January 27, 2022 Item No. 9.6. Adamson Lagoon and Cindy Hallaran Pools

Sponsor: Steve Wright

Reviewed By CBC: N/A

Agenda Caption: Presentation, discussion, and possible action on a construction contract with Progressive Commercial Aquatics, in the amount of \$246,878 for removal and installation of plastering at Adamson Lagoon and Cindy Hallaran swimming pools.

Relationship to Strategic Goals:

Recommendation(s): Staff recommends approval of the construction contract with Progressive Commercial Aquatics.

Summary: Progressive Commercial Aquatics will remove and haul away existing plaster material and install an improved, upgraded plaster, designed to withstand bather load and extreme temperatures, at City pools. Upon completion, the contractor will supply start up chemicals and ensure a safely, balanced water chemistry.

Budget & Financial Summary: Parkland Dedication and/or General Fund

Attachments:

1. 22300211 - Progressive Commercial Aquatics inc

CITY OF COLLEGE STATION STANDARD FORM OF CONSTRUCTION AGREEMENT

| This Agreement is entered into by and between the City of College Station, a Texas home-rule mu | ınicipa |
|---|---------|
| corporation (the "City") and Progressive Commercial Aquatics Inc. | _ (the |
| "Contractor") for the construction and or installation of the following: | |
| Re-Plaster of City Pools (Adamson Lagoon and Hallaran) | |

1. **DEFINITIONS**

- **1.01** Calendar Day. The term "calendar day" shall mean any day of the week or month, no days being excepted.
- **1.02** City. The term "City" shall mean and be understood as referring to the City of College Station, Texas.
- **1.03** <u>City's Consultant.</u> The term "City's Consultant" or "Consultant" shall mean and be understood as referring to the City's design professional(s) for the Project.
- **1.04** <u>City's Representative</u>. The term "City's Representative" or "Representative" shall mean and be understood as referring to the City Manager or his delegate or delegates, including a project management firm if applicable, who shall act as City's agent.
- 1.05 <u>Contract Amount.</u> The term "Contract Amount" shall mean the amount of Contractor's lump sum base bid proposal, together with all alternates, as accepted by the City in accordance with the Contractor's Proposal. In the case of a unit price contract, Contract Amount shall mean the sum of the product of all unit prices multiplied by the respective estimated final quantities of work, for all base bid and alternates, as accepted by the City. Except in the event of a duly authorized change order approved by the City as provided in this Agreement, and in consideration of the Contractor's final completion of all Work in conformity with this Agreement, the City shall pay the Contractor an amount not to exceed: Two Hundred Forty-Six Thousand Eight Hundred Seventy-Eight and NO /100 Dollars (\$ 246,878.00).
- **1.06** Contract Documents. The term "Contract Documents" shall mean those documents listed in Paragraph 2.01.
- **1.07** <u>Contractor</u>. The term "Contractor" shall mean the person(s), partnership, or corporation who has agreed to perform the Work contemplated in this Agreement and the other Contract Documents.
- **1.08** <u>Contractor's Proposal.</u> The term "Contractor's Proposal" shall mean the document provided by the Contractor in response to, and shall include all information required by the City's Request for Proposal/Invitation to Bid for the Project.
- **1.09** Extra Work. The term "Extra Work" shall mean and include work that is **not** covered or contemplated by the Contract Documents but that may be required by City's Representative and approved by the City in writing *prior* to the work being done by the Contractor.
- **1.10** <u>Final Completion.</u> The term "Final Completion" shall mean that all the Work has been completed, all final punch list items have been inspected and satisfactorily completed, all payments to materialmen and subcontractors have been made, all documentation and warranties have been submitted, and all closeout documents have been executed and approved by the City.

Contract No. 22300211
Construction Agreement Over \$50,000
Form 05-26-2021

- 1.11 <u>Hazardous Substance.</u> The term "Hazardous Substance" shall mean and include any element, constituent, chemical, substance, compound, or mixture, which is defined as a hazardous substance by any local, state or federal law, rule, ordinance, by-law, or regulation pertaining to environmental regulation, contamination, clean-up or disclosure, including, without limitation, The Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), The Resource Conservation and Recovery Act ("RCRA"), The Toxic Substances Control Act ("TSCA"), The Clean Water Act ("CWA"), The Clean Air Act ("CAA"), and the Marine Protection Research and Sanctuaries Act ("MPRSA"), The Occupational Safety and Health Act ("OSHA"), The Superfund Amendments and Reauthorization Act of 1986 ("SARA"), or other state superlien or environmental clean-up or disclosure statutes including all state and local counterparts of such laws (all such laws, rules and regulations being referred to collectively as "Environmental Laws").
- 1.12 <u>Environmental Laws</u>. The term "Environmental laws" shall mean collectively, any local, state or federal law, rule, ordinance, by-law, or regulation pertaining to environmental regulation, contamination, clean-up or disclosure, including, without limitation, The Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA"), The Resource Conservation and Recovery Act ("RCRA"), The Toxic Substances Control Act ("TSCA"), The Clean Water Act ("CWA"), The Clean Air Act ("CAA"), and the Marine Protection Research and Sanctuaries Act ("MPRSA"), The Occupational Safety and Health Act ("OSHA"), The Superfund Amendments and Reauthorization Act of 1986 ("SARA"), or other state superlien or environmental clean-up or disclosure statutes including all state and local counterparts of such laws.
- **1.13** <u>Interpretation of Phrases.</u> Whenever the words "directed", "permitted", "designated", "required", "considered necessary", "prescribed", or words of like import are used, it is understood that the direction, requirement, permission, order, designation, or prescription of City's Representative is intended. Similarly, the words "approved", "acceptable", "satisfactory", or words of like import shall mean approved by, accepted by, or satisfactory to City's Representative.
- **1.14 Nonconforming work.** The term "nonconforming work" shall mean Work or any part thereof that is rejected by City's Representative as not conforming with the Contract Documents.
- **1.15 Parties.** The "parties" are the City and the Contractor.
- **1.16 Project.** The term "Project" shall mean the construction of an improvement to real property where the Work comprises either whole or a part of such construction and which may include construction by the City or separate contractors.
- **1.17 Project Manager.** The term "Project Manager" shall mean the Contractor's Project Manager. The Project Manager shall assist the City in performing various administrative and oversight duties relating to the Work, subject to limitations in authority that must be verified by Contractor.
- **1.18 Subcontractor.** The term "subcontractor" shall mean and include only those hired by and having a direct contract with Contractor for performance of work on the Project. The City shall have no responsibility to any subcontractor employed by a Contractor for performance of work on the Project, and all subcontractors shall look exclusively to the Contractor for any payments due.
- **1.19** <u>Substantially Completed.</u> The term "Substantially Completed" means that in the opinion of the City's Representative the Project, including all systems and improvements, is in a condition to serve its intended purpose but still may require minor miscellaneous work and adjustment. Final payment of the Agreement Price, including

retainage, however, shall be withheld until Final Completion and acceptance of the Work by the City. Acceptance by the City shall not impair or waive any warranty obligation of Contractor.

- 1.20 <u>Work.</u> The term "Work" as used in this Agreement shall mean the construction and services required by the Contract Documents and Exhibits, including any duly authorized change orders, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill its obligations. The Work may constitute the whole or a part of the Project. The Work includes but is not limited to all labor, parts, supplies, skill, supervision, transportation, services, and other facilities and all other items needed to produce, construct, and fully complete the Project.
- 1.21 Working Day. A "working day" means any day not including Saturdays, Sundays, or legal holidays.

2. CONTRACT DOCUMENTS

- **2.01** The Contract Documents and their priority shall be as follows:
 - (a) This signed Agreement.
 - **(b)** Addendum to this Agreement.
 - (c) General Conditions, as may be applicable.
 - (d) Special Conditions, as may be applicable.
 - (e) Specifications, including the technical specifications set out at BCS Unified Design Guidelines ("Specifications").
 - (f) Plans.
 - (g) Instructions to Bidders and any other notices to Bidders or Contractor.
 - (h) Performance bond, Payment bonds, Bid bonds and Special bonds.
 - (i) Contractor's Proposal.
- **2.02** Where applicable, the Contractor will be furnished three (3) sets of plans, specifications, and related Contract Documents for its use during construction. Plans and Specifications provided for use during construction shall be furnished directly to the Contractor only.
- **2.03** The Contractor shall distribute copies of the Plans and Specifications to suppliers and subcontractors as necessary. The Contractor shall keep one (1) copy of the Plans and Specifications accessible at the work site with the latest revisions noted thereon. For proper execution of the Work contemplated by this Agreement, additional sets of drawings, plans and specifications may be purchased by the Contractor.
- **2.04** All drawings, specifications, and copies thereof furnished by the City shall not be re-used on other work, and with the exception of one (1) copy of the signed Contract Documents, all documents, including sets of the Plans and Specifications and "as built" drawings, are to be returned to the City on request at the completion of the Work. All Contract Documents, models, mockups, or other representations are the property of the City.
- 2.05 In the event of inconsistencies within or between parts of the Contract Documents, the Contractor shall (1) provide the better quality or greater quantity of Work, or (2) comply with the more stringent requirement, either or both in accordance with the City's interpretation. The terms and conditions of this paragraph -2.05, however, shall not relieve the Contractor of any of the obligations set forth in paragraphs 8.01. and 8.02 of this Agreement.

3. AWARD OF CONTRACT

- **3.01** Upon the notice of intent to award of the contract by the City, the parties shall execute this Agreement, and the Contractor shall deliver to City's Representative all documents, bonds, and certificates of insurance required herein.
- 3.02 Time is of the essence of this Agreement. Accordingly, the Contractor shall be prepared to perform the Work in the most expedient and efficient possible manner in order to complete the Work by the times specified in this Agreement for Substantial Completion and Final Completion. In addition, the Contractor's work on the Project shall be commenced on the date to be specified in the City's written notice to proceed. The notice to proceed may not be given, nor may any Work be commenced, until this Agreement is fully executed and complete, including all required exhibits and other attachments, particularly those required under paragraphs 27 and 28 (Insurance & Bonds).

4. CITY'S REPRESENTATIVE

- **4.01** The Contractor shall forward all communications, written or oral, to the City through the City's Representative.
- **4.02** The City's Representative may periodically review and inspect the Work of the Contractor.
- **4.03** The City's Representative shall appoint, from time to time, such subordinate supervisors or inspectors as City's Representative may deem proper to inspect the Work performed under this Agreement and ensure that said Work is performed in accordance with the Plans and Specifications.
- **4.04** The City's Representative shall interpret questions concerning the Contract Documents. The City's inspector has authority to reject any of the Work for failure to comply with the Contract Documents and/or applicable laws.
- **4.05** Should the Contractor object to any orders by any subordinate supervisor or inspector, the Contractor may, within two (2) days from receipt of such order, make written appeal to City's Representative for his decision.

5. INDEPENDENT CONTRACTOR

- 5.01 In all activities or services performed hereunder, the Contractor is an independent contractor and not an agent or employee of the City. The Contractor, as an independent contractor, shall be responsible for the final product contemplated under this Agreement. Except for materials furnished by the City, the Contractor shall supply all materials, equipment and labor required for the execution of the Work. The Contractor shall have ultimate control over the execution of the Work under this Agreement. The Contractor shall have the sole obligation to employ, direct, control, supervise, manage, discharge, and compensate all of its employees and subcontractors, and the City shall have no control of or supervision over the employees of the Contractor or any of the Contractor's subcontractors except to the limited extent provided for in this Agreement.
- **5.02 Standard of Care.** The Work shall be performed in a good and workmanlike manner, and in accordance with this Agreement, and all applicable laws, codes, and regulations. The construction of the Project is subject to amendments and adjustments to the Contract required by any applicable changes in regulations or requested or approved by in writing by the City. If at any time during the progress of the Work the Contractor becomes aware

of any errors or omissions in the Plans or Specifications for this Project or that the Agreement deviates from applicable legal requirements, Contractor shall promptly provide written notice thereof to the City. The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention.

- 5.03 The Contractor shall retain personal control and shall give its personal attention to the faithful prosecution and completion of the Work and fulfillment of this Agreement. The Contractor shall be responsible for and have control over construction means, methods, techniques, sequences and procedures, and for coordinating all portions of the Work. The subletting of any portion or feature of the Work or materials required in the performance of this Agreement shall not relieve the Contractor from its obligations to the City under this Agreement. The Contractor shall appoint and keep on the Project site during the progress of the Work, including at all times subcontractors are present at the Project site, a competent English speaking Project Manager and/or superintendent and any necessary assistants, all satisfactory to City's Representative, to act as the Contractor's representative and to supervise its employees and subcontractors. All directions given to the Project Manager and/or superintendent shall be binding as if given to the Contractor. Adequate supervision by competent and reasonable representatives of the Contractor is essential to the proper performance of the Work, and lack of such supervision shall be grounds for suspending the operations of the Contractor and is a breach of this Agreement.
- **5.04** Unless otherwise stipulated, the Contractor shall provide and pay for all labor, materials, tools, equipment, transportation, facilities, and drawings, including engineering, and any other services necessary or reasonably incidental to the performance of the Work by the Contractor. Any additional work, material, or equipment needed to meet the intent of this provision shall be supplied by the Contractor *without* claim for additional payment, even though not specifically mentioned herein.
- **5.05** Any injury or damage to the Contractor or the Project caused by an act of God, natural cause, a party or entity not privy to this Agreement, or other force majeure shall be assumed and borne by the Contractor.

6. DISORDERLY EMPLOYEES

The Contractor agrees to employ only orderly and competent employees skillful in the performance of the type of work required, and agrees that whenever City's Representative shall inform the Contractor in writing that any person or persons on the Project are, in his opinion, incompetent, unfaithful, or disorderly, such person or person shall be discharged from the Project and shall not again be re-employed on the site or the Project without City's Representative's written permission.

7. HOURS OF WORK

The Contractor may work Monday through Friday from 7 a.m. to 6 p.m., exclusive of Saturdays, Sundays, or legal holidays. The Contractor may work overtime, weekends, and holidays only when approved in advance by the City's Representative. The time for Substantial Completion shall not be affected in any way by inclusion of this section or by the City's consent or lack of consent to work outside of the times specified in this Agreement.

8. NATURE OF THE WORK

8.01 It is understood and agreed that the Contractor has, by careful examination, studied and compared the Plans and other Contract Documents, satisfied itself as to the nature and location of the Work, the conditions of the ground and soil, the nature of any structures, the character, quality, and quantity of the material to be utilized, the character of equipment and facilities needed for and during the prosecution of the Work, the time needed to complete the Work, Contractor's ability to meet all deadlines and schedules required by this Agreement, the general and local conditions, including but not limited to weather, and all other matters that in any way affect the

Work under this Agreement. These obligations are for the purpose of facilitating construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, any errors, inconsistencies or omissions discovered, or which reasonably should have been discovered by the Contractor shall be reported promptly to the City as a request for information in such form as the City may require. However, the Contractor shall not perform any act or do any Work that places the safety of persons at risk or potentially damages materials or equipment used in the Project, and the Contractor shall do nothing that would render any test or tests erroneous.

- **8.02** Any design errors or omissions noted by the Contractor shall be reported promptly to the City, but it is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents. Any nonconformity discovered by or which reasonably should have been discovered or made known to the Contractor shall be reported promptly to the City.
- **8.03** If the Contractor fails to perform the obligations of Paragraphs 8.01. and 8.02., the Contractor shall pay such costs and damages to the City as would have been avoided if the Contractor had performed such obligations. The Contractor shall not be liable to the City for damages resulting from errors, inconsistencies or omissions in the Contract Documents or for differences between field measurements or conditions and the Contract Documents unless the Contractor recognized or reasonably should have recognized such error, inconsistency, omission or difference and knowingly failed to report it to the City.

9. POST-AGREEMENT AWARD MEETINGS

- 9.01 Prior to the commencement of the Work, the parties shall meet and attend a post-agreement award meeting at the time and place determined by City's Representative. At the post-agreement award meeting, the parties shall meet, discuss, and finalize all schedules, including commencement date, and/or specifications submitted for review. No later than ten (10) days prior to the post-agreement award meeting, the Contractor shall submit to City's Representative the following documents:
 - (a) Schedule for performance of the Work ("Construction Schedule"). Project Schedule contemplated, including the starting and ending date, as well as an indication of the completion of stages of Work hereunder. Such document, once approved by the City and, if applicable, the City's Consultant shall be incorporated into this Agreement as a Contract Document and attached hereto as **Exhibit E**. If not accepted, the Construction Schedule shall be promptly revised by the Contractor in accordance with the recommendations of the City and Consultant and resubmitted for acceptance. The Construction Schedule shall not be modified except by written change order. The Construction Schedule shall not exceed time limits current under the Contract Documents, shall be submitted with each pay application, shall be related to the entire Project to the extent required by the Contract Documents, and shall provide for expeditious and practicable execution of the Work.
 - **(b)** The names and addresses of all proposed subcontractors in writing.
 - (c) Schedules of the starting and ending dates of subcontractors and the scope of Work contemplated for subcontractors.
 - (d) Name, local office, phone number and addresses and, home phone numbers for the Contractor and its Project Superintendent/Manager.

- (e) For construction projects, four (4) copies of all shop and/or setting drawings or schedules for the submission thereof.
- **(f)** Where applicable, materials procurement schedules and material supplier names, addresses and phone numbers.
- 9.02 The City's Representative, within five (5) working days after the initial post-agreement award conference or any other meetings, may submit minutes of the meeting to the Contractor. The Contractor shall thereafter have five (5) working days to review the minutes and make its objections, changes, or reductions thereto in writing. The Contractor shall thereafter sign the minutes and promptly return them to City's Representative. Where there is disagreement, City's Representative will make the final determination.

10. PROGRESS OF WORK

- 10.01 The Construction Schedule shall be in a detailed precedence-style critical path method ("CPM") or primavera-type format satisfactory to the City and the Consultant. The Construction Schedule shall also (i) provide a graphic representation of all activities and events that will occur during performance of the Work; (ii) identify each phase of construction and occupancy; and (iii) set forth dates that are critical in ensuring the timely and orderly completion of the Work in accordance with the requirements of the Contract Documents (hereinafter referred to as "Milestone Dates"). If not accepted, the Construction Schedule shall be promptly revised by the Contractor in accordance with the recommendations of the City and Consultant and resubmitted for acceptance.
- **10.02** Further, the parties shall be subject to the following:
 - (a) The Contractor shall submit a Construction Schedule and schedule of values at the initial post-agreement award meeting and subsequent meetings.
 - **(b)** City's Representative shall be entitled to make objections to the Contractor's Construction Schedule submitted herein. The Contractor shall promptly resubmit a revised Construction Schedule to City's Representative.
 - (c) The Project Superintendent/Manager shall coordinate its activities with City's Representative. If required by the City, the Contractor shall provide a weekly schedule of planned activities, which may be reviewed on a daily basis.
 - (d) The Contractor shall submit, at such time as may reasonably be requested by City's Representative, additional schedules that shall list the order in which the Contractor proposes to carry on the Work with dates at which the Contractor will start the several parts of the Work and the estimated dates of completion of the several parts.
 - (e) The Contractor shall attend additional meetings called by City's Representative upon twenty-four (24) hours written notice unless otherwise agreed in writing by the parties.
 - (f) When the City is having other work done, either by agreement or by its own force, City's Representative may direct the time and manner of work done under this Agreement so that conflicts will be avoided and the various work being done by and for the City shall be coordinated.
 - (g) In the event that it is determined by the City that the progress of the Work is not in accordance with the approved Construction Schedule, the City may so inform the Contractor and require the

Contractor to take such action as is necessary to insure completion of the Project within the time specified.

10.03 The process of approving the Construction Schedule and updates to the Construction Schedule shall not constitute a warranty by the City that any non-Contractor milestones or activities will occur as set out in the Construction Schedule. Approval of the Construction Schedule does not constitute a commitment by the City to furnish any City-furnished information or material any earlier than the City would otherwise be obligated to furnish that information or material under the Contract Documents. Failure of the Work to proceed in the sequence scheduled by Contractor shall not alone serve as the basis for a claim for additional compensation or time. In the event there is interference with the Work which is beyond its control, Contractor shall attempt to reschedule the Work in a manner that will hold the additional time and costs beyond its control to a minimum. The Contractor shall monitor the progress of the Work for conformance with the requirements of the Construction Schedule and shall promptly advise the City of any delays or potential delays. In the event the Construction Schedule indicates any delays, the Contractor shall propose an affirmative plan to correct the delay. In no event shall any adjustment to the Construction Schedule constitute an adjustment in the Contract Time, any Milestone Date or the Contract Sum unless any such adjustment is agreed to by the City and authorized pursuant to Change Order.

10.04 The Contractor shall also prepare a submittal schedule promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, and shall submit the schedule(s) for the Consultant's approval. The Consultant's approval shall not unreasonably be delayed or withheld. The submittal schedule shall (i) be coordinated with the Contractor's Construction Schedule; and (ii) allow the Consultant reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

10.05 In the event the City determines that the performance of the Work, as of a Milestone Date or otherwise, has not progressed or reached the level of completion required by the Contract Documents, the City shall have the right to order the Contractor to take corrective measures necessary to expedite the progress of construction, including, without limitation, (i) working additional shifts or overtime; (ii) supplying additional manpower, equipment, and facilities; and (iii) other similar measures (hereinafter referred to collectively as "Extraordinary Measures"). Such Extraordinary Measures shall continue until the progress of the Work complies with the stage of completion required by the Contract Documents. The City's right to require Extraordinary Measures is solely for the purpose of ensuring the Contractor's compliance with the Construction Schedule.

- (a) The Contractor shall not be entitled to an adjustment in the Contract Sum in connection with Extraordinary Measures required by the City under or pursuant to this Subparagraph.
- **(b)** The City may exercise the rights furnished the City under or pursuant to this Subparagraph as frequently as the City deems necessary to ensure that the Contractor's performance of the Work will comply with any Milestone Date or completion date set forth in the Contract Documents.

10.06 Work Stoppage. If in the judgment of either the City or City's Representative any of the Work or materials furnished is not in strict accordance with this Agreement or any portion of the Work is being performed so as to create a hazardous condition, they may, in their sole discretion, order the Work of the Contractor or any subcontractor wholly or partially stopped until any objectionable person, work, or material is removed from the premises. Such stoppage or suspension shall neither invalidate any of the Contractor's performance obligations under this Agreement, including the time of performance and deadlines therefore, nor will any extra charge be allowed the Contractor by reason of such stoppage or suspension.

11. SITE CONDITIONS AND MANAGEMENT

- 11.01 Where the Contractor is working around or in existing structures, it shall verify conditions at the site, including but not limited to, door openings and passages. Any items constructed or manufactured off-site or outside of buildings shall be done so that they are not too bulky for existing facilities. The Contractor shall provide special apparatus as required to handle any such items. All special handling equipment charges shall be at the Contractor's expense. Further, Contractor shall include in its price for the Work, all labor, materials, equipment and/or engineering services required to protect the adjacent properties and/or structures from damage due to performance of the Work.
- 11.02 The Contractor shall be responsible for all power, light, and water required to perform the Work.
- 11.03 Throughout the progress of the Work, the Contractor shall keep the working area free from debris of all types, and remove from premises all rubbish, resulting from any work being done by him. At the completion of the Work, the Contractor shall leave the premises in a clean and finished condition. Any failure to do so may be remedied and charged back to the Contractor.
- 11.04 Layout of Work. Except as specifically provided herein, the Contractor shall lay out all Work in a manner acceptable to City's Representative in accordance with applicable City of College Station codes and ordinances. City's Representative will review the Contractor's layout of all structures and any other layout work done by the Contractor at the construction meeting, or at the Contractor's request, but this review does not relieve the Contractor of the responsibility of accurately locating all Work in accordance with the Plans and Specifications.
- 11.05 Lines and Grades. All lines and grades shall be furnished by the Contractor. Benchmarks and control stakes have been provided by the City's Representative. All benchmarks and control stakes shall be carefully preserved by the Contractor. In case of destruction or removal of the same by the Contractor, its subcontractors, or employees, such stakes, marks, etc. shall be replaced by the Contractor at the Contractor's expense. If the Contractor fails to do so, the City may do so and charge back the Contractor. Additional construction staking as needed for the Work, including lines and grades, shall be the sole responsibility of the Contractor, and the Contractor shall receive no extra time or compensation therefor.
- 11.06 The Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as any information furnished by the City, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the City and the Consultant any errors, inconsistencies or omissions discovered by or made known to the Contractor. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents. Contractor acknowledges the City does not represent nor warrant the accuracy or completeness of information provided by the City related to existing conditions and locations of existing utilities and services. Such information if provided, is provided to the Contractor as a matter of convenience and does not substitute for the Contractor using due diligence to reasonably observe and or to access space to determine errors, inconsistencies or omissions. In all cases of interconnection of the Work with existing conditions, Contractor shall verify at the site all dimensions relating to such existing conditions.
- 11.07 Contractor's Structures. The building or locating of structures or the erection of tents or other forms of protection will be permitted only at such places as City's Representative shall permit. The Contractor shall not

damage the property where such structures are allowed and shall at all times maintain sanitary conditions in and about such structures in a manner satisfactory to the City. The City may charge the Contractor for any damage or injury to the City, its property, or third persons as a result of the location or use of such structures.

- 11.08 The Contractor and any entity over whom the Contractor has control shall not erect any sign on the Project site without the prior written consent of the City.
- 11.09 City may have other work related to the Project performed at the Project site during the time the Work is performed. Contractor should schedule its Work to coordinate with the work of other contractors and utilities with the understanding that some of that work may be performed at times other than as set out in the Contract Documents or as otherwise anticipated. City will endeavor to have such other work performed so as not to unduly interfere with Contractor's performance when Contractor notifies City of specific reasonable needs well in advance of those needs and where it is possible to do so. In the event of substantial delay caused by another contractor or a utility, after advance notice of its needs by Contractor, Contractor will be entitled to make a claim for an extension of time as provided herein.
- 11.10 When two or more contractors, including Contractor, are employed on related or adjacent work or obtain materials from the same material source, or when work must be completed by one contractor before another can begin, each shall conduct his operations in such a manner as not to cause any unnecessary delay or hindrance to the other. Each contractor, including Contractor if applicable, shall be responsible to the other for all damage to work, to persons, or to property caused to the other by his operations, and for loss caused the other due to unreasonable or unjustified delays or failure to finish the work or portions thereof, or furnish materials within the time requested. Should Contractor cause damage to the work or property of any separate contractor at the Project site, or should any claim arising out of Contractor's separate contractor at the Project site, or should any claim arising out of Contractor's performance of the Work be made by any separate contractor against Contractor, City or other consultants, or any other person, Contractor shall promptly attempt to settle with such other contractor by agreement, or to otherwise resolve the dispute. Contractor shall, to the fullest extent permitted by applicable laws, indemnify and hold City harmless from and against all claims, damages, losses and expenses (including, but not limited to, fees of architects, attorneys and other professionals and court costs) arising directly, indirectly or consequentially out of any action, legal or equitable, brought by any separate contractor against City to the extent based on a claim arising out of Contractor's negligence.

12. MATERIALS

- 12.01 Materials or work described in words that when so applied have well-known technical or trade meaning shall be held to refer to such recognized standards. All work shall be done and all materials furnished in strict conformity with this Agreement, the other Contract Documents, and recognized industry standards. When specific products, systems or items of equipment are referred to in the Contract Documents, any ancillary devices necessary for connecting the products, systems or items of equipment shall also be provided. When standards, codes, manufacturer's instructions and guarantees are required by the Contract Documents, the current edition at the time of Contract execution shall apply, unless another edition is specified in the Contract Documents. References to standards, codes, manufacturer's instructions and guarantees shall apply in full, except (1) they do not supersede more stringent standards set out in the Contract Documents, and (2) any exclusions or waivers that are inconsistent with the Contract Documents do not apply.
- 12.02 All materials shall be approved by the City prior to purchase by the Contractor. Unless otherwise specified herein, the Contractor shall purchase all materials and equipment outright and shall not subject the materials and equipment utilized in the Project to any conditional sales agreement, bailment, lease, or other agreement reserving

unto seller any right, title, or interest therein. Title to all materials, but not risk of loss, shall pass to the City upon delivery to the Project.

- 12.03 Where the City deems it necessary to supply materials, it may furnish to the Contractor the list of materials set forth in the attached "List of City Furnished Materials". Upon receipt of said materials, the Contractor shall immediately furnish to the City a written receipt. Moreover, the Contractor shall, on behalf of the City, accept delivery of the materials set forth in the attached "List of Materials Ordered by the City". Under such circumstances, the Contractor shall promptly forward to the City for payment the supplier's invoice together with the Contractor's receipt in writing for such materials.
 - (a) Upon acceptance of the materials furnished or ordered by the City, the Contractor warrants that it shall properly handle, transport, store and safeguard the materials.
 - (b) Further, the Contractor shall repair, repaint or replace any and all materials or any part thereof damaged or stolen while in its possession. Such materials are considered to be in the Contractor's possession from the moment the Contractor either accepts delivery of the materials or signs a receipt accepting delivery of said materials until the Project is accepted by the City's Representative.
 - (c) Before transporting any of the materials furnished or ordered by the City, the Contractor shall establish to the City's satisfaction that it has obtained insurance against losses, theft, damage, equal to or greater than the amounts spent by the City in securing said materials. It shall be incumbent upon the Contractor to verify the cost of materials.
 - (d) The City shall not be obligated to furnish materials in excess of the quantities, size, kind, and type set forth in the attached List of City Furnished Materials and List of Materials Ordered by the City. If the City furnishes, and the Contractor accepts, materials in excess thereof, the values of such excess materials shall be their actual cost as stated by the City.
 - (e) Upon delivery, the Contractor shall promptly receive, unload, transport, and handle all materials and equipment on the List of Materials Ordered by the City at its expense and shall be responsible for all shipping costs.
- **12.04 Materials and supplies shall be new and of good quality.** Upon request, the Contractor shall supply proof of quality and manufacturer. No refurbished, reconditioned, or other previously utilized materials or supplies will be used without the prior signed authorization of City's Representative. The Contractor may utilize substitutes of equal quality and function only upon the prior written authorization of the City's Representative. The City's Representative may require documentation as to quality and function, including manufacturer's specifications, to insure that the proposed substitute is equal to the required material or supply. The City's Representative shall have sole discretion over the use of substitute materials and supplies. Contractor shall bear the risk of any delay in performance caused by submitting substitutions.
- 12.05 Only materials and equipment which are to be used directly in the Work shall be brought to and stored on the Project site by the Contractor. After equipment is no longer required for the Work, it shall be promptly removed from the Project site. Protection of construction material and equipment stored at the Project site from weather, theft, damage and all other perils is solely the responsibility of the Contractor.
- **12.06** Shop Drawings are drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a subcontractor, sub-subcontractor, manufacturer, supplier or distributor to illustrate some portion of the Work.

- **12.07** Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.
- 12.08 Samples are physical examples that illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.
- **12.09** Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. Their purpose is to demonstrate the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals.
- **12.10** The Contractor shall review for compliance with the Contract Documents, approve and submit to the City's Consultant Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents in accordance with the submittal schedule approved by the City's Consultant or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the City or of separate contractors.
- 12.11 By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents to the City and City's Consultant that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- 12.12 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the City's Consultant.
- 12.13 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the City's Consultant's approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the City's Consultant in writing of such deviation at the time of submittal and (1) the City's Consultant has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the City's Consultant's approval thereof.
- **12.14** The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the City's Consultant on previous submittals. In the absence of such written notice, the City's Consultant's approval of a resubmission shall not apply to such revisions.
- **12.15** Contractor shall be liable for and the City may withhold from Contractor's payments any amount of additional fees charged by City's Consultant for excessive resubmittal review.

13. ENTRY, OBSERVATION, TESTING & POSSESSION

- 13.01 The City reserves the right to enter the Project site or sites by such employee(s) or agent(s) as it may elect for the purpose of inspecting the work. The City further reserves the right to enter the Project site or sites for the purpose of performing such collateral work as the City may desire.
- 13.02 The City's Representative shall have the right, at all reasonable times, to observe and test the work. The Contractor shall make necessary arrangements and provide proper facilities and access for such observation and testing at any location where the Work or any part thereof is in preparation or progress. The Contractor shall ascertain the scope of any observation that may be contemplated by City's Representative and shall give ample notice as to the time each part of the Work will be ready for observation.
- 13.03 The City's Representative may require Contractor to remove, dismantle, or uncover completed work. If the work is not in accordance with the Plans, Specifications, or other Contract Documents, the Contractor shall pay the costs of repair and restoration of the work required to be removed, dismantled, or uncovered. Unless Contractor is obligated to provide advance notice of inspection, prior to covering up the work, and fails to do so, if said work is in accordance with the -Plans, -Specifications, and other Contract Documents, the City shall pay the costs of repair and restoration of the work.
- 13.04 City shall have the right to take possession of and use any completed or partially completed portions of the Project prior to the time for completing the entire Project or such portions which may not have expired. The parties agree and understand that possession and use shall not constitute an acceptance of any work not completed in accordance with this Agreement. Further, insurance changes required to keep Contractor's insurance in effect shall be the responsibility of Contractor.

14. REJECTED WORK

- 14.01 All work deemed not in conformity with this Agreement as determined by the City in its sole discretion, may be rejected by the City. City's Representative may reject any work found to be defective or not in accordance with the Contract Documents, regardless of the stage of the work's completion or the time or place of discovery of such defects or inconsistencies and regardless of whether City's Representative has previously accepted the work through oversight or otherwise. Neither observations nor inspections, tests, or approvals made by City's Representative, or other persons authorized under this Agreement to make such observations, inspections, tests, or approvals, shall relieve the Contractor from the obligation to perform the Work in accordance with the requirements of this Agreement and the other Contract Documents.
- **14.02** If the work or any part thereof is rejected by the City, it shall be deemed by City's Representative as not in conformity with this Agreement. Any remedial action required, as set forth herein, shall be at the Contractor's expense, as follows:
 - (a) The Contractor may be required, at the City's option, after notice from City's Representative, to remedy such work so that it shall be in full compliance with this Agreement. All rejected work or materials shall be immediately replaced in order to conform with this Agreement.
 - **(b)** If the City deems it inexpedient to correct work damaged or not done in accordance with this Agreement, an equitable deduction from the agreed sum may be made by the City at the City's sole discretion.

14.03 If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of written notice from the City to commence and continue correction of such default or neglect with diligence and promptness, the City may, without prejudice to other remedies the City may have, correct such deficiencies. In such case an appropriate Change Order shall be issued deducting from payments then or thereafter due the Contractor the reasonable cost of correcting such deficiencies, including City's expenses and compensation for the City's Consultant's additional services made necessary by such default, neglect or failure. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the City.

15. SUBCONTRACTING & SUBCONTRACTORS

15.01 The Contractor agrees that it will retain personal control and will give its personal attention to the fulfillment of this Agreement. The Contractor further agrees that subletting of any portion or feature of the Work or materials required in the performance of this Agreement shall not relieve the Contractor from its full obligation to the City as provided by this Agreement.

15.02 Subcontractors must be approved by City's Representative prior to hiring or beginning any work on the Project. If City's Representative judges any subcontractor to be failing to perform the Work in strict accordance with the drawings and specifications, the Contractor, after due notice, shall discharge the same, but this shall in no way release the Contractor from its obligations and responsibility under this Agreement. Every subcontractor shall be bound by the terms and provisions of this Agreement and the Contract Documents as far as applicable to their work. Contractor's subcontract agreement shall provide that subcontractors shall assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the subcontractor's Work, which the Contractor, by these Documents, assumes toward the City and Consultant. The Contractor shall be fully responsible to the City for the acts and omissions of its subcontractors. Nothing contained herein shall create any contractual or employment relations between any subcontractor and the City.

16. PAYMENT

16.01 The City stipulates that it is an exempt organization as defined by the Limited Sales, Excise and Use Tax Act and, as such, is exempt from the payment of the sales tax on materials and supplies used in the performance of this Agreement. The Contractor shall issue exemption certificates to its suppliers and subcontractors in lieu of said sales tax for all such materials and supplies, and said exemption certificates must comply with the State Comptroller's Ruling No. 95-0.07 and shall be subject to the provision of the State Comptroller's Ruling No. 95-0.09, effective October 1, 1969.

16.02 Progress Payment Applications. The Contractor shall submit applications for payment as provided for herein. Applications for payment will be processed by City's Representative. Before the first Application for Payment, the Contractor shall submit to the City a schedule of values allocated to various portions of the Work, prepared in such form and supported by such data to substantiate its accuracy as the City may require ("Schedule of Values"). The Schedule of Values shall not overvalue early job activities and shall follow the trade divisions of the Specifications so far as possible. Modifications must be approved by City. This schedule, unless objected to by the City, shall be incorporated into this Agreement as a Contract Document and attached hereto as Exhibit F. The Schedule of Values shall be used as a basis for reviewing the Contractor's Applications for Payment. On or before the 15th day of each month, the Contractor shall submit to City's Representative, for approval or modification, a statement, backed by the Schedule of Values, showing as completely as practicable the total value of the actual work performed by the Contractor and accepted by the City up to and including the last day of the preceding month. The statement shall also include the value of all materials not previously submitted for payment which have been delivered to the site but have not yet been incorporated into the Work.

16.03 Progress Payments. On or before the 30th calendar day following the City's receipt of a progress payment application made in conformity with Paragraph 16.02, the City shall pay to the Contractor the approved amount of the progress payment based on the Contractor's applications for payment, and the recommendation and approval of City's Representative. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage of Work completed by the Contractor and approved by the City, but in each case less the aggregate of payments previously made, less retainage, and less amounts as City's Representative shall determine and the City may withhold in accordance with this Agreement. Upon Final Completion, including the delivery of all close out documents, such as "as built" drawings, warranties, guarantees, required additional materials, releases, operation and maintenance manuals, and acceptance of the Work in accordance with this Agreement, the City shall pay the remainder of the balance due under this Agreement, less any sums withheld under other terms of this Agreement and less the retainage, which shall be retained for a period of thirty (30) calendar days from the date of Final Completion. Acceptance of retainage by Contractor shall constitute a Waiver and Release of all claims by Contractor.

16.04 Retainage. From each approved statement, the City shall retain until final payment, ten percent (10%), where the full contract amount is less than \$400,000.00, and five percent (5%), where the full contract amount is \$400,000.00 or more. The City may also retain from each approved statement any other sums authorized under the terms of this Agreement.

OR:

- **16.04 Retainage.** This section has been removed. No retainage will be deducted.
- **16.05** If the actual amount of work to be done and the materials to be furnished differ from estimates and where the basis for payment is the unit price method, then payment shall be for the actual amount of accepted work done and materials furnished on the Project.
- 16.06 Reduction in the scope or quantity of work on unit price items shall merely reduce the number of units. In the event that materials have been delivered prior to notice of such reduction, the City will have the option either to pay freight & transportation costs and any re-stocking charges actually incurred by the Contractor or to purchase the materials. The Contractor shall never be entitled to anticipated or lost profits on the deleted or reduced portion of a job, whether bid on a unit price or lump sum basis.
- 16.07 The Contractor shall have the sole obligation to pay any and all charges or fees and give all notices necessary to and incidental to the lawful prosecution of the Work hereunder. The Contractor shall not and shall have no authority whatsoever to obligate the City to make any payments to another party nor make any promises or representation of any nature on behalf of the City, without the specific written approval of the City.
- **16.08** The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the City may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.
- **16.09** Unless otherwise provided in the Contract Documents:
 - (a) Allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;

- **(b)** Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Amount but not in the allowances; and
- (c) Whenever costs are more than or less than allowances, the Contract Amount shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Paragraph 16.9(a) and (2) changes in the Contractor's costs under Paragraph 16.9(b).
- **16.10** Suspension of Payments. The City, at any time, may suspend monthly progress payments on the Work if it determines that the projected liquidated damages may exceed retainage. The City, at any time, may suspend monthly progress payments if it believes that the Contractor will not complete the Work due to actual default or that the Contractor has represented or done some act that indicates that it will not complete the Work in accordance with this Agreement or within the time period submitted in its bid. Provided, however, City is in no way obligated to Contractor's surety to withhold payment pursuant to the provisions of this Paragraph.
- **16.11 Withhold Funds.** Regardless of any bond, the City may, on account of subsequently discovered evidence and in addition to the retainage withheld under Paragraph 16.04, withhold funds or nullify all or part of any acceptance or certificate to such extent as may be necessary to protect itself from loss on account of any of the following, or as otherwise provided in this Agreement:
 - (a) Defective work.
 - **(b)** Claims made or reasonable evidence indicating probable filing of claims by unpaid vendors or other third parties.
 - (c) Failure of the Contractor to make prompt payments to subcontractors for labor or material or materialmen.
 - (d) Claims made or reasonable evidence indicating claims will be made for damage to another by the Contractor.
 - (e) Claims made or reasonable evidence indicating claims will be made for damage to third parties, including adjacent property owners.
 - **(f)** Claims made or reasonable evidence indicating claims will be made for unremedied damage to property owned by the City.
 - **(g)** City's determination of an amount of liquidated damages.
 - **(h)** Charges made for repairs to the Contractor's defective work or repairs made by the City to correct damage to other property.
 - (i) Other amounts authorized under this Agreement or under any other agreement made between City and Contractor.
 - (j) Corrections of mistakes, errors and overpayments in relation to prior pay applications and payments.

Provided, however, City is in no way obligated to Contractor's surety to withhold payment pursuant to the provisions of this Paragraph.

17. EXTRA WORK CHARGES

17.01 No changes shall be made, nor will bills for changes, alterations, modifications, deviations, and extra orders be recognized or paid for except upon the written order from authorized personnel of the City.

17.02 City Manager Approval. When the original contract amount plus all change orders is One Hundred Thousand Dollars (\$100,000) or less, the City Manager or his designee may approve the written change order in accordance with 17.03 below, provided the change order does not increase the total amount set forth in the Contract to more than One Hundred Thousand Dollars (\$100,000). For such contracts, when a change order results in a total contract amount that exceeds One Hundred Thousand Dollars (\$100,000), the City Council of the City must approve such change order prior to commencement of the services or work.

17.03 For "Extra Work", as defined in Paragraph 1.09 and authorized through written change orders, and pursuant to Section 252.048(d) of the Texas Local Government Code, the original Contract price may not be increased by more than twenty-five percent (25%). Written change orders that do not exceed twenty-five percent (25%) of the original Contract Amount may be made or approved by the City Manager or his delegate if the change order is equal to or less than Fifty Thousand Dollars (\$50,000.00). Changes in excess of Fifty Thousand Dollars (\$50,000.00) must be approved by the City Council prior to commencement of the services or work. Any requests by the Contractor for a change to the Contract Amount shall be made prior to the beginning of the work covered by the proposed change or the right to payment for Extra Work shall be waived. No course of conduct or dealings between the parties, nor implied acceptance of alterations or additions to the Work or changes to the Contract Schedule shall be the basis for any claim for an increase in compensation or change in time. Any cost incurred by Contractor in connection with any Extra Work shall be included in Contractor's requested change order and Contractor's failure to include any such cost shall act to Waive and Release any claim for such non-included cost.

OR:

17.03 For construction contracts funded in whole or in part by Certificates of Obligations, for "Extra Work," as defined in Paragraph 1.09 and authorized through written change orders, and pursuant to Section 271.060 of the Texas Local Government Code, a contract with an original contract price of \$1 million or more may not be increased by more than twenty-five percent (25%). If a change order for a construction contract funded in whole or in part with certificates of obligation that has an original price of less than \$1 million increases the Contract Amount to \$1 million or more, subsequent change orders may not increase the revised Contract Amount by more than twenty-five percent (25%). Written change orders may be made or approved by the City Manager or his delegate if the change order is equal to or less than Fifty Thousand Dollars (\$50,000.00). Changes in excess of Fifty Thousand Dollars (\$50,000.00) must be approved by the City Council prior to commencement of the services or work. Any requests by the Contractor for a change to the Contract Amount shall be made prior to the beginning of the work covered by the proposed change or the right to payment for Extra Work shall be waived. No course of conduct or dealings between the parties, nor implied acceptance of alterations or additions to the Work or changes to the Contract Schedule shall be the basis for any claim for an increase in compensation or change in time. Any cost incurred by Contractor in connection with any Extra Work shall be included in Contractor's requested change order and Contractor's failure to include any such cost shall act to Waive and Release any claim for such non-included cost.

17.04 The Contractor shall complete all Work as specified or indicated in the Contract Documents. The Contractor shall complete all Extra Work in connection therewith. All work and materials shall be in strict conformity with the specifications. The Substantial Completion of the Work shall not excuse the Contractor from

performing all the Work undertaken, whether of a minor or major nature, and thereby completing the Project in accordance with the Contract Documents. In the event that the Contractor fails to perform the Work as required for Substantial Completion or Final Completion, the City may contract with a third party to complete the Work and the Contractor shall assume and pay the costs of the performance of the Work as contracted.

- (a) It is agreed that the Contractor shall perform all Extra Work under the direction of City's Representative when presented with a written work order signed by City.
- (b) No claim for Extra Work of any kind will be allowed unless ordered in writing by the City. In case any orders or instructions appear to the Contractor to involve Extra Work for which it should receive compensation or an adjustment in the construction time, it shall make written request to City's Representative for a written order from City authorizing such Extra Work.
- (c) Should a difference of opinion arise as to what does or does not constitute Extra Work, or as to the payment therefor, and the City insists upon its performance, then the Contractor shall proceed with the Work after making written requests for written orders in a change order and shall keep adequate and accurate account of the actual field costs therefor, as provided under Method C.
- (d) It is also agreed that the compensation to be paid to the Contractor for performing Extra Work shall be determined by one or more of the following methods:

Method A - By agreed unit prices, or

Method B - By agreed lump sum, or

Method C - If neither Method A nor Method B is agreed upon before the Extra Work is commenced, then the Contractor shall be paid the actual field cost (as defined in subsection (g) below) of the Work.

- **(e) Method A Unit Prices.** The Contractor agrees to perform Extra Work for the unit prices in the Contractor's Proposal. The Contractor also agrees and warrants that when it is necessary to construct units not shown in the Contract Documents, it shall construct such units for a price arrived at as follows:
 - (1) The cost of materials shall be determined by the invoices;
 - (2) The cost of labor shall be the reasonable cost thereof, as determined by the City, but in no event shall it exceed an amount determined by calculating the ratio of the total labor costs to the total costs to the total material costs in the section of the Proposal involved, and multiplying the cost of materials for the unit in question by this ratio. Provided, however, that the ratio shall be calculated for only those units that are similar to the new unit for which a price is to be determined.
- (f) Method B Lump Sum. The lump sum shall be reasonably close to the amount for similar work previously done or combinations of similar units. Invoices for materials used shall be provided in support of the agreed lump sum.
- **(g) Method** C **Actual Field Costs.** The actual field cost is hereby defined to include the cost of all applicable workmen and laborers, as well as materials, supplies, teams, trucks, rentals on machinery and equipment, for the time actually employed or used for such Extra Work, plus actual transportation charges necessarily incurred, together with other costs reasonably incurred directly on account of such Extra Work, including social security, old age benefits, maintenance bonds, public liability, property damage, workers' compensation, and all other insurance as may be required by law or ordinances or required and agreed to

by the City or City's Representative. City's Representative may direct the form in which accounts of the actual field costs shall be kept and records of these accounts shall be made available to City's Representative. Unless otherwise agreed upon, the prices for the use of machinery and equipment shall be determined by using one hundred percent (100%), unless otherwise specified, of the latest schedule of equipment and ownership expenses adopted by the Associated General Contractors of America. Where practical, the terms and prices for the use of machinery and equipment shall be incorporated in the written Extra Work order. Actual field costs shall not exceed the prevailing market price therefor within reasonable tolerances as determined by City's Representative. The amount due to Contractor for costs other than actual field costs shall be calculated in accordance with the following standards:

- (1) No indirect or consequential damages will be allowed.
- (2) All damages must be directly and specifically shown to be caused by a proven wrong. No recovery shall be based on a comparison by planned expenditures to total actual expenditures or on estimated losses of labor efficiency, or on a comparison of planned man loading to actual man loading, or any other analysis that is used to show damages indirectly.
- (3) Damages are limited to extra costs specifically shown to have been directly caused by a proven wrong.
- (4) The maximum daily limit on any recovery for delay shall be the amount established by the Contractor for job overhead costs, defined in the pay applications, divided by the total number of days specified for completion called for in the original Contract. Absent an overhead amount in the Schedule of Values, the amount estimated by Contractor for job overhead cost shall be used.

18. TIME OF COMPLETION

18.01 The date of beginning, the time for Substantial Completion and Final Completion of Work as specified in this Agreement are of the essence of this Agreement.

18.02 The Work embraced by this Agreement shall be commenced on the date specified in the notice to proceed. Said notice to proceed may be given orally or set by the City's Representative at the post-award conference.

18.03 The Work shall be Substantially Completed within the time bid, which shall run from the date when the notice to proceed is given by City's Representative. The Contractor bid calendar days for the time within which it shall reach Substantial Completion of the Project.

18.04 The Work shall reach Final Completion and be ready for final payment within **thirty (30) calendar days** from the date of Substantial Completion.

19. SUBSTANTIAL COMPLETION

19.01 The Contractor shall notify City's Representative when, in the Contractor's opinion, the Contract is Substantially Completed. Within ten (10) calendar days after the Contractor has given City's Representative written notice that the Work has been Substantially Completed, City's Representative shall inspect the Work for the preparation of a final punch list.

- (a) If City's Representative and the City find that the Work is not Substantially Completed, then they shall so notify the Contractor who shall then complete the Work. City's Representative shall not be required to provide a list of unfinished work.
- **(b)** If the City Representative and City find that the Work is Substantially Completed, the City shall issue to the Contractor its certificate of Substantial Completion.
- 19.02 The Substantial Completion of the Work shall not excuse the Contractor from performing all of the Work, whether of a minor or major nature, necessary for Final Completion and thereby completing the Project in accordance with the Contract Documents.

20. FINAL COMPLETION

- **20.01** Contractor shall notify the City's Representative when it believes that the Work has reached Final Completion as defined in Paragraph 1.08. If the City's Representative and the City accept and deems such Work Finally Complete, then Contractor shall be so notified and certificates of completion and acceptance, as provided herein, shall be issued. A complete itemized statement of this Agreement account, certified by the City's Representative as correct, shall then be prepared and delivered to Contractor. Contractor or City, as the case may be, shall pay the balance due as reflected by said statement within thirty (30) calendar days.
- **20.02** The Contractor shall procure all required certificates of acceptance or completions issued by state, municipal, or other authorities and submit the same to the City. The City may withhold any payments due under this Agreement until the necessary certificates are procured and delivered.
- 20.03 Neither the final payment nor any acceptance nor certificate nor any provision of this Agreement shall relieve the Contractor of any responsibility for faulty workmanship or materials. At the option of the City, the Contractor shall remedy any defects and pay for any damage to other work which may appear after final acceptance of the Work.

21. DELAYS

- **21.01** The Contractor, in undertaking to complete the Work within the times herein fixed, has taken into consideration and made allowance for all hindrances and delays incident to such Work, whether growing out of delays in securing material or workmen or delays arising from inclement weather or otherwise.
- **21.02** The City may, in its sole discretion, delay the Work during inclement weather in order to preserve the Project, insure safety of work forces, and the preservation of materials and equipment. In such event and upon a written request from the Contractor, the City may grant an extension of time pursuant to Paragraph 22 to offset for such stoppage of the Work.
- 21.03 No payment or compensation of any kind shall be made to the Contractor for damages because of hindrance or delay in the progress of the Work, unless such delays (1) are caused by the actual interference, fraud, bad faith or misrepresentation by the City or its agents, (ii) extend for an unreasonable length of time; or (iii) were not contemplated by the parties at the time of contracting. In the event of any delay entitling Contractor to an increase in Contract Amount, except when due to City's intentional interference or fraud, Contractor's recovery shall be limited as outlined in subsection 21.04 below. The City's reasonable exercise of any of its rights or remedies under the Contract, regardless of the extent or frequency, shall not under any circumstances be construed as interference with the Contractor's performance of the Work.

21.04 In the event of delays resulting from changes ordered in the Work by the City or other delays caused by the City or for the City's convenience, the Contractor may apply to the City for recovery of incidental damages resulting from increased storage costs or other costs necessary to protect the value of the Work. In no event shall any consequential or other damages be allowed or any other charges or claims be made by the Contractor for hindrances or delays resulting from any other cause.

22. EXTENSIONS OF TIME

- **22.01** The Contractor has submitted its proposal in full recognition of the time required for the completion of this Project, taking into consideration all factors including, but not limited to the average climatic range and industrial conditions. The Contractor has considered the liquidated damage provision of this Agreement and understands and agrees that it shall not be entitled to, nor will it request, an extension of time for either Substantial Completion or Final Completion, except when the Work has been delayed by one or more of the following:
 - (a) An act or neglect of the City, the City's Representative, employees of the City, or other contractors employed by the City;
 - **(b)** By changes ordered in the Work, or reductions thereto approved in writing;
 - (c) By "rain days" (days with rainfall in excess of one-tenth of an inch) during the term of this Agreement that exceed the average number of rain days for such term for this locality, both as determined by the Texas A&M University weather service; or
 - (d) By other causes that the City and the Contractor agree may reasonably justify delay and that were beyond the Contractor's reasonable control and ability to estimate, predict, or avoid, such as delays caused by unforeseen labor disputes, fire, natural disasters, acts of war, and other rare and unpredictable events. This term does **not** include normal delays incident to the delivery of materials, tools, or labor that reasonably could have been predicted and/or accounted for in the Contractor's Proposal or decision to bid.
- 22.02 If one or more of the foregoing conditions is present, the Contractor may apply in writing for an extension of time, within thirty (30) days of the occurrence of the event causing the delay, submitting therewith all written justification as may be required by the City's Representative. Within ten (10) calendar days after receipt of a written request for an extension of time, which is supported by all requested documentation, the City shall, in writing and in its sole discretion, grant or deny the request. Under no circumstances shall any extension of time by the City be valid and binding unless it is in writing and in conformity with the other terms of this Agreement.

23. LIQUIDATED DAMAGES

- 23.01 The time for the Substantial and Final Completion of the Work described herein are reasonable times for the completion of each, taking into consideration all conditions, including but not limited to the average climatic conditions and usual industrial conditions prevailing in this locality. The amount of liquidated damages for the Contractor's failure to meet the deadlines for Substantial and/or Final Completion are fixed and agreed on by the Contractor because of the impracticability and extreme difficulty in fixing and ascertaining the actual damages that the City would in such an event sustain. The amounts to be charged are agreed to be damages the City would sustain and shall be retained by the City from current periodic estimates for payment or from final payment.
- 23.02 As a result of the difficulty in estimation, calculation and ascertainment of City's damages due to a failure of Contractor to achieve timely completion of the Work, if the Contractor should neglect, fail, or refuse to either Substantially Complete or Finally Complete the Work within the time herein specified, or any proper extension

thereof granted by the City's Representative pursuant to the terms of Paragraph 22 of this Agreement, then the Contractor does hereby agree as part of the consideration for the awarding of this Agreement that the City may permanently withhold from the Contractor's total compensation the sum of One Hundred and One Hundred of Contractor's total compensation the sum of One Hundred of Contractor shall be in default after the time stipulated for Substantial Completion and/or Final Completion, not as a penalty, but as liquidated damages for the breach of this Agreement. It being specifically understood that the assessment of liquidated damages may be made for any failure to meet either or both of the deadlines specified for Substantial Completion and/or Final Completion.

24. CHARGES FOR INJURY OR REPAIR

- **24.01** The Contractor shall be liable for any damages incurred or repairs made necessary by reason of its work and/or caused by it. Repairs of any kind required by the City will be made and charged to the Contractor by the City.
- **24.02** The Contractor shall take the necessary precautions to protect any areas adjacent to its Work.
- 24.03 The Work specified consists of all work, materials, and labor required by the City to repair any damage to the property of the City, including but not limited to structures, roadways, curbs, parking areas, and sidewalks.

25. WARRANTY

25.01 Upon issuance of a certificate of Final Completion, the Contractor warrants for a period of one (l) year as follows:

The Contractor warrants that all materials provided to the City under this Agreement shall be new unless otherwise approved in advance by City's Representative, and all work will be of good quality, free from faults and defects, and in conformance with this Agreement, the other Contract Documents, and recognized industry standards.

- 25.02 All work not conforming to these requirements, including but not limited to unapproved substitutions, may be considered defective.
- **25.03** This warranty is in addition to any rights or warranties expressed or implied by law and in addition to any consumer protection claims arising from misrepresentations by the Contractor.
- **25.04** Where more than a one (l) year warranty is specified for individual products, work, or materials, the longer warranty shall govern.
- **25.05** This warranty obligation shall be covered by any performance or payment bonds tendered in compliance with this Agreement.
- **25.06 Defective Work Discovered During Warranty Period.** If any of the Work is found or determined to be either defective, including obvious defects, or otherwise not in accordance with this Agreement within one (l) year after the date of the issuance of a certificate of Final Completion of the Work or a designated portion thereof, whichever is longer, or within one (l) year after acceptance by the City of designated equipment, or within such longer period of time as may be prescribed by law or by the terms of any applicable special warranty required by this Agreement, the Contractor shall promptly, upon receipt of written notice by the City, correct the defective work at no cost to the City.

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- **25.07** The obligation to correct any defective work shall survive the termination of this Agreement. The guarantee to correct the defective work shall not constitute the exclusive remedy of City, nor shall other remedies be limited to the terms of either the warranty or the guarantee.
- **25.08** If within ten (10) calendar days after the City has notified the Contractor of a defect, failure, or abnormality in the Work, the Contractor has not started to make the necessary corrections or adjustments, the City is hereby authorized to make the corrections or adjustments, or to order the Work to be done by a third party. The cost of the work shall be paid by the Contractor or its surety.
- **25.09** The cost of all materials, parts, labor, transportation, supervision, special instruments, and supplies required for the replacement or repair of parts and for correction of defects shall be paid by the Contractor or by the surety.
- **25.10** The guarantee shall be extended to cover all repairs and replacements furnished, and the term of the guarantee for each repair or replacement shall be one (l) year after the installation or completion. The one (l) year warranty shall cover all Work, equipment, and materials that are part of this Project, whether or not a warranty is specified in the individual section of the Contract Documents that prescribe that particular aspect of the Work.

26. PAYMENT OF EMPLOYEES, SUBCONTRACTORS & SUPPLIERS

- **26.01 Wage Rates.** Pursuant to Section 2258.023(a) of the Texas Government Code, wage rates paid by the Contractor and any subcontractor on this Project shall be not less than the general prevailing rate of per diem wages for work of a similar character in this locality as specified in the schedule of general prevailing rates of per diem wages attached hereto as Exhibit A.
- **26.02 Statutory Penalty.** Pursuant to Section 2258.023(b) of the Texas Government Code, if the Contractor or any subcontractor violates the requirements of Paragraph 26.01, the Contractor or subcontractor as the case may be shall pay the City **sixty dollars** (\$60.00) for each worker employed for each calendar day or part of the day that the worker is paid less than the stipulated wage rates.
- 26.03 The Contractor and each subcontractors shall pay all of their employees engaged in work on the Project in full (less mandatory legal deductions) in cash or by check readily cashable, without discount, no less than once each week.
- **26.04** No later than the seventh (7th) calendar day following the payment of wages, the Contractor must file with City's Representative a certified, sworn, legible copy of such payroll. This shall contain the name of each employee, their classification, the number of hours worked on each day, rate of pay, and net pay. The affidavit shall state that the copy is a true and correct copy of such payroll and that no rebates or deductions (except as shown) have been made or will be made in the future from the wages therein shown.
- **26.05 Payment of Subcontractors.** The Contractor shall be solely and exclusively responsible for compensating any of the Contractor's employees, subcontractors, materialmen and/or suppliers of any type or nature whatsoever and for insuring that no claims or liens of any type arising out of or incidental to the performance of any services performed pursuant to this Agreement are filed against any property owned by the City. In the event a statutory lien notice is sent to the City, the Contractor shall, where no payment bond covers the Work, upon written notice from the City, immediately obtain a bond at its expense and hold the City harmless from any losses that may result from the filing or enforcement of any said lien notice. In the event that the

Contractor defaults in the provision of the bond, the City may withhold such funds as are necessary to assure the payment of such claim until litigation determines to whom payment shall be made.

26.06 Affidavit of Bills Paid. Prior to Final Acceptance of the Project, the Contractor shall provide a notarized affidavit stating that all bills for labor, materials, and incidentals incurred have been paid in full, that any claims from manufacturers, materialmen, and subcontractors have been released, and that there are no claims pending of which the Contractor has been notified.

27. INSURANCE

27.01 The Contractor shall procure and maintain at its sole cost and expense for the duration of this Agreement insurance against claims for injuries to persons or damages to property that may arise from or in connection with the performance of the Work hereunder by the Contractor, its agents, representatives, volunteers, employees or subcontractors. The policies, coverages, limits and endorsements required are as set forth below.

During the term of this Agreement Contractor's insurance policies shall meet the minimum requirements of this section.

- **27.02** Types. Contractor shall have the following types of insurance:
 - (a) Commercial General Liability.
 - **(b)** Business Automobile Liability.
 - (c) Excess Liability required for contract amounts exceeding \$1,000,000.
 - (d) Builder's Risk provides coverage for contractor's labor and materials for a project during construction that involves a structure such as a building or garage, builder's risk policy shall be written on "all risks" form.
 - (e) Workers' Compensation/ Employer's Liability.
- **27.03** General Requirements Applicable to All Policies. The following General requirements applicable to all policies shall apply:
 - (a) Only licensed Insurance Carriers authorized to do business in the State of Texas will be accepted.
 - **(b)** Deductibles shall be listed on the Certificate of Insurance and are acceptable only on a per occurrence basis for property damage only.
 - (c) "Claims Made" policies are not accepted.
 - (d) Coverage shall not be suspended, voided, canceled, reduced in coverage or in limits except after thirty (30) days prior written notice has been given to the City of College Station.
 - (e) The City of College Station, its agents, officials, employees and volunteers, are to be named as "Additional Insured" to the Commercial General, Umbrella and Business Automobile Liability policies. The coverage shall contain no special limitations on the scope of protection afforded to the City, its agents, officials, employees or volunteers.
- 27.04 Commercial General Liability. The following Commercial General Liability requirements shall apply:
 - (a) General Liability insurance shall be written by a carrier rated "A:VIII" or better in accordance with the current A.M. Best Key Rating Guide.

- (b) Limit of \$1,000,000.00 per occurrence for bodily injury and property damage with an annual aggregate limit of \$2,000,000.00 which limits shall be endorsed to be per Project.
- (c) Coverage shall be at least as broad as ISO form GC 00 01.
- (d) No coverage shall be excluded from the standard policy without notification of individual exclusions being attached for the City's review and acceptance.
- (e) The coverage shall not exclude the following: premises/operations with separate aggregate; independent contracts; products/completed operations; contractual liability (insuring the indemnity provided herein) Host Liquor Liability, Personal & Advertising Liability; and Explosion, Collapse, and Underground coverage.

27.05 Business Automobile Liability. The following Business Automobile Liability requirements shall apply:

- (a) Business Automobile Liability insurance shall be written by a carrier rated "A:VIII" or better in accordance with the current A.M. Best Key Rating Guide.
- **(b)** Minimum Combined Single Limit of \$1,000,000.00 per occurrence for bodily injury and property damage.
- (c) The Business Auto Policy must show Symbol 1 in the Covered Autos Portion of the liability section in Item 2 of the declarations page.
- (d) The coverage shall include owned autos, leased or rented autos, non-owned autos, any autos and hired autos.
- (e) Pollution Liability coverage shall be provided by endorsement MCS-90, with a limit of \$1,000,000.00, where such exposures exist.

27.06 Excess Liability. The following Excess Liability requirements shall apply:

Unless otherwise agreed in writing, excess liability coverage following the form of the underlying coverage with a minimum limit of \$5,000,000.00 or the total value of the Agreement, whichever is greater, per occurrence/aggregate when combined with the lowest primary liability coverage, is required for contracts exceeding \$1,000,000 in total value.

27.07 Additional Insured.

Those policies set forth in Paragraphs 27.04, 27.05, and 27.06 shall contain an endorsement listing the City as Additional Insured and further providing that the Contractor's policies are primary to any self-insurance or insurance policies procured by the City. The additional insured endorsement shall be in a form acceptable to the City. Waiver of subrogation in a form acceptable to the City shall be provided in favor of the City on all policies obtained by the Contractor in compliance with the terms of this Agreement. Contractor shall be responsible for all deductibles which may exist on any policies obtained in compliance with the terms of this Agreement. All coverage for subcontractors shall be subject to the requirements stated herein. All Certificates of Insurance and endorsements shall be furnished to the City's Representative at the time of execution of this Agreement, attached hereto as Exhibit C, and approved by the City before Work commences.

27.08 Builder's Risk

Until the Work is completed and accepted by the City, the Contractor shall purchase and maintain builder's risk insurance upon the entire Work at the Project site to the full insurable value thereof. The builder's risk insurance shall also cover portions of the Work stored off site after written approval of the City of the value established in the approval, and also portions of the Work in transit. This insurance shall include the interests of the City, the Contractor, subcontractors and sub-subcontractors in the Work and shall insure against the perils of fire, wind, storm, hail, lightning and extended coverage including flood and earthquake and shall include all-risk insurance for physical loss or damage, including, without duplication of coverage, theft, vandalism and malicious mischief. The insurance shall cover reasonable compensation for City's Consultant's services and expenses required as a result of an insured loss. This must be an all-risk policy incorporating the following language:

Permission is given for the Project insured hereunder to become occupied, the insurance remaining in full force and effect until such time as the Project has been accepted by the City, all as currently approved by the Texas Board of Insurance Commissioners

When permissible by law, the Certificate of Insurance must include the names of the insured Contractor and the City. The deductible under the policy, including that for flood shall not exceed \$100,000.00 without the written approval of the City.

27.09 Workers' Compensation/Employer's Liability Insurance. The following Workers' Compensation Insurance requirements shall apply.

- Pursuant to the requirements set forth in Title 28, Section 110.110 of the Texas Administrative Code, all employees of the Contractor, all employees of any and all subcontractors, and all other persons providing services on the Project must be covered by a workers' compensation insurance policy: either directly through their employer's policy (the Contractor's or subcontractor's policy) or through an executed coverage agreement on an approved Texas Department of Insurance Division of Workers' Compensation (DWC) form. Accordingly, if a subcontractor does not have his or her own policy and a coverage agreement is used, contractors and subcontractors must use that portion of the form whereby the hiring contractor agrees to provide coverage to the employees of the subcontractor. The portion of the form that would otherwise allow them not to provide coverage for the employees of an independent contractor may not be used.
- **(b)** Workers' Compensation/ Employer's Liability insurance shall include the following terms:
 - 1. Employer's Liability minimum limits of \$1,000,000.00 for each accident/each disease/each employee are required.
 - 2. "Texas Waiver of Our Right to Recover From Others Endorsement, WC 42 03 04" shall be included in this policy.
 - 3. Texas must appear in Item 3A of the Workers' Compensation coverage or Item 3C must contain the following: All States except those listed in Item 3A and the States of NV, ND, OH, WA, WV, and WY.

(c) Pursuant to the explicit terms of Title 28, Section 110.110(c) (7) of the Texas Administrative Code, the bid specifications, this Agreement, and all subcontracts on this Project must include the following terms and conditions in the following language, without any additional words or changes, except those required to accommodate the specific document in which they are contained or to impose stricter standards of documentation:

"A. Definitions:

Certificate of coverage ("certificate") – An original certificate of insurance, a certificate of authority to self-insure issued by the Division of Workers' Compensation, or a coverage agreement (DWC-81, DWC-83, or DWC-84), showing statutory workers' compensation insurance coverage for the person's or entity's employees providing services on a project, for the duration of the project.

Duration of the project - includes the time from the beginning of the Work on the project until the Contractor's/person's Work on the project has been completed and accepted by the governmental entity.

Persons providing services on the project ("subcontractors" in § 406.096 [of the Texas Labor Code]) - includes all persons or entities performing all or part of the services the Contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the Contractor and regardless of whether that person has employees. This includes, without limitation, independent Contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage vendors, office supply deliveries, and delivery of portable toilets.

- B. The Contractor shall provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, that meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all employees of the Contractor providing services on the project, for the duration of the project.
- C. The Contractor must provide a certificate of coverage to the governmental entity prior to being awarded the contract.
- D. If the coverage period shown on the Contractor's current certificate of coverage ends during the duration of the project, the Contractor must, prior to the end of the coverage period, file a new certificate of coverage with the governmental entity showing that coverage has been extended.
- E. The Contractor shall obtain from each person providing services on a project, and provide to the governmental entity:
 - (1) a certificate of coverage, prior to that person beginning work on the project, so the governmental entity will have on file certificates of coverage showing coverage for all

- (2) no later than seven calendar days after receipt by the Contractor, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project.
- F. The Contractor shall retain all required certificates of coverage for the duration of the project and for one year thereafter.
- G. The Contractor shall notify the governmental entity in writing by certified mail or personal delivery, within 10 calendar days after the Contractor knew or should have known, or any change that materially affects the provision of coverage of any person providing services on the project.
- H. The Contractor shall post on each project site a notice, in the text, form and manner prescribed by the Division of Workers' Compensation, informing all persons providing services on the project that they are required to be covered, and stating how a person may verify coverage and report lack of coverage.
- I. The Contractor shall contractually require each person with whom it contracts to provide services on a project, to:
 - (1) provide coverage, based on proper reporting of classification codes and payroll amounts and filing of any coverage agreements, that meets the statutory requirements of Texas Labor Code, Section 401.011(44) for all of its employees providing services on the project, for the duration of the project;
 - (2) provide to the Contractor, prior to that person beginning work on the project, a certificate of coverage showing that coverage is being provided for all employees of the person providing services on the project, for the duration of the project;
 - (3) provide the Contractor, prior to the end of the coverage period, a new certificate of coverage showing extension of coverage, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (4) obtain from each other person with whom it contracts, and provide to the Contractor:
 - (a) A certificate of coverage, prior to the other person beginning work on the project; and
 - (b) A new certificate of coverage showing extension of coverage, prior to the end of the coverage period, if the coverage period shown on the current certificate of coverage ends during the duration of the project;
 - (5) retain all required certificates of coverage on file for the duration of the project and for one year thereafter;
 - (6) notify the governmental entity in writing by certified mail or personal delivery, within 10 calendar days after the person knew or should have known, of any change that

materially affects the provision of coverage of any person providing services on the project; and

- (7) Contractually require each person with whom it contracts to perform as required by paragraphs (a) (g), with the certificates of coverage to be provided to the person for whom they are providing services.
- J. By signing this Agreement, or providing, or causing to be provided a certificate of coverage, the Contractor is representing to the governmental entity that all employees of the Contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project; that the coverage will be based on proper reporting of classification codes and payroll amounts; and that all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the Commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the Contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.
- K. The Contractor's failure to comply with any of these provisions is a breach of contract by the Contractor that entitles the governmental entity to declare the Agreement void if the Contractor does not remedy the breach within ten calendar days after receipt of notice of breach from the governmental entity."
- **27.09** Certificates of Insurance. Certificates of Insurance shall be prepared and executed by the insurance company or its authorized agent on the most current State of Texas Department of Insurance-approved form, and shall contain the following provisions and warranties:
 - (a) The company is authorized to do business in the State of Texas.
 - (b) The insurance policies provided by the insurance company are underwritten on forms that have been provided by the Department of Insurance or ISO.
 - (c) Original endorsements affecting coverage required by this section shall be furnished with the certificates of insurance.

28. BOND PROVISIONS

- **28.01** Pursuant to Section 2253.021 of the Texas Government Code, for all public works contracts with governmental entities, a payment bond is required if the Contract Amount exceeds \$50,000, and a performance bond is required if the Contract Amount exceeds \$100,000. Below those amounts, the City *may* require payment and/or performance bonds. In the event a performance or payment bond or both is required either by law or in the City's discretion, such bonds shall be executed in accordance with all requirements of Chapter 3503 of the Texas Insurance Code, all other applicable law, and the following:
 - (a) The Contractor shall execute performance and payment bonds for the full Contract Amount.
 - **(b)** The bond surety shall be authorized under the laws of the State of Texas to provide a performance and payment bond and shall have attached proof of authorization of the surety to act in the performance and payment of bonds.
 - (c) The Contractor shall provide original, sealed, and complete counterparts of the executed bonds in the forms required by the Contract Documents, which are attached as Exhibit B, together with valid

original powers of attorney, at the time of execution of this Agreement by Contractor and prior to the commencement of work. Copies of the executed bonds shall be attached hereto as Exhibit B.

- (d) The performance and payment bonds shall remain in effect for a period of one (1) year after Final Completion of the Work and shall be extended for any warranty work to cover the warranty period.
- (e) If at any time during the execution of this Agreement in the required period thereafter, the bond or bonds become invalid or ineffective for any reason, the Contractor shall promptly supply within ten (10) days such other bond or bonds, which bond or bonds shall assure performance or payment as required.
- **28.02** The Contractor may make such changes and alterations as the City may require in the Work or any part thereof without affecting the validity of this Agreement and any accompanying bond. If such changes or alterations diminish the quantity of the work to be done, they shall not constitute the basis for any claim for damages or anticipated profits. If the City makes changes or alterations that render useless any work already done or material already used in said work, then the City shall compensate the Contractor for any material or labor so used, and for any actual loss occasioned by such change due to actual expenses incurred in preparation for the Work as originally planned, in accordance with the provisions of Article 17.

29. SURETY

- **29.01** If the Contractor has abandoned the Project or the City has terminated the Contract for cause and the Contractor's Surety, after notice demanding completion is sent, fails to commence the completion of the Work in compliance with this Agreement, then the City <u>at its option</u> may provide for completion of the Work in either of the following manners:
 - (a) The City may employ such force of men and use of instruments, machinery, equipment, tools, materials, and supplies as said the City may deem necessary to complete the Work and charge the expense of such labor, machinery, equipment, tools, materials, and supplies to the Contractor, and the expense so charged shall be deducted and paid by the City out of such monies as may be due or that may thereafter at any time become due to the Contractor and Surety.
 - (b) The City may, after notice published as required by law, accept sealed bids and let this Agreement for the completion of the Work under substantially the same terms and conditions that are provided in this Agreement. In case of any increase in cost to the City under the new agreement as compared to what would have been the cost under this Agreement, such increase together with all of the City's damages due to Contractor's abandonment and/or default, including liquidated damages, as provided pursuant to Paragraph 38, entitled "TERMINATION FOR CAUSE" shall be charged to the Contractor and the surety shall be and remain bound therefor. However, should the cost to complete such new agreement prove to be less than that which would have been the cost to complete the Work under this Agreement, the Contractor shall be credited therewith after all deductions are made in accordance with this Agreement.
- 29.02 Should the cost to complete the Work exceed the Contract Amount and the Contractor fails to pay the amount due to the City within the time designated and there remains any machinery, equipment, tools, materials, or supplies on the Project site, notice thereof, together with an itemized list of such equipment and materials, shall be mailed to the Contractor at its respective address designated in this Agreement; provided, however, that actual written notice given in any manner shall satisfy this condition. After mailing, or otherwise giving such notice, such property shall be held at the risk of the Contractor subject only to the duty of City's Representative to exercise ordinary care to protect such property. After fifteen (15) calendar days from the date of said notice, City's Representative may sell such machinery, equipment, tools, materials, or supplies and apply the net sum derived

from such sale to the credit of the Contractor. Such sale may be made at either public or private sale, with or without notice, as City's Representative may elect. City's Representative shall release any machinery, equipment, tools, materials, or supplies which remain on the job site and belong to persons other than the Contractor to their proper owners.

29.03 In the event the account shows that the cost to complete the Work is less than that which would have been the cost to City had the Work been completed by the Contractor under the terms of this Agreement, or when the Contractor shall pay the balance shown to be due by them to the City, then all machinery, equipment, tools, materials, or supplies left on the Project site shall be turned over to the Contractor.

30. COMPLIANCE WITH LAW

- **30.01** The Contractor's work and materials shall comply with all state and federal laws, municipal ordinances, regulations, codes, and directions of inspectors appointed by proper authorities having jurisdiction.
- **30.02** The Contractor shall perform and require all subcontractors to perform the Work in accordance with applicable laws, codes, ordinances, and regulations of the State of Texas and the United States and in compliance with OSHA and other laws as they apply to its employees. In the event any of the conditions of the specifications violate the code for any industry, then such code conditions shall prevail.
- **30.03** The Contractor shall follow all applicable state and federal laws, municipal ordinances, and guidelines concerning soil erosion and sediment control throughout the Project and warranty term.

31. SAFETY PRECAUTIONS

- **31.01** All safety measures, policies and precautions at the site are a part of the construction techniques and processes for which the Contractor shall be solely responsible. The Contractor is solely responsible for handling and use of hazardous materials or waste, and informing employees of any such hazardous materials or waste. The Contractor shall provide copies of all hazardous materials and waste data sheets to the College Station Fire Department marked "Attn.: Assistant Chief".
- **31.02** The Contractor has the sole obligation to protect or warn any individual of potential hazards created by the performance of the Work set forth herein. The Contractor shall, at its own expense, take such precautionary measures for the protection of persons, property, and the Work as may be necessary.
- 31.03 The Contractor shall be held responsible for all damages to property, personal injuries and/or death due to failure of safety devices of any type or nature that may be required to protect or warn any individual of potential hazards created by the performance of the Work set forth herein; and when any property damage is incurred, the damaged portion shall immediately be replaced or compensated for by the Contractor at its own cost and expense.
- 31.04 Contractor agrees that it shall not transport to, use, generate, dispose of, or install at the Project site any Hazardous Substance (as defined in section 1.11, except in accordance with applicable Environmental Laws. Further, in performing the Work, Contractor shall not cause any release of Hazardous Substances into, or contamination of, the environment, including the soil, the atmosphere, any water course or ground water, except in accordance with applicable Environmental Laws (as defined in section 1.12). In the event Contractor engages in any of the activities prohibited in this section 31.04 to the fullest extent permitted by law, Contractor hereby indemnifies and holds City and all of its respective officials, agents and employees harmless from and against any and all claims, damages, losses, causes of action, suits and liabilities of every

kind, including, but not limited to, expenses of litigation, court costs, punitive damages and attorneys' fees, arising out of, incidental to or resulting from the activities prohibited in this section 31.04.

- 31.05 In the event Contractor encounters on the Project site any Hazardous Substance, or what Contractor may reasonably believe to be a Hazardous Substance, and which is being introduced to the Work, or exists on the Project site, in a manner violative of any applicable Environmental Laws, Contractor shall immediately stop work in the area affected and report the condition to City in writing. The Work in the affected area shall not thereafter be resumed except by written authorization of City if in fact a Hazardous Substance has been encountered and has not been rendered harmless. In the event Contractor fails to stop the Work upon encountering a Hazardous Substance at the Project site, to the fullest extent permitted by law, Contractor hereby indemnifies and holds City and all of its officials, agents and employees harmless from and against any and all claims, damages, losses, causes of action, suits and liabilities of every kind, including, but not limited to, expenses of litigation, court costs, punitive damages and attorneys' fees, arising out of, incidental to or resulting from Contractor's failure to stop the Work.
- 31.06 City and Contractor may enter into a separate agreement and/or Change Order for Contractor to remediate and/or render harmless the Hazardous Substance, but Contractor shall not be required to remediate and/or render harmless the Hazardous Substance absent such agreement. Contractor shall not be required to resume work in any area affected by the Hazardous Substance until such time as the Hazardous Substance has been remediated and/or rendered harmless.
- **31.07** It is the Contractor's responsibility to comply with all Environmental Laws (as defined in section 1.10 of this Agreement) based on the law in effect at the time its services are rendered and to comply with any amendments to those laws for all services rendered after the effective date of any such amendments.

32. TRENCH SAFETY

The Contractor must comply with Texas law regarding trench excavation exceeding five feet in depth and in accordance with the following items:

- **32.01** The Contractor must comply with the requirements of Subchapter 756 of the Tex. Health & Safety Code Ann. §756.022-023, and the requirements of 29 C.F.R., Subpart P Excavations (sections 1926.650 et. seq.) of the Occupational Safety and Health Administration Standards, as amended.
- 32.02 The Contractor must include a separate pay item for trench safety complying with trench safety requirements, stating a unit price per linear foot of trench safety systems, as measured along the centerline of trench including manholes and other line structures.
- **32.03** Before beginning work on this project, the Contractor must submit to the City a complete trench safety program that complies with state and federal regulations. It is the sole duty, responsibility and prerogative of the Contractor, not the City, to determine the specific applicability of the designed trench safety systems to each field condition encountered on the project.
- **32.04** The Contractor must provide the City the name of the "competent person" required by OSHA standards to perform the trench safety inspections. The Contractor must make daily inspections to ensure that the systems comply with all applicable laws and regulations, and must maintain a permanent record of daily inspections available for examination by the City or other government authority.

32.05 If evidence of possible cave-ins or slides is apparent, the Contractor must cease all work in the trench and surrounding area until the necessary precautions have been taken by the Contractor to safeguard personnel entering the trench.

33. INDEMNITY

33.01 CONTRACTOR SHALL PROTECT, DEFEND, HOLD HARMLESS AND INDEMNIFY THE CITY FROM ANY AND ALL CLAIMS, DEMANDS, EXPENSES, LIABILITY OR CAUSES OF ACTION FOR INJURY TO ANY PERSON, INCLUDING DEATH, AND FOR DAMAGE TO ANY PROPERTY, TANGIBLE OR INTANGIBLE, OR FOR ANY BREACH OF CONTRACT ARISING OUT OF OR IN ANY MANNER CONNECTED WITH THE WORK DONE BY ANY PERSON UNDER THE CONTRACT DOCUMENTS. IT IS THE INTENT OF THE PARTIES THAT THIS PROVISION SHALL EXTEND TO, AND INCLUDE, ANY AND ALL CLAIMS, CAUSES OF ACTION OR LIABILITY CAUSED BY THE CONCURRENT, JOINT AND/OR CONTRIBUTORY NEGLIGENCE OF THE CITY, AN ALLEGED BREACH OF AN EXPRESS OR IMPLIED WARRANTY BY THE CITY OR WHICH ARISES OUT OF ANY THEORY OF STRICT OR PRODUCTS LIABILITY.

33.02 The indemnification contained in paragraphs 33.01 shall include but not be limited to the following specific instances:

- (a) The City is damaged due to the act, omission, mistake, fault or default of the Contractor.
- (b) In the event of any claims for payment for goods or services brought by any material suppliers, mechanics, laborers, or other subcontractors.
- (c) In the event of any and all injuries to or claims of adjacent property owners caused by the Contractor, its agents, employees, and representatives.
- (d) In the event of any damage to the floor, walls, etc., caused by the Contractor's personnel or equipment during installation.
- (e) The removal of all debris related to the Work.
- (f) The acts and omissions of the subcontractors it hired.
- (g) The Contractor's failure to comply with applicable federal, state, or local regulations, that touch upon or concern the maintenance of a safe and protected working environment and the safe use and operation of machinery and equipment in that working environment, no matter where fault or responsibility lies.
- 33.03 The indemnification obligations of the Contractor under this section shall <u>not</u> extend to include the liability of any professional engineer, the architect, their consultants, and agents or employees of any of them arising out of (1) the preparation or approval of maps, drawings, opinions, reports, surveys, Change Orders, designs or specifications, or (2) the giving of or the failure to give directions or instructions by the professional engineer, the architect, their consultants, and agents and employees of any of them, provided such giving or failure to give is the primary cause of the injury or damage.

33.04 It is agreed with respect to any legal limitations now or hereafter in effect and affecting the validity or enforceability of the indemnification obligation under Paragraph 33.01, such legal limitations are made a part of the indemnification obligation and shall operate to amend the indemnification obligation to the minimum extent necessary to bring the provision into conformity with the requirements of such limitations, and as so modified, the indemnification obligation shall continue in full force and effect.

33.05 The indemnity provisions provided herein shall survive the termination or expiration of this Agreement.

33.06 The indemnification obligations under this section shall not be limited by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor under workers compensation acts, disability benefit acts or other employee benefit acts. There shall be no additional indemnification other than as set forth in this section. All other provisions regarding the same subject matter shall be declared void and of no effect.

34. RELEASE

34.01 The Contractor assumes full responsibility for the Work to be performed hereunder, and hereby releases, relinquishes, and discharges the City, its officers, agents, and employees from all claims, demands, and causes of action of every kind and character, including the cost of defense thereof, for any injury to or death of any person (whether employees of either party or other third parties) and any loss of or damage to any property (whether property of either of the parties hereto, their employees, or of third parties) that is caused by or alleged to be caused by, arising out of, or in connection with the Contractor's Work to be performed hereunder. This release shall apply regardless of whether said claims, demands, and causes of action are covered in whole or in part by insurance, and in the event of injury, death, property damage, or loss suffered by the Contractor, any subcontractor, or any person or organization directly or indirectly employed by any of them to perform or furnish work on the Project, this release shall apply regardless of whether such injury, death, loss, or damage was caused in whole or in part by the negligence of the City. There shall be no additional release or hold harmless provision other than as set forth in this section. All other provisions regarding the same subject matter shall be declared void and of no effect.

35. PERMITS AND LICENSES

35.01 The Contractor shall secure and pay for all necessary permits and licenses, governmental fees, and inspections necessary for the proper execution and completion of the Work. During this Agreement term and/or period during which the Contractor is working, it shall give all notices and comply with all laws, ordinances, rules, regulations, and lawful orders of any public authority bearing on the performance of the Work.

36. ROYALTIES AND LICENSING FEES

36.01 THE CONTRACTOR SHALL PAY ALL ROYALTIES AND LICENSING FEES. THE CONTRACTOR SHALL HOLD THE CITY HARMLESS AND INDEMNIFY THE CITY FROM THE PAYMENT OF ANY ROYALTIES, DAMAGES, LOSSES OR EXPENSES INCLUDING ATTORNEY'S FEES FOR SUITS, CLAIMS OR OTHERWISE, GROWING OUT OF INFRINGEMENT OR ALLEGED INFRINGEMENT OF PATENTS, MATERIALS AND METHODS USED IN THE PROJECT. IT SHALL DEFEND ALL SUITS OR CLAIMS FOR INFRINGEMENT OF ANY PATENT RIGHTS. FURTHER, IF THE CONTRACTOR HAS REASON TO BELIEVE THAT THE DESIGN, SERVICE, PROCESS, OR PRODUCT

SPECIFIED IS AN INFRINGEMENT OF A PATENT, IT SHALL PROMPTLY GIVE SUCH INFORMATION TO CITY'S REPRESENTATIVE.

37. BREACH OF CONTRACT & DAMAGES

- **37.01** The City shall have the right to declare the Contractor in breach of this Agreement for cause when the City determines that this Agreement is not being performed according to its understanding of the intent and meaning of this Agreement. Such breach shall not in any way invalidate, abrogate, or terminate the Contractor's obligations under this Agreement.
- 37.02 Without prejudice to any other legal or equitable right or remedy that the City would otherwise possess hereunder or as a matter of law, the City upon giving the Contractor five (5) calendar days prior written notice shall be entitled to damages for breach of contract, upon but not limited to the following occurrences:
 - (a) If the Contractor shall fail to remedy any default after written notice thereof from City's Representative, as City's Representative shall direct; or
 - **(b)** If the Contractor shall fail for any reason other than the failure by City's Representative to make payments called upon when due; or
 - (c) If the Contractor commits a substantial default under any of the terms, provisions, conditions, or covenants contained in this Agreement.

38. TERMINATION FOR CAUSE

- **38.01** At any time, and without prejudice to any other legal or equitable right or remedy that the City would otherwise possess hereunder or as a matter of law, the City upon giving the Contractor five (5) calendar days prior written notice shall be entitled to terminate this Agreement in its entirety for any of the following:
 - (a) If the Contractor becomes insolvent, commits any act of bankruptcy, makes a general assignment for the benefit of creditors, or becomes the subject of any proceeding commenced under any statute or law for the relief of debtors and, after notice, fails to provide adequate assurance that it can remedy all of its defaults; or
 - **(b)** If a receiver, trustee, or liquidator of any of the property or income of the Contractor is appointed; or
 - (c) If the Contractor fails to prosecute the Work or any part thereof with diligence necessary to insure its progress and completion as prescribed by the time schedules; or
 - (d) If the Contractor fails to remedy any default within ten (10) calendar days after written notice thereof from City's Representative, as City's Representative shall direct; or
 - (e) If the Contractor fails for any reason other than the failure by City's Representative to make payments called upon when due; or
 - (f) If the Contractor abandons the Work.

(g) If the Contractor commits a material default under any of the terms, provisions, conditions, or covenants contained in this Agreement.

39. TERMINATION FOR CONVENIENCE

39.01 The performance of the Work may be terminated at any time in whole or, from time to time, in part, by the City for its convenience. Any such termination shall be effected by delivery to the Contractor of a written notice (notice of termination) specifying the extent to which performance of the Work is terminated, and the date upon which termination becomes effective.

39.02 In the event of termination for convenience, the Contractor shall only be paid the reasonable value of the Work performed prior to the effective date of the termination notice and shall be further subject to any claim the City may have against the Contractor under other provisions of this Agreement or as a matter of law. In the event of termination for convenience, Contractor <u>Waives and Releases</u> any claim for lost profit, other than profit on Work performed prior to the effective date of such termination.

40. RIGHT TO COMPLETE

40.01 If this Agreement is terminated for cause, the City shall have the right but shall not be obligated to complete the Work itself or by others; and to this end, the City shall be entitled to take possession of and use such equipment, without rental obligation therefor, and materials as may be on the job site, and to exercise all rights, options, and privileges of the Contractor under its subcontracts, purchase orders, or otherwise; and the Contractor shall promptly assign such rights, options, and privileges to City. If the City elects to complete the Work itself or by others, pursuant to the foregoing, then the Contractor and/or Contractor's surety will reimburse City for all costs incurred by the City (including, without limitation, applicable, general, administrative expenses, field overhead, the cost of necessary equipment, materials, field labor, additional fees paid to architects, engineers, attorneys or others to assist the City in connection with the termination and liquidated damages) in completing and/or correcting work by the Contractor that fails to meet any requirement of this Agreement or the other Contract Documents.

41. CLOSE OUT

- **41.01** After receipt of a notice of termination, whether for cause or convenience, unless otherwise directed by City's Representative, the Contractor shall, in good faith and to the best of its ability, do all things necessary in the light of such notice to assure the efficient and proper closeout of the terminated work (including the protection of City's property). Among other things, the Contractor shall, except as otherwise directed or approved by City's Representative, do the following:
 - (a) Stop the work on the date and to the extent specified in the notice of termination;
 - **(b)** Place no further orders or subcontracts for services, equipment, or materials, except as may be necessary for completion of such portion of the Work as is not terminated;
 - (c) Terminate all orders and subcontracts to the extent that they relate to the performance of the Work terminated by the notice of termination;

- (d) Assign to City's Representative, in the manner and to the extent directed by it, all of the right, title, and interest of the Contractor under the orders or subcontracts so terminated; in which case, City's Representative shall have the right to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
- (e) With the approval of City's Representative, settle all outstanding liabilities and all claims arising out of such termination, orders, and subcontracts; and/or
- (f) Deliver to City's Representative, when directed by City's Representative, all documents and all property, which if the Work had been completed, Contractor would have been required to account for or deliver to City's Representative, and transfer title to such property to City's Representative to the extent not already transferred.

42. TERMINATION CONVERSION

42.01 Upon determination of Court of competent jurisdiction that termination of the Contractor pursuant to Paragraph 38 was wrongful and/or otherwise improper, such termination will be deemed converted to a termination for convenience pursuant to Paragraph 39 and Contractor's remedy for such termination shall be limited to the recovery of the payments permitted for termination for convenience as set forth in Paragraph 39.

43. HIRING

43.01 During the term of this Agreement and for a period of one (1) year thereafter, the Contractor agrees not to solicit for hire any employee or employees of the City that were associated with work specified under this Agreement. In the event that this provision is breached by the Contractor, the Contractor agrees to pay the City damages in the amount equal to twelve (12) months of the employee's total compensation plus any legal expenses associated with enforcement of this provision.

44. ASSIGNMENT

44.01 This Agreement and the rights and obligations contained herein may not be assigned by the Contractor without the prior written approval of the City.

45. EFFECTIVE DATE

45.01 This Agreement goes into effect when duly approved by all the parties hereto and is contingent upon Contractor obtaining the bonds required herein.

46. OTHER TERMS

- **46.01 Invalidity.** If any provision of this Agreement shall be held to be invalid, illegal or unenforceable by a court or other tribunal of competent jurisdiction, the validity, legality, and enforceability of the remaining provisions shall not in any way be affected or impaired thereby. The parties shall use their best efforts to replace the respective provision or provisions of this Agreement with legal terms and conditions approximating the original intent of the parties.
- **46.02 Prioritization.** Contractor and City agree that City is a political subdivision of the State of Texas and is thus subject to certain laws. Because of this there may be documents or portions thereof added by Contractor to this Agreement as exhibits that conflict with such laws, or that conflict with the terms and conditions herein

excluding the additions by Contractor. In either case, the applicable law or the applicable provision of this Agreement excluding such conflicting addition by Contractor shall prevail. The parties understand this section comprises part of this Agreement without necessity of additional consideration.

- **46.03 Written Notice.** Unless otherwise specified, written notice shall be deemed to have been duly served if delivered in person to the individual or to a member of the firm or to any officer of the corporation for whom it is intended or if it is delivered or sent certified mail to the last business address as listed herein. Each party will have the right to change its business address by at least thirty (30) calendar days written notice to the other parties in writing of such change.
- **46.04** Entire Agreement. It is understood that this Agreement contains the entire agreement between the parties and supersedes any and all prior agreements, arrangements, or understandings between the parties relating to the subject matter. No oral understandings, statements, promises or inducements contrary to the terms of this Agreement exist. This Agreement cannot be changed or terminated orally. No verbal agreement or conversation with any officer, agent or employee of the City, either before or after the execution of this Agreement, shall affect or modify any of the terms or obligations hereunder.
- **46.05 Amendment.** No amendment to this Agreement shall be effective and binding unless and until it is reduced to writing and signed by duly authorized representatives of both parties.
- **46.06 Mediation.** After receipt of a written notice of a claim, the City may elect to refer the matter to the City's Consultant, City's Representative or another party for review. Contractor will attend meetings called to review and discuss the claims and mitigation of the problem, and shall furnish any reasonable factual backup for the claim requested. The City may also elect to defer consideration of the claim until the Work is completed, in which case the same review options shall be available to the City at the completion of the Work. At any stage, the City, at its sole discretion, is entitled to refer a claim to mediation under the Construction Industry Mediation Rules of the American Arbitration Association, and, if this referral is made, Contractor will take part in the mediation process. The filing, mediation or rejection of a claim does not entitle Contractor to stop performance of the Work. The Contractor shall proceed diligently with performance of the Contract during the pendency of any claim, excepting termination or under City's direction to stop the Work. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof. The parties shall share the Mediator's fee and any filing fees equally and the Mediation shall be held in College Station, Texas.
- **46.07 Arbitration.** In the event of a dispute and upon the mutual written consent of both parties, the parties may agree to arbitration without waiving any of their other rights hereunder.
- **46.08** Choice of Law and Place of Performance. This Agreement has been made under and shall be governed by the laws of the State of Texas. Performance and all matters related thereto shall be in Brazos County, Texas, United States of America.
- **46.09 Authority to do business.** The Contractor represents that it has a certificate of authority, authorizing it to do business in the State of Texas, a registered agent and registered office during the duration of this Agreement.
- **46.10 Authority to Contract.** Each party has the full power and authority to enter into and perform this Agreement, and the person signing this Agreement on behalf of each party has been properly authorized and empowered to enter into this Agreement. The persons executing this Agreement hereby represent that they have authorization to sign on behalf of their respective corporations.

- **46.11 Waiver.** Failure of any party, at any time, to enforce a provision of this Agreement shall in no way constitute a waiver of that provision nor in any way affect the validity of this Agreement, any part hereof, or the right of the City thereafter to enforce each and every provision hereof. No term of this Agreement shall be deemed waived or breach excused unless the waiver shall be in writing and signed by the party claimed to have waived. Furthermore, any consent to or waiver of a breach will not constitute consent to or waiver of or excuse of any other different or subsequent breach.
- **46.12 Headings, Gender, Number.** The article headings are used in this Agreement for convenience and reference purposes only and are not intended to define, limit, or describe the scope or intent of any provision of this Agreement and shall have no meaning or effect upon its interpretation. Words of any gender used in this Agreement shall be held and construed to include any other gender, and words in the singular number shall be held to include the plural, and vice versa, unless the context requires otherwise.
- **46.13** Agreement Read. The parties acknowledge that they have had opportunity to consult with counsel of their choice, have read, understand and intend to be bound by the terms and conditions of this Agreement.
- **46.14 Multiple Originals.** It is understood and agreed that this Agreement may be executed in a number of identical counterparts, each of which shall be deemed an original for all purposes.
- 46.15 Notice of Indemnification. City and Contractor hereby acknowledge and agree that this Agreement contains certain indemnification obligations and covenants.
- **46.16 Verification No Boycott Israel.** To the extent this Contract is considered a contract for goods or services subject to § 2270.002 Texas Government Code, Contractor verifies that it i) does not boycott Israel; and ii) will not boycott Israel during the term of this Contract.

List of Exhibits

- A. Wage Rates
- **B.** Performance & Payment Bonds
- C. Certificates of Insurance
- D. Plans & Specifications
- E. Construction Schedule
- F. Schedule of Values

| PROGRESSIVE COMMERCIAL |
|------------------------|
| AQUATICS, INC. |

CITY OF COLLEGE STATION

Date: _____

EXHIBIT A DAVIS BACON WAGE RATES

DAVIS BACON WAGE RATES

"General Decision Number: TX20210007 01/01/2021

Superseded General Decision Number: TX20200007

State: Texas

Construction Types: Heavy and Highway

Counties: Atascosa, Bandera, Bastrop, Bell, Bexar, Brazos, Burleson, Caldwell, Comal, Corvell, Guadalupe, Hays, Kendall, Lampasas, McLennan, Medina, Robertson, Travis, Williamson and Wilson Counties in Texas.

HEAVY (excluding tunnels and dams, not to be used for work on Sewage or Water Treatment Plants or Lift/Pump Stations in Bell, Coryell, McClennon and Williamson Counties) and HIGHWAY Construction Projects

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.95 for calendar year 2021 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.95 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2021. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number Publication Date 01/01/2021

| * SUTX2011-006 08/03/2011 | Rates | Fringes |
|---|---------------------|---------|
| ELECTRICIAN | \$ 26.35 | |
| FORM BUILDER/FORM SETTER Paving & Curb Structures | | |
| LABORER Asphalt RakerFlaggerLaborer, CommonLaborer, Utility | \$ 9.45 \$ 10.50 | |

| Pipelayer\$ | 12.79 |
|-------------------------------|--------|
| Work Zone Barricade | |
| Servicer\$ | 11.85 |
| PAINTER (Structures)\$ | 18.34 |
| POWER EQUIPMENT OPERATOR: | |
| Agricultural Tractor\$ | 12.69 |
| Asphalt Distributor\$ | |
| Asphalt Paving Machine\$ | |
| Boom Truck\$ | |
| Broom or Sweeper\$ | |
| Concrete Pavement | |
| Finishing Machine\$ | 15.48 |
| Crane, Hydraulic 80 tons | |
| or less\$ | 18 36 |
| Crane, Lattice Boom 80 | 10.50 |
| tons or less\$ | 15.87 |
| Crane, Lattice Boom over | 13.07 |
| 80 tons\$ | 10 38 |
| Crawler Tractor\$ | |
| Directional Drilling | 13.07 |
| Locator\$ | 11.67 |
| Directional Drilling | 11.07 |
| Operator\$ | 17 24 |
| | 17.24 |
| Excavator 50,000 lbs or | 12.00 |
| Less\$ | |
| Excavator over 50,000 lbs\$ | 1/./1 |
| Foundation Drill, Truck | 1 6 00 |
| Mounted\$ | 16.93 |
| Front End Loader, 3 CY or | 1001 |
| Less\$ | 13.04 |
| Front End Loader, Over 3 CY\$ | |
| Loader/Backhoe\$ | |
| Mechanic\$ | |
| Milling Machine\$ | |
| Motor Grader, Fine Grade\$ | |
| Motor Grader, Rough\$ | |
| Pavement Marking Machine\$ | |
| Reclaimer/Pulverizer\$ | |
| Roller, Asphalt\$ | |
| Roller, Other\$ | |
| Scraper\$ | |
| Spreader Box\$ | 14.04 |
| Trenching Machine, Heavy\$ | 18.48 |
| Servicer\$ | 14.51 |
| Steel Worker | |
| Reinforcing\$ | 14.00 |
| Structural\$ | |
| | |

| TRAFFIC SIGNAL INSTALLER |
|----------------------------|
| Traffic Signal/Light Pole |
| Worker \$ 16.00 |
| TRUCK DRUCE |
| TRUCK DRIVER |
| Lowboy-Float\$ 15.66 |
| Off Road Hauler\$ 11.88 |
| Single Axle\$ 11.79 |
| Single or Tandem Axle Dump |
| Truck\$ 11.68 |
| Tandem Axle Tractor w/Semi |
| Trailer\$ 12.81 |
| |
| WELDER\$ 15.97 |
| |

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

- 1. Payment greater than prevailing wage rate as listed within this document not prohibited per Texas Government Code, Chapter 2258, Prevailing Wage Rates, Subchapter A. General Provisions.
- 2. Not less than the following hourly rates shall be paid for the various classifications of work required by this project. Workers in classifications where rates are not identified shall be paid not less than the general prevailing rate of "laborer" for the various classifications of work therein listed.
- 3. The hourly rate for legal holiday and overtime work shall not be less than one and one-half (1 & 1/2) times the base hourly rate.
- 4. The rates listed are journeyman rates. Helpers may be used on the project and may be compensated at a rate determined mutually by the worker and employer, commensurate with the experience and skill of the worker but not at a rate less than 60% of the journeyman's wage as shown. Apprentices (enrolled in a federally certified apprentice program) may be used at the percentage rates of the journeyman scale stipulated in their apprenticeship agreement. At no time shall a journeyman supervise more than two (2) apprentices or helpers. All apprentices or helpers shall be under the direct supervision of a journeyman working as a crew.
- **5.** Except for Heavy/Highway Construction, building construction wage rates shall be paid to all workers except those workers engaged in site work and construction beyond five feet of buildings.

EXHIBIT B PERFORMANCE AND PAYMENT BONDS

PERFORMANCE BOND

| Во | nd No | |
|--|----------------|---|
| THE STATE OF TEXAS | \$ \$ \$ | KNOW ALL MEN BY THESE PRESENTS: |
| THE COUNTY OF BRAZOS | § | |
| THAT WE, | | , as Principal, hereinafter called |
| "Contractor" and the other subscrib | ber hereto | , a |
| Surety, do hereby acknowledge oursel corporation, in the sum of Two Thousa | | eld and firmly bound to the City of College Station, a municipa Thousand Eight Hundred Seventy-Eight |
| and NO /100 Dollars (\$\frac{246,87}{246,87} | 78.00 |) for the payment of which sum, well and truly to be made |
| | successors, | the said Contractor and Surety do bind themselves, their heirs |
| THE CONDITIONS OF THIS OBI WHEREAS, the Contractor 1 | | ARE SUCH THAT: bout this day executed a Contract in writing with the City o |
| College Station for Re-Plaster of City Po | ools (Adamsor | n Lagoon and Hallaran) |
| all of such Work to be done as set our | t in full in s | aid Contract Documents therein referred to and adopted by the |
| City Council, all of which are made a | part of this | instrument as fully and completely as if set out in full herein. |

NOW THEREFORE, if the said Contractor shall faithfully and strictly perform Contract in all its terms, provisions, and stipulations in accordance with its true meaning and effect, and in accordance with the Contract Documents referred to therein and shall comply strictly with each and every provision of the Contract, including all warranties and indemnities therein and with this bond, then this obligation shall become null and void and shall have no further force and effect; otherwise the same is to remain in full force and effect.

It is further understood and agreed that the Surety does hereby relieve the City of College Station or its representatives from the exercise of any diligence whatever in securing compliance on the part of the Contractor with the terms of the Contract, including the making of payments thereunder and, having fully considered its Principal's competence to perform the Contract in the underwriting of this Performance Bond, the Surety hereby waives any notice to it of any default, or delay by the Contractor in the performance of his Contract and agrees that it, the Surety, shall be bound to take notice of and shall be held to have knowledge of all acts or omissions of the Contractor in all matters pertaining to the Contract. The Surety understands and agrees that the provision in the Contract that the City of College Station shall retain certain amounts due the Contractor until the expiration of thirty (30) days from the acceptance of the Work is intended for the City's benefit, and the City of College Station shall have the right to pay or withhold such retained amounts or any other amount owing under the Contract without changing or affecting the liability of the Surety hereon in any degree.

It is further expressly agreed by Surety that the City of College Station or its representatives are at liberty at any time, without notice to the Surety, to make any change in the Contract Documents and in the Work to be

Contract No. 22300211
Construction Agreement Over \$50,000
Form 05-26-2021

done thereunder, as provided in the Contract, and in the terms and conditions thereof, or to make any change in, addition to, or deduction from the Work to be done thereunder; and that such changes, if made, shall not in any way vitiate the obligation in this bond and undertaking or release the Surety therefrom. Surety, for value received, stipulates and agrees that any change in Contract Time or Contract Sum shall not in anywise affect its obligation on this bond and it does hereby waive notice of any such change in Contract Time or Contract Sum.

It is further expressly agreed and understood that the Contractor and Surety will fully indemnify and hold harmless the City of College Station from any liability, loss, cost, expense, or damage arising out of or in connection with the Work done by the Contractor under the Contract. In the event that the City of College Station shall bring any suit or other proceeding at law on the Contract or this bond or both, the Contractor and Surety agree to pay to the City the actual amounts of attorneys' fees incurred by the city in connection with such suit.

This bond and all obligations created hereunder shall be performable in Brazos County, Texas. This bond is given in compliance with the provisions of Chapter 2253 of the Texas Government Code, as amended, which is incorporated herein by this reference. However, all of the express provisions hereof shall be applicable whether or not within the scope of said statute.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United State Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other party at the address prescribed in the Contract Documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party. A copy of surety agent's "Power of Attorney" must be attached hereto.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

| FOR THE CONTRACTOR: ATTEST & SEAL: (if a corporation) (SEAI WITNESS: (if not a corporation) By: Name: Ianuary 27, 2022 | (Name of Contractor) By: Name: Title: |
|--|---|
| Date: | Date: |
| FOR THE SURETY: ATTEST/WITNESS (SEAL) By: | (Full Name of Surety) |
| Name: Title: | (Address of Surety for Notice) |
| Date: January 27, 2022 | By: |
| | Name: |
| | Title: |
| | Date: |
| FOR THE CITY: | |
| REVIEWED: | THE FOREGOING BOND IS ACCEPTED ON BEHALF OF THE CITY OF COLLEGE STATION, TEXAS: |

City Manager

Bond No.

NOTE: Date of bonds must be on or after the date of execution by City.

Contract No. 22300211
Construction Agreement Over \$50,000
Form 05-26-2021

City Attorney

TEXAS STATUTORY PAYMENT BOND

| Bor | nd No | |
|--|-----------------|---|
| THE STATE OF TEXAS | § § | KNOW ALL MEN BY THESE PRESENTS: |
| THE COUNTY OF BRAZOS | § | |
| THAT WE, | | , as Principal, hereinafter |
| called "Principal" and the other subs | criber hereto | , a |
| corporation organized and existing un | der the laws | of the State of, licensed to business in the |
| State of Texas and admitted to write | bonds, as Si | urety, herein after called "Surety", do hereby acknowledge |
| ourselves to be held and firmly bound | d to the City | of College Station, a municipal corporation, in the sum of |
| Two Hundred Forty-Six Thousand Eight Hun | dred Seventy-Ei | ight and |
| NO /100 Dollars (\$ 246,878.0 | 0 for | r payment whereof, the said Principal and Surety bind |
| | | rs, successors and assigns jointly and severally. |
| THE CONDITIONS OF THIS OBL WHEREAS, Principal has enter | | ARE SUCH THAT: tain contract with the City of College Station, dated the 27 |
| day of January , 20 ² | 2, for Re-F | Plaster of City Pools (Adamson Lagoon and Hallaran) |
| | | e same extent as if copied at length herein. |

NOW THEREFORE, the condition of this obligation is such that if Principal shall pay all claimants supplying labor and material to him or a subcontractor in the prosecution of the Work provided for in said contract, then, this obligation shall be null and void; otherwise to remain in full force and effect;

PROVIDED, HOWEVER, that this bond is executed pursuant to the provisions of Chapter 2253 of the Texas Government Code and all liabilities on this bond shall be determined in accordance with the provisions, conditions and limitations of said Code to the same extent as if it were copied at length herein.

Surety, for value received, stipulates and agrees that any change in Contract Time or Contract Sum shall not in anywise affect its obligation on this bond, and it does hereby waive notice of any such change in Contract Time or Contract Sum. A copy of surety agent's "Power of Attorney" must be attached hereto.

IN WITNESS THEREOF, the said Principal and Surety have signed and sealed this instrument on the respective dates written below their signatures.

| FOR THE CONTRACTOR: | PROGRESSIVE AQUATIC COMMERICAL |
|--|---|
| ATTEST & SEAL: (if a corporation) WITNESS: (if not a corporation) (SEAL | (Name of Contractor) |
| By: | By: |
| Name: | Name: |
| Title: | Title: |
| Date: January 27, 2022 | Date: |
| FOR THE SURETY: ATTEST/WITNESS (SEAL) By: | (Full Name of Surety) |
| Name: | (Address of Surety for Notice) |
| Date : January 27, 2022 | By: |
| | Name: |
| | Title: |
| | Date: January 27, 2022 |
| FOR THE CITY: | |
| | THE FOREGOING BOND IS ACCEPTED ON BEHALF OF THE CITY OF COLLEGE STATION, TEXAS: |

City Manager

Bond No._____

NOTE: Date of bonds must be on or after the date of execution by City.

Contract No. 22300211 Construction Agreement Over \$50,000 Form 05-26-2021

City Attorney

EXHIBIT C CERTIFICATES OF INSURANCE AND ENDORSEMENTS

EXHIBIT D PLANS AND SPECIFICATIONS

Removal and Replacement of Filter Material at Adamson Lagoon and Hallaran Pool

Scope of Work:

Adamson Lagoon:

- 1. Remove and haul of site all existing material within all 4 Neptune Benson Sand Filters. Model Number 4872SHFFG-M3SLA-8X6
- 2. Once all material is removed, inspect all lateral systems in each Neptune Benson filter. Replace lateral system if needed.
 - a. Contractor to have laterals onsite in case of replacement. If laterals are not used, they are to remaining onsite.
- 3. Add new sand and gravel per manufacturer's specifications.
- 4. Seal filter manways with mew manway gaskets.
- 5. Start system and backwash as needed.

Hallaran Pool

- 1. Remove and haul of site all existing material within all 3 Neptune Benson Sand Filters. Model Number 4260SHFFGC-M3WA-6X4
- 2. Once all material is removed, inspect all lateral systems in each Neptune Benson filter. Replace lateral system if needed.
- 3. Contractor to have laterals onsite in case of replacement. If laterals are not used, they are to remaining onsite.
- 4. Add new sand and gravel per manufacturer's specifications.
- 5. Seal filter manways with mew manway gaskets.
- 6. Start system and backwash as needed.

SECTION 33 11 10 - SWIMMING POOL CEMENTITIOUS FINISH

PART 1 - GENERAL

1.1 SUMMARY

A. Provide a Diamond Brite finish or Owner approved equal to the pool structure. Provide installation of bond coat prior to application of pool finishes. A ceramic tile trim shall be installed to match existing conditions at depth markings, wall targets, floor lane markings, existing **expansion joints**.

1.2 SUBMITTALS

A. Samples

1. Prepare a 12-inch square panel at the site showing color and texture for pool plaster. Finished cementitious finish work shall match the approve sample panel.

B. Certificates

1. Submit certificates attesting that the materials furnished meet the requirements specified herein.

C. Test Report

1. Submit results of domestic water analysis and calculation of amounts of chemical required to balance pool water on initial fill of pool.

1.3 PRODUCT DELIVERY AND STORAGE

1.01 Definition below refers to those materials that make up cementitious component of water-cementitious materials ratio.

A. Deliver manufactured materials to the site in manufacturers original unbroken packages or containers bearing manufacturers name and brand labels. Keep cementitious material dry until ready to be used and stored off the ground, under cover and away from damp surfaces.

1.4 JOB CONDITIONS

A. Apply plaster in swimming pool only when ambient temperature is above 40 degrees F and below 90 degrees F and protect applied plaster from rapid drying by sun or wind until curing is completed or pool is filled with water. Confirm and comply with all applicable manufacture's installation requirements.

1.5 QUALITY ASSURANCE

A. Plaster installers shall have two years' experience in similar pool projects which the owner may require written proof thereof and proper tools to install plaster.

1.6 SURFACE PREPARATION

A. Surface shall be structurally sound and free of any foreign substances and debris that could reduce or impair adhesion, free of dirt, oil grease or other foreign materials. Sound and remove all loose concrete to firm substrate. Surfaces shall be roughened by sand blasting, water jetting, shot blasting, scarifying, or grinding. Pressure-wash the entire surface. Wash with trisodium phosphate (TSP) using a stiff broom. Thoroughly wash/rinse with clean potable water. Surface defects or holes in the substrate shall be patched per

manufacturers recommendation.

B. Apply and cure bond coat per manufacturers recommendations. After proper curing of bond coat, lightly moisten with clean potable water prior to application of cementitious finish. Ensure bond coat is free of any foreign matter plier to plastering.

PART 2 - PRODUCTS

2.01 Plaster

A. The Contractor shall Install a slip-resistant proprietary plaster finish in all areas of the existing pool. Description: Diamond Brite finish shall be a blend of selected quartz aggregates and fortified white Portland cement. Color and texture shall be selected by the Owner. Confirm all installation requirements with the manufacturer.

B. Bond Coat

1. Bond Kote by SGM, Inc. or approved equal. Apply and cure bond coat per manufacturer's recommendations. After proper curing of bond coat, lightly moisten with clean potable water prior to application of cementitious finish. Ensure bond coat is free of any foreign matter plier to plastering.

C. Mixing

1. Thoroughly mix Diamond Brite to a homogenous lump-free consistency using 1-112 to 2 gallons of potable water per 80 lb. bag.

D. Application

1. Diamond Brite shall be applied to a uniform thickness of 3/8' to ½" over the entire surface. The walls shall be scratch coated followed by a finish coat. Material applied to the floor after the walls have been applied shall be accelerated to assure uniform setting time throughout the pool surface.

E.Coverage

- 1. Each 80 lb. bag shall cover approximately 25 square feet to a thickness of 3/8".
- F. Proprietary plaster finish to be applied by a licensed applicator as approved by the manufacturer.

PART 3 - EXECUTION

3.01 PREPARATION OF SURFACES AND BOND COAT

A. Clean base surfaces of projections, dust, loose particles, grease, bond breakers, and foreign matter; make sufficiently rough to provide a strong mechanical bond, Sandblast, acid etch, or waterblast to achieve appropriate profile. If acid etching, surfaces must be neutralized, and power washed plier to proceeding. Do not apply cementitious finished directly to the surfaces of masonry or concrete that is coated with any acidic solution compound or similar agent until compound to agent is completely removed by water blasting. Thoroughly wash entire surface with 2,000 psi high-pressure water immediately prior to application of finishes. Wet cementitious base surfaces with a fine fog water spray to produce a uniformly moist condition and check screeds, pool equipment, and accessories for correct alignment before work is started. Do not apply

- finish materials to base surfaces containing frost. Install temporary coverings as required to protect adjoining surfaces from staining or damage by plastering operations.
- B. Prepare and clean concrete surfaces by removing oil or grease. Repair all cracks, surface damage as required prior to proceeding. Protect or mask all adjacent surfaces that are not scheduled to receive cementitious finish. If expansion or construction joints exist in the areas where cementitious finish will be applied cover plastic joins for protection (if plastic joints are used). Additionally, mark joints for saw-cutting if area will be saw-cut.
- C. Apply and cure bond coat per manufacturers recommendations. After proper curing of bond coat, lightly moisten with clean potable water prior to application cementitious finish. Ensure bond coat is free of any foreign matter prior to plastering.
- D. Contractor to thoroughly verify the site conditions prior to the application of cementitious finish. Verify concrete is free of ridges and sharp projections. Verify that all concrete surfaces that are to receive a cementitious finish have cured for a minimum of 5 days. Consideration should be given for the application of a primer for all concrete surfaces that is over 28 days old to improve bonding.

3.1 APPLICATION OF CEMENTITIOUS FINISH

A. General

- 1. Confirm all application requirements with the manufacturer. Apply finish plaster to the properly prepared substrate at the minimum thickness required by the manufacturer, but no less than 3/8-inch thickness at any location, Apply finish by hand or machine. If plastering machine is used, control fluidity of plaster to have a slump not exceeding 2-1/2 inches when tested using a 2" by 4" by 6" high slump cone. Do not add additional water to the mix subsequent to determining water content to meet this slump. Perform slump test according to following procedure.
 - a. Place cone on level, dry non-absorptive base plate.
 - b. While holding cone firmly against the base plate, fill cone with plaster taken directly from hose or nozzle of plastering machine, tamping with a metal rod during filling to release all air bubbles.
 - c. Screed off plaster level with top of cone. Remove cone by lifting it straight up with a slow and smooth motion,
 - d. Place cone in a vertical position adjacent to freed plaster sample suing care not to jiggle base plate.
 - e. Lay straightedge across top of cone being careful not to vibrate cone: measure slump in inches from bottom edge of straight edge top of slumped plaster sample,
- 2. All mixing materials and application procedures shall be done in accordance with

the manufacturer's recommendations and requirements. The manufacturer's representative shall visit the site to verify field conditions, confirm materials and application requirements and ascertain that all materials and systems are so installed. Documentation shall be provided to this affect.

B. Workmanship

- 1.Unless otherwise required by the manufacturer, apply finish plaster in two coats by "double-back" method with second coat applied as soon as first coat is lamped and initially floated. Apply plaster with sufficient pressure to provide a good bond on bases. Work plaster to screens at intervals of from 5 feet to 8 feet on straight surfaces. Apply smooth towel finish without waves, cracks, towel marks, ridges, pits, crazing, discoloration, projections, or other imperfections. Form plaster carefully around the curves and angles, well up to screeds. Take special care to prevent sagging and consequent drooping of applications. Produce surfaces free of visible junction marks in finish coat where one day's work adjoins another. Finish proprietary plaster as required by the manufacturer.
 - 2. All cementitious finishes shall be applied by a licensed applicator as approved by the manufacturer.

C. Curing

1. Curing cementitious finishes with fine fog water spray applied to finish coat as frequently as required to prevent dry-out of surface, or as directed by the manufacturer of the cementitious finish. Keep plaster damp until pool is filled. Prevent damage or staining of plaster by troweling or curing.

D. Patching, Pointing, and Cleaning Up

1. Upon completion, cut out and patch loose, cracked, damaged, or defective plaster; patches matching existing plaster in texture, color, and finish, flush with adjoining plaster. Perform pointing and patching of surfaces and plaster work abutting or adjoining any other finish work in a need and workmanlike manner. If 10 percent or more of the pools plaster finish is found to be defective, the plaster shall be removed and replaced complete from all surfaces. Remove plaster droppings or spattering from all surfaces. Leave plaster surfaces in clean, unblemished condition ready for pool filling. Remove protective coverings from adjoining surfaces. Remove rubbish and debris from the site.

3.03 PRE-FILL SPECIFICATION

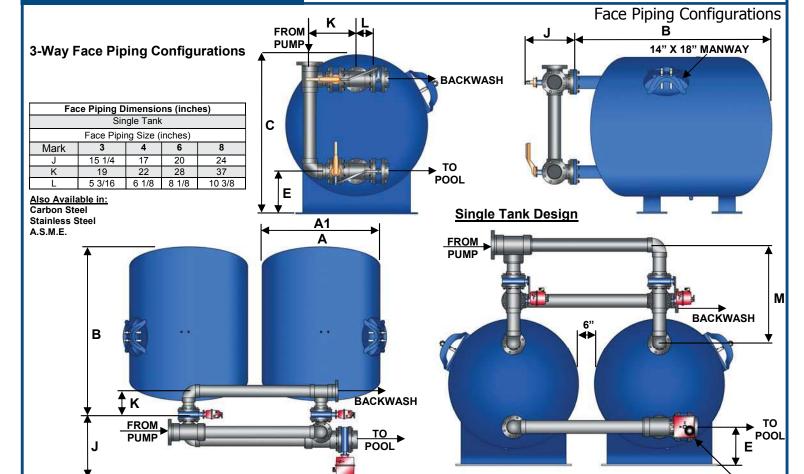
A. Contractor shall employ a qualified water testing agency to analyze the domestic water with which the pool will be filled within 2 weeks of the plaster date. And shall employ a swimming pool experienced water chemistry consultant to determine the types and quantities of chemicals required to ensure calcium-balanced water immediately upon the completion of water filling. Refer to section 131100 for water filling requirements.

- 1. Have on hand quantiles of the chemicals as determined above, plus 25% overage for follow-up treatment. These chemicals, typically including calcium chloride, bicarbonate of soda, and muriatic acid are in addition to standard bromine/chlorine products and alkalizer/pH control products required elsewhere.
- B.The pool(s) shall not be plastered until directed by the Owners representative and the filtration system and chlorination system are complete and ready for start-up. The Contractor shall supply all chemicals required for treatment of the pool water.
- C. The Contractor shall submit domestic water analysis to the Owner at least 2 weeks prior to filling the pool(s).

END OF SECTION 13153

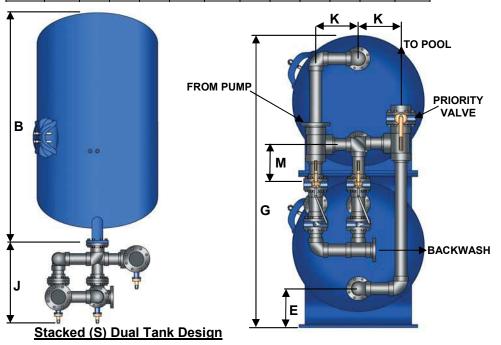
FILTERS

Horizontal Fiberglass Sand Filters



Side by Side (SxS) Dual Tank Design

| | Face Piping Dimensions (inches) | | | | | | | | | | | |
|---|---------------------------------|----|----|----|----|------|----|----|----|----|----|----|
| | Face Piping Size (inches) | | | | | | | | | | | |
| Side by Side (SxS) Stacked (S) Tank | | | | | | | | | | | | |
| Mark 4x3 6x4 6x6 8x6 10x6 10x8 4x3 6x4 6x6 8x6 10x6 10x | | | | | | 10x8 | | | | | | |
| J | 14 | 18 | 19 | 22 | 28 | 28 | 24 | 31 | 41 | 41 | 41 | 54 |
| K | 9 1/2 | 11 | 16 | 16 | 16 | 16 | 21 | 26 | 30 | 33 | 39 | 42 |
| M | 33 | 38 | 45 | 48 | 54 | 60 | 8 | 13 | 13 | 17 | 21 | 21 |





R-6/1/11

PRIORITY

VALVE

Horizontal Fiberglass Sand Filters

Physical Capacity & Dimensional Information

Adamson Lagoon (4) 4872SHFFG-M3SLA-8X6

| Number Size Republic Size S | Filter Model | Tank Conn | Filter | Flow | Filter Rate | Tank Shipping | Operating | - | All dimensions are in inche | | nches | | |
|--|---------------|--------------|--------|----------|-------------|------------------|-----------------|----|-----------------------------|---------|-------|--------|-----|
| 193485HFFG | | Size | ` ' | , , | (GPM/SF) | Weight (LBS) | Weight (LBS) | | | | | | |
| CASSASHERG 3 14.0 70-206 5-14 38.3 3642 33 1/4 34 70 41 13 3/4 83 70 34 70 41 13 3/4 83 70 34 70 41 13 3/4 83 70 34 70 41 73 3/4 83 70 34 70 41 73 3/4 83 70 34 70 41 73 3/4 83 70 41 73 3/4 83 70 41 73 3/4 83 70 41 73 3/4 83 70 41 73 3/4 83 70 41 73 3/4 83 70 41 73 3/4 83 70 41 73 3/4 83 70 41 73 3/4 83 73 73 73 73 73 73 73 | () | | | | 5-15 | 356 | 3239 | | | | | | |
| (**)4968HFFG | | | | | | | | | | | | | |
| CyadesSHFFG | | | | | | | | | | | | | |
| | | | | | | | | | _ | | | | |
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| C)3478SHFEG | | | | | | | | | _ | | | | |
| Cy34RSHFEG | | | | | | | | | | | | | |
| (**)3484SHFFG 4 21.0 105-358 5-17 505 5849 33 14 34 100 41 13 34 83 (**)3490SHFFG 4 22.4 112-358 5-16 518 6252 33 14 34 106 41 13 34 83 (**)3490SHFFG 6 22.4 112-448 5-20 518 6252 33 14 34 106 41 13 34 83 (**)3490SHFFG 6 22.4 112-448 5-20 518 6252 33 14 34 106 41 13 34 83 (**)3490SHFFG 6 22.4 112-448 5-20 518 6252 33 14 34 106 41 13 34 83 (**)3490SHFFG 6 22.8 18 119-357 5-15 531 6655 33 14 34 112 41 13 34 83 (**)3496SHFFG 6 23.8 119-357 5-15 531 6655 33 14 34 112 41 13 34 83 (**)348SHFFG 6 23.8 119-357 5-15 531 6655 33 14 34 112 41 13 34 83 (**)348SHFFG 6 23.8 119-357 5-15 375 3650 36 38 14 67 34 43 14 34 87 (**)346SHFFG 1 41 3 24 258 516.20 375 3650 36 38 146 73 44 31 13 34 87 (**)346SHFFG 4 14.3 216-288 16-20 375 3650 36 38 146 73 44 31 14 34 87 (**)362SHFFG 4 14.3 216-285 5-17 490 5070 36 38 14 91 34 43 14 34 87 (**)362SHFFG 6 23.3 356-466 16-20 535 5670 38 38 14 91 34 43 14 34 87 (**)362SHFFG 6 23.3 356-466 16-20 535 5670 38 38 14 16 73 44 31 14 34 87 (**)362SHFFG 6 23.3 356-466 16-20 535 5670 38 38 14 17 14 34 14 34 87 (**)364SHFFG 6 23.3 356-466 16-20 535 5670 38 38 14 11 15 34 43 14 34 87 (**)364SHFFG 6 23.3 356-466 16-20 535 5670 38 38 14 17 34 34 31 14 34 87 (**)364SHFFG 6 23.3 162-266 5-20 655 8290 36 38 14 11 33 34 43 14 34 87 (**)364SHFFG 6 23.3 162-266 5-20 655 8290 36 38 14 11 33 34 43 14 34 87 (**)364SHFFG 6 23.3 162-266 5-20 665 8290 36 38 14 11 33 34 43 14 34 87 (**)364SHFFG 6 29.3 147-586 5-20 665 8290 36 38 14 11 33 34 43 14 34 87 (**)364SHFFG 6 29.3 147-586 5-20 665 8290 36 38 14 11 33 34 43 14 34 87 (**)364SHFFG 6 29.3 147-586 5-20 665 8290 36 38 14 17 33 34 34 34 34 34 34 34 34 34 34 34 34 | | | | | | | | | | | | | _ |
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| (**)3684SHFFG** 6** 23.3** 317-358** 5-15** 535** 5870** 36** 3814** 103 34** 43** 14 34** 87** (**)368SHFFG** 6** 23.3** 339-466** 16:20** 535** 5870** 36** 3814** 103 34** 43** 14 34** 87** (**)36108SHFFG** 6** 29.3** 147-586** 5-20** 580** 6680** 36** 38 14** 115 34** 43** 14 34** 87** (**)36108SHFFG** 6** 29.3** 147-586** 5-20** 615** 7490** 36** 3814** 1173** 44** 31 14 34** 87** (**)36108SHFFG** 6** 32.3** 182-646** 5-20** 615** 8290** 36** 3814** 1173** 34** 31** 143** 87** (**)36108SHFFG** 4** 17.1** 86:342** 5-20** 435** 4870** 42** 44** 14** 89:34** 49** 14:34** 87** (**)36108SHFFG** 4** 17.1** 86:342** 5-20** 435** 4870** 42** 44** 14** 81:34** 49** 14:34** 99** (**)4278SHFFG** 6** 20.4** 339-408** 18:20** 515** 5580** 42** 44** 14** 81:34** 49** 14:34** 99** (**)4272SHFFG** 6** 23.9** 359-478** 16:20** 560** 6685** 42** 44** 14** 81:34** 49** 14:34** 99** (**)4272SHFFG** 6** 23.9** 359-478** 16:20** 560** 6685** 42** 44** 14** 13:34** 49** 14:34** 99** (**)4278SHFFG** 6** 27.4** 137-548** 5-20** 660** 8700** 42** 44** 14** 17:34** 49** 14:34** 99** (**)4278SHFFG** 6** 30.9** 15:56-818** 5-20** 660** 8700** 42** 44** 14** 17:34** 49** 14:34** 99** (**)42108SHFFG** 6** 38.1** 11:762** 5-20** 760** 10710** 42** 44** 14** 17:34** 49** 14:34** 99** (**)42108SHFFG** 6** 38.1** 11:762** 5-20** 760** 10710** 42** 44** 14** 17:34** 49** 14:34** 99** (**)42108SHFFG** 6** 38.1** 11:762** 5-20** 760** 10710** 42** 44** 14** 15:33** 49** 14:34** 99** (**)4213SHFFG** 6** 45.1** 225:900** 5-20** 855** 12720** 42** 44** 14** 15:33** 49** 14:34** 99** (**)4218SHFFG** 6** 45.1** 225:900** 5-20** 855** 12720** 42** 44** 14** 15:33** 49** 14:34** 99** (**)4218SHFFG** 6** 45.1** 225:900** 5-20** 855** 12720** 42** 44** 14** 14** 134** 49** 14** 34** 99** (**)42108SHFFG** 6** 38.1** 11:762** 5-20** 760** 10710** 42** 44** 14** 14** 34** 49** 14** 34** 99** (**)42108SHFFG** 6** 38.1** 11:762** 5-20** 805** 11:720** 42** 44** 14** 14** 34** 99** (**)42108SHFFG** 6** 45.1** 225:900** 5-20** 855** 12720** 42** 5014** 14** 14 | | | | | | | | | | | | | |
| (*)36108SHFFG 6 26.3 132-526 5-20 580 6680 36 38 114 115 314 43 14 314 87 (*)36108SHFFG 6 29.3 147-586 5-20 615 7490 36 38 114 115 314 43 14 314 87 (*)36120SHFFG 6 32.3 162-646 5-20 655 8290 36 38 114 115 314 43 14 314 87 (*)4248SHFFG 4 17.1 86-342 5-20 435 4870 42 44 114 81 314 49 14 314 87 (*)4248SHFFG 4 20.4 102-358 5-17 515 5680 42 44 114 81 314 49 14 314 99 (*)4260SHFFG 6 20.4 359-408 18-20 515 5680 42 44 114 81 314 49 14 314 99 (*)4272SHFFG 6 23.9 395-478 16-20 560 6685 42 44 114 81 314 49 14 314 99 (*)4272SHFFG 6 23.9 395-478 16-20 560 6685 42 44 114 93 314 49 14 314 99 (*)4272SHFFG 6 23.9 395-478 16-20 560 6685 42 44 114 93 314 49 14 314 99 (*)4272SHFFG 6 27.4 137-548 5-20 610 7690 42 44 114 17 314 49 14 314 99 (*)4272SHFFG 6 30.9 155-618 5-20 660 8700 42 44 114 17 314 49 14 314 99 (*)42720SHFFG 6 30.9 155-618 5-20 660 8700 42 44 114 17 314 49 14 314 99 (*)42120SHFFG 6 38.1 191-762 5-20 760 10710 42 44 114 117 314 49 14 314 99 (*)42120SHFFG 6 38.1 191-762 5-20 760 10710 42 44 114 153 314 49 14 314 99 (*)42120SHFFG 6 416. 208-832 5-20 805 11720 42 44 114 153 314 49 14 314 99 (*)42143SHFG 6 451 225-900 5-20 855 12720 42 44 114 153 314 49 14 314 99 (*)42144SHFFG 6 451 225-900 5-20 855 12720 42 44 114 153 314 49 14 314 99 (*)428SHFFG 6 33.7 199-358 5-18 550 6310 48 50 114 70 314 55 14 314 111 (*)4860SHFFG 6 32.7 199-358 5-18 550 6310 48 50 114 70 314 55 14 314 111 (*)4860SHFFG 6 35.7 179-714 5-20 770 11320 48 50 114 18 314 55 14 314 111 (*)4860SHFFG 6 35.7 179-714 5-20 770 11320 48 50 114 18 314 55 14 314 111 (*)4860SHFFG 6 35.7 179-714 5-20 770 11320 48 50 114 18 314 55 14 314 111 (*)4860SHFFG 6 35.7 179-714 5-20 770 11320 48 50 114 18 314 55 14 314 111 (*)4860SHFFG 6 35.7 179-714 5-20 770 11320 48 50 114 18 314 55 14 314 111 (*)4860SHFFG 6 35.7 179-714 5-20 770 11320 48 50 114 18 314 55 14 314 111 (*)4860SHFFG 6 35.7 179-714 5-20 770 11320 48 50 114 18 314 55 14 314 111 (*)4860SHFFG 6 35.8 179-716 5-20 818 114 114 12460 60 63 31/2 18 314 68 16 314 135 (*)6008SHFFG 6 35.8 179-716 5-20 188 114 12460 60 63 1 | (*)3684SHFFG | 4 | 23.3 | 117-358 | 5-15 | 535 | 5870 | 36 | 38 1/4 | 103 3/4 | 43 | 14 3/4 | 87 |
| (**)36108SHFFG 6 29.3 147-586 5-20 615 7490 36 38 1/4 127 3/4 43 14 3/4 87 (**)3612OSHFFG 6 32.3 162-646 5-20 655 8290 36 38 11/4 139 3/4 43 14 3/4 87 (**)2426SHFFG 4 17.1 86-342 5-20 435 4870 42 44 11/4 69 3/4 49 14 3/4 99 (**)426OSHFFG 4 20.4 102-558 5-17 515 5680 42 44 11/4 18 13/4 49 14 3/4 99 (**)426OSHFFG 6 20.4 359-408 18-20 515 5680 42 44 11/8 18 13/4 49 14 3/4 99 (**)426OSHFFG 6 20.4 359-408 18-20 515 5680 42 44 11/8 18 13/4 49 14 3/4 99 (**)4272SHFFG 4 23.9 120-358 5-15 560 6685 42 44 11/4 19 33/4 49 14 3/4 99 (**)4272SHFFG 6 23.9 359-478 16-20 560 6685 42 44 11/4 93 3/4 49 14 3/4 99 (**)4272SHFFG 6 27.4 137-548 5-20 610 7690 42 44 11/4 105 3/4 49 14 3/4 99 (**)42296SHFFG 6 30.9 155-618 5-20 660 8700 42 44 11/4 117 3/4 49 14 3/4 99 (**)4210SHFFG 6 34.6 173-692 5-20 710 9700 42 44 11/4 117 3/4 49 14 3/4 99 (**)4210SHFFG 6 38.8 11 191-762 5-20 760 107-10 42 44 11/4 113 3/4 49 14 3/4 99 (**)4210SHFFG 6 38.8 11 191-762 5-20 805 11720 42 44 11/4 115 3/4 49 14 3/4 99 (**)4210SHFFG 6 45.1 225-900 5-20 805 11720 42 44 11/4 115 3/4 49 14 3/4 99 (**)4214SHFFG 6 45.1 225-900 5-20 855 12720 42 44 11/4 115 3/4 49 14 3/4 99 (**)4243SHFFG 6 45.1 225-905 5-20 855 12720 42 44 11/4 155 3/4 49 14 3/4 99 (**)4248SHFFG 6 6 31.9 7 359-394 19-20 550 6310 48 50 11/4 70 3/4 55 14 3/4 111 (**)486OSHFFG 6 35.7 195-394 19-20 550 6310 48 50 11/4 70 3/4 55 14 3/4 111 (**)486OSHFFG 6 35.7 195-344 5-20 770 11320 48 50 11/4 182 3/4 55 14 3/4 111 (**)486OSHFFG 6 35.7 195-344 5-20 770 11320 48 50 11/4 183 3/4 55 14 3/4 111 (**)486OSHFFG 6 35.7 195-344 5-20 770 11320 48 50 11/4 183 3/4 55 14 3/4 111 (**)486OSHFFG 6 35.7 195-344 5-20 770 11320 48 50 11/4 183 3/4 55 14 3/4 111 (**)486OSHFFG 6 35.7 159-544 5-20 800 13730 48 50 11/4 183 3/4 55 14 3/4 111 (**)486OSHFFG 6 35.7 159-544 5-20 800 13730 48 50 11/4 183 3/4 55 14 3/4 111 (**)486OSHFFG 6 35.7 159-544 5-20 800 13730 48 50 11/4 183 3/4 55 14 3/4 111 (**)486OSHFFG 6 35.7 159-744 5-20 800 13730 48 50 11/4 183 3/4 55 14 3/4 111 (**)486OSHFFG 6 35.8 29-779 5-17 1082 18510 60 63 11/2 183 3 | | 6 | 23.3 | | 16-20 | 535 | 5870 | 36 | 38 1/4 | 103 3/4 | 43 | 14 3/4 | 87 |
| (*)36120SHFFG 6 32.3 162-646 5-20 655 8290 36 38 144 139 3/4 43 14 3/4 89 (*)4260SHFFG 4 17.1 86-342 5-20 435 4870 42 44 1/4 89 3/4 49 14 3/4 99 (*)4260SHFFG 6 20.4 359-408 18-20 515 5680 42 44 1/4 81 3/4 49 14 3/4 99 (*)4272SHFFG 6 20.4 359-408 18-20 515 5680 42 44 1/4 81 3/4 49 14 3/4 99 (*)4272SHFFG 6 23.9 359-478 16-20 560 6685 42 44 1/4 19 3/4 49 14 3/4 99 (*)4228SHFFG 6 27.4 137-548 5-20 600 8700 42 44 1/4 17 3/4 49 14 3/4 99 (*)42108SHFG 6 34.6 173-692 5-20 710 9700 <td>(*)3696SHFFG</td> <td>6</td> <td>26.3</td> <td>132-526</td> <td>5-20</td> <td>580</td> <td>6680</td> <td>36</td> <td>38 1/4</td> <td>115 3/4</td> <td>43</td> <td>14 3/4</td> <td>87</td> | (*)3696SHFFG | 6 | 26.3 | 132-526 | 5-20 | 580 | 6680 | 36 | 38 1/4 | 115 3/4 | 43 | 14 3/4 | 87 |
| CY2480SHFFG | (*)36108SHFFG | 6 | 29.3 | 147-586 | 5-20 | 615 | 7490 | 36 | 38 1/4 | 127 3/4 | 43 | 14 3/4 | 87 |
| (*)4260SHFFG 4 20.4 102-358 5-17 515 5680 42 44 1/4 81 3/4 49 14 3/4 99 (*)4272SHFFG 6 20.4 359-408 18-20 515 5680 42 44 1/4 81 3/4 49 14 3/4 99 (*)4272SHFFG 6 23.9 120-358 5-15 560 6685 42 44 1/4 81 3/4 49 14 3/4 99 (*)4284SHFFG 6 23.9 359-478 16-20 560 6685 42 44 1/4 93 3/4 49 14 3/4 99 (*)4289SHFFG 6 23.9 155-618 5-20 610 7690 42 44 1/4 110 3/4 49 14 3/4 99 (*)42108SHFG 6 34.6 173-692 5-20 710 9700 42 44 1/4 14 3/4 99 (*)4210SHFG 6 34.6 173-692 5-20 760 10710 42 44 1/4 | (*)36120SHFFG | 6 | 32.3 | 162-646 | 5-20 | 655 | 8290 | 36 | 38 1/4 | 139 3/4 | 43 | 14 3/4 | 87 |
| (*)4272SHFFG 6 23.9 120.358 5-15 560 6685 42 44 1/4 81 3/4 49 14 3/4 99 (*)4272SHFFG 6 23.9 359-478 16-20 560 6685 42 44 1/4 149 33 3/4 49 14 3/4 99 (*)4272SHFFG 6 23.9 359-478 16-20 560 6685 42 44 1/4 93 3/4 49 14 3/4 99 (*)429SHFFG 6 23.9 359-478 16-20 560 6685 42 44 1/4 193 3/4 49 14 3/4 99 (*)429SHFFG 6 23.9 359-478 16-20 660 8700 42 44 1/4 105 3/4 49 14 3/4 99 (*)429SHFFG 6 30.9 155-618 5-20 660 8700 42 44 1/4 105 3/4 49 14 3/4 99 (*)429SHFFG 6 34.6 173-692 5-20 710 9700 42 44 1/4 117 3/4 49 14 3/4 99 (*)42120SHFFG 6 38.1 191-762 5-20 760 10710 42 44 1/4 141 3/4 49 14 3/4 99 (*)42120SHFFG 6 38.1 191-762 5-20 760 10710 42 44 1/4 145 3/4 49 14 3/4 99 (*)42143SHFFG 6 41.6 208-832 5-20 805 11720 42 44 1/4 163 3/4 49 14 3/4 99 (*)42144SHFFG 6 45.1 225-900 5-20 855 12720 42 44 1/4 163 3/4 49 14 3/4 99 (*)42144SHFFG 6 41.1 225-900 5-20 855 12720 42 44 1/4 163 3/4 49 14 3/4 99 (*)42484SHFFG 6 19.7 39-358 5-18 550 6310 48 50 1/4 70 3/4 55 14 3/4 111 (*)4860SHFFG 6 19.7 359-394 19-20 550 6310 48 50 1/4 70 3/4 55 14 3/4 111 (*)4860SHFFG 6 23.7 359-347 16-20 605 7520 48 50 1/4 82 3/4 55 14 3/4 111 (*)4860SHFFG 6 23.7 359-347 16-20 605 7520 48 50 1/4 82 3/4 55 14 3/4 111 (*)4860SHFFG 6 31.7 199-584 5-20 770 11320 48 50 1/4 103 3/4 55 14 3/4 111 (*)4860SHFFG 6 3.7 199-574 5-20 880 13730 48 50 1/4 103 3/4 55 14 3/4 111 (*)4860SHFFG 6 35.7 179-714 5-20 770 11320 48 50 1/4 103 3/4 55 14 3/4 111 (*)48120SHFFG 6 35.7 179-714 5-20 770 11320 48 50 1/4 103 3/4 55 14 3/4 111 (*)48120SHFFG 6 35.7 179-714 5-20 820 841 12460 60 63 1/2 84 3/4 68 16 3/4 135 (*)6060SHFFG 6 30.8 341-616 12-20 841 12460 60 63 1/2 84 3/4 68 16 3/4 135 (*)6060SHFFG 6 30.8 341-616 12-20 841 12460 60 63 1/2 120 3/4 68 16 3/4 135 (*)6060SHFFG 6 30.8 341-616 12-20 841 12460 60 63 1/2 120 3/4 68 16 3/4 135 (*)6060SHFFG 6 30.8 341-616 12-20 841 12460 60 63 1/2 120 3/4 68 16 3/4 135 (*)6060SHFFG 6 30.8 341-616 12-20 184 114 12460 60 63 1/2 120 3/4 68 16 3/4 135 (*)6010SHFFG 6 6 30.8 304-790 5-17 1082 18510 60 63 1/2 120 3/4 68 16 3/4 135 (*)6010SHFFG 6 6.8 8.5 8 | | | | | | | | | | | | | _ |
| (*)4272SHFFG | | | | | | | | | | | | | |
| (*)4272SHFFG 6 23.9 359-478 16-20 560 6685 42 44 1/4 93.34 49 14 3/4 99 (*)4296SHFFG 6 30.9 155-618 5-20 660 8700 42 44 1/4 117 3/4 49 14 3/4 49 (*)4210SHFFG 6 34.6 173-692 5-20 710 9700 42 44 1/4 117 3/4 49 14 3/4 99 (*)4212OSHFFG 6 38.1 191-762 5-20 760 10710 42 44 1/4 118 3/4 49 14 3/4 49 (*)4213SHFFG 6 41.6 208-832 5-20 805 11720 42 44 1/4 153 3/4 49 14 3/4 99 (*)4214SHFFG 6 45.1 225-900 5-20 855 12720 42 44 1/4 163 3/4 49 14 3/4 99 (*)4284SHFFG 4 19.7 399-349 19-20 550 63 | | | | | | | | | | | | | _ |
| (*)4284SHFFG 6 27.4 137-548 5-20 610 7690 42 44 1/4 105 3/4 49 14 3/4 99 (*)4296SHFFG 6 30.9 155-618 5-20 660 8700 42 44 1/4 117 3/4 49 14 3/4 99 (*)4210SHFFG 6 38.1 191-762 5-20 760 10710 42 44 1/4 14 3/4 49 14 3/4 99 (*)4213ZSHFFG 6 41.6 208-832 5-20 805 11720 42 44 1/4 14 3/4 49 14 3/4 99 (*)42143SHFFG 6 45.1 225-900 5-20 855 12720 42 44 1/4 165 3/4 49 14 3/4 99 (*)42848SHFFG 6 19.7 99-358 5-18 550 6310 48 50 1/4 70 3/4 55 14 3/4 19 (*)4880SHFFG 6 19.7 359-394 19-20 550 631 | | | | | | | | | | | | | |
| (*)4296SHFFG 6 30.9 155-618 5-20 660 8700 42 44 1/4 117 3/4 49 14 3/4 99 (*)42108SHFFG 6 34.6 173-682 5-20 710 9700 42 44 1/4 112 3/4 49 14 3/4 99 (*)42132SHFFG 6 41.6 208-832 5-20 805 11720 42 44 1/4 113/4 49 14 3/4 99 (*)42132SHFFG 6 41.6 208-832 5-20 805 11720 42 44 1/4 153 3/4 49 14 3/4 99 (*)42132SHFFG 6 45.1 225-900 5-20 855 12720 42 44 1/4 153 3/4 49 14 3/4 99 (*)4848SHFFG 6 45.7 99-358 5-18 550 6310 48 50 1/4 70 3/4 55 14 3/4 111 (*)4860SHFG 6 19.7 359-34 19-20 550 631 | | | | | | | | | | | | | |
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| (*)6072SHFFG 6 40.8 204-816 5-20 1010 16501 60 63 1/2 108 3/4 68 16 3/4 135 (*)6084SHFFG 6 45.8 229-779 5-17 1082 18510 60 63 1/2 120 3/4 68 16 3/4 135 (*)6084SHFFG 8 45.8 780-916 18-20 1082 18510 60 63 1/2 120 3/4 68 16 3/4 135 (*)6096SHFFG 6 50.8 254-762 5-15 1154 20518 60 63 1/2 132 3/4 68 16 3/4 135 (*)6096SHFFG 8 50.8 763-1016 16-20 1154 20518 60 63 1/2 132 3/4 68 16 3/4 135 (*)60108SHFFG 6 55.8 279-813 5-15 1216 22417 60 63 1/2 144 3/4 68 16 3/4 135 (*)60108SHFFG 8 55.8 814-1116 16-20 12 | | | | | | | | | | 96 3/4 | | 16 3/4 | |
| (*)6084SHFFG 6 45.8 229-779 5-17 1082 18510 60 63 1/2 120 3/4 68 16 3/4 135 (*)6084SHFFG 8 45.8 780-916 18-20 1082 18510 60 63 1/2 120 3/4 68 16 3/4 135 (*)6096SHFFG 6 50.8 254-762 5-15 1154 20518 60 63 1/2 132 3/4 68 16 3/4 135 (*)6096SHFFG 8 50.8 763-1016 16-20 1154 20518 60 63 1/2 132 3/4 68 16 3/4 135 (*)60108SHFFG 6 55.8 279-813 5-15 1216 22417 60 63 1/2 144 3/4 68 16 3/4 135 (*)60108SHFFG 8 55.8 814-1116 16-20 1216 22417 60 63 1/2 144 3/4 68 16 3/4 135 (*)60120SHFFG 6 60.8 304-790 5-13 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60120SHFFG 8 60.8 791-1216 14-20 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60132SHFFG 6 65.8 329-790 5-12 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60132SHFFG 8 65.8 791-1316 13-20 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60132SHFFG 8 65.8 791-1316 13-20 1355 26335 60 63 1/2 180 3/4 68 16 3/4 135 (*)60132SHFFG 8 65.8 791-1316 15-20 1432 28348 60 63 1/2 180 3/4 68 16 3/4 135 (*)60132SHFFG 8 75.8 379-1516 5-20 1504 30357 60 63 1/2 192 3/4 68 16 3/4 135 (*)60156SHFFG 8 75.8 379-1516 5-20 1504 30357 60 63 1/2 192 3/4 68 16 3/4 135 | | | | 1 | | | | | | | | | |
| (*)6096SHFFG 6 50.8 254-762 5-15 1154 20518 60 63 1/2 132 3/4 68 16 3/4 135 (*)6096SHFFG 8 50.8 763-1016 16-20 1154 20518 60 63 1/2 132 3/4 68 16 3/4 135 (*)60108SHFFG 6 55.8 279-813 5-15 1216 22417 60 63 1/2 144 3/4 68 16 3/4 135 (*)60108SHFFG 8 55.8 814-1116 16-20 1216 22417 60 63 1/2 144 3/4 68 16 3/4 135 (*)6012OSHFFG 6 60.8 304-790 5-13 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60132SHFFG 8 60.8 791-1216 14-20 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60132SHFFG 6 65.8 329-790 5-12 <t< td=""><td>(*)6084SHFFG</td><td>6</td><td>45.8</td><td></td><td></td><td></td><td></td><td>60</td><td>63 1/2</td><td></td><td>68</td><td></td><td></td></t<> | (*)6084SHFFG | 6 | 45.8 | | | | | 60 | 63 1/2 | | 68 | | |
| (*)6096SHFFG 8 50.8 763-1016 16-20 1154 20518 60 63 1/2 132 3/4 68 16 3/4 135 (*)60108SHFFG 6 55.8 279-813 5-15 1216 22417 60 63 1/2 144 3/4 68 16 3/4 135 (*)60108SHFFG 8 55.8 814-1116 16-20 1216 22417 60 63 1/2 144 3/4 68 16 3/4 135 (*)60120SHFFG 6 60.8 304-790 5-13 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60132SHFFG 8 60.8 791-1216 14-20 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60132SHFFG 6 65.8 329-790 5-12 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60132SHFFG 8 65.8 791-1316 13-20 | (*)6084SHFFG | 8 | 45.8 | | 18-20 | 1082 | 18510 | 60 | 63 1/2 | 120 3/4 | 68 | 16 3/4 | 135 |
| (*)60108SHFFG 6 55.8 279-813 5-15 1216 22417 60 63 1/2 144 3/4 68 16 3/4 135 (*)60108SHFFG 8 55.8 814-1116 16-20 1216 22417 60 63 1/2 144 3/4 68 16 3/4 135 (*)60120SHFFG 6 60.8 304-790 5-13 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60120SHFFG 8 60.8 791-1216 14-20 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60132SHFFG 6 65.8 329-790 5-12 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60132SHFFG 8 65.8 791-1316 13-20 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60144SHFFG 8 70.8 354-1416 5-20 1432 28348 60 63 1/2 180 3/4 68 16 3/4 135 (*)60156SHFFG 8 75.8 379-1516 5-20 1504 30357 60 63 1/2 192 3/4 68 16 3/4 135 | | 6 | | | | | | 60 | | | 68 | | 135 |
| (*)60108SHFFG 8 55.8 814-1116 16-20 1216 22417 60 63 1/2 144 3/4 68 16 3/4 135 (*)60120SHFFG 6 60.8 304-790 5-13 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60120SHFFG 8 60.8 791-1216 14-20 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60132SHFFG 6 65.8 329-790 5-12 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60132SHFFG 8 65.8 791-1316 13-20 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60132SHFFG 8 70.8 354-1416 5-20 1432 28348 60 63 1/2 180 3/4 68 16 3/4 135 (*)60156SHFFG 8 75.8 379-1516 5-20 1504 30357 60 63 1/2 192 3/4 68 16 3/4 135 | () | | | | | | | | | | | | |
| (*)60120SHFFG 6 60.8 304-790 5-13 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60120SHFFG 8 60.8 791-1216 14-20 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60132SHFFG 6 65.8 329-790 5-12 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60132SHFFG 8 65.8 791-1316 13-20 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60144SHFFG 8 70.8 354-1416 5-20 1432 28348 60 63 1/2 180 3/4 68 16 3/4 135 (*)60156SHFFG 8 75.8 379-1516 5-20 1504 30357 60 63 1/2 192 3/4 68 16 3/4 135 | | | | | | | | | | | | | |
| (*)60120SHFFG 8 60.8 791-1216 14-20 1282 24519 60 63 1/2 156 3/4 68 16 3/4 135 (*)60132SHFFG 6 65.8 329-790 5-12 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60132SHFFG 8 65.8 791-1316 13-20 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60144SHFFG 8 70.8 354-1416 5-20 1432 28348 60 63 1/2 180 3/4 68 16 3/4 135 (*)60156SHFFG 8 75.8 379-1516 5-20 1504 30357 60 63 1/2 192 3/4 68 16 3/4 135 | | | | | | | | | | | | | |
| (*)60132SHFFG 6 65.8 329-790 5-12 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60132SHFFG 8 65.8 791-1316 13-20 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60144SHFFG 8 70.8 354-1416 5-20 1432 28348 60 63 1/2 180 3/4 68 16 3/4 135 (*)60156SHFFG 8 75.8 379-1516 5-20 1504 30357 60 63 1/2 192 3/4 68 16 3/4 135 | | | | | | | | | | | | | |
| (*)60132SHFFG 8 65.8 791-1316 13-20 1355 26335 60 63 1/2 168 3/4 68 16 3/4 135 (*)60144SHFFG 8 70.8 354-1416 5-20 1432 28348 60 63 1/2 180 3/4 68 16 3/4 135 (*)60156SHFFG 8 75.8 379-1516 5-20 1504 30357 60 63 1/2 192 3/4 68 16 3/4 135 | | | | | | | | | | | | | |
| (*)60144SHFFG 8 70.8 354-1416 5-20 1432 28348 60 63 1/2 180 3/4 68 16 3/4 135 (*)60156SHFFG 8 75.8 379-1516 5-20 1504 30357 60 63 1/2 192 3/4 68 16 3/4 135 | () | | | | | | | | | | | | |
| (*)60156SHFFG 8 75.8 379-1516 5-20 1504 30357 60 63 1/2 192 3/4 68 16 3/4 135 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| [(*)60168SHFFG 8 80.8 404-1616 5-20 1571 32167 60 63 1/2 204 3/4 68 16 3/4 135 | | | | | | | | | | | | | |
| | (*)60168SHFFG | 8 | 80.8 | 404-1616 | 5-20 | 1571 | 32167 | 60 | 63 1/2 | 204 3/4 | 68 | 16 3/4 | 135 |

Note: All dimensions are based on fiberglass construction, 50 psi working pressure hydrostatically tested to 1.1 x working pressure and designed with a 4:1 safety factor. Consult Neptune-Benson for dimensional verification on custom fabricated vessels. All tanks include air relief and drain connections.

(*)Denotes quantity of tanks.

Tank shipping weight includes manifold & internals.

A* = Inside Diameter

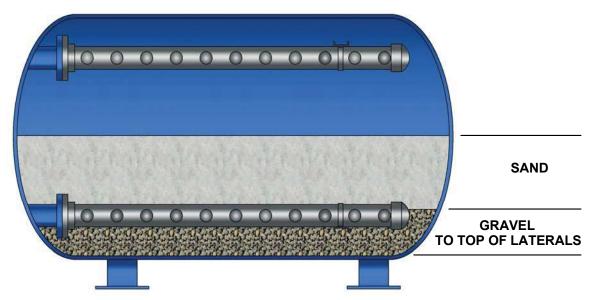
A1** = Maximum Outside Diameter





Horizontal Fiberglass Sand Filters

Media Requirements



Tank connections not shown for clarity purposes.

STANDARD MEDIA CHART

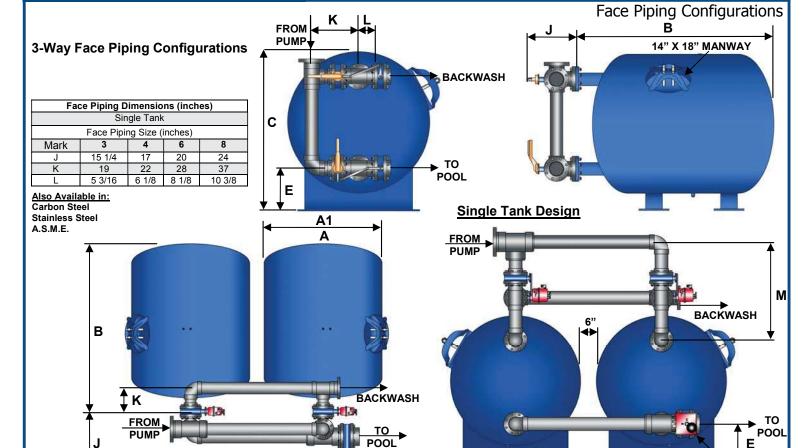
| All dimensions are in inches | | | | | | | | |
|------------------------------|----------------|------------------------|---------------|-----------------------|--|--|--|--|
| Filter Model Number | Gravel (CF) | Filter Sand (CF) | Sand Depth | Total Bed Depth | | | | |
| (*)3448SHFFG | 5 | 10 | 10 | 18 | | | | |
| (*)3454SHFFG | 5 | 11 | 10 | 18 | | | | |
| (*)3460SHFFG | 6 | 12 | 10 | 18 | | | | |
| (*)3466SHFFG | 7 | 13 | 10 | 18 | | | | |
| (*)3472SHFFG | 7 | 14 | 10 | 18 | | | | |
| (*)3478SHFFG | 8 | 15 | 10 | 18 | | | | |
| (*)3484SHFFG | 8 | 16 | 10 | 18 | | | | |
| (*)3490SHFFG | 9 | 17 | 10 | 18 | | | | |
| (*)3496SHFFG | 10 | 19 | 10 | 18 | | | | |
| (*)3648SHFFG | 6 | 11 | 9 | 18 | | | | |
| (*)3660SHFFG | 7 | 13 | 9 | 18 | | | | |
| (*)3672SHFFG | 9 | 15 | 9 | 18 | | | | |
| (*)3684SHFFG | 10 | 18 | 9 | 18 | | | | |
| (*)3696SHFFG | 11 | 21 | 9 | 18 | | | | |
| (*)36108SHFFG | 13 | 23 | 9 | 18 | | | | |
| (*)36120SHFFG | 14 | 26 | 9 | 18 | | | | |
| (*)4248SHFFG | 6 | 17 | 12 | 21 | | | | |
| (*)4260SHFFG | 8 | 19 | 12 | 21 | | | | |
| (*)4272SHFFG | 9 | 23 | 12 | 21 | | | | |
| (*)4284SHFFG | 11 | 26 | 12 | 21 | | | | |
| (*)4296SHFFG | 12 | 30 | 12 | 21 | | | | |
| (*)42108SHFFG | 14 | 33 | 12 | 21 | | | | |

| All dimensions are in inches | | | | | | | | |
|------------------------------|----------------|------------------------|---------------|-----------------------|--|--|--|--|
| Filter Model Number | Gravel (CF) | Filter Sand (CF) | Sand Depth | Total Bed Depth | | | | |
| (*)42120SHFFG | 15 | 37 | 12 | 21 | | | | |
| (*)42132SHFFG | 17 | 40 | 12 | 21 | | | | |
| (*)42144SHFFG | 18 | 44 | 12 | 21 | | | | |
| (*)4848SHFFG | 7 | 23 | 15 | 24 | | | | |
| (*)4860SHFFG | 8 | 28 | 15 | 24 | | | | |
| (*)4872SHFFG | 10 | 33 | 15 | 24 | | | | |
| (*)4884SHFFG | 12 | 37 | 15 | 24 | | | | |
| (*)4896SHFFG | 13 | 42 | 15 | 24 | | | | |
| (*)48108SHFFG | 15 | 46 | 15 | 24 | | | | |
| (*)48120SHFFG | 17 | 50 | 15 | 24 | | | | |
| (*)6048SHFFG | 12 | 48 | 19 | 30 | | | | |
| (*)6060SHFFG | 14 | 56 | 19 | 30 | | | | |
| (*)6072SHFFG | 16 | 64 | 19 | 30 | | | | |
| (*)6084SHFFG | 18 | 72 | 19 | 30 | | | | |
| (*)6096SHFFG | 20 | 80 | 19 | 30 | | | | |
| (*)60108SHFFG | 22 | 87 | 19 | 30 | | | | |
| (*)60120SHFFG | 25 | 95 | 19 | 30 | | | | |
| (*)60132SHFFG | 27 | 102 | 19 | 30 | | | | |
| (*)60144SHFFG | 29 | 110 | 19 | 30 | | | | |
| (*)60156SHFFG | 31 | 118 | 19 | 30 | | | | |
| (*)60168SHFFG | 33 | 125 | 19 | 30 | | | | |



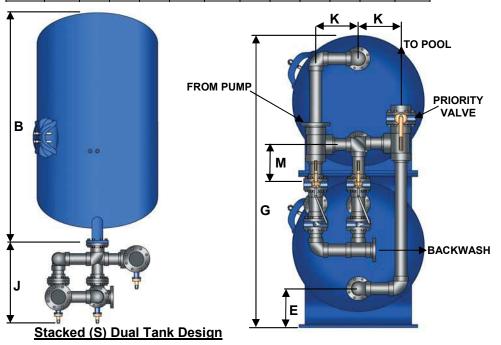
FILTERS

Horizontal Fiberglass Sand Filters



Side by Side (SxS) Dual Tank Design

| Face Piping Dimensions (inches) | | | | | | | | | | | | |
|---------------------------------|-------------------------------------|-----|-----|-----|------|------|-----|-----|-----|-----|------|------|
| Face Piping Size (inches) | | | | | | | | | | | | |
| | Side by Side (SxS) Stacked (S) Tank | | | | | | | | | | | |
| Mark | 4x3 | 6x4 | 6x6 | 8x6 | 10x6 | 10x8 | 4x3 | 6x4 | 6x6 | 8x6 | 10x6 | 10x8 |
| J | 14 | 18 | 19 | 22 | 28 | 28 | 24 | 31 | 41 | 41 | 41 | 54 |
| K | 9 1/2 | 11 | 16 | 16 | 16 | 16 | 21 | 26 | 30 | 33 | 39 | 42 |
| M | 33 | 38 | 45 | 48 | 54 | 60 | 8 | 13 | 13 | 17 | 21 | 21 |





R-6/1/11

PRIORITY

VALVE

Horizontal Fiberglass Sand Filters

Physical Capacity & Dimensional Information

| Filter Model | Tank | Filter | Flow Capacity | Filter Rate | Tank | Operating | All dimensions are in inches | | | | | |
|------------------------------|--------------|--------------|--------------------|---------------|--------------------------|-----------------|------------------------------|------------------|--------------------|----------|------------------|------------|
| Number | Conn Size | Area (SF) | (GPM) | (GPM/SF) | Shipping Weight (LBS) | Weight (LBS) | A* | A1** | В | С | Е | G |
| (*)3448SHFFG | 3 | 12.6 | 63-206 | 5-15 | 356 | 3239 | 33 1/4 | 34 | 64 | 41 | 13 3/4 | 83 |
| (*)3448SHFFG | 4 | 12.6 | 207-252 | 17-20 | 356 | 3239 | 33 1/4 | 34 | 64 | 41 | 13 3/4 | 83 |
| (*)3454SHFFG | 3 | 14.0 | 70-206 | 5-14 | 383 | 3642 | 33 1/4 | 34 | 70 | 41 | 13 3/4 | 83 |
| (*)3454SHFFG | 4 | 14.0 | 207-280 | 15-20 | 383 | 3642 | 33 1/4 | 34 | 70 | 41 | 13 3/4 | 83 |
| (*)3460SHFFG | 4 | 15.4 | 77-308 | 5-20 | 410 | 4044 | 33 1/4 | 34 | 76 | 41 | 13 3/4 | 83 |
| (*)3466SHFFG | 4 | 16.8 | 84-336 | 5-20 | 465 | 4446 | 33 1/4 | 34 | 82 | 41 | 13 3/4 | 83 |
| (*)3472SHFFG | 4 | 18.2 | 91-358 | 5-20 | 479 | 5043 | 33 1/4 | 34 | 88 | 41 | 13 3/4 | 83 |
| (*)3478SHFFG | 4 | 19.6 | 98-358 | 5-18 | 492 | 5446 | 33 1/4 | 34 | 94 | 41 | 13 3/4 | 83 |
| (*)3478SHFFG | 6 | 19.6 | 98-392 | 5-20 | 492 | 5446 | 33 1/4 | 34 | 94 | 41 | 13 3/4 | 83 |
| (*)3484SHFFG | 4 | 21.0 | 105-358 | 5-17 | 505 | 5849 | 33 1/4 | 34 | 100 | 41 | 13 3/4 | 83 |
| (*)3484SHFFG | 6 | 21.0 | 105-420 | 5-20 | 505 | 5849 | 33 1/4 | 34 | 100 | 41 | 13 3/4 | 83 |
| (*)3490SHFFG | 4 | 22.4 | 112-358 | 5-16 | 518 | 6252 | 33 1/4 | 34 | 106 | 41 | 13 3/4 | 83 |
| (*)3490SHFFG | 6 | 22.4 | 112-448 | 5-20 | 518 | 6252 | 33 1/4 | 34 | 106 | 41 | 13 3/4 | 83 |
| (*)3496SHFFG | 4 | 23.8 | 119-357 | 5-15 | 531 | 6655 | 33 1/4 | 34 | 112 | 41 | 13 3/4 | 83 |
| (*)3496SHFFG | 6 | 23.8 | 119-476 | 5-20 | 531 | 6655 | 33 1/4 | 34 | 112 | 41 | 13 3/4 | 83 |
| (*)3648SHFFG | 3 | 14.3 | 72-215 | 5-15 | 375 | 3650 | 36 | 38 1/4 | 67 3/4 | 43 | 14 3/4 | 87 |
| (*)3648SHFFG | 4 | 14.3 | 216-286 | 16-20 | 375 | 3650 | 36 | 38 1/4 | 67 3/4 | 43 | 14 3/4 | 87 |
| (*)3660SHFFG | 4 | 17.3 | 87-346 | 5-20 | 425 | 4260 | 36 | 38 1/4 | 79 3/4 | 43 | 14 3/4 | 87 |
| (*)3672SHFFG | 4 | 20.3 | 102-358 | 5-17 | 490 | 5070 | 36 | 38 1/4 | 91 3/4 | 43 | 14 3/4 | 87 |
| (*)3672SHFFG | 6 | 20.3 | 358-406 | 18-20 | 490 | 5070 | 36 | 38 1/4 | 91 3/4 | 43 | 14 3/4 | 87 |
| (*)3684SHFFG | 4 | 23.3 | 117-358 | 5-15 | 535 | 5870 | 36 | 38 1/4 | 103 3/4 | 43 | 14 3/4 | 87 |
| (*)3684SHFFG | 6 | 23.3 | 359-466 | 16-20 | 535 | 5870 | 36 | 38 1/4 | 103 3/4 | 43 | 14 3/4 | 87 |
| (*)3696SHFFG | 6 | 26.3 | 132-526 | 5-20 | 580 | 6680 | 36 | 38 1/4 | 115 3/4 | 43 | 14 3/4 | 87 |
| (*)36108SHFFG | 6 | 29.3 | 147-586 | 5-20 | 615 | 7490 | 36 | 38 1/4 | 127 3/4 | 43 | 14 3/4 | 87 |
| (*)36120SHFFG | 6 | 32.3 | 162-646 | 5-20 | 655 | 8290 | 36 | 38 1/4 | 139 3/4 | 43 | 14 3/4 | 87 |
| (*)4248SHFFG | 4 | 17.1 | 86-342 | 5-20 | 435 | 4870 | 42 | 44 1/4 | 69 3/4 | 49 | 14 3/4 | 99 |
| (*)4260SHFFG | 4 | 20.4 | 102-358 | (5-17) | (<mark>515</mark>) | 5680 | 42 | 44 1/4 | 81 3/4 | 49 | 14 3/4 | 99 |
| (*)4260SHFFG | 6 | 20.4 | 359-408 | 18-20 | 515 | 5680 | 42 | 44 1/4 | 81 3/4 | 49 | 14 3/4 | 99 |
| (*)4272SHFFG | 4 | 23.9 | 120-358 | 5-15 | 560 | 6685 | 42 | 44 1/4 | 93 3/4 | 49 | 14 3/4 | 99 |
| (*)4272SHFFG | 6 | 23.9 | 359-478 | 16-20 | 560 | 6685 | 42 | 44 1/4 | 93 3/4 | 49 | 14 3/4 | 99 |
| (*)4284SHFFG | 6 | 27.4 | 137-548 | 5-20 | 610 | 7690 | 42 | 44 1/4 | 105 3/4 | 49 | 14 3/4 | 99 |
| (*)4296SHFFG | 6 | 30.9 | 155-618 | 5-20 | 660 | 8700 | 42 | 44 1/4 | 117 3/4 | 49 | 14 3/4 | 99 |
| (*)42108SHFFG | 6 | 34.6 | 173-692 | 5-20 | 710 | 9700 | 42 | 44 1/4 | 129 3/4 | 49 | 14 3/4 | 99 |
| (*)42120SHFFG | 6 | 38.1 | 191-762 | 5-20 | 760 | 10710 | 42 | 44 1/4 | 141 3/4 | 49 | 14 3/4 | 99 |
| (*)42132SHFFG | 6 | 41.6 | 208-832 | 5-20 | 805 | 11720 | 42 | 44 1/4 | 153 3/4 | 49 | 14 3/4 | 99 |
| (*)42144SHFFG | 6 | 45.1 | 225-900 | 5-20 | 855 | 12720 | 42 | 44 1/4 | 165 3/4 | 49 | 14 3/4 | 99 |
| (*)4848SHFFG | 4 | 19.7 | 99-358 | 5-18 | 550 | 6310 | 48 | 50 1/4 | 70 3/4 | 55 | 14 3/4 | 111 |
| (*)4848SHFFG | 6 | 19.7 | 359-394 | 19-20 | 550 | 6310 | 48 | 50 1/4 | 70 3/4 | 55 | 14 3/4 | 111 |
| (*)4860SHFFG | 4 | 23.7 | 119-358 | 5-15 | 605 | 7520 | 48 | 50 1/4 | 82 3/4 | 55 | 14 3/4 | 111 |
| (*)4860SHFFG | 6 | 23.7 | 359-474 | 16-20 | 605 | 7520 | 48 | 50 1/4 | 82 3/4 | 55 | 14 3/4 | 111 |
| (*)4872SHFFG | 6 | 27.7 | 139-554 | 5-20 | 660 | 8915 | 48 | 50 1/4 | 94 3/4 | 55 | 14 3/4 | 111 |
| (*)4884SHFFG | 6 | 31.7 | 159-634 | 5-20 | 715 | 10120 | 48 | 50 1/4 | 106 3/4 | 55 | 14 3/4 | 111 |
| (*)4896SHFFG | 6 | 35.7 | 179-714 | 5-20 | 770 | 11320 | 48 | 50 1/4 | 118 3/4 | 55 | 14 3/4 | 111 |
| (*)48108SHFFG | 6 | 39.7 43.7 | 199-794 | 5-20 | 825 | 12530 | 48 48 | 50 1/4 | 130 3/4 | 55 | 14 3/4 | 111 |
| (*)48120SHFFG | 6 4 | 30.8 | 219-874 | 5-20 5-11 | 880 841 | 13730 | 60 | 50 1/4 63 1/2 | 142 3/4 84 3/4 | 55 68 | 16 3/4 | 111 |
| (*)6048SHFFG | 6 | 30.8 | 154-340 | | 841 | 12460 12460 | 60 | | 84 3/4 | 68 | 16 3/4 | |
| (*)6048SHFFG | | | 341-616 179-716 | 12-20 | | | | 63 1/2 | | | | 135 |
| (*)6060SHFFG | 6 | 35.8 40.8 | | 5-20 | 918 | 14473 | 60 60 | 63 1/2 | 96 3/4 | 68 68 | 16 3/4 | 135 |
| (*)6072SHFFG (*)6084SHFFG | | 45.8 | 204-816 | 5-20 | 1010 1082 | 16501 | | 63 1/2 | 108 3/4 120 3/4 | | 16 3/4 16 3/4 | 135 |
| (*)6084SHFFG | 6 8 | 45.8 | 229-779 780-916 | 5-17 18-20 | 1082 | 18510 18510 | 60 60 | | 120 3/4 | 68 68 | 16 3/4 | 135 135 |
| (*)6096SHFFG | 6 | 50.8 | 254-762 | 5-15 | 1154 | 20518 | 60 | | 132 3/4 | 68 | 16 3/4 | 135 |
| (*)6096SHFFG | 8 | 50.8 | 763-1016 | 16-20 | 1154 | 20518 | 60 | 63 1/2 | | 68 | 16 3/4 | 135 |
| (*)60108SHFFG | 6 | 55.8 | 279-813 | 5-15 | 1216 | 22417 | 60 | | 144 3/4 | 68 | 16 3/4 | 135 |
| (*)60108SHFFG | 8 | 55.8 | 814-1116 | 16-20 | 1216 | 22417 | 60 | 63 1/2 | | 68 | 16 3/4 | 135 |
| (*)60120SHFFG | 6 | 60.8 | 304-790 | 5-13 | 1282 | 24519 | 60 | 63 1/2 | | 68 | 16 3/4 | 135 |
| (*)60120SHFFG | 8 | 60.8 | 791-1216 | 14-20 | 1282 | 24519 | 60 | | 156 3/4 | 68 | 16 3/4 | 135 |
| (*)60132SHFFG | 6 | 65.8 | 329-790 | 5-12 | 1355 | 26335 | 60 | | 168 3/4 | 68 | 16 3/4 | 135 |
| (*)60132SHFFG | 8 | 65.8 | 791-1316 | 13-20 | 1355 | 26335 | 60 | 63 1/2 | | 68 | 16 3/4 | 135 |
| (*)60144SHFFG | 8 | 70.8 | 354-1416 | 5-20 | 1432 | 28348 | 60 | 63 1/2 | | 68 | 16 3/4 | 135 |
| (*)60156SHFFG | 8 | 75.8 | 379-1516 | 5-20 | 1504 | 30357 | 60 | 63 1/2 | | 68 | 16 3/4 | 135 |
| (*)60168SHFFG | 8 | 80.8 | 404-1616 | 5-20 5-20 | 1571 | 32167 | 60 | | 204 3/4 | 68 | 16 3/4 | 135 |
| ()00 100011111 G | U | 00.0 | | J-20 | 10/1 | JZ 101 | 00 | 00 1/2 | 2UT 3/4 | 00 | 10 3/4 | 100 |

Note: All dimensions are based on fiberglass construction, 50 psi working pressure hydrostatically tested to 1.1 x working pressure and designed with a 4:1 safety factor. Consult Neptune-Benson for dimensional verification on custom fabricated vessels. All tanks include air relief and drain connections.

(*)Denotes quantity of tanks.

Tank shipping weight includes manifold & internals.

A* = Inside Diameter

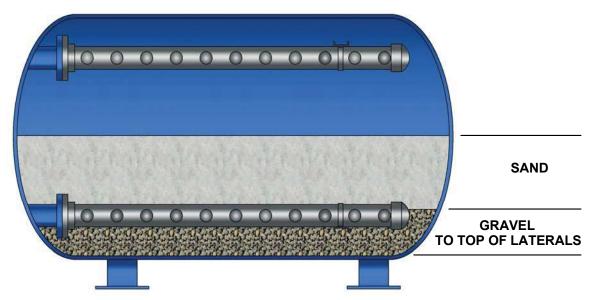
A1** = Maximum Outside Diameter





Horizontal Fiberglass Sand Filters

Media Requirements



Tank connections not shown for clarity purposes.

STANDARD MEDIA CHART

| All dimensions are in inches | | | | | | | | |
|------------------------------|----------------|------------------------|---------------|-----------------------|--|--|--|--|
| Filter Model Number | Gravel (CF) | Filter Sand (CF) | Sand Depth | Total Bed Depth | | | | |
| (*)3448SHFFG | 5 | 10 | 10 | 18 | | | | |
| (*)3454SHFFG | 5 | 11 | 10 | 18 | | | | |
| (*)3460SHFFG | 6 | 12 | 10 | 18 | | | | |
| (*)3466SHFFG | 7 | 13 | 10 | 18 | | | | |
| (*)3472SHFFG | 7 | 14 | 10 | 18 | | | | |
| (*)3478SHFFG | 8 | 15 | 10 | 18 | | | | |
| (*)3484SHFFG | 8 | 16 | 10 | 18 | | | | |
| (*)3490SHFFG | 9 | 17 | 10 | 18 | | | | |
| (*)3496SHFFG | 10 | 19 | 10 | 18 | | | | |
| (*)3648SHFFG | 6 | 11 | 9 | 18 | | | | |
| (*)3660SHFFG | 7 | 13 | 9 | 18 | | | | |
| (*)3672SHFFG | 9 | 15 | 9 | 18 | | | | |
| (*)3684SHFFG | 10 | 18 | 9 | 18 | | | | |
| (*)3696SHFFG | 11 | 21 | 9 | 18 | | | | |
| (*)36108SHFFG | 13 | 23 | 9 | 18 | | | | |
| (*)36120SHFFG | 14 | 26 | 9 | 18 | | | | |
| (*)4248SHFFG | 6 | 17 | 12 | 21 | | | | |
| (*)4260SHFFG | 8 | 19 | 12 | 21 | | | | |
| (*)4272SHFFG | 9 | 23 | 12 | 21 | | | | |
| (*)4284SHFFG | 11 | 26 | 12 | 21 | | | | |
| (*)4296SHFFG | 12 | 30 | 12 | 21 | | | | |
| (*)42108SHFFG | 14 | 33 | 12 | 21 | | | | |

| All dimensions are in inches | | | | | | | | | |
|------------------------------|----------------|------|----|-----------------------|--|--|--|--|--|
| Filter Model Number | Gravel (CF) | Sand | | Total Bed Depth | | | | | |
| (*)42120SHFFG | 15 | 37 | 12 | 21 | | | | | |
| (*)42132SHFFG | 17 | 40 | 12 | 21 | | | | | |
| (*)42144SHFFG | 18 | 44 | 12 | 21 | | | | | |
| (*)4848SHFFG | 7 | 23 | 15 | 24 | | | | | |
| (*)4860SHFFG | 8 | 28 | 15 | 24 | | | | | |
| (*)4872SHFFG | 10 | 33 | 15 | 24 | | | | | |
| (*)4884SHFFG | 12 | 37 | 15 | 24 | | | | | |
| (*)4896SHFFG | 13 | 42 | 15 | 24 | | | | | |
| (*)48108SHFFG | 15 | 46 | 15 | 24 | | | | | |
| (*)48120SHFFG | 17 | 50 | 15 | 24 | | | | | |
| (*)6048SHFFG | 12 | 48 | 19 | 30 | | | | | |
| (*)6060SHFFG | 14 | 56 | 19 | 30 | | | | | |
| (*)6072SHFFG | 16 | 64 | 19 | 30 | | | | | |
| (*)6084SHFFG | 18 | 72 | 19 | 30 | | | | | |
| (*)6096SHFFG | 20 | 80 | 19 | 30 | | | | | |
| (*)60108SHFFG | 22 | 87 | 19 | 30 | | | | | |
| (*)60120SHFFG | 25 | 95 | 19 | 30 | | | | | |
| (*)60132SHFFG | 27 | 102 | 19 | 30 | | | | | |
| (*)60144SHFFG | 29 | 110 | 19 | 30 | | | | | |
| (*)60156SHFFG | 31 | 118 | 19 | 30 | | | | | |
| (*)60168SHFFG | 33 | 125 | 19 | 30 | | | | | |



EXHIBIT E CONSTRUCTION SCHEDULE

EXHIBIT F SCHEDULE OF VALUES



2510 Farrell Rd

Houston TX

77073 281-982-0212

Quote

Quote #: Q5633 **Date:** 11/19/2021

Shipping Method:

Salesperson: Erica

Exp Date: 1/18/2022

Bill To

City of College Station (CSCITY)
Adamson & Hallaran Filters/Plaster
PPG 18300249R1 (until 1/3/20)
PO 18300249R2 (start 1/4/20)
vendorinvoiceentry@cstx.gov
rlgonzalez@cstx.gov

Ship To

City of College Station (CSCITY)
Adamson & Hallaran Filters/Plaster
PPG 21300209
Service/Repairs 20300358

College Station TX

77840 (979)764-3773

| Item | Description | Qty | UOM | Unit Price | Tax | Total |
|----------|---|-----|-----|--------------|--------|--------------|
| NONSTOCK | Filter Media Change - Adamson | 1 | EA | \$14,974.00 | \$0.00 | \$14,974.00 |
| PLASTER | Re-Plaster of Adamson | 1 | EA | \$135,500.00 | \$0.00 | \$135,500.00 |
| NONSTOCK | Filter Media Change - C Hallaran | 1 | EA | \$7,874.00 | \$0.00 | \$7,874.00 |
| PLASTER | Re-Plaster of C Hallaran | 1 | EA | \$78,300.00 | \$0.00 | \$78,300.00 |
| NONSTOCK | P/P Bond | 1 | EA | \$4,630.00 | \$0.00 | \$4,630.00 |
| NONSTOCK | VGBA SS Main Drain Cover 24 x 24 - C Hallaran | 3 | EA | \$800.00 | \$0.00 | \$2,400.00 |
| NONSTOCK | VGBA SS Main Drain Cover 24 x 24 - Adamson | 4 | EA | \$800.00 | \$0.00 | \$3,200.00 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

EXMPT \$0.00

Total Weight of Items 0 lbs

Total \$246,878.00

Tax Total \$0.00

Grand Total \$246,878.00

There will be a 25% restocking fee on all returned items.
Credit Card Purchases will include a 4% Service Fee
Due to Material Shortages, Quotes are only valid for 60 days

Thank you for your business

1 of 4



2510 Farrell Rd

Houston TX

77073 281-982-0212

Quote

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Adamson & Hallaran Filters/Plaster
PPG 21300209
Service/Repairs 20300358

College Station

ΤX

77840 (979)764-3773

Item Description Qty UOM Unit Price Tax Total

Project details below:

- 1. Filter Media Change Adamson
- 4 qty filters
- Each filter: 22 laterals & 1 gasket. Total for project: 88 laterals & 4 gaskets
- Labor included
- 2. Re-Plaster of Adamson

Project to include saw cutting around all tile inside of pool to preserve. Removal of existing plaster down to concrete shell. Clean and power wash concrete surface to allow good adhesion with new plaster.

New quartz aggregate plaster will be installed on entire inner surface of pool. Pool will be refilled and mechanical system will be restarted. Chemicals will be provided to balance pool for new plaster. Brush and vacuum for 1 week following new plaster application.

Warranty:

Quartz plaster - 3 year warranty against delamination

- 3. Filter Media Change Hallaran
- 3 qty filters

EXMPT

\$0.00

Total Weight of Items 0 lbs

Total \$246,878.00

Tax Total
Grand Total

\$246.878.00

\$0.00

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77073 281-982-0212

Quote

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Ship To

City of College Station (CSCITY)
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PPG 21300209
Service/Repairs 20300358

College Station TX

77840 (979)764-3773

Item Description Qty UOM Unit Price Tax Total

- Each filter: 18 laterals & 1 gasket. Total for project: 54 laterals & 3 gaskets
- Labor included

4. Re-Plaster of Hallaran

Project to include saw cutting around all tile inside of pool to preserve. Removal of existing plaster down to concrete shell. Clean and power wash concrete surface to allow good adhesion with new plaster.

New quartz aggregate plaster will be installed on entire inner surface of pool. Pool will be refilled and mechanical system will be restarted. Chemicals will be provided to balance pool for new plaster. Brush and vacuum for 1 week following new plaster application.

BEACH ENTRY: Part of beach entry is currently plaster that is not underwater, this is not recommended. Plaster needs to be fully submerged. This price includes a tough coat beach entry.

Warranty:

Quartz plaster - 3 year warranty against delamination

BOND: Total for all projects

EXCLUSIONS:

Maindraine. If main drains are expired or not to TY Code they must be replaced it is believed that Admacan has stainless steel drains that are to code

EXMPT \$0.00

Total Weight of Items 0 lbs

Total \$246,878.00

Tax Total \$0.00

Grand Total \$246,878.00

There will be a 25% restocking fee on all returned items.

Credit Card Purchases will include a 4% Service Fee

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Thank you for your business

3 of 4



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Quote

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Salesperson: Erica

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Ship To

City of College Station (CSCITY)

Adamson & Hallaran Filters/Plaster
PPG 21300209

Service/Repairs 20300358

College Station TX

77840 (979)764-3773

Item Description Qty UOM Unit Price Tax Total

- Maindrains. If main drains are expired or not to TX Code they must be replaced. It is believed that Admason has stainless steel drains that are to code.

EXMPT

\$0.00

Total Weight of Items 0 lbs

Total \$246,878.00

Tax Total

\$0.00

Grand Total \$246,878.00

There will be a 25% restocking fee on all returned items.
Credit Card Purchases will include a 4% Service Fee
Due to Material Shortages, Quotes are only valid for 60 days

Thank you for your business

4 of 4