vacuum to 225 psig. Stainless steel control rods shall be used. Flexible connectors shall be manufactured by Unaflex or equal.

11. **ELECTRICAL CONTROLS:**

- a) All control panels must be UL 508A listed as a complete assembly by the system supplier. All wiring and construction shall be in accordance with the latest N.E.C. codes.
- b) There shall be permanently affixed to the interior side of the exterior enclosure door a data plate, a laminated wiring diagram, and a bill of materials. The nameplate information shall include: horsepower, voltage, phase, full-load amps and short circuit current rating. The wiring diagram shall include: the control panel manufacturer's name, address and telephone number along with the date of manufacture. The wiring diagram must be updated to reflect the actual construction and shall be labeled "as-built".
- c) Terminal points of all wires and terminal strips shall be permanently identified. All terminal numbers and identifying nomenclature shall correspond to and be shown on electrical diagrams. All circuit breakers, control switches, indicator pilot lights and other control devices shall be identified with permanently affixed legend plates and lamicoïd type engraved nameplates where applicable.

12. **ENCLOSURE:** The control and power equipment shall be mounted in a NEMA 4X, 304 SS floor-standing enclosure with leg kit and three-point latch. The enclosure shall be protected by a sunshield. The enclosure shall include a removable back plate. All

indication lights, reset buttons, H-O-A switches, etc., shall be rated NEMA 4 or 4X and shall be mounted on the panel door or on a panel deadfront.

13. LIGHTNING AND SURGE PROTECTION: An internally-mounted surge protection device (SPD) shall be provided on the incoming power source to protect all electrical devices. Protection shall be rated for a minimum current of 50,000 amps per phase. The device shall be installed per the manufacturer's recommendations keeping the lead lengths as short as possible from the main circuit breaker. The unit shall be designed in accordance with ANSI/IEEE 62.41 and shall be UL 1449 3rd Edition listed. Surge Protection Device shall be manufactured by APT, Ditek, Meter Treater or equal. In addition, all low voltage analog signal cable connected to external equipment shall be protected with a UL 479B listed, plug in style SPD device (EDCO Model PC642 or approved equal.)

14. GROUNDING AND BONDING

- a) Ground rods shall be copper-clad steel, ¾ inch diameter, minimum 30 feet long, with hardened steel points.
- b) Provide a handhole and ground rod as detailed in the electrical drawings to aid in performing ground testing and connection additional ground rods if required by the test results. Connect ground wire from ground rod to the main service switchboard ground bus as detailed in the electrical drawings.
- c) Grounding System Resistance: Separately Derived Sources (as Defined by NEC 250) Grounding Electrode: 5 ohms.
- d) If length does not achieve the ohms required provide additional ground rods until achieved.

15. FULL VOLTAGE MOTOR STARTERS Unless stated otherwise, all motors shall be powered by full voltage, NEMA rated, motor starters. IEC rated starters and contractors are not acceptable. A manual, through-the-door reset mechanism shall be provided for each starter. Each starter shall be fitted with an auxiliary contact and an auxiliary overload contact that shall be wired to the PLC. Motor starters shall be manufactured by Square D, Allen-Bradley or equal.

16. **CIRCUIT BREAKERS** Thermal-magnetic, molded-case circuit breakers shall be used to supply short circuit protection for each motor and shall be rated for a minimum 18,000 amp interrupting current. Fuses shall not be acceptable for motor power circuit protection. Circuit breakers shall be sized according to U.L. guidelines and be provided for the main disconnect, for each individual pump or motor circuit, and for the control power circuit. Circuit breakers shall be manufactured by Square D, Allen-Bradley or equal.
17. **LOCKOUT TAGOUT SAFETY** Circuit breakers with a lockout tagout safety switch handle or disconnects shall be provided to insure open circuits for safety during maintenance activities.
18. **CONTROL POWER** The control power shall be single phase, 120V and/or 24V, and shall be protected by circuit breakers and/or fuses of a rating to conform to U.L. 508A standards. Control power shall not be used for any load other than controls. If a control transformer is required, it shall be manufactured by Square D or equal.
19. **GFI RECEPTACLE** A 15 amp, duplex, GFI receptacle shall be provided, powered through a dedicated circuit breaker. The GFI receptacle shall be mounted on the inner door to provide a maximum of 3 amperes at 120 volt. The receptacle shall be a 15 ampere rated 3-wire ground fault interrupter duplex type. A circuit breaker shall be provided for the receptacle.
20. **PHASE MONITOR** A plug-in type phase monitor shall be provided to sense phase loss and phase sequence. Automatic reset of the phase protection circuit shall occur after the fault condition has been corrected. Individual phase monitors on each motor are not required; single point monitoring of incoming phase is acceptable. Phase monitor shall be manufactured by Diversified or approved equal.
21. **SOLENOID :** A bypass line piped from the discharge to the suction header that includes a pilot-operated general service solenoid valve rated for water service with a brass body shall be supplied. The coil shall be rated 120 VAC or 24 VAC and shall include class F insulation as a minimum. The coil shall be sized such that the minimum required differential pressure for operation is zero psig. The maximum operating pressure differential rating shall exceed the maximum pressure produced by the system. The valve shall be Asco Series 8210 or equal.

- 22. FLOW METER:** The flow meter shall be of the flanged electromagnetic type. The flow meter metering tube shall be 304 stainless steel with a NSF-61 approved polyurethane lining. The flow meter shall be provided with 316 stainless steel electrodes and flanged grounding rings. The flow meter shall have a microprocessor-based signal converter and have an accuracy of plus or minus 0.2% up to a maximum velocity of 49 ft/sec. The flowmeter and signal conditioner shall be capable of producing a 4-20 mA signal. For installation and pre-wiring on the system base, the flow meter supply voltage shall be 24 VDC – no exceptions. In all case, the meter bypass valves and piping shall be provided. Flow meter shall be manufactured by ABB, McCrometer or approved equal.
- 23. PRESSURE SWITCH:** Pressure switches shall be the diaphragm type and suitable for water use. Each switch shall have an adjustable set point and differential, appropriate for the application. The switch shall be NEMA 4X rated, single pole and double throw. Pressure switches shall be manufactured by Square D, Dwyer, Murphy or approved equal.
- 24. PRESSURE TRANSDUCER:** A solid state, analog, pressure transmitter shall be provided to measure the changing pressure in the system. The transducer shall be industrial quality with 316 SS wetted metal parts and a NEMA 4X enclosure. The transducer shall have a 4-20 mA output through shielded cable, and shall incorporate reverse polarity protection. Sensor shall employ a NPT sized connection. The overall accuracy of the transducer shall be $\pm 0.25\%$ of the full scale output. Pressure transducers shall be as manufactured by Wika, ABB, Rosemount or approved equal.
- 25. VFD :** Variable Frequency Drives (VFD's) shall be a digital, pulse width modulated (PWM) design. 6-pulse drive packages shall be provided for all motors 20hp and smaller. VFD's shall be employed to control the motor speed of the jockey and/or main pumps to maintain constant system pressure. The VFD shall have an output frequency range from 0-67 Hz with a 0.1 Hz resolution for an analog reference signal. The minimum speed shall be adjustable from 0 to 60 hertz. The VFD shall have capability to suppress up to three (3) critical frequencies where operation may cause mechanical resonance. Acceleration and deceleration ramps shall be separately adjustable from 1 to 60 seconds, and shall automatically adjust in case of over-torque. The ramp shape shall have adjustable profiles. Protection shall include thermal protection for the drive and motor, incoming line supply under voltage and overvoltage, phase loss, and short circuits between output phases, output phases and ground, on the internal supply outputs, and on the logic and analog outputs. The keypad display shall provide drive identification, display of parameter values when the drive is running, or of fault type when the drive is in the fault condition, adjustment and configuration of the drive and local command of the drive. The keypad display shall have access levels to allow for a total lock or unlock of drive commands. The keypad shall be capable of uploading, downloading, and storing the VFD parameters. The VFD shall be capable of Ethernet/IP, analog outputs, and digital (relay contacts) outputs to communicate with the PLC.

VFD shall additionally have the following basic features:

- a) Short circuit rating appropriate for the location of the drive.
- b) Line side fast acting fuses to protect the drive.
- c) UL listed.
- d) Constant torque rating.
- e) Drive shall be capable of operation in ambient temperature range between 20°F and 105°F and 0-95% humidity.
- f) Drive enclosure shall be NEMA 1 gasketed with washable type filters on all air intake and exhaust louvers; cooling fans shall turn off when drive is not in use to reduce dirt infiltration and noise.
- g) Input disconnects with operating handle protruding outside the door. Disconnect shall not be mounted on the door.
- h) Input line reactor mounted inside the VFD enclosure.
- i) All external wiring shall have permanent wire identification marks.
- j) Push buttons and indicating lights shall be heavy duty oil tight type.
- k) The control relays shall have neon indicating lights and push-to-test buttons.
- l) Operator interface shall be via a membrane.

Variable frequency drives shall be manufactured by Square D, Allen-Bradley or approved equal.

The control system shall include one full-voltage NEMA-rated interlocking starter for each pump and one VFD for the entire system to be alternated among the pumps.

26. PROGRAMMABLE LOGIC CONTROLLER:

- a) Control and data acquisition associated with the operation of the packaged pumping system shall be performed by an industrial-grade, programmable logic controller (PLC). The PLC system shall include the processor, power supplies, flash memory or battery backed static RAM memory, and process input and output modules. The PLC shall be fitted with a real-time clock. Removable flash or EEPROM memory shall be provided for backup of the system configuration. The PLC shall have direct cable connections between the PLC and OI, and PLC to I/O cards (hard-wiring shall not be acceptable).
- b) A minimum of two spare analog inputs and outputs shall be provided. A minimum of ten spare digital inputs and outputs shall be provided. All inputs and outputs, including spares, shall be wired to terminal strips. Wiring shall include any factory required fuses and/or other protection devices.
- c) The PLC shall be powered by a 24 VDC power supply with no exception allowed. The PLC shall support connectivity for a CAT5 cable connection to an Ethernet switch. The Ethernet interface shall support standard TCP/IP communications and standard Ethernet media.
- d) The PLC shall provide demand controlled sequential pump start-up, shutdown and safety features through its pressure sensing, flow sensing and voltage sensing devices. All control software shall be fully documented. All operational

parameters, including alarms, shall be listed and instructions for changing the parameters shall be included. The PLC shall be Allen-Bradley, Compact Logix Series.

- e) The PLC shall be programmed to allow for ease of use with SCADA software. An I/O list including registers, data and appropriate tags shall be included in the O&M Manual.
- f) The PLC will communicate with an existing Telemetry Control Unit (TCU) manufactured by Data Flow Systems, Inv. (DFS) and provided by the City. The PLC control panel shall include a patch panel where necessary I/O can be wired to field terminal strips or a compatible communications port for connection from the PLC to the TCU. The PLC to TCU connection shall be provided by the Contractor. The Contractor shall coordinate with DFS for the necessary hardware and/or software requirement. See the contract electrical drawings for more information.

27. OPERATOR INTERFACE DEVICE

- a) An operator-interface device (OID) shall be provided to display system status and alarm events and to modify certain user-definable system setpoints. The OID shall be NEMA 4X rated and shall be mounted on the outer door. The OID shall be for monitoring purposes only, the station shall remain fully operational in the event of an OID failure. The OID shall include an 8" minimum color touch-screen type display. The unit shall include a minimum of 64 MB of RAM and at least one Universal Serial Bus (USB) or RS232 serial port that supports a printer. The Operator Interface shall have one dedicated port which supports communications to the PLC via Ethernet or RS232 serial connection utilizing industrial secure protocols.
- b) The OID shall be fitted with a removable compact flash (CF) card to be used for data logging. All alarms and events shall be logged per the real time clock. System data shall be logged once per minute and each day's log shall be stored in a separate file.
- c) The OID shall be manufactured by Maple Systems or approved equal.

28. ETHERNET SWITCH CABLE

- a) An industrial Ethernet switch and all necessary patch cables shall be provided for interconnection of the PLC and the OID. One spare port shall be included for connection to a lap top computer. A minimum of one additional spare port shall be included. The switch shall be DIN rail mounted, and shall be powered by a 24 VDC power supply – no exceptions. If fiber optic cabling and communication is

required, then the switch shall include a minimum of two integral fiber optic ST-type ports. The switch shall be manufactured by N-Tron, Hirschman or approved equal.

- b) All Ethernet cables shall be shielded, and shall be grounded on only one end to prevent ground loop currents. Ethernet equipment designed for home or office use shall not be acceptable.

29. UNINTERRUPTIBLE POWER SUPPLY (UPS): A UPS shall be provided to maintain power to the PLC, OID, Ethernet switch and instrumentation. The UPS shall be DINrail mounted securely to the back panel of the enclosure and shall be protected by a dedicated circuit breaker. Any manufacturer requirements for spacing to provide proper cooling and air flow shall be strictly followed. For 120 VAC automation equipment, the UPS shall be an Allen-Bradley 1609-U or equal. For 24 VDC automation equipment, the UPS shall be a Phoenix Contact model Quint-DC-UPS or approved equal.

30. PANEL FEATURES:

- a) A three position HAND/OFF/AUTO switch shall be provided for each pump. In the HAND position, the pump shall operate using the full voltage/across-the-line starter. In the OFF position, pump operation is not allowed. In the AUTO position, operation of the pumps shall be controlled by the PLC.
- b) Individual run lights shall be provided for each pump. The indicating lights shall not be wired through the PLC and shall not count towards the discrete I/O total.
- c) I/O is a minimum of ten digital inputs and outputs with a minimum of two spare analog inputs and outputs, all inputs and outputs, including spares, shall be wired to terminal strips. Wiring shall include any factory required fuses and/or other protective devices.
- d) Contractor to coordinate with Data Flow Systems (Phone 321-259-5009) for Telemetry panel components and their connection and startup. All devices shall be compatible with the City of Lake Wales existing radio telemetry system.

31. PROGRAM FEATURES

- a) The PLC shall be programmed to control the pump speed to maintain the system operating pressure using PID control. If the lead main pump is not capable of meeting the system demand, additional lag main pump(s) shall be started. The lead main pump shall alternate after each cycle or after 24 hours.
- b) Lead and Lag pump assignments shall be based on auto intelligent alternation. Auto sequence shifting shall be employed in the event of pump or motor failure.

32. ALARM CONDITIONS:

- a) High discharge pressure
- b) Low discharge pressure
- c) Low suction pressure (manual reset)
- d) Low water level or low suction pressure
- e) High flow alarm
- f) Pressure transmitter failure (manual reset)
- g) Flow meter failure (manual reset)
- h) Phase failure, Low voltage, Phase Imbalance, Phase Reversal
- i) Motor start failure (manual reset)
- j) Motor overload (manual reset)
- k) Pump failure (manual reset)
- l) All alarms shall automatically reset unless noted otherwise. All alarms shall be indicated by a general alarm light and horn mounted on the exterior of the enclosure. An "ALARM SILENCE" pushbutton, also located on the exterior of the enclosure shall be provided. The specific alarm condition shall be displayed on the OID.

33. OPERATOR-INTERFACE –DEVICE CONTROLS:

- a) The OID shall use a combination of function keys and/or touch-screen controls to change screens and to modify system setpoints. At a minimum the following separate screens shall be provided:
 - 1) System monitoring: Displays current pressure, current flow rate and totalized flows. Totalized flows shall include a resettable total and a grand total for system operation. This screen shall be immediately accessible from all other screens via a "system status" button. This screen shall also indicate the run status of each pump.
 - 2) Pump Status and Monitoring: Display includes parameters including run status or constant speed operation, run time, and alternator status.
 - 3) Time of day setpoints: Displays time periods for which different operating pressures may be defined. The pressure setpoints, cut-in pressure and times may be changed from this screen. The current setpoints shall be passed to the Pressure Configuration screen.
 - 4) Pressure and Flow Configuration: Displays the current system operating pressure setpoint, low pressure, alarm setpoint, high pressure alarm setpoint, and pump start pressure setpoint(s). User configurable pressure and flow rate setpoints may be changed from this screen.
 - 5) Lockout and Daily Alternation Times: Displays time periods for which the system is prevented from operating and the time at which the pumps are forced to alternate. Both daily alternation and lockout can be turned on and off from this screen.

- 6) Backup Mode: Displays the current mode of operation. These modes of operation shall include: normal, pressure transmitter fail, flow transmitter fail, and shutdown. All setpoints related to the backup operation of the station shall be displayed and configured from this screen.
- 7) Help and Information Screen: Displays pertinent information about the system including information about the pumps, PLC, OI, and the software used to program the system. Contact information shall also be displayed on this page.
- 8) Alarm Annunciator: Displays a list of active alarms. Alarms may be acknowledged on this screen.
- 9) Data Logging: Provides a quick and easy method of downloading a log of system data to a CF card.
- 10) Timers: Displays the current timer setpoints. These shall include power fail lock out delay, phase fail lockout delay, and pump on/off timers. All timers shall be adjustable from this screen.
- 11) Alarm History: Displays an alarm history. This history shall include a log of all active and past alarms.

34. REMOTE ACCESS: A 6"x6" blank space on the backplate shall be provided to allow for the installation of future equipment. A 120V/1Ø 15 amp circuit breaker shall be provided for future use.

35. WIRING: All external wiring shall be enclosed in conduit. All power wire shall be stranded and sized as required for load and application according to the National Electric Code. All control and signal wire shall be a minimum of #14 AWG, type THWN or MTW, 90°C insulated and color-coded. All wiring on the rear of the inner door shall be neatly bundled using tie wraps or other means. All internal wiring on the backplate shall be neatly routed in wire duct with removable covers. All wiring shall be continuous point-to-point (no splices) and be totally accessible. All power wires terminals shall be torque to manufacturer's specifications.

36. CONDUIT:

- a) All external above ground wiring shall be enclosed in rigid aluminum conduit and liquidtight flexible conduit. For below grade runs, PVC conduit shall be rigid Schedule 80, sunlight resistant and shall be US listed (L 651) and shall comply

with Federal Specification WC-1094 and NEMATC-2. Liquid tight flexible nonmetallic conduit shall be UL listed (UL 1660) and shall be Carlon Carflex Liquid tight flexible nonmetallic conduit or equivalent. Liquid tight nonmetallic connectors shall be UL listed (UL 514B) and shall be Carlon Carflex Liquid tight nonmetallic fittings or equivalent. Each section of flexible nonmetallic conduit shall not exceed 6 feet in length.

- b)** All conduits shall be mounted on 316 SS or aluminum Unistrut stands located not more than 24" apart on the baseplate. Conduit shall not be mounted directly to the baseplate. Attachment of the conduit to the Unistrut shall be by two-piece pipe straps or by Uni-Clip supports only. Attachment by perforated metal or by wires is not acceptable. The Unistrut stands shall be secured to the baseplate with ¼" stainless steel fasteners.
- c)** Provide a conduit sealing fitting for each conduit prior to entering lift station wet well.
- d)** For the purposes of routing and spacing conduit, conductor cables shall be divided into the following two categories: a) Category 1 conductors shall include AC power lines, and digital DC I/O signals to hard contact switches, relays, and solenoids. b) Category 2 conductors shall include analog I/O lines, DC power lines for analog circuits, digital AC lines, digital DC I/O lines with specific sensitivity requirements and communication cables.
- e)** Category 2 conductors shall have the following minimum spacing from conduit containing Category 1 conductors based on the power in the category 1 conduit per the following table:

| <u>POWER</u> | <u>MINIMUM SPACING</u> |
|---|------------------------|
| Less than 20 amps | 6" |
| More than 20 amps and less than a total of 100kVA | 12" |
| 100kVA or more | 24" |

- f)** The electrical equipment on the skid shall be located in such a fashion as to prevent the signal conduit and power conduit from crossing. If a crossover of power conduit and signal conduit is unavoidable, then the crossover must occur at a right angle.

PART 3 - EXECUTION

1. **FACTORY TESTING:** Non witness factory hydrostatic and mechanical function testing of the package shall be performed prior to shipment.

2. **FIELD TESTING:**
 - a) A minimum of two eight hour days of startup service shall be provided. One day of service shall be provided at initial commission with the second day being provided approximately one month after initial startup. The second day shall be used to fine tune the system operation and to provide follow up training. Field tests will not be conducted until such time as the entire installation is complete and ready for operation. This includes the completion of all piping, electrical connection and inspections, and availability of supply water. During startup, the system supplier shall run the pumps through normal start and stop, and full load conditions. The pump supplier shall make any adjustments and correct any defects at no cost to the City. Tests shall be performed until satisfactory results are obtained. A training session shall be performed at the time of the startup.
 - b) Verify that the various specified alarm signals are generated and transmitted from the system control panel. Verify pumps running, flow switch activation, and high and low pressure alarms.

3. **PAINT:** All external structural steel surfaces, pumps, motors, and other appurtenances shall be shop blasted (per SSPC-SP6 commercial grade) and shall be primed with an industrial grade epoxy primer and painted with Devco Devthane 379. Color shall be dark gray.

4. **SERVICE CONDITIONS:**

- a) Pump hydraulic performance conditions and design data shall be as shown below:
- b) **MAIN PUMPS**

| Capacity (gpm) | Total Head (ft) | Pump Efficiency (%) | Power (hp) |
|---------------------------|----------------------------|--------------------------------|-----------------------|
| 200 | 126 | 57 | 11.2 |
| 300 | 122 | 68 | 13.6 |
| 400 | 114 | 72 | 15.9 |
| 500 * | 100 | 70 | 18.1 |
| 600 | 78.8 | 61 | 19.5 |

*Design Point

| | |
|------------------------|---------------|
| Maximum Pump Speed | 1750 rpm |
| Motor Horsepower | 20hp |
| Impeller Diameter | 10.125 inches |
| Suction Diameter | 4 inches |
| Discharge Diameter | 4 inches |
| Manufacturer and Model | Aurora 4x4x12 |

5. INSTALLATION:

- a) The packaged pumping station manufacturer shall assemble the pump baseplates with associated pumps and motors in the shop. After each

pump is completely assembled, the pumping station manufacturer shall match both sides of each connection as to ensure proper field assembly by the Contractor, if field assembly is required.

- b) The packaged pumping station manufacturer shall furnish a set of installation drawings, wiring diagrams, and instructions for use by the Contractor. The wiring diagrams shall include terminal board numbers for connection of the power supply wiring to the pump station.
- c) The packaged pumping station manufacturer shall deliver the packaged pumping station unit to the installation site.
- d) The contractor shall be responsible for unloading the packaged pumping station.
- e) The contractor shall field install the packaged pump station unit in accordance with the manufacturer's specifications.
- f) All materials, including lubricants and anchor bolts, equipment, and labor to install the pump shall be performed by the Contractor.
- g) The packaged pumping station manufacturer shall install, adjust, and calibrate any equipment that is to be part of the skid assembly but is shipped separately for field installation.
- h) Upon transferral of the packaged pump station to the City, the Manufacturer and the City shall make a joint inspection of the condition of each piece of equipment and shall note in writing, the defects in said equipment. Damage or loss of equipment and materials after the date of their transfer to the City shall be repaired or replaced at the City's expense.
- i) Contractor shall be responsible for connecting existing piping to packaged pumping station.

END OF SECTION

