

AGREEMENT FOR PROVISION AND REPLACEMENT OF 275-TON AIR-COOLED CHILLER

THIS AGREEMENT FOR PROVISION AND REPLACEMENT OF 275-TON AIR-COOLED CHILLER ("Agreement") is entered into by and between the **CITY OF OCALA**, a Florida municipal corporation ("City"), and **SHERMAN MECHANICAL CONTRACTORS, LLC**, a Limited Liability Company, duly organized and authorized to do business in the state of Florida (EIN: 84-3927579) ("Contractor").

R E C I T A L S :

WHEREAS, on October 30, 2025, City issued an Invitation to Bid ("ITB") for the provision of construction services related to a 275-Ton Air-Cooled Chiller Replacement, ITB No.: FAC/260128 (the "Solicitation"); and

WHEREAS, a total of five (5) firms responded to the Solicitation and, after consideration of price and other evaluation factors set forth in the Solicitation, the bid submitted by Sherman Mechanical Contractors, LLC, was found to be the lowest; and

WHEREAS, Contractor was chosen as the intended awardee to provide construction services related to the 275-Ton Air-Cooled Chiller Replacement (the "Project"); and

WHEREAS, Contractor certifies that Contractor and its subcontractors are qualified and possess the required licensure and skill to perform the work required for the Project; and

NOW THEREFORE, in consideration of the foregoing recitals, the following mutual covenants and conditions, and other good and valuable consideration, City and Contractor agree as follows:

T E R M S O F A G R E E M E N T :

1. **RECITALS.** City and Contractor hereby represent, warrant, and agree that the Recitals set forth above are true and correct and are incorporated herein by reference.
2. **CONTRACT DOCUMENTS.** The Contract Documents which comprise the entire understanding between City and Contractor shall only include: (a) this Agreement; (b) those documents listed in this section as Exhibits to this Agreement; (c) the City's Solicitation for the Project and the quote submitted by Contractor in response to same (the "Solicitation Documents"); and (d) those documents identified in the Project Specifications section of this Agreement. Each of these documents are incorporated herein by reference for all purposes.

If there is a conflict between the terms of this Agreement and the Contract Documents, then the terms of this Agreement shall control, amend, and supersede any conflicting terms contained in the remaining Contract Documents.

- A. **Exhibits to Agreement:** The Exhibits to this Agreement are as follows:

| | |
|------------|---|
| Exhibit A: | Scope of Work (A-1 through A-4) |
| Exhibit B: | Price Proposal (B-1) |
| Exhibit C: | Johnson Controls Air-Cooled Screw Chiller Specifications (C-1 through C-38) |
| Exhibit D: | VLT HVAC Drive FC 102 Design Guide (D-1) |
| Exhibit E: | Bell & Gossett Centrifugal Pump (E-1 through E-4) |
| Exhibit F: | Schedule and Safety Plan (F-1 through F-3) |

If there is a conflict between the individual Exhibits regarding the scope of work to be performed, then any identified inconsistency shall be resolved by giving precedence in the following order: (1) Exhibit A, then (2) Exhibit B, then (3) Exhibit C, then (4) Exhibit D, then (5) Exhibit E, then (6) Exhibit F.

3. **SCOPE OF SERVICES.** Contractor shall provide all materials, labor, supervision, tools, accessories, equipment, permits, fees, testing, inspections, certifications, and all other things necessary for Contractor to perform its obligations under this Agreement as set forth in the attached **Exhibit A - Scope of Work** and the Solicitation Documents. Prime Contractor must perform a minimum of thirty percent (30%) of the work with its own forces. The Scope of Work under this Agreement may only be adjusted by written amendment executed by both parties.
4. **COMPENSATION.** City shall pay Contractor an amount not to exceed **THREE HUNDRED SIXTY-THREE THOUSAND, SIX HUNDRED SIXTY-EIGHT AND NO/100 DOLLARS (\$363,668)** (the "Contract Sum") as full and complete compensation for the timely and satisfactory completion of the work in compliance with the pricing schedule in **Exhibit B – Price Proposal** and other requirements set forth in the Contract Documents. The pricing under this Agreement may only be adjusted by written amendment executed by both parties.
 - A. **Invoice Submission.** All invoices submitted by Contractor shall include the City Contract Number, an assigned Invoice Number, and an Invoice Date. Contractor shall submit the original invoice at the completion of the Project once all final inspections have been approved through the responsible City Project Manager at: **City of Ocala Facilities Management Department, Attn: Gary Crews, Address: 1805 NE 30th Avenue, Building 200, Ocala, Florida 34470; E-Mail: facilities@ocalafl.gov.**
 - B. **Payment of Invoices by City.** The City Project Manager must review and approve all invoices prior to payment. City Project Manager's approval shall not be unreasonably withheld, conditioned, or delayed. Payments by City shall be made no later than the time periods established in section 218.735, Florida Statutes.
 - C. **Withholding of Payment.** City reserves the right to withhold, in whole or in part, payment for any and all work that: (i) has not been completed by Contractor; (ii) is inadequate or defective and has not been remedied or resolved in a manner satisfactory to the City Project Manager; or (iii) which fails to comply with any term, condition, or other requirement under this Agreement. Any payment withheld shall be released and remitted to Contractor within **THIRTY (30)** calendar days of the Contractor's remedy or resolution of the inadequacy or defect.
 - D. **Excess Funds.** If due to mistake or any other reason Contractor receives payment under this Agreement in excess of what is provided for by the Agreement, Contractor shall promptly notify City upon discovery of the receipt of the overpayment. Any overpayment shall be refunded to City within **THIRTY (30)** days of Contractor's receipt of the overpayment or must also include interest calculated from the date of the overpayment at the interest rate for judgments at the highest rate as allowed by law.
 - E. **Amounts Due to the City.** Contractor must be current and remain current in all obligations due to the City during the performance of services under this Agreement. Payments to Contractor may be offset by any delinquent amounts due to the City or fees and/or charges owed to the City.
 - F. **Tax Exemption.** City is exempt from all federal excise and state sales taxes (State of Florida Consumer's Certification of Exemption 85-8012621655C-9). The City's Employer Identification Number is 59-60000392. Contractor shall not be exempted from paying sales tax to its suppliers for materials to fulfill contractual obligations with the City, nor will Contractor be authorized to use City's Tax Exemption Number for securing materials listed herein.
5. **TIME FOR PERFORMANCE.** Time is of the essence with respect to the performance of all duties, obligations, and responsibilities set forth in this Agreement and the Contract Documents.

- A. **Lead Time.** The maximum acceptable lead time on materials is 17 weeks, unless due to unforeseeable circumstances. The City shall issue a Notice to Proceed (NTP) upon notification of receipt materials by Contractor.
- B. Contractor shall mobilize and commence work no later than **TEN (10)** working days from the date of issuance of a Notice to Proceed for the project by City. At no time will the Contractor be allowed to lag behind.
- C. **All work shall be completed by Contractor in a manner satisfactory to the City Project Manager and ready for final payment within THIRTY (30) days of the start date indicated on the Notice to Proceed.**
- D. The Time for Performance under this Agreement may only be adjusted by Change Order, in the sole and absolute discretion of City. Any request for an extension of the Time for Performance must be submitted in a writing delivered to the City Project Manager, along with all supporting data, within **SEVEN (7)** calendar days of the occurrence of the event giving rise to the need for adjustment unless the City allows an additional period of time to ascertain more accurate data. All requests for adjustments in the Contract Time shall be determined by City.
- E. **Weather Days:** Contractor shall submit a written request to the City Project Manager (e-mail is the preferred method) for additional days for which work is suspended or delayed by weather. Weather days shall be reconciled with each monthly pay application for the time period which the application is submitted and shall be final. Contractor performance and execution of work shall be considered in the determination for granting additional days.
- F. As to any delay, inefficiency, or interference in this performance of this Agreement caused by any act or failure to act by City, the Contractor's sole remedy shall be the entitlement of an extension of time to complete the performance of the affected work in accordance with the Contract Documents. Contractor agrees to make no claim for extra or additional costs attributable to said delays, inefficiencies or interference, except as provided in this Agreement.
- G. None of the provisions of this section shall exclude City's right of recovery for damages caused by delays or inefficiencies caused by any act or failure to act by Contractor, to include costs incurred by City for the procurement of additional professional services.

6. **LIQUIDATED DAMAGES FOR LATE COMPLETION.** The parties agree that it would be extremely difficult and impracticable under the presently known facts and anticipated circumstances to ascertain and fix the actual damages that City and its residents would incur should Contractor fail to achieve Final Completion and readiness for final payment by the dates specified for each under the terms of this Agreement. Accordingly, the parties agree that should Contractor fail to achieve Final Completion by the date specified, then Contractor shall pay City, as liquidated damages and not as a penalty, the sum of **ONE THOUSAND AND NO/100 DOLLARS (\$1,000)** per day for each calendar day of unexcused delay in achieving Final Completion beyond the date specified in the Contract Documents.

- A. **No Waiver of Rights or Liabilities.** Permitting Contractor to continue and finish the work, or any part thereof, beyond the dates specified for Substantial Completion and/or Final Completion and readiness for final payment shall not operate as a waiver on the part of the City of any of its rights under this Agreement. Any liquidated damages assessed pursuant to this section shall not relieve Contractor from liability for any damages or costs of other contractors caused by a failure of Contractor to complete the work as agreed.

- B. **Right to Withhold or Deduct Damages.** When liquidated damages are due and owing, City shall have the right to: (1) deduct the liquidated damages from any money in its hands or from any money otherwise due or to become due to Contractor; or to (2) initiate any applicable dispute resolution procedure for the recovery of liquidated damages within the times specified under this Agreement.
- C. **Additional Costs.** In addition to the liquidated damages set forth under this section, Contractor agrees to pay all costs and expenses incurred by City due to Contractor's delay in performance to include inspection fees, superintendence costs, and travel expenses.
- D. **Injunctive Relief.** The parties acknowledge that monetary damages may not be a sufficient remedy for Contractor's failure to achieve Substantial Completion or Final Completion in accordance with the terms of this Agreement, and that City shall be entitled, in addition to all other rights or remedies in law and equity, to seek injunctive relief.

7. **DELAYS AND DAMAGES.** The Contractor agrees to make no claim for extra or additional costs attributable to any delays, inefficiencies, or interference in the performance of this contract occasioned by any act or omission to act by the City except as provided in the Agreement. The Contractor also agrees that any such delay, inefficiency, or interference shall be compensated for solely by an extension of time to complete the performance of the work in accordance with the provision in the standard specification.

8. **FORCE MAJEURE.** Neither party shall be liable for delay, damage, or failure in the performance of any obligation under this Agreement if such delay, damage, or failure is due to causes beyond its reasonable control, including without limitation: fire, flood, strikes and labor disputes, acts of war, acts of nature, terrorism, civil unrest, acts or delays in acting of the government of the United States or the several states, judicial orders, decrees or restrictions, or any other like reason which is beyond the control of the respective party ("Force Majeure"). The party affected by any event of force majeure shall use reasonable efforts to remedy, remove, or mitigate such event and the effects thereof with all reasonable dispatch.

- A. The party affected by force majeure shall provide the other party with full particulars thereof including, but not limited to, the nature, details, and expected duration thereof, as soon as it becomes aware.
- B. When force majeure circumstances arise, the parties shall negotiate in good faith any modifications of the terms of this Agreement that may be necessary or appropriate in order to arrive at an equitable solution. Contractor performance shall be extended for a number of days equal to the duration of the force majeure. Contractor shall be entitled to an extension of time only and, in no event, shall Contractor be entitled to any increased costs, additional compensation, or damages of any type resulting from such force majeure delays.

9. **INSPECTION AND ACCEPTANCE OF THE WORK.** Contractor shall report its progress to the City Project Manager as set forth herein. All services, work, and materials provided by Contractor under this Agreement shall be provided to the satisfaction and approval of the City Project Manager.

- A. The City Project Manager shall decide all questions regarding the quality, acceptability, and/or fitness of materials furnished, or workmanship performed, the rate of progress of the work, the interpretation of the plans and specifications, and the acceptable fulfillment of the Agreement, in his or her sole discretion, based upon both the requirements set forth by City and the information provided by Contractor in its Bid. The authority vested in the City Project Manager pursuant to this paragraph shall be confined to the direction or specification of what

is to be performed under this Agreement and shall not extend to the actual execution of the work.

B. Neither the City Project Manager's review of Contractor's work nor recommendations made by City Project Manager pursuant to this Agreement will impose on City Project Manager any responsibility to supervise, direct, or control Contractor's work in progress or for the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident Contractor's furnishing and performing the work.

10. **TERMINATION AND DEFAULT.** Either party, upon determination that the other party has failed or refused to perform or is otherwise in breach of any obligation or provision under this Agreement or the Contract Document, may give written notice of default to the defaulting party in the manner specified for the giving of notices herein. Termination of this Agreement by either party for any reason shall have no effect upon the rights or duties accruing to the parties prior to termination.

A. **Termination by City for Cause.** City shall have the right to terminate this Agreement immediately, in whole or in part, upon the failure of Contractor to carry out any obligation, term, or condition of this Agreement. City's election to terminate the Agreement for default shall be communicated by providing Contractor written notice of termination in the manner specified for the giving of notices herein. Any notice of termination given to Contractor by City shall be effective immediately, unless otherwise provided therein, upon the occurrence of any one or more of the following events:

- (1) Contractor fails to timely and properly perform any of the services set forth in the specifications of the Agreement;
- (2) Contractor provides material that does not meet the specifications of the Agreement;
- (3) Contractor fails to complete the work required within the time stipulated in the Agreement; or
- (4) Contractor fails to make progress in the performance of the Agreement and/or gives City reason to believe that Contractor cannot or will not perform to the requirements of the Agreement.

B. **Contractor's Opportunity to Cure Default.** City may, in its sole discretion, provide Contractor with an opportunity to cure the violations set forth in City's notice of default to Contractor. Contractor shall commence to cure the violations immediately and shall diligently and continuously prosecute such cure to completion within a reasonable time as determined by City. If the violations are not corrected within the time determined to be reasonable by City or to the reasonable satisfaction of City, City may, without further notice, declare Contractor to be in breach of this Agreement and pursue all remedies available at law or equity, to include termination of this Agreement without further notice.

C. **City's Remedies Upon Contractor Default.** In the event that Contractor fails to cure any default under this Agreement within the time period specified in this section, City may pursue any remedies available at law or equity, including, without limitation, the following:

- (1) City shall be entitled to terminate this Agreement without further notice;
- (2) City shall be entitled to hire another contractor to complete the required work in accordance with the needs of City;
- (3) City shall be entitled to recover from Contractor all damages, costs, and attorney's fees arising from Contractor's default prior to termination; and

(4) City shall be entitled to recovery from Contractor any actual excess costs by: (i) deduction from any unpaid balances owed to Contractor; or (ii) any other remedy as provided by law.

D. **Termination for Convenience.** City reserves the right to terminate this Agreement in whole or in part at any time for the convenience of City without penalty or recourse. The City Project Manager shall provide written notice of the termination. Upon receipt of the notice, Contractor shall immediately discontinue all work as directed in the notice, notify all subcontractors of the effective date of the termination, and minimize all further costs to City including, but not limited to, the placing of any and all orders for materials, facilities, or supplies, in connection with its performance under this Agreement. Contractor shall be entitled to receive compensation solely for: (1) the actual cost of the work completed in conformity with this Agreement; and/or (2) such other costs incurred by Contractor as permitted under this Agreement and approved by City.

11. **WARRANTY.** Contractor warrants that all labor, materials, and equipment furnished under the agreement are new, of the type and quality required for the Project, and installed in a good and workmanlike manner in accordance with the Contract Documents. Contractor shall guarantee that the work shall be free from any defects in workmanship for a period of not less than **FIVE (5)** years from the date of Final Completion. Contractor shall guarantee that the materials provided shall be free from any defects for the longer of: (1) **FIVE (5)** years from the date of Final Completion; or (2) the period of warranty provided by any supplier or manufacturer. All written manufacturers' warranties for materials supplied must be provided to the City Project Manager before final payment will be authorized.

12. **PERFORMANCE EVALUATION.** At the end of the contract, City may evaluate Contractor's performance. Any such evaluation will become public record.

13. **NOTICE REGARDING FAILURE TO FULFILL AGREEMENT.** Any contractor who enters into an Agreement with the City of Ocala and fails to complete the contract term, for any reason, shall be subject to future bidding suspension for a period of **ONE (1)** year and bid debarment for a period of up to **THREE (3)** years for serious contract failures.

14. **CONTRACTOR REPRESENTATIONS.** Contractor expressly represents that:

- A. Contractor has read and is fully familiar with all the terms and conditions of this Agreement, the Contract Documents, and other related data and acknowledges that they are sufficient in scope and detail to indicate and convey understanding of all terms and conditions of the work to be performed by Contractor under this Agreement.
- B. Contractor has disclosed, in writing, all known conflicts, errors, inconsistencies, discrepancies, or omissions discovered by Contractor in the Contract Documents, and that the City's written resolution of same is acceptable to Contractor.
- C. Contractor has had an opportunity to visit, has visited, or has had an opportunity to examine and ask questions regarding the sites upon which the work is to be performed and is satisfied with the site conditions that may affect cost, progress, and performance of the work, as observable or determinable by Contractor's own investigation.
- D. Contractor is satisfied with the site conditions that may affect cost, progress, and performance of the work, as observable or determinable by Contractor's own investigation.
- E. Contractor is familiar with all local, state, and Federal laws, regulations, and ordinances which may affect cost, progress, or its performance under this Agreement whatsoever.

F. **Public Entity Crimes.** Neither Contractor, its parent corporations, subsidiaries, members, shareholders, partners, officers, directors or executives, nor any of its affiliates, contractors, suppliers, subcontractors, or consultants under this Agreement have been placed on the convicted vendor list following a conviction of a public entity crime. Contractor understands that a "public entity crime" as defined in section 287.133(1)(g), Florida Statutes, is "a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States..." Contractor further understands that any person or affiliate who has been placed on the convicted vendor list following a conviction for a public entity crime: (1) may not submit a bid, proposal, or reply on a contract: (a) to provide any goods or services to a public entity; (b) for the construction or repair of a public building or public work; or (c) for leases of real property to a public entity; (2) may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under a contract with any public entity; and (3) may not transact business with any public entity in excess of the threshold amount provided in section 287.017, Florida Statutes, for CATEGORY TWO for a period of 36 months from the date of being placed on the convicted vendor list.

15. **CONTRACTOR RESPONSIBILITIES.** Except as otherwise specifically provided for in this Agreement, the following provisions are the responsibility of the Contractor:

- A. Contractor shall competently and efficiently supervise, inspect, and direct all work to be performed under this Agreement, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the work in accordance with the Contract Documents.
- B. Contractor shall be solely responsible for the means, methods, techniques, sequences, or procedures of construction and safety precautions or programs incident thereto.
- C. Contractor shall be responsible to see that the finished work complies accurately with this Agreement and the intent thereof.
- D. Contractor shall comply with all local, state, and Federal laws, regulations, and ordinances which may affect cost, progress, or its performance under this Agreement, including, but not limited to obtaining all permits, licenses, and other authorizations necessary for the prosecution of the work and be responsible for all costs associated with same.
- E. Contractor shall operate and cause all construction equipment and materials supplied for or intended to be utilized in the Project to be operated and stored in only those areas prescribed by City. This includes the operations of workmen.
- F. Contractor shall be fully responsible for receipt, inspection, acceptance, handling, and storage of all construction equipment and materials supplied for or intended to be utilized in the Project, whether furnished by Contractor or City. Contractor shall be responsible for providing adequate safeguards to prevent loss, theft, damage, or commingling with other materials or projects.
- G. Contractor shall continue its performance under this Agreement during the pendency of any dispute or disagreement arising out of or relating to this Agreement, except as Contractor and City may otherwise agree in writing.

16. **NO EXCLUSIVITY.** It is expressly understood and agreed by the parties that this is not an exclusive agreement. Nothing in this Agreement shall be construed as creating any exclusive arrangement with Contractor or as prohibit City from either acquiring similar, equal, or like goods and/or services or from executing additional contracts with other entities or sources.

17. RIGHT OF ACCESS AND OTHER WORK PERFORMED BY THIRD PARTIES. City may perform additional work related to the Project itself, or have additional work performed by utility service companies, or let other direct contracts therefore which shall contain General Conditions similar to these. Contractor shall afford the utility service companies and the other contractors who are parties to such direct contracts (or City, if City is performing the additional work with City's employees) reasonable opportunity for the introduction and storage of materials and equipment and the execution of work and shall properly connect and coordinate his work with theirs.

- A. If any part of Contractor's work depends for proper execution or results upon the work of any such other contractor or utility service company (or City), Contractor shall inspect and promptly report to City in writing any latent or apparent defects or deficiencies in such work that render it unsuitable for such proper execution and results. Contractor's failure to so report shall constitute an acceptance of the other work as fit and proper for integration with Contractor's work except for latent or non-apparent defects and deficiencies in the other work.
- B. Contractor shall do all cutting, fitting, and patching of work that may be required to make the parts come together properly and integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work, and will only cut or alter their work with the written consent of City.

18. STORAGE OF MATERIALS/EQUIPMENT. Contractor shall be fully responsible for receipt, inspection, acceptance, handling, and storage of equipment and materials (whether furnished by Contractor or City) to be utilized in the performance of or incorporated into the work.

19. RESPONSIBILITIES OF CITY. City or its representative shall issue all communications to Contractor. City has the authority to request changes in the work in accordance with the terms of this Agreement and with the terms in **Exhibit A – Scope of Work**. City has the authority to stop work or to suspend any work.

20. COMMERCIAL AUTO LIABILITY INSURANCE. Contractor shall procure, maintain, and keep in full force, effect, and good standing for the life of this Agreement a policy of Commercial Auto Liability insurance with a minimum combined single limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury and property damage arising out of Contractor's operations and covering all owned, hired, scheduled, and non-owned automobiles utilized in said operations. If Contractor does not own vehicles, Contractor shall maintain coverage for hired and non-owned automobile liability, which may be satisfied by way of endorsement to Contractor's Commercial General Liability policy or separate Commercial Automobile Liability policy.

21. COMMERCIAL GENERAL LIABILITY INSURANCE. Contractor shall procure, maintain, and keep in full force, effect, and good standing for the life of this Agreement a policy of Commercial General Liability insurance with limits not less than:

- A. One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate (or project aggregate, if a construction project) for bodily injury, property damage, and personal and advertising injury; and
- B. One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate (or project aggregate, if a construction project) for products and completed operations.
- C. Policy must include coverage for contractual liability and independent contractors.
- D. Policy must include Additional Insured coverage in favor of the City that is no less restrictive than that afforded under the CG 20 26 04 13 Additional Insured Form.

22. WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY. Worker's Compensation insurance shall be provided by Contractor as required by Chapter 440, Florida Statutes, or any other applicable state or federal law, including the U.S. Longshoremen's and Harbor Workers Compensation Act and the Jones Act.

- A. Contractor shall similarly require any and all subcontractors to afford such coverage for all of its employees as required by applicable law.
- B. Contractor shall waive and shall ensure that Contractor's insurance carrier waives, all subrogation rights against the City of Ocala and its officers, employees, and volunteers for all losses or damages. Contractor's policy shall be endorsed with WC 00 03 13 Waiver of our Right to Recover from Others or its equivalent.
- C. Exceptions and exemptions to this Section may be allowed at the discretion of the City's Risk Manager on a case-by-case basis in accordance with Florida Statutes and shall be evidenced by a separate waiver.

23. ADDITIONAL INSURANCE REQUIREMENTS.

- A. Contractor's insurance coverage shall be primary insurance for all applicable policies. The limits of coverage under each policy maintained by Contractor shall not be interpreted as limiting Contractor's liability or obligations under this Agreement. City does not in any way represent that these types or amounts of insurance are sufficient or adequate enough to protect Contractor's interests or liabilities or to protect Contractor from claims that may arise out of or result from the negligent acts, errors, or omissions of Contractor, any of its agents or subcontractors, or for anyone whose negligent act(s) Contractor may be liable.
- B. No insurance shall be provided by the City for Contractor under this Agreement and Contractor shall be fully and solely responsible for any costs or expenses incurred as a result of a coverage deductible, co-insurance penalty to include any loss not covered because of the operation of such deductible, co-insurance penalty, or coverage exclusion or limitation.
- C. **Certificates of Insurance.** No work shall be commenced by Contractor under this Agreement until the required Certificate of Insurance and endorsements have been provided nor shall Contractor allow any subcontractor to commence work until all similarly required certificates and endorsements of the subcontractor have also been provided. Work shall not continue after expiration (or cancellation) of the Certificate of Insurance and work shall not resume until a new Certificate of Insurance has been provided. **Contractor shall provide evidence of insurance in the form of a valid Certificate of Insurance (binders are unacceptable) prior to the start of work contemplated under this Agreement to: City of Ocala, Attention: Procurement & Contracting Department, Address: 110 SE Watula Avenue, Third Floor, Ocala Florida 34471, E-Mail: vendors@ocalafl.gov.** Contractor's Certificate of Insurance and required endorsements shall be issued by an agency authorized to do business in the State of Florida with an A.M. Best Rating of A or better. The Certificate of Insurance shall indicate whether coverage is being provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
- D. **City as an Additional Insured.** The City of Ocala shall be named as an Additional Insured and Certificate Holder on all liability policies identified in this Section with the exception of Workers' Compensation, Auto Liability (except when required by Risk Management) and

Professional Liability policies. **Workers Compensation policy must contain a Waiver of Subrogation in favor of the City.**

- E. **Notice of Cancellation of Insurance.** Contractor's Certificate of Insurance shall provide **THIRTY (30) DAY** notice of cancellation, **TEN (10) DAY** notice if cancellation is for non-payment of premium. In the event that Contractor's insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of Contractor to provide the proper notice. Such notification shall be in writing by registered mail, return receipt requested, and addressed to the certificate holder. Additional copies may be sent to the City of Ocala at vendors@ocalafl.gov.
- F. **Failure to Maintain Coverage.** The insurance policies and coverages set forth above are required and providing proof of and maintaining insurance of the types and with such terms and limits set forth above is a material obligation of Contractor. Contractor's failure to obtain or maintain in full force and effect any insurance coverage required under this Agreement shall constitute material breach of this Agreement.
- G. **Severability of Interests.** Contractor shall arrange for its liability insurance to include, or be endorsed to include a severability of interests/cross-liability provision so that the "City of Ocala" (where named as an additional insured) will be treated as if a separate policy were in existence, but without increasing the policy limits.

24. **SAFETY/ENVIRONMENTAL.** Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Contractor shall make an effort to detect hazardous conditions and shall take prompt action where necessary to avoid accident, injury or property damage. EPA, DEP, OSHA and all other applicable safety laws and ordinances shall be followed as well as American National Standards Institute Safety Standards. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

- A. All employees on the work and other persons that may be affected thereby;
- B. All work, materials and equipment to be incorporated therein, whether in storage on or off the site; and
- C. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

All, injury, or loss to any property caused, directly or indirectly, in whole or in part, by Contractor, any subcontractor, or anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, shall be remedied by Contractor. Contractor's duties and responsibilities for the safety and protection of the work shall continue until such time as the work is completed and accepted by City.

25. **TRAFFIC CONTROL AND BARRICADES.** Contractor shall mitigate impact on local traffic conditions to all extents possible. Contractor is responsible for establishing and maintaining appropriate traffic control and barricades. The Contractor shall provide sufficient signing, flagging and barricading to ensure the safety of vehicular and pedestrian traffic at all locations where work is being done under this Agreement.

- A. In addition to the requirements set forth in its bid, the Contractor shall maintain at all times a good and sufficient fence, railing or barrier around all exposed portions of said work in such a manner as to warn vehicular and pedestrian traffic of hazardous conditions.

B. Should Contractor fail to properly barricade his work or stored material sites in the manner outlined above, the City may have the necessary barricading done, and all cost incurred for said barricading shall be charged to the Contractor.

26. WORK SITE AND CLEANUP. Daily, during the progress of the work, Contractor shall keep the premises free from accumulations of waste materials, rubbish, and all other debris resulting from the work. At the completion of the work, Contractor shall remove all waste materials, rubbish, and debris from and about the premises, as well as all tools, appliances, construction equipment and machinery, and surplus materials, and shall leave the site clean and ready for occupancy by City. Contractor shall provide an inventory listing of all surplus materials in an area designated by City. Contractor shall restore to their original condition those portions of the site not designated or alteration by this Agreement.

27. NON-DISCRIMINATORY EMPLOYMENT PRACTICES. During the performance of the contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, ancestry, national origin, sex, pregnancy, age, disability, sexual orientation, gender identity, marital or domestic partner status, familial status, or veteran status and shall take affirmative action to ensure that an employee or applicant is afforded equal employment opportunities without discrimination. Such action shall be taken with reference to, but not limited to: recruitment, employment, termination, rates of pay or other forms of compensation and selection for training or retraining, including apprenticeship and on-the-job training.

28. SUBCONTRACTORS. Nothing in this Agreement shall be construed to create, impose, or give rise to any duty owed by City or its representatives to any subcontractor of Contractor or any other persons or organizations having a direct contract with Contractor, nor shall it create any obligation on the part of City or its representatives to pay or seek payment of any monies to any subcontractor of Contractor or any other persons or organizations having a direct contract with Contractor, except as may otherwise be required by law. City shall not be responsible for the acts or omissions of any Contractor, subcontractor, or of any of their agents or employees, nor shall it create any obligation on the part of City or its representatives to pay or to seek the payment of any monies to any subcontractor or other person or organization, except as may otherwise be required by law.

29. EMERGENCIES. In an emergency affecting the welfare and safety of life or property, Contractor, without special instruction or authorization from the City Project Manager, is hereby permitted, authorized and directed to act at its own discretion to prevent threatened loss or injury. Except in the case of an emergency requiring immediate remedial work, any work performed after regular working hours, on Saturdays, Sundays or legal holidays, shall be performed without additional expense to the City unless such work has been specifically requested and approved by the City Project Manager. Contractor shall be required to provide to the City Project Manager with the names, addresses and telephone numbers of those representatives who can be contacted at any time in case of emergency. Contractor's emergency representatives must be fully authorized and equipped to correct unsafe or excessively inconvenient conditions on short notice by City or public inspectors.

30. INDEPENDENT CONTRACTOR STATUS. Contractor acknowledges and agrees that under this Agreement, Contractor and any agent or employee of Contractor shall be deemed at all times to be an independent contractor and shall be wholly responsible for the manner in which it performs the services and work required under this Agreement. Neither Contractor nor its agents or employees shall represent or hold themselves out to be employees of City at any time. Neither

Contractor nor its agents or employees shall have employee status with City. Nothing in this Agreement shall constitute or be construed to create any intent on the part of either party to create an agency relationship, partnership, employer-employee relationship, joint venture relationship, or any other relationship which would allow City to exercise control or discretion over the manner or methods employed by Contractor in its performance of its obligations under this Agreement.

31. **ACCESS TO FACILITIES.** City shall provide Contractor with access to all City facilities as is reasonably necessary for Contractor to perform its obligations under this Agreement.
32. **ASSIGNMENT.** Neither party may assign its rights or obligations under this Agreement to any third party without the prior express approval of the other party, which shall not be unreasonably withheld.
33. **RIGHT OF CITY TO TAKE OVER CONTRACT.** Should the work to be performed by Contractor under this Agreement be abandoned, or should Contractor become insolvent, or if Contractor shall assign or sublet the work to be performed hereunder without the written consent of City, the City Project Manager shall have the power and right to hire and acquire additional men and equipment, supply additional material, and perform such work as deemed necessary for the completion of this Agreement. Under these circumstances, all expenses and costs actually incurred by City to accomplish such completion shall be credited to City along with amounts attributable to any other elements of damage and certified by the City Project Manager. The City Project Manager's certification as to the amount of such liability shall be final and conclusive.
34. **PUBLIC RECORDS.** The Contractor shall comply with all applicable provisions of the Florida Public Records Act, Chapter 119, Florida Statutes. Specifically, the Contractor shall:
 - A. Keep and maintain public records required by the public agency to perform the service.
 - B. Upon request from the public agency's custodian of public records, provide the public agency with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.
 - C. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the public agency.
 - D. Upon completion of the contract, transfer, at no cost, to the public agency all public records in possession of the Contractor or keep and maintain public records required by the public agency to perform the service. If the Contractor transfers all public records to the public agency upon completion of the contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the public agency, upon request from the public agency's custodian of public records, in a format that is compatible with the information technology systems of the public agency.

IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT,

**CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT: CITY OF OCALA,
OFFICE OF THE CITY CLERK; 352-629-8266; E-mail: clerk@ocalafl.gov;
City Hall, 110 SE Watula Avenue, Ocala, FL 34471.**

35. **AUDIT.** Contractor shall comply and cooperate immediately with any inspections, reviews, investigations, or audits relating to this Agreement as deemed necessary by the Florida Office of the Inspector General, the City's Internal or External auditors or by any other Florida official with proper authority.
36. **PUBLICITY.** Contractor shall not use City's name, logo, seal or other likeness in any press release, marketing materials, or other public announcement without City's prior written approval.
37. **E-VERIFY.** Pursuant to section 448.095, Contractor shall register with and use the U.S. Department of Homeland Security's ("DHS") E-Verify System, accessible at <https://e-verify.uscis.gov/emp>, to verify the work authorization status of all newly hired employees. Contractor shall obtain affidavits from any and all subcontractors in accordance with paragraph 2(b) of section 448.095, Florida Statutes, and maintain copies of such affidavits for the duration of this Agreement. By entering into this Agreement, Contractor certifies and ensures that it utilizes and will continue to utilize the DHS E-Verify System for the duration of this Agreement and any subsequent renewals of same. Contractor understands that failure to comply with the requirements of this section shall result in the termination of this Agreement and Contractor may lose the ability to be awarded a public contract for a minimum of one (1) year after the date on which the Agreement was terminated. Contractor shall provide a copy of its DHS Memorandum of Understanding upon City's request. Please visit www.e-verify.gov for more information regarding the E-Verify System.
38. **CONFLICT OF INTEREST.** Contractor is required to have disclosed, with the submission of their bid, the name of any officer, director, or agent who may be employed by the City. Contractor shall further disclose the name of any City employee who owns, directly or indirectly, any interest in Contractor's business or any affiliated business entity. Any additional conflicts of interest that may occur during the contract term must be disclosed to the City of Ocala Procurement Department.
39. **WAIVER.** The failure or delay of any party at any time to require performance by another party of any provision of this Agreement, even if known, shall not affect the right of such party to require performance of that provision or to exercise any right, power or remedy hereunder. Any waiver by any party of any breach of any provision of this Agreement should not be construed as a waiver of any continuing or succeeding breach of such provision, a waiver of the provision itself, or a waiver of any right, power or remedy under this Agreement. No notice to or demand on any party in any circumstance shall, of itself, entitle such party to any other or further notice or demand in similar or other circumstances.
40. **SEVERABILITY OF ILLEGAL PROVISIONS.** Wherever possible, each provision of this Agreement shall be interpreted in such a manner as to be effective and valid under the applicable law. Should any portion of this Agreement be declared invalid for any reason, such declaration shall have no effect upon the remaining portions of this Agreement.
41. **INDEMNITY.** Contractor shall indemnify, defend, and hold harmless City and its elected officials, employees and volunteers against any actions, claims, or damages arising out of, relating to, or resulting from negligent or wrongful acts of Contractor, or any of its officers, agents, or employees, acting within the scope of their office or employment, in connection with the rights

granted to or exercised by Contractor.

42. **NO WAIVER OF SOVEREIGN IMMUNITY.** Nothing herein is intended to waive sovereign immunity by the City to which sovereign immunity may be applicable, or of any rights or limits of liability existing under Florida Statute § 768.28. This term shall survive the termination of all performance or obligations under this Agreement and shall be fully binding until any proceeding brought under this Agreement is barred by any applicable statute of limitations.

43. **NOTICES.** All notices, certifications or communications required by this Agreement shall be given in writing and shall be deemed delivered when personally served, or when received if by facsimile transmission with a confirming copy mailed by registered or certified mail, postage prepaid, return receipt requested. Notices can be concurrently delivered by e-mail. All notices shall be addressed to the respective parties as follows:

If to Contractor: Sherman Mechanical Contractors, LLC
Attn: Jesse Jenkins
525 SW 16th Street
Ocala, Florida 34471
Phone: 352-547-5532
E-mail: jesse.jenkins@shermanmc.com

If to City of Ocala: Daphne M. Robinson, Esq., Contracting Officer
City of Ocala
110 SE Watula Avenue, Third Floor
Ocala, Florida 34471
Phone: 352-629-8343
E-mail: notices@ocalafl.gov

Copy to: William E. Sexton, Esq., City Attorney
City of Ocala
110 SE Watula Avenue, Third Floor
Ocala, Florida 34471
Phone: 352-401-3972
E-mail: wsexton@ocalafl.gov

44. **ATTORNEYS' FEES.** If any civil action, arbitration or other legal proceeding is brought for the enforcement of this Agreement, or because of an alleged dispute, breach, default or misrepresentation in connection with any provision of this Agreement, the successful or prevailing party shall be entitled to recover reasonable attorneys' fees, sales and use taxes, court costs and all expenses reasonably incurred even if not taxable as court costs (including, without limitation, all such fees, taxes, costs and expenses incident to arbitration, appellate, bankruptcy and post-judgment proceedings), incurred in that civil action, arbitration or legal proceeding, in addition to any other relief to which such party or parties may be entitled. Attorneys' fees shall include, without limitation, paralegal fees, investigative fees, administrative costs, sales and use taxes and all other charges reasonably billed by the attorney to the prevailing party.

45. **JURY WAIVER.** IN ANY CIVIL ACTION, COUNTERCLAIM, OR PROCEEDING, WHETHER AT LAW OR IN EQUITY, WHICH ARISES OUT OF, CONCERNS, OR RELATES TO THIS AGREEMENT, ANY AND ALL TRANSACTIONS CONTEMPLATED

HEREUNDER, THE PERFORMANCE HEREOF, OR THE RELATIONSHIP CREATED HEREBY, WHETHER SOUNDING IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE, TRIAL SHALL BE TO A COURT OF COMPETENT JURISDICTION AND NOT TO A JURY. EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY. NEITHER PARTY HAS MADE OR RELIED UPON ANY ORAL REPRESENTATIONS TO OR BY ANY OTHER PARTY REGARDING THE ENFORCEABILITY OF THIS PROVISION. EACH PARTY HAS READ AND UNDERSTANDS THE EFFECT OF THIS JURY WAIVER PROVISION.

46. **GOVERNING LAW.** This Agreement is and shall be deemed to be a contract entered and made pursuant to the laws of the state of Florida and shall in all respects be governed, construed, applied and enforced in accordance with the laws of the state of Florida.
47. **JURISDICTION AND VENUE.** The parties acknowledge that a majority of the negotiations, anticipated performance and execution of this Agreement occurred or shall occur in Marion County, Florida. Any civil action or legal proceeding arising out of or relating to this Agreement shall be brought only in the courts of record of the State of Florida in Marion County or the United States District Court, Middle District of Florida, Ocala Division. Each party consents to the exclusive jurisdiction of such court in any such civil action or legal proceeding and waives any objection to the laying of venue of any such civil action or legal proceeding in such court and/or the right to bring an action or proceeding in any other court. Service of any court paper may be effected on such party by mail, as provided in this Agreement, or in such other manner as may be provided under applicable laws, rules of procedures or local rules.
48. **REFERENCE TO PARTIES.** Each reference herein to the parties shall be deemed to include their successors, assigns, heirs, administrators, and legal representatives, all whom shall be bound by the provisions hereof.
49. **MUTUALITY OF NEGOTIATION.** Contractor and City acknowledge that this Agreement is a result of negotiations between Contractor and City, and the Agreement shall not be construed in favor of, or against, either party because of that party having been more involved in the drafting of the Agreement.
50. **SECTION HEADINGS.** The section headings herein are included for convenience only and shall not be deemed to be a part of this Agreement.
51. **RIGHTS OF THIRD PARTIES.** Nothing in this Agreement, whether express or implied, is intended to confer any rights or remedies under or because of this Agreement on any persons other than the parties hereto and their respective legal representatives, successors and permitted assigns. Nothing in this Agreement is intended to relieve or discharge the obligation or liability of any third persons to any party to this Agreement, nor shall any provision give any third persons any right of subrogation or action over or against any party to this Agreement.
52. **AMENDMENT.** No amendment to this Agreement shall be effective except those agreed to in writing and signed by both parties to this Agreement.
53. **COUNTERPARTS.** This Agreement may be executed in counterparts, each of which shall be an original and all of which shall constitute the same instrument.
54. **ELECTRONIC SIGNATURE(S).** Contractor, if and by offering an electronic signature in any form whatsoever, will accept and agree to be bound by said electronic signature to all terms and conditions of this Agreement. Further, a duplicate or copy of the Agreement that contains a

duplicated or non-original signature will be treated the same as an original, signed copy of this original Agreement for all purposes.

55. **ENTIRE AGREEMENT.** This Agreement, including exhibits, (if any) constitutes the entire Agreement between the parties hereto with respect to the subject matter hereof. There are no other representations, warranties, promises, agreements or understandings, oral, written or implied, among the Parties, except to the extent reference is made thereto in this Agreement. No course of prior dealings between the parties and no usage of trade shall be relevant or admissible to supplement, explain, or vary any of the terms of this Agreement. No representations, understandings, or agreements have been made or relied upon in the making of this Agreement other than those specifically set forth herein.
56. **LEGAL AUTHORITY.** Each person signing this Agreement on behalf of either party individually warrants that he or she has full legal power to execute this Agreement on behalf of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement on _____.

ATTEST:

CITY OF OCALA

Angel B. Jacobs
City Clerk

Ire J. Bethea, Sr.
Council President

Approved as to form and legality:

SHERMAN MECHANICAL CONTRACTORS, LLC

William E. Sexton, Esq.
City Attorney

By: _____
(Printed Name)

Title: _____
(Title of Authorized Signatory)

BACKGROUND

1. Contractor shall supply and install a new 275-ton air-cooled chiller system at Ocala City Hall building located at 110 SE Watula Avenue, Ocala, FL 34471. Contractor shall provide all materials, equipment and labor necessary to complete the project.

DELIVERY TIMELINE

1. **Lead Time:** The maximum acceptable lead time on materials is 17 weeks, unless due to unforeseeable circumstances. The City shall issue a Notice to Proceed (NTP) upon notification of receipt materials by Contractor.

PROJECT SUMMARY, DELIVERABLES AND HOURS

1. **Project Summary:** The Contractor will be required to remove the existing unit, procure and install new unit and associated pump replacement or modification.
 - Equipment Requirements:
 - Chiller Type: Packaged Air-Cooled Chiller
 - Capacity: 275 Tons
 - Approved Manufacturers: Trane or an approved equivalent
 - Condenser Type: Air Cooled
 - Compressor Type: VFD Screw
 - Nameplate Voltage: 460-3-60 (V-Ph-Hz)
 - Drives: Replace (2) 30HP Variable Frequency Drives (VFD) with BACnet communication protocol for integration with building automation systems
 - Pump Replacement/Modification (must match manufacturer specifications)
 - Replace and/or modify the chilled water pump system
 - Pump Specification: Bell & Gossett chilled water pump
 - Include new sled and suction diffuser

The existing chiller is rated at **200 tons** with a pump capacity of **500 GPM**, equating to **2.5 GPM per ton**. The new chiller will be **275 tons**, and the Contractor shall **maintain the current pump rating of 2.5 GPM per ton** to match the existing pump that is not being replaced. No changes to the flow rate are required.

- Plumbing
 - Replace all gauges and their respective threaded fittings into water lines
- HVAC must continue operating during normal business hours of 7 am-5 pm, Monday through Friday.
- The Contractor shall plan and execute the work in a manner that allows the building's chiller to be shut down midday on Friday, with all work completed over the weekend and the chiller fully operational by Monday morning.

- **Temporary cooling will not be required** provided the Contractor adheres to this schedule. If the Contractor is unable to meet this timeline, they shall be responsible for providing and installing temporary cooling at no additional cost to the Owner. The awarded Contractor shall coordinate with **Honeywell**, the provider of the building's control systems, to perform a **disconnect and reconnect** of the existing system as part of the project. The Contractor is responsible for ensuring the system is properly commissioned and fully operational following reconnection. All coordination and verification of appropriate system operation must be included in the Contractor's scope.
- Contractor shall be capable of responding on-site within two (2) hours to 110 SE Watula Avenue, Ocala, FL 34471, for the purpose of diagnosing and performing necessary repairs to restore the chiller unit to operable condition within the same two (2) hour timeframe.
- The Contractor must have access to qualified labor—either through its own workforce or through a subcontractor—who is capable of performing timely diagnostics and repairs. Additionally, the Contractor must have the ability to obtain and utilize Trane or OEM-equivalent parts, as applicable to the final chiller product selected, in order to meet the required response and repair timeframe.

2. **Deliverables:** The Contractor shall provide monthly reports of all work in progress. Deliverables must be provided to the City Project Manager before payment for such work.
3. **Working Hours:** Working hours are contingent upon the Contractor. The Contractor must confirm all working hours with the City Project Manager.

CONTRACTOR EMPLOYEES AND EQUIPMENT

1. The Contractor shall utilize competent employees in performing the work. Employees performing the work must be properly licensed or qualified as required by the scope/project.
2. The Contractor shall provide an assigned project manager, who will be the primary point of contact. The Contractor shall provide a valid telephone number and address at all times to the City Project Manager. The telephone shall be answered during normal working hours or voicemail must be available to take a message.
3. At the request of the City, the Contractor shall replace any incompetent, unfaithful, abusive, or disorderly person in their employment. The City and the Contractor shall each be promptly notified by the other of any complaints received.
4. The employees of the Contractor shall wear suitable work clothes and personal protective equipment as defined by OSHA. Employees shall be clean and in as good appearance as the job conditions permit.
5. The Contractor shall operate as an independent contractor and not as an agent, representative, partner or employee of the City of Ocala, and shall control their operations at the work site, and be solely responsible for the acts or omissions of their employees.
6. No smoking is allowed on City property or projects.
7. The Contractor shall possess/obtain all required equipment to perform the work. A list of equipment shall be provided to the City upon request.
8. All company trucks shall have a visible company name/logo on the outside of the vehicle.

CITY OF OCALA RESPONSIBILITIES

1. The City of Ocala shall furnish the following services/data to the Contractor for the performance of services:
 - A. Access to City buildings and facilities to perform the work.
 - B. Provide access to drawings, specifications, schedules, reports, and other information prepared by/for the City of Ocala pertinent to the Contractor's responsibilities.
 - C. Provide office facilities for the Contractor, if needed.
2. The City reserves the right to purchase any materials for the Contractor to use. The Contractor shall not charge a mark-up fee for material furnished by the City.

CONTRACTOR RESPONSIBILITIES

1. The Contractor shall complete all work performed under this solicitation in accordance with policies and procedures of the City of Ocala and all applicable State and Federal laws, policies, procedures, and guidelines.
2. The Contractor shall obtain and pay for any and licenses, additional equipment, dumping and/or disposal fees, etc., required to fulfill this contract.
3. Installation shall be performed in compliance with all requirements and instructions of applicable manufacturers.
4. The Contractor is responsible for any and all damages including but not limited to buildings, curbing, pavement, landscaping, or irrigation systems caused by their activity. Should any public or private property be damaged or destroyed, the Contractor at their expense shall repair or make restoration as acceptable to the City of destroyed or damaged property no later than one (1) month from the date damage occurred.
5. If the Contractor is advised to leave a property by the property owner or their representative, the Contractor shall leave at once without alteration. The Contractor shall then contact the City Project Manager within 24 hours and advise of the reason for not completing the assigned project.
6. Data collected by the Contractor shall be in a format compatible with or easily converted to the City's databases. A sequential naming convention should be applied to the files and documentation provided to the City.
7. The Contractor shall ensure that all documents prepared under this contract have been prepared on a Windows-based operating system computer using the most current version of Microsoft Office, which includes Word, Excel, Power Point, Access or any other software as specified and approved by City staff.

SUB-CONTRACTORS

1. The Contractor shall perform a minimum of 30% of the work with their own forces.
2. Services assigned to sub-contractors shall be approved in advance by the City Project Manager.

SITE HOUSEKEEPING AND CLEANUP

1. **Cleanup:** The Contractor shall keep the premises free at all times from accumulation of waste materials and rubbish caused by operations and employees. Such responsibilities shall include but not limited to:
 - A. Periodic cleanup to avoid hazards or interference with operations at the site, and to leave the site in a reasonable neat condition.
 - B. Work site shall be completely cleaned after each day of work.
 - C. The Contractor shall dispose of debris in a legal manner.
2. **Final Cleaning:** Upon completion of work, clean entire work area as applicable.
 - A. All furnishings and equipment shall be placed back in the original locations.
 - B. All work areas shall be returned to original condition.
 - C. The Contractor shall clean and remove from the premises, all surplus and discarded materials, rubbish, and temporary structures, and shall restore in an acceptable manner all property, both public and private, which has been damaged during the prosecution of the work and shall have the work in a neat and presentable condition. *Note: Any and all debris shall be removed from the premises. New construction debris, trash, etc., shall not be left or buried on site.*

SAFETY

1. The Contractor shall be fully responsible for the provision of adequate and proper safety precautions meeting all OSHA, local, state, and national codes concerning safety provisions for their employees, sub-contractors, all building and site occupants, staff, public, and all persons in or around the work area.
2. In no event shall the City be responsible for any damages to any of the Contractor's equipment, materials, property, or clothing lost, damaged, destroyed or stolen.
3. Prior to completion, storage and adequate protection of all material and equipment will be the Contractor's responsibility.

WARRANTY

1. The Contractor shall provide a five-year material and labor warranty from the date of completion, against operational failure caused by defective material or workmanship which occurs during normal use.
2. All manufacturer warranty documentation and owner/operator manuals must be provided before final payment request.

INVOICING

1. All original invoices will be sent to: Gary Crews, Project Manager, Facilities Management Department, 1805 NE 30th Avenue, Building 200, Ocala, FL 34470, email: Facilities@ocalafl.gov.
2. The Contractor shall invoice at least once a month.

|  | Bidder name | Bidder Location |
|--|--|--|
| | SHERMAN MECHANICAL CONTRACTORS, LLC | 525 SW 16TH ST, OCALA, FL 34471 |

INITIAL CONTRACT TERM PRICING

| ITEM | DESCRIPTION | UOM | UNIT COST |
|-------------|---|------------|------------------|
| 1 | Procurement and Installation of 275-Ton Air-Cooled Chiller System | Lump Sum | \$ 363,668.00 |
| | TOTAL BID PRICE | | \$363,668.00 |

Northrich Florida

**SUBMITTAL DATE:** 18/11/2025**SITE ADDRESS:**

EQUIPMENT SUBMITTAL FOR APPROVAL REVISION (0)

PROJECT NAME: City of Ocala 275 Ton Air Cooled Chiller Replacement
Specification Section:####

| ITEM | QTY | TAG | ITEM DESCRIPTIONS |
|------|-----|------|---|
| I | 1 | CH-1 | DIRECT EXPANSION - AIR COOLED SCREW CHILLER |

SOLD TO:**CONSULTING ENGINEER:****PREPARED BY:**

Cliff Dickinson
Northrich Florida

2111 N. Commerce Parkway Weston Florida United States 33326

Northrich Florida



TABLE OF CONTENTS

- Cover Page
- Table Of Contents
- BOM Data
- Performance Ratings
- Unit Drawings
- Wiring Diagrams
- Pressure Relief Devices
- Unit Specifications Text
- Attachments
- Receiving/Rigging
- Additional Data Sheets
- Lead Time Report
- Statement of Compliance
- Local Standards
- Product Spec. Text
- IOM Information
- Startup Checklist
- Special Requests
- Warranties
- Submittal Approval Page

BOM Data

BILL OF MATERIALS

| ITEM | QTY | TAG | ITEM DESCRIPTIONS |
|------|-----|------|-------------------|
| I | 1 | CH-1 | QTC40280 |

Johnson Controls' standard warranty for chillers and air-handlers begin upon startup or 6 months after shipment, whichever occurs first. If unit startup will occur more than 6 months after shipment, long term storage preparation and periodic inspections may be required at additional cost to the buyer. If these procedures are not followed, the warranty will be voided. Please contact your JCI representative for more details.

Quantity:1 QTC40280

Unit Tag:CH-1

Items Included

- Provide Model QTC40280B1 Qty: 1
- Refrigerant Type: R-513A
- Power: 460/3/60.0 Application
- Power Connection: SP Supply TB
- Starter Type: Standard VSD
- TEAO Fan Motors
- Low Sound Fans With Variable Speed Control
- 3/4 Inch Single Thickness Insulation of Evaporator
- 4G Microchannel Coil - 25mm
- No Selection
- Entire Unit Parts Only Warranty: 18 Month (1 Year) (Std) (Months are from date of shipment/Years are from date of start up, whichever expires first)
- Control Transformer
- Standard Factory Sound Kit (Level 0 Reduction)
- Discharge Pressure Readout Kit ASME Pressure Vessel Codes
- Flow Switches One Differential Pressure Switch
- Low Ambient Kit Standard Factory Sound Kit (Level 0 Reduction)

Items Included but Installed by Others

Items NOT Included

- Hauling or Rigging Equipment Into Place.
- No Isolators Selected

Performance Ratings

| | | | |
|---|-----------------------|---------------|------------------------|
| Project Name: City of Ocala 275 Ton Air Cooled Chiller Replacement | Unit Tag: CH-1 | Qty: 1 | Model: QTC40280 |
|---|-----------------------|---------------|------------------------|

Full Load - Design

| Unit | |
|---|---------------------------|
| Model No. | QTC40280 |
| Number of Compressors | 2 |
| Compressor Type | VSD Screw - Semi Hermetic |
| Number of Compressor Circuits | 2 |
| Capacity Control | 10% - 100% |
| Refrigerant | R-513A |
| Performance Data | |
| Net Cooling Capacity [tons.R] | 275.0 |
| Total Input Power [kW] | 304.2 |
| EER [Btu/W.h] | 10.85 |
| NPLV.IP [Btu/W.h] | 21.67 |
| A-Weighted Sound Power [dB(A)] | 101.0 |
| Sound Pressure (Hemispherical Method) [dB(A)] | 67.0 |
| Sound Pressure Measured at [ft] | 50.0 |
| Electrical Data | |
| Nominal Voltage / Voltage Limits | 460/3/60.0 / 414V - 508V |
| Compressor kW (each circuit) | 137.8 / 142.0 |
| Compressor RLA (each circuit) [A] | 182.2 / 187.8 |
| Fan QTY (each circuit) | 8 / 8 |
| Fan Drive Rated Input Current (each system) [A] | 44.0 / 44.0 |
| Min. Circuit Ampacity [A] | 475.1 |
| Max. Fuse / CB Rating [A] | 600.0 |
| Unit Short Circuit Withstand [kA] | 30 kA @460 |
| Displacement Power Factor | 0.95 |
| Control kVA | 2.000 |



| Performance Impacting Options | |
|-------------------------------|--|
| Compressor Style | Maximum Part Load Efficiency |
| Condenser Coil | 4G Microchannel Coil - 25mm |
| Fan | Low Sound Fans With Variable Speed Control |
| Sound Attenuation | Standard Factory Sound Kit (Level 0 Reduction) |
| Weight & Dimensional Data | |
| Shipping Weight [lbs] | 15492 |
| Operating Weight [lbs] | 16159 |
| Refrigerant Charge [lbs] | 214 / 209 |
| Length [in] | 379.2 |
| Width [in] | 88.3 |
| Height [in] | 92.8 |

| Heat Exchanger Performance | | | |
|---|---|--|-----------------|
| Evaporator | | Condenser (Air Cooled) | |
| Heat Exchanger Type | Hybrid Falling Film | Ambient Air Temperature* [°F] | 95.0 |
| Entering Fluid Temperature* [°F] | 55.00 | Altitude* [ft] | 0.00 |
| Leaving Fluid Temperature* [°F] | 45.00 | Condensing Temperature [°F] | 121.59 / 123.47 |
| Flow Rate [USGPM] | 658.4 | Number of Fans (Circuit 1 / Circuit 2) | 8 / 8 |
| Fouling Factor* [h ft ² F/Btu] | 0.00 | Total Air Flow [cfm] | 185632 |
| Fluid Type* | Water | Total Fan Power [kW] | 24.47 |
| Passes* | 2 | | |
| Pressure Drop [ft H ₂ O] | 26.7 | | |
| Fluid Volume [USGAL] | 80.0 | | |
| Evaporating Temperature [°F] | 41.96 / 46.64 | | |
| Minimum Flow Rate [USGPM] | 320.0 | | |
| Maximum Flow Rate [USGPM] | 1300 | | |
| Bundle Code (System 1 / System 2) | Tube Bundle G (3/4") / Tube Bundle G (3/4") | | |

* Designates user specified input

Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages Using Vapor Compression Cycle Certification Program, which is based on AHRI Standard 550/590 (I-P) and AHRI Standard 551/591 (SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org. Auxiliary components included in total KW - Oil heaters, Chiller controls. Auxiliary power is already included in the compressor and fan power



| Part Load Performance (Based on Standard AHRI Unloading) | | | | |
|--|--------------|-------------------|------------------|---------------------------|
| Percent Load | Ambient [°F] | Capacity [tons.R] | Power Input [kW] | Unit Efficiency [Btu/W.h] |
| 100.0 | 95.0 | 275.0 | 304.2 | 10.85 |
| 75.0 | 80.1 | 206.3 | 152.4 | 16.25 |
| 50.0 | 65.1 | 137.5 | 65.94 | 25.02 |
| 25.0 | 55.0 | 68.75 | 28.45 | 29.00 |

| Sound Power Levels (In Accordance with AHRI 370) | | | | | | | | | | |
|--|--------------|-----------------------------------|------|------|-------|------|------|------|------|-------|
| Percent Load | Ambient [°F] | Octave Band Center Frequency [Hz] | | | | | | | | LWA |
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| 100.0 | 95.0 | 98.0 | 98.0 | 99.0 | 100.0 | 96.0 | 91.0 | 87.0 | 83.0 | 101.0 |
| 75.0 | 80.1 | 96.0 | 96.0 | 97.0 | 97.0 | 93.0 | 88.0 | 84.0 | 79.0 | 98.0 |
| 50.0 | 65.1 | 91.0 | 92.0 | 92.0 | 93.0 | 90.0 | 83.0 | 79.0 | 75.0 | 94.0 |
| 25.0 | 55.0 | 88.0 | 90.0 | 89.0 | 90.0 | 86.0 | 80.0 | 76.0 | 72.0 | 91.0 |

Note: Unit is equipped with Low Sound Fans With Variable Speed Control.

Measurement of sound pressure used to obtain the sound power data presented is based on AHRI-370.

Air-cooled chillers are rated in terms of sound power not sound pressure. Johnson Controls provides estimates of sound pressure, but this is not the rating metric.

For an air-cooled chiller, sound pressure calculated from sound power varies depending on how the chiller is assumed to behave, i.e. the radiation model. In other words, determining sound pressure from sound power requires making assumptions that result in different answers at a given distance from the chiller. The environment also influences sound pressure in the field installation. Sound pressure estimation radiation models pertaining to air-cooled chillers include the 'traditional' hemispherical model, parallelepiped model and equivalent hemispherical model.

Regarding sound power, Johnson Controls references tolerance limits based on ASHRAE guidelines. These are +/- 6dB in the 63Hz octave band, +/- 4dB in all other octave bands and +/- 3dB for the overall dBA.

Tolerance limits are based on uncertainties associated with:

1. Measurement Test Procedure
2. Repeatability
3. Production / Manufacturing Variability

Standard deviation associated with air-cooled chiller sound data is a measure of spread i.e. it indicates the range of probability of sound levels. Note that for operating conditions other than AHRI's Standard Rating Condition, higher levels of uncertainty can be expected.

Lead times for factory performance testing depend on test laboratory availability. Please confirm with Johnson Controls Customer Service.

| Estimated Sound Pressure Levels at 50.0 ft (Derived from AHRI 370 Sound Power using Hemispherical Method) | | | | | | | | | | |
|---|--------------|-----------------------------------|------|------|------|------|------|------|------|------|
| Percent Load | Ambient [°F] | Octave Band Center Frequency [Hz] | | | | | | | | LpA |
| | | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | |
| 100.0 | 95.0 | 65.0 | 64.0 | 65.0 | 66.0 | 63.0 | 58.0 | 54.0 | 49.0 | 67.0 |
| 75.0 | 80.1 | 62.0 | 63.0 | 63.0 | 63.0 | 59.0 | 54.0 | 50.0 | 45.0 | 64.0 |
| 50.0 | 65.1 | 57.0 | 59.0 | 58.0 | 59.0 | 56.0 | 49.0 | 45.0 | 41.0 | 60.0 |
| 25.0 | 55.0 | 55.0 | 56.0 | 55.0 | 56.0 | 52.0 | 46.0 | 42.0 | 38.0 | 57.0 |

| Performance at AHRI Conditions | | | | | | | | | |
|--|--|----------|--|--|-------------------------------|--|-------|--|--|
| Evaporator | | | | | Condenser | | | | |
| EFT [°F] | | 54.00 | | | Ambient Temp. [°F] | | 95.0 | | |
| LFT [°F] | | 44.00 | | | Altitude [ft] | | 0.00 | | |
| Flow Rate [USGPM] | | 658.2 | | | Performance | | | | |
| Pressure Drop [ft H ₂ O] | | 26.7 | | | EER [Btu/W.h] | | 10.54 | | |
| Fluid Type | | Water | | | IPLV/IP [Btu/W.h] | | 21.12 | | |
| Fouling Factor [h ft ² F/Btu] | | 0.000100 | | | Net Cooling Capacity [tons.R] | | 275.0 | | |
| Fluid Volume [USGAL] | | 80.0 | | | | | | | |

Note: Unit rated at design condition capacity.

| Part Load Performance (Based on AHRI 550/590 - 2023 (IP)) | | | | |
|---|--------------|-------------------|------------------|---------------------------|
| Percent Load | Ambient [°F] | Capacity [tons.R] | Power Input [kW] | Unit Efficiency [Btu/W.h] |
| 100.0 | 95.0 | 275.0 | 313.0 | 10.54 |
| 75.0 | 80.0 | 206.3 | 156.8 | 15.78 |
| 50.0 | 65.0 | 137.5 | 67.55 | 24.43 |
| 25.0 | 55.0 | 68.74 | 29.15 | 28.30 |

Notes:

Country of Origin:Mexico

Displacement Power Factor refers to compressor only. Unit Power Factor depends on fan option selected. Calculated value is available by request.

Use Copper Conductors only

Minimum and maximum evaporator flow information are for full load ratings with Water.

Evaporator Passes:2, Condenser Type:4, Fan Type:V

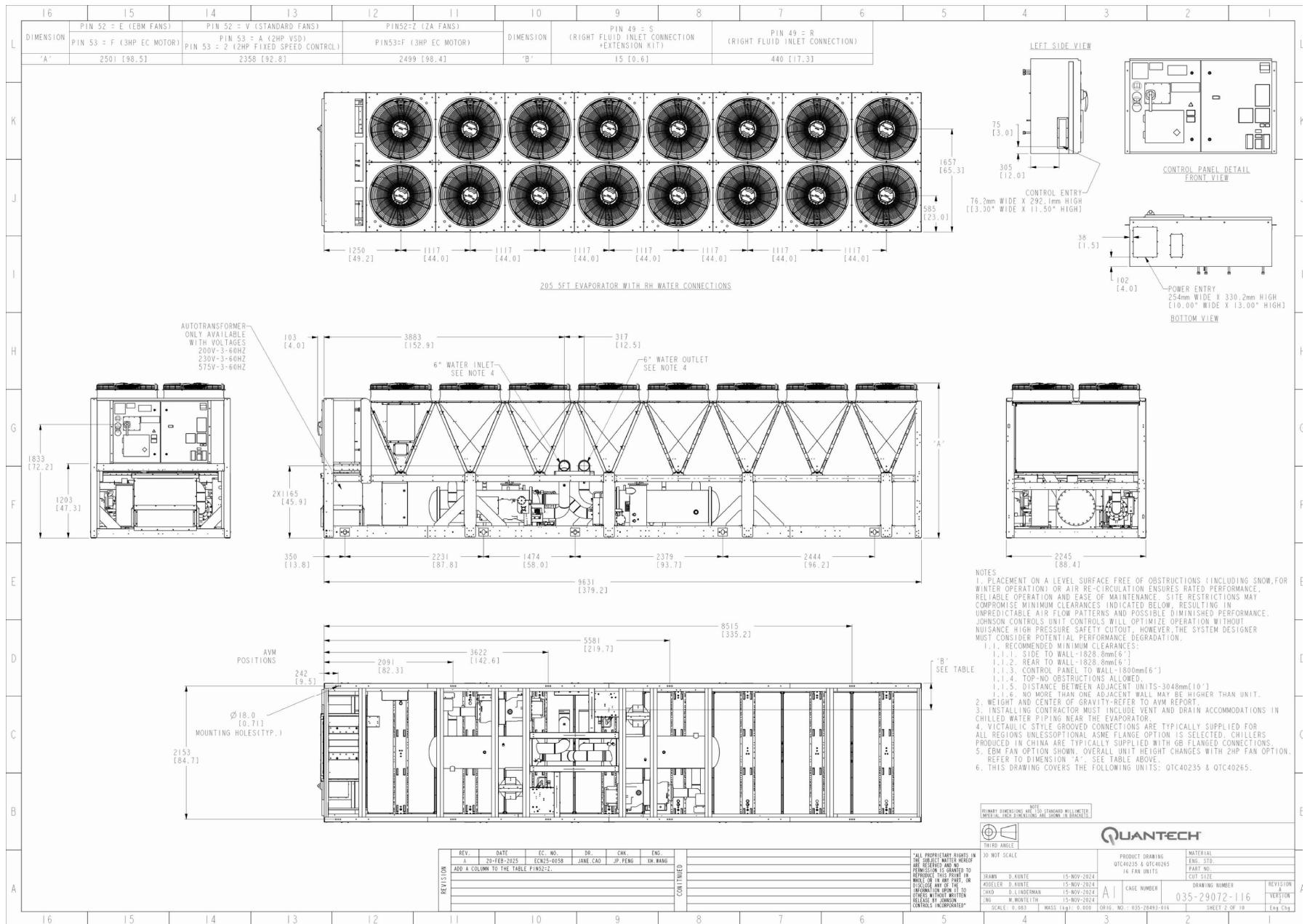
Compliant with ASHRAE 90.1 - 2010,2013,2016,2019,2022.

Compliant with IECC - 2012,2015,2018.

Field Provided Wiring for Water Box Heaters (one connection per chiller):120-1-60, 6A.

The product image shown is for illustrative purposes only and is not representative of selected options.

Unit Drawings





QTC4 Air Cooled Scroll Chillers

Page 3 of 1

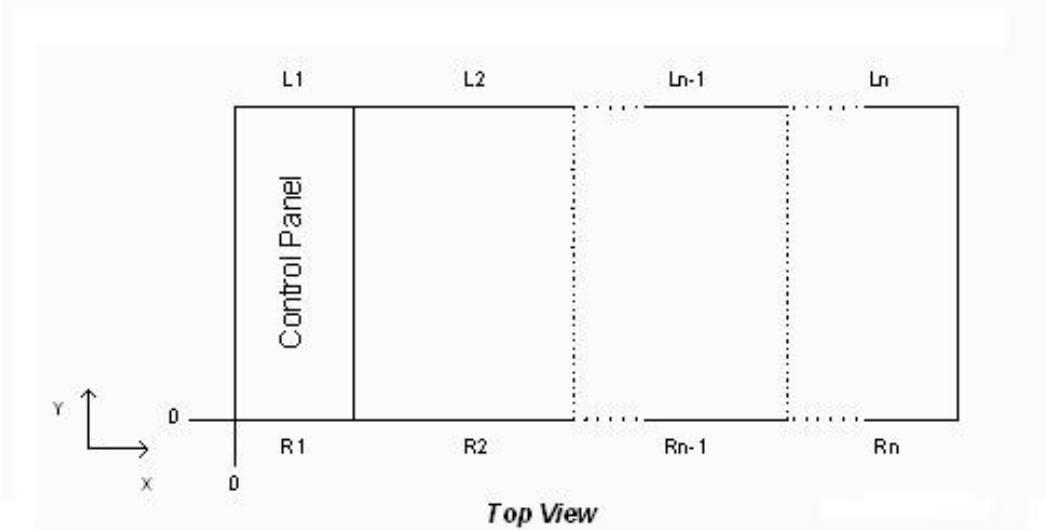
Project Name: City of Ocala 275 Ton Air Cooled Chiller Replacement

Unit Tag: CH-1

Qty.: 1

Model No.: QTC4028C

| PIN | | | | | | | | | |
|-------------|-------------|-------------|-------------|------------|------------|------------|------------|------------|--|
| QTC4028B1 | 646AHVSBXX | XAXLXUSNXD | BXXXXAXI JL | BW1SXDA2S4 | TVA0808XXX | XXXSGAXVXX | IJLBJSAX2 | 005G621200 | |
|5...10 |5...20 |5...30 |5...40 |5...50 |5...60 |5...70 |5...80 |5...90 | |
| 5G621XXXXY | XMXX004555 | 0950275196 | 00060DBXXT | | | | | | |
|5...100 |5...110 |5...120 |5...130 | | | | | | |



| AVM Data | | | | | |
|----------|-----------------|-----------------|------------|-------|------------------------|
| Location | X-Distance [in] | Y-Distance [in] | PartNumber | Color | Operating Weight [lbs] |
| L1 | 9.5 | 86.6 | | | 800 |
| R1 | 9.5 | 1.6 | | | 800 |
| L2 | 82.3 | 86.6 | | | 1570 |
| R2 | 82.3 | 1.6 | | | 1823 |
| L3 | 142.6 | 86.6 | | | 2299 |
| R3 | 142.6 | 1.6 | | | 2456 |
| L4 | 219.7 | 86.6 | | | 2553 |
| R4 | 219.7 | 1.6 | | | 2145 |
| L5 | 335.2 | 86.6 | | | 855 |
| R5 | 335.2 | 1.6 | | | 855 |

| Weight Data | | | | | |
|--------------------|--|------------------------|--|-------|--|
| Total Weight [lbs] | | Center of gravity [in] | | | |
| Shipping | | Xg | | 159.6 | |
| Operating | | Yg | | 44.1 | |

Wiring Diagrams

Pressure Relief Devices

Unit Specifications Text

Air Cooled Screw Liquid Chiller - Quantech QTC4 R-513A 60Hz

I. GENERAL

a. GENERAL REQUIREMENTS

- i. The requirements of this Section shall conform to the general provisions of the Contract, including General and Supplementary Conditions, Conditions of the Contract, and Contract Drawings.

b. SCOPE

- i. Provide Microprocessor controlled, twin-screw compressor, air-cooled, liquid chillers of the scheduled capacities as shown and indicated on the Drawings, including but not limited to:

1. Chiller package
2. Charge of refrigerant and oil
3. Electrical power and control connections
4. Chilled liquid connections
5. Manufacturer start-up

c. QUALITY ASSURANCE

- i. Products shall be Designed, Tested, Rated and Certified in accordance with, and Installed in compliance with applicable sections of the following Standards and Codes:

1. AHRI 550/590 – Water Chilling Packages Using the Vapor Compression Cycle
2. AHRI 370 – Sound Rating of Large Outdoor Refrigerating and Air-Conditioning Equipment
3. ANSI/ASHRAE 15 – Safety Code for Mechanical Refrigeration
4. ANSI/ASHRAE 34 – Number Designation and Safety Classification of Refrigerants
5. ASHRAE 90.1 – Energy Standard for Buildings Except Low-Rise Residential Buildings
6. ANSI/NFPA 70 – National Electrical Code (N.E.C.)
7. ASME Boiler and Pressure Vessel Code, Section VIII, Division 1
8. OSHA – Occupational Safety and Health Act
9. Manufactured in facility registered to ISO 9001
10. Conform to Intertek Testing Services for construction of chillers and provide ETL/cETL Listed Mark

- ii. Factory Run Test: Chiller shall be pressure-tested, evacuated and fully charged with refrigerant and oil, and shall be factory operational run tested with water flowing through the vessel.

- iii. Chiller manufacturer shall have a factory trained and supported service organization.

- iv. Warranty: Manufacturer shall Warrant all equipment and material of its manufacture against defects in workmanship and material for a period of eighteen (18) months from date of shipment or twelve (12) months from date of start-up, whichever occurs first.

d. DELIVERY AND HANDLING

- i. Unit shall be delivered to job site fully assembled with all interconnecting refrigerant piping and internal wiring ready for field installation and charged with refrigerant and oil by the Manufacturer.
- ii. Provide protective covering over vulnerable components for unit protection during shipment. Fit nozzles and open ends with plastic enclosures.
- iii. Unit shall be stored and handled per Manufacturer's instructions.

II. PRODUCTS

a. MANUFACTURERS

- i. The design shown on the Drawings is based on Quantech model chiller manufactured by Johnson Controls. Alternate equipment will be acceptable if the manufacturer's equipment meets the scheduled performance and complies with these specifications. If equipment manufactured by a manufacturer other than that scheduled is utilized, then the Mechanical Contractor shall be responsible for coordinating with the General Contractor and all affected Subcontractors to insure proper provisions for installation of the furnished unit. This coordination shall include, but not be limited to, the following:

1. Structural supports for units.

- 2. Piping size and connection/header locations.
- 3. Electrical power requirements and wire/conduit and overcurrent protection sizes.
- 4. Chiller physical size on plant layout.
- 5. Site noise considerations.
- ii. The Mechanical Contractor shall be responsible for all costs incurred by the General Contractor, Subcontractors, and Consultants to modify the building provisions to accept the furnished alternate equipment.
- iii. The equipment manufacturer must specialize in the design and manufacture of the products specified and shall have a minimum of five (5) years of experience in supplying variable speed driven compressor technology on the type of equipment and refrigerant specified.

b. GENERAL

- i. Description: Furnish, Install, and Commission factory assembled, charged, and operational run tested air-cooled screw compressor chiller as specified herein and shown on the Drawings. Chiller shall include, but is not limited to: a complete system with multiple independent refrigerant circuits, semi hermetic twin screw compressors, shell and tube hybrid falling film type evaporator, air-cooled condenser, R-513A refrigerant, lubrication system, interconnecting wiring, safety and operating controls including capacity controller, control center, motor starting components, and special features as specified herein or required for safe, automatic operation.
- ii. Operating Characteristics:
 - 1. Provide low and high ambient temperature control options as required to ensure unit is capable of starting and operating from -10°F to 125°F (-23°C to 52°C) ambient temperature.
 - 2. Provide capacity control system capable of reducing unit capacity to 10% of full load for 2 compressor units. Compressor shall start in unloaded condition. Hot gas bypass shall not be acceptable to meet specified minimum load.
- iii. Cabinet: Unit panels, structural elements, control boxes and heavy gauge structural base shall be constructed of painted galvanized steel. All exposed sheet steel shall be coated with baked on powder paint to meet 500-hour salt spray test in accordance with the ASTM B117 standard.
- iv. Shipping: Unit shall ship in one piece and shall require installer to provide only a single evaporator inlet and outlet pipe connection. If providing chiller model that ships in multiple pieces, bid shall include all the material and field labor costs for factory authorized personnel to install a trim kit to connect the pieces as well as all interconnecting piping and wiring.

c. COMPRESSORS

- i. Compressors: Shall be direct drive, semi hermetic, rotary twin-screw type, including: muffler, temperature actuated 'off-cycle' heater, rain-tight terminal box, discharge shut-off service valve and precision machined cast iron housing. Design working pressure of entire compressor, suction to discharge, shall be 350 psig (24 barg) or higher. Compressor shall be U.L. Recognized.
- ii. Compressor Motors: Refrigerant suction-gas cooled accessible hermetic compressor motor, full suction gas flow through 0.006" (0.1524 mm) maximum mesh screen, with inherent internal thermal overload protection and external current overload on all three phases.
- iii. Balancing Requirements: All rotating parts shall be statically and dynamically balanced.
- iv. Lubrication System: External oil separators with no moving parts, 450 psig (31 barg) design working pressure, and ETL listing shall be provided on the chiller. Refrigerant system differential pressure shall provide oil flow through service replaceable, 0.5 micron, full flow, cartridge type oil filter internal to compressor. Filter bypass, less restrictive media, or oil pump not acceptable.
- v. Capacity Control: Compressors shall start at minimum load. Provide Microprocessor control to command compressor capacity to balance compressor capacity with cooling load.

d. REFRIGERANT CIRCUIT COMPONENTS

- i. Refrigerant: R-513A. Classified as Safety Group A1 according to ASHRAE 34.
- ii. Equipment supplied shall comply with LEED Energy & Atmosphere Credit 4, Enhanced Refrigerant Management.
- iii. Each independent refrigerant circuit shall incorporate all components necessary for the designed operation including: liquid line shut-off valve with charging port, low side pressure relief device, removable core filter-drier and sight glass with moisture indicator.
- iv. Chiller manufacturer shall provide an independent circuit for each compressor to provide maximum redundancy during chiller operation. If equipment does not have independent circuits per compressor, manufacturer shall provide owner one spare compressor of each unique size.
- v. Discharge lines shall be provided with manual compressor shut-off service valves.

e. HEAT EXCHANGERS

- i. Evaporator:
 - 1. Evaporator shall be shell and tube, hybrid falling film type with 2 pass arrangement to optimize efficiency and refrigerant charge. Tubes shall be high-efficiency, internally and externally enhanced type copper tubes with 0.035" (0.89 mm) minimum wall thickness at all intermediate tube supports to provide maximum tube wall thickness at the support area. Each tube shall be roller expanded into the tube sheets providing a leak proof seal, and be individually replaceable. Independent refrigerant circuits shall be provided per compressor.
 - 2. Constructed, tested, and stamped in accordance with applicable sections of ASME pressure vessel code for minimum 235 psig (16 barg) refrigerant side design working pressure and 150 psig (10 barg) liquid side design working pressure.

- 3. Water boxes shall be removable to permit tube cleaning and replacement. Water boxes shall include liquid nozzle connections suitable for ANSI/AWWA C-606 couplings, welding, or flanges.
- 4. Provide vent and drain fittings.
- 5. Provide thermostatically controlled shell heaters and water box immersion heaters to assist in preventing freeze damage. A separate power connection for evaporator water box heaters is required and shall be provided by the Contractor
- ii. Air-cooled Condenser:
 - 1. Low Sound Fans with Variable Speed Drives. All fans shall be powered by VSDs. Fans shall provide vertical air discharge from extended orifices. Fans shall be composed of corrosion resistant aluminum hub and glass-fiber-reinforced polypropylene composite blades molded into a low-noise airfoil section. Fan impeller shall be dynamically balanced for vibration-free operation. Fan guards of heavy gauge, PVC (polyvinyl chloride) coated or galvanized steel.
 - 2. Fan Motors: High efficiency, direct drive, 3-phase, insulation class "F", current protected, Totally Enclosed Air-Over (TEAO), with double sealed, permanently-lubricated ball bearings. Open Drip Proof (ODP) fan motors will not be acceptable.
- f. INSULATION
 - i. Material: Closed-cell, flexible, UV protected, thermal insulation complying with ASTM C 534 Type 2 (Sheet) for preformed flexible elastomeric cellular thermal insulation in sheet and tubular form.
 - ii. Thickness: 3/4 (19mm).
 - iii. Thermal conductivity: 0.26 (BTU/HR-Ft²-°F/in) maximum at 75°F mean temperature.
 - iv. Factory-applied insulation over cold surfaces of liquid chiller components including evaporator shell, water boxes, and suction line. Liquid nozzles shall be insulated by Contractor after pipe installation.
 - v. Adhesive: As recommended by insulation manufacturer and applied to 100 percent of insulation contact surface including all seams and joints.
- g. ACOUSTICAL DATA
 - i. Provide acoustical sound power or sound pressure level data in decibels (dB) at the scheduled eight (8) octave band center frequencies. A-weighted sound data alone is not acceptable.
 - ii. Provide all sound power or sound pressure level data at 100%, 75%, 50%, and 25% load.
 - iii. Supplied equipment shall not exceed scheduled sound power or sound pressure level data at any load point. The mechanical Contractor shall be responsible for any additional costs associated with equipment deviation.
 - iv. Acoustical performance ratings shall be in accordance with AHRI Standard 370.
- h. POWER AND ELECTRICAL REQUIREMENTS
 - i. Power/Control Panel:
 - 1. Factory installed and wired NEMA 3R, powder painted steel cabinets with tool lockable, hinged, latched, and gasket sealed outer doors equipped with wind struts for safer servicing. Provide main power connection(s), compressor starters and fan motor contactors, current overloads, and factory wiring.
 - 2. Panel shall include control display access door.
 - ii. Single Point Power:
 - 1. Provide single point power connection to chiller, shall be 3 phase of scheduled voltage.
 - 2. Terminal Block connections shall be provided at the point of incoming single point connection for field connection and interconnecting wiring to the compressors. Separate external protection must be supplied, by others, in the incoming power wiring, which must comply with local codes.
 - iii. Control Transformer: Power panel shall be supplied with a factory mounted and wired control transformer that will supply all unit control voltage from the main unit power supply. Transformer shall utilize scheduled line voltage on the primary side and provide 115V/1Ø on secondary.
 - iv. Short Circuit Withstand Rating of the chiller electrical enclosure shall be (380, 400, & 460V: 30,000 Amps). Rating shall be published in accordance with UL508.
 - v. Motor Starters: Motor starters shall be Variable Frequency Drive type with zero electrical inrush current. Wye-Delta, Solid State, and Across the Line type starters will not be acceptable.
 - vi. Motor Starters: Motor starters shall be zero electrical inrush current (Variable Frequency Drives) or reduced inrush type (Closed transition Wye-Delta or Solid State) for minimum electrical inrush. Open transition Wye-Delta and Across the Line type starters will not be acceptable.
 - vii. Motor Starters: Motor starters shall be Variable Frequency Drive type with zero electrical inrush current. Wye-Delta, Solid State, and Across the Line type starters will not be acceptable.
 - viii. Power Factor:
 - 1. Provide equipment with power factor correction capacitors as required to maintain a displacement power factor of 95% at all load conditions.

2. The installing contractor is responsible for additional cost to furnish and install power factor correction capacitors if they are not factory mounted and wired.
- ix. All exposed power wiring shall be routed through liquid-tight, UV-stabilized, non-metallic conduit.
- x. Supplied equipment shall not exceed scheduled Minimum Circuit Ampacity (MCA.) The mechanical Contractor shall be responsible for any additional costs associated with equipment deviation.

i. CONTROLS

i. General:

1. Provide automatic control of chiller and waterside economizer operation including compressor start/stop and load/unload, anti-recycle timers, condenser fans, evaporator pump, evaporator heater, waterside economizer bypass value, unit alarm contacts and run signal contacts.
2. Provide dry contacts for chilled fluid pump control and evaporator shell heaters to assist in preventing freeze damage due to migration of refrigerant at ambient temperatures below 32°C (0°C).
3. Chiller shall automatically reset to normal chiller operation after power failure.
4. Unit operating software shall be stored in non-volatile memory. Field programmed set points shall be retained in lithium battery backed regulated time clock (RTC) memory for minimum 5 years.
5. Alarm contacts shall be provided to remote alert for any unit or system safety fault.

ii. Display:

1. Provide a touch screen display per chiller that is viewable in both direct sunlight and during nighttime.
2. Display shall be accessible through display access door without opening main control/electrical cabinet doors.
3. Display shall provide a minimum of unit setpoints, status, electrical data, temperature data, pressures, safety lockouts and diagnostics without the use of a coded display.
4. Descriptions in English (or available language options), numeric data in English (or Metric) units.

iii. Security Access: Controlled through YORK Chiller Access Manager which will provide users dynamic access codes so that changes in the control panel can be traced back to a specific user. Users will need to set up an account at www.yorkchilleraccessmanager.com in order to be able to generate access codes. Access levels are defined by different levels of user capability.

iv. Programmable Setpoints (within Manufacturer limits): Display language, chilled liquid cooling mode, local/remote control mode, display units mode, system lead/lag control mode, remote temperature reset, remote current limit, remote sound limit, low ambient temperature cutout enable/disable, leaving chilled liquid setpoint and range, maximum remote temperature reset.

v. Display Data: Chilled liquid leaving and entering temperatures; outside ambient air temperature; lead system; evaporator pump status; active remote control; compressor suction, discharge, and oil pressures per refrigerant circuit; compressor discharge, motor, and oil temperatures per refrigerant circuit; saturation temperatures per refrigerant circuit; compressor speed; condenser fan status; condenser subcooling temperature; condenser drain valve percentage open; compressor capacity in percentage of Full Load Amps; compressor number of starts; run time; operating hours; evaporator heater status; history data for last ten shutdown faults; history data for last 20 normal (non-fault) shutdowns.

vi. Predictive Control Points: Unit controls shall avoid safety shutdown when operating outside design conditions by optimizing the chiller controls and cooling load output to stay online and avoid safety limits being reached. The system shall monitor the following parameters and maintain the maximum cooling output possible without shutdown of the equipment: motor current, suction pressure, discharge pressure, starter internal ambient temperature, and starter baseplate temperature.

vii. System Safeties: Shall cause individual compressor systems to perform auto-reset shut down if: high discharge pressure or temperature, low suction pressure, low motor current, high/low differential oil pressure, low discharge superheat, high motor temperature, system control voltage.

viii. Unit Safeties: Shall be automatic reset and cause compressors to shut down if: high or low ambient temperature, low leaving chilled liquid temperature, under voltage, flow switch operation. Contractor shall provide flow switch and wiring per chiller manufacturer requirements.

ix. Manufacturer shall provide any controls not listed above, necessary for automatic chiller operation. Mechanical Contractor shall provide field control wiring necessary to interface sensors to the chiller control system.

j. ACCESSORIES AND OPTIONS

i. Some accessories and options supersede standard product features. All options are factory-mounted unless otherwise noted.

ii. CONTROLS OPTIONS:

1. Building Automation System Interface: Chiller to accept BACnet MS/TP, N2 and Modbus protocol from BAS (by others). BACnet to be BACnet Testing Laboratories (BTL) listed and support BACnet Automatic Discovery to eliminate field commissioning of chiller controls.

iii. GENERAL OPTIONS:

1. Differential Pressure Switch: 3-45 psig (0.2-3 barg) range with 1/4" NPTE pressure connections. (Field Mounted by Contractor).

III. EXECUTION

a. INSTALLATION

- i. General: Rig and Install in full accordance with Manufacturer's requirements, Project drawings, and Contract documents.
- ii. Location: Locate chiller as indicated on drawings, including cleaning and service maintenance clearance per Manufacturer instructions. Adjust and level chiller on support structure.
- iii. Components: Installing Contractor shall provide and install all auxiliary devices and accessories for fully operational chiller.
- iv. Electrical: Coordinate electrical requirements and connections for all power feeds with Electrical Contractor.
- v. Controls: Coordinate all control requirements and connections with Controls Contractor.
- vi. Finish: Installing Contractor shall paint damaged and abraded factory finish with touch-up paint matching factory finish.

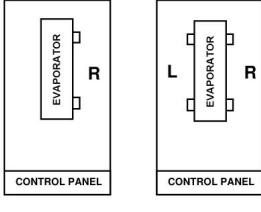
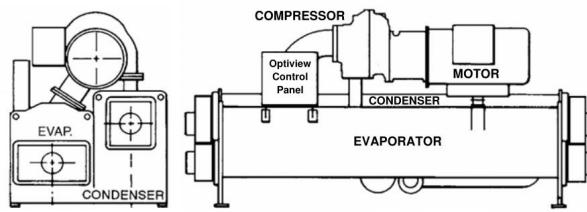
Attachments

Receiving/Rigging

Additional Data Sheets

CHILLER Equipment Release / Configuration Process

Attached you will find preliminary drawings and performance representing the unit(s) we are submitting on this project. Please review these forms, make any required modifications, sign each page indicating your approval and then fax them back to my attention. Please note that equipment cannot be released for fabrication until these forms are completed and returned with your signature of approval. Please feel free to contact me if you have any questions regarding the attached information.

| Unit Section | Items for Review | Potential Configurations |
|--|---|--|
| Electrical | Main unit voltage | 208, 230, 460, 480, or 4160 |
| | Control Voltage | 115, 208, 230, 460, 480, Single or Three Phase |
| | Type of Electrical Connection | Single or Multiple Point |
| | Connection | Lugs per Phase |
| | Starter | Unit Mounted or Remote Mounted |
| | Electrical Protection | Breaker or Disconnect Size |
| Electrical Protection Type | Terminal Block, Disconnect or Circuit Breaker | |
| Evaporator & Condenser | Water Cooled Chiller Piping Connections | One or Two |
| | Connection Type | Victaulic or Flanged |
| | Passes | One, Two or Three |
| | Water Box Type | Compact or Marine |
| | Waterside Pressure | 150 psig or 300 psig |
| | Proof of Flow | Flow Sensors or Flow Switches |
| Evaporator Insulation | None, 3/4" or 1-1/2" | |
| General | Unit Height | Please review contract drawings to approve attached dimensions |
| | Unit Width | Please review contract drawings to approve attached dimensions |
| | Unit Length | Please review contract drawings to approve attached dimensions |
| | Unit Weight | Please review contract drawings and approve |
| | Form 1 Shipment | Completely Assembled w/ Refrigerant in Unit |
| | Form 2 Shipment | Completely Assembled w/ Refrigerant Shipped Loose |
| | Form 3 Shipment | Two Piece Shipment: Driveline and Shell Assembly |
| | Form 7 Shipment | Three Piece Shipment: Driveline, Evaporator and Condenser |
| Form 8 Shipment | Completely Assembled w/ Oil Separator Shipped Loose | |
| AIR COOLED | | WATER COOLED |
|  | |  |
| <p>NOTE: Evaporator hand is determined by facing the control section</p> | | |
| <p>Important Notes:</p> <ol style="list-style-type: none"> 1) Actual fabrication release cannot commence until this form is confirmed by the customer 2) The release process cannot commence until written release notification is issued by customer including want date and ship to address 3) Equipment "lead-time" does not start until confirmed release documentation is received 4) Modifications to equipment configurations after fabrication release may impact cost and lead-time 5) Configurations noted below are as shown in the approved equipment submittals or as defined in superseding customer correspondence 6) Material handling of loose refrigerant between delivery truck and chiller room is customer's responsibility 7) Note that once this document is confirmed, the equipment configurations defined by this document take precedence over all other documents 8) "Want date" and/or "ship to address" changes made after this document is confirmed may impact cost and lead-time | | |

Lead Time Report

Statement of Compliance

Local Standards

Product Spec. Text

IOM Information

Startup Checklist

Special Requests

Warranties

| | | |
|---|---|-----------------------|
|  | STANDARD LIMITED WARRANTY ENGINEERED SYSTEMS EQUIPMENT | |
| SERVICE POLICY | Supersedes: 50.05-NM2 (812) | Form 50.05-NM2 (1212) |

POLICY STATEMENT

Johnson Controls (JCI) warrants all equipment and associated factory supplied materials or start-up services performed by Johnson Controls in connection therewith, against defects in workmanship and material for a period of eighteen (18) months from date of shipment, or twelve (12) months from date of start up, whichever occurs first. Subject to the exclusions listed below, Johnson Controls, at its option, will repair or replace, FOB point of shipment, such products or components as it finds defective.

Except for reciprocating replacement compressors, which Johnson Controls warrants for a period of twelve (12) months from date of shipment, Johnson Controls warrants Johnson Controls reconditioned or replacement materials, or installation or start-up services performed by Johnson Controls in connection therewith, against defects in workmanship and material for a period of (90) days from date of shipment.

The above represents the minimum warranty policy Johnson Controls will extend to customers. Additional product specific coverage is provided as outlined in related warranty policies. No warranty repairs or replacements will be made until payment for all equipment, materials, or components has been received by Johnson Controls.

EXCLUSIONS:

Unless specifically agreed to in the contract documents, this warranty does not include the following costs and expenses:

1. Labor to remove or reinstall any equipment, materials or components.
2. Shipping, handling or transportation charges, including cranes, safety walks or other safety requirements specific to jobsites.
3. Cost of refrigerant.
4. Freight damage.
5. Field applied coatings added to any surface or heat exchanger
6. Rental Chillers.

ALL WARRANTIES ARE VOID IF:

1. Equipment is used with refrigerants, oil, additives, or antifreeze agents other than those authorized by supplying factory.
2. Equipment is used with any material or any equipment such as evaporators, tubing, other low side equipment or refrigerant controls not approved by supplying factory
3. Equipment has been damaged by freezing because it was not properly protected during cold weather or damaged by fire or any other conditions not ordinarily encountered.
4. Equipment is not installed, operated, maintained and serviced in accordance with instructions issued by Johnson Controls.
5. Equipment is damaged due to dirt, air, moisture, or other foreign matter entering the refrigerant system.
6. Equipment is not properly stored, protected, or inspected by the customer during the period from date of shipment to date of initial start-up.
7. Field coating of coil has occurred.
8. Equipment is damaged due to acts of god, abuse, including shipping damage, neglect, sabotage, or acts of terrorists.
9. Equipment has modifications carried out that have an effect on the original design of the product without such work being authorized by the factory. Any on site design changes or unit modification/replacement shall be authorized in advance by the factory.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES AND LIABILITIES, EXPRESS OR IMPLIED IN LAW OR IN FACT, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE WARRANTIES CONTAINED HEREIN SET FORTH BUYER'S SOLE AND EXCLUSIVE REMEDY IN THE EVENT OF A DEFECT IN WORKMANSHIP OR MATERIALS. IN NO EVENT SHALL JOHNSON CONTROLS' LIABILITY FOR DIRECT OR COMPENSATORY DAMAGES EXCEED THE PAYMENTS RECEIVED BY JOHNSON CONTROLS FROM BUYER FOR THE MATERIAL OR EQUIPMENT INVOLVED, NOR SHALL JOHNSON CONTROLS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES. THESE LIMITATIONS ON LIABILITY AND DAMAGES SHALL APPLY UNDER ALL THEORIES OF LIABILITY OR CAUSES OF ACTION, INCLUDING BUT NOT LIMITED TO, CONTRACT, WARRANTY, TORT, (INCLUDING NEGLIGENCE) OR STRICT LIABILITY. THE ABOVE LIMITATIONS SHALL INURE TO THE BENEFIT OF JOHNSON CONTROLS SUPPLIERS AND SUBCONTRACTORS.



Submittal Approval Page



Equipment Release Approval Form

SUBMITTAL NOTES

Product Type: Air-Cooled

Unit Tags: CH-1

The following table must be completed prior to releasing the equipment for fabrication. Please initial the column indicating the information contained in this submittal has been verified, or indicate to refer to a marked-up page.

| SUBMITTAL VERIFICATION | |
|---|---------------------------|
| | Purchaser Initials |
| Electrical voltage and electrical connections are compatible with jobsite requirements. | |
| Piping / Ductwork connections shown in this submittal are correct . | |
| Unit tag designations are correct. | |
| Equipment dimensions (length, width, and height) and weights have been verified to comply with jobsite conditions and rigging requirements. Please indicate approval by your initials on all included drawings. | |
| Verify "Unit Hand" of any Air Handling Equipment per the definition provided on the "Equipment Release / Configuration Process" form. | |



| SUBMITTAL VERIFICATION | |
|--|--------------------|
| | Purchaser Initials |
| Indicate equipment configuration choices on the Equipment Release /Configuration Process form (if included on this Submittal package), and sign the form. | |

Important Notes:

- 1) Actual fabrication release cannot commence until this form is signed by the customer and returned to JCI along with a release notification want date and ship to address.
- 2) Equipment "lead-time" does not start until confirmed release documentation is received, and the order is actually released to the factory.
- 3) Modifications to equipment configurations after fabrication release may impact cost and lead-time
- 4) Attached configurations are as shown in the approved equipment submittals or as defined in superseding customer correspondence.
- 5) AHU "Side" / "Hand" orientation is relative to a person standing inside an AHU with air hitting the back of the head.
- 6) Note that once this document is confirmed, the equipment configurations defined by this document take precedence over all other documents.
- 7) "Want date" and/or "ship to address" changes made after this document is confirmed may impact cost and lead-time.
- 8) Air handler drawings also include shipping split explosions with corresponding weights and dimensions. If additional splits are required, there will be additional costs and the unit length will increase.



Please fill out the following table and refer to the receiving/rigging instructions in this submittal to help ensure a smooth delivery and installation of the equipment.

| DELIVERY INFORMATION | |
|--|--|
| | Please fill out information below |
| Contact name for coordinating delivery of equipment with transportation company | |
| Contact phone number | |
| Advance notice required from transportation company prior to delivering equipment (typically 48 hours) | |
| Ship to address: | |
| Other special shipping instructions or requirements | |

**CUSTOMER APPROVAL:**

Customer
Name: _____

Signature (*) _____

Date: _____

**The Design Guide for Danfoss VLT HVAC Drive FC 102 is available for inspection and
copying at
1805 NE 30th Avenue, Bldg. 1000, Ocala, FL 34470**



Bell & Gossett
a xylem brand

SUBMITTAL
B-880.8C

JOB:

REPRESENTATIVE:

UNIT TAG:

ORDER NO.:

DATE:

ENGINEER:

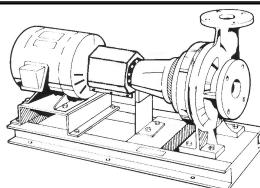
SUBMITTED BY:

DATE:

CONTRACTOR:

APPROVED BY:

DATE:



3AD Series e-1510

Centrifugal Pumps - Base Mounted

SPECIFICATIONS

FLOW _____ HEAD _____
 HP _____ RPM _____
 VOLTS _____
 CYCLE _____ PHASE _____
 ENCLOSURE _____
 APPROX. WEIGHT _____
 SPECIALS _____

MATERIALS OF CONSTRUCTION

Stainless Steel Fitted

FEATURES

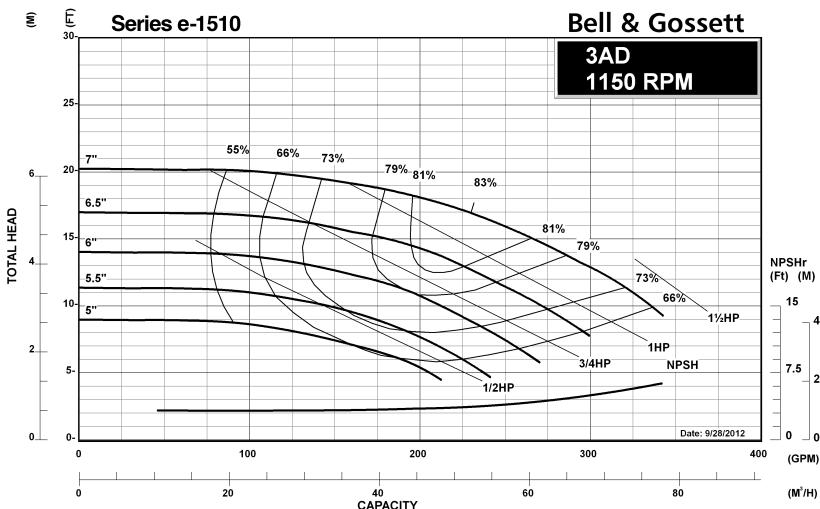
ANSI/OSHA Coupling Guard
 Center Drop Out Spacer Coupling
 Fabricated Heavy Duty Baseplate

MAXIMUM WORKING PRESSURE

175 psi (12 bar) W.P.
 w/ 125# ANSI flange drilling

TYPE OF SEAL

- Standard Seal (Buna-Carbon/Ceramic)
- F Standard Seal w/ Flush Line (Buna-Carbon/Ceramic)
- S Stuffing Box Construction w/ Flushed Mechanical Single Seal (EPR-Tungsten Carbide/Carbon)
- PF Stuffing Box Construction w/ Packing (Graphite Impregnated Teflon)

Note: Equipped with NEOPRENE coupling



Bell & Gossett
a xylem brand

SUBMITTAL

B-880.8C

JOB:

REPRESENTATIVE:

UNIT TAG:

ORDER NO.:

DATE:

ENGINEER:

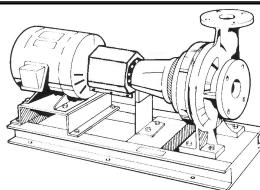
SUBMITTED BY:

DATE:

CONTRACTOR:

APPROVED BY:

DATE:



3AD Series e-1510

Centrifugal Pumps - Base Mounted

SPECIFICATIONS

FLOW _____ HEAD _____
 HP _____ RPM _____
 VOLTS _____
 CYCLE _____ PHASE _____
 ENCLOSURE _____
 APPROX. WEIGHT _____
 SPECIALS _____

MATERIALS OF CONSTRUCTION

Stainless Steel Fitted

FEATURES

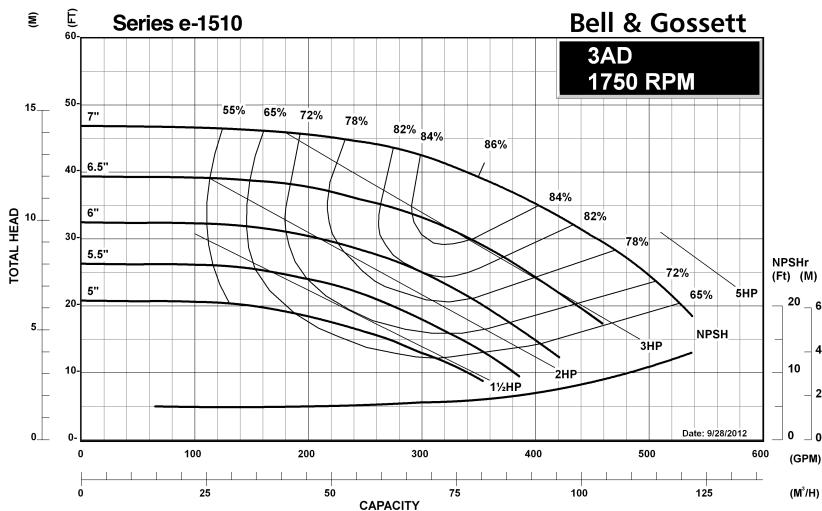
ANSI/OSHA Coupling Guard
 Center Drop Out Spacer Coupling
 Fabricated Heavy Duty Baseplate

MAXIMUM WORKING PRESSURE

175 psi (12 bar) W.P.
 w/ 125# ANSI flange drilling

TYPE OF SEAL

- Standard Seal (Buna-Carbon/Ceramic)
- F Standard Seal w/ Flush Line (Buna-Carbon/Ceramic)
- S Stuffing Box Construction w/ Flushed Mechanical Single Seal (EPR-Tungsten Carbide/Carbon)
- PF Stuffing Box Construction w/ Packing (Graphite Impregnated Teflon)

Note: Equipped with NEOPRENE coupling



Bell & Gossett
a xylem brand

SUBMITTAL
B-880.8C

JOB:

REPRESENTATIVE:

UNIT TAG:

ORDER NO.:

DATE:

ENGINEER:

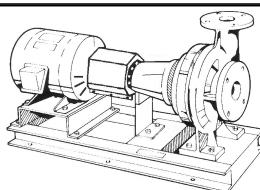
SUBMITTED BY:

DATE:

CONTRACTOR:

APPROVED BY:

DATE:



3AD Series e-1510

Centrifugal Pumps - Base Mounted

SPECIFICATIONS

FLOW _____ HEAD _____
 HP _____ RPM _____
 VOLTS _____
 CYCLE _____ PHASE _____
 ENCLOSURE _____
 APPROX. WEIGHT _____
 SPECIALS _____

MATERIALS OF CONSTRUCTION

Stainless Steel Fitted

FEATURES

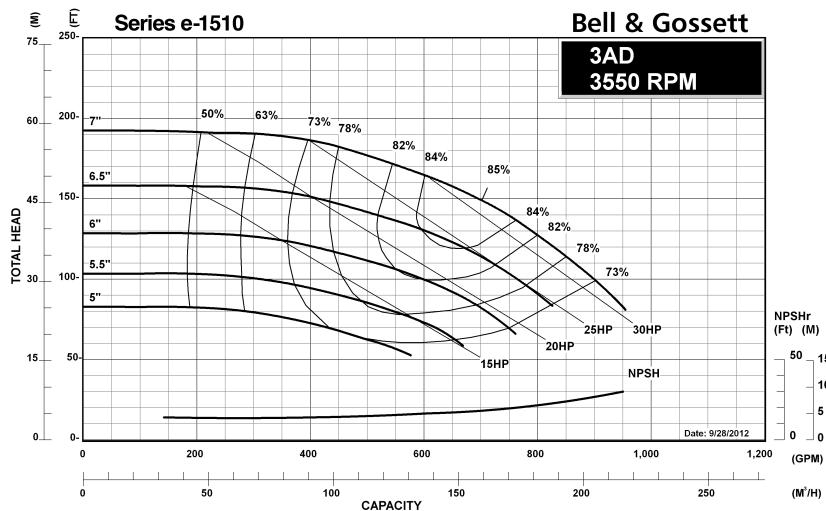
ANSI/OSHA Coupling Guard
 Center Drop Out Spacer Coupling
 Fabricated Heavy Duty Baseplate

MAXIMUM WORKING PRESSURE

175 psi (12 bar) W.P.
 w/ 125# ANSI flange drilling

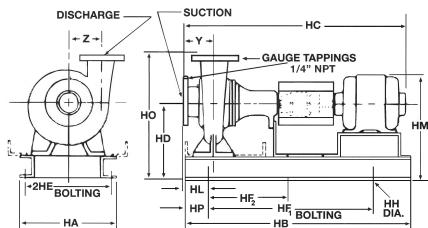
TYPE OF SEAL

- Standard Seal (Buna-Carbon/Ceramic)
- F Standard Seal w/ Flush Line (Buna-Carbon/Ceramic)
- S Stuffing Box Construction w/ Flushed Mechanical Single Seal (EPR-Tungsten Carbide/Carbon)
- PF Stuffing Box Construction w/ Packing (Graphite Impregnated Teflon)

Note: Equipped with NEOPRENE coupling

Series e-1510 3AD Centrifugal Pump Submittal

B-880.8C



FLANGE DIMENSIONS IN INCHES (MM)

| | SIZE | THICKNESS | O.D. |
|-----------|------|-------------|--------------|
| Discharge | 3" | 3/4" (19) | 7-1/2" (191) |
| Suction | 4" | 15/16" (24) | 9" (229) |

FLANGES ARE 125# ANSI - STANDARD

DIMENSIONS - Inches (mm)

STANDARD SEAL

| MOTOR FRAME | HA | HB | HC MAX | HD | 2HE | HF ₁ | HF ₂ | HH | HL | HM MAX | HO | HP | Y | Z |
|-------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-------------|-----------------|-----------------|-----------------|-----------|----------------|------------|
| "S" FRAME | | | | | | | | | | | | | | |
| 56 | 12 (305) | 28-3/4 (730) | 29-1/2 (749) | 9-3/4 (248) | 10-1/4 (260) | 22-1/2 (572) | - | 3/4 (19) | 4-5/16 (110) | 13-3/8 (340) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |
| 143T | 12 (305) | 28-3/4 (730) | 29-5/8 (752) | 9-3/4 (248) | 10-1/4 (260) | 22-1/2 (572) | - | 3/4 (19) | 4-5/16 (110) | 13-1/2 (343) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |
| 145T | 12 (305) | 28-3/4 (730) | 30-5/8 (778) | 9-3/4 (248) | 10-1/4 (260) | 22-1/2 (572) | - | 3/4 (19) | 4-5/16 (110) | 13-1/2 (343) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |
| 182T | 14-5/8 (371) | 31 (787) | 33-3/8 (848) | 9-3/4 (248) | 12-7/8 (327) | 25 (635) | - | 3/4 (19) | 4-5/16 (110) | 15 (381) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |
| 184T | 14-5/8 (371) | 31 (787) | 34-1/8 (867) | 9-3/4 (248) | 12-7/8 (327) | 25 (635) | - | 3/4 (19) | 2-15/16 (75) | 15 (381) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |

"L" FRAME

| MOTOR FRAME | HA | HB | HC MAX | HD | 2HE | HF ₁ | HF ₂ | HH | HL | HM MAX | HO | HP | Y | Z |
|-------------|-----------------|------------------|------------------|----------------|-----------------|-----------------|-----------------|-------------|-----------------|-----------------|-----------------|------------|----------------|------------|
| "L" FRAME | | | | | | | | | | | | | | |
| 215T | 14-5/8 (371) | 39-3/8 (1000) | 42-5/8 (1083) | 9-3/4 (248) | 12-7/8 (327) | 33-5/8 (848) | - | 3/4 (19) | 2-15/16 (75) | 15-3/8 (397) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |
| 254T | 16 (406) | 46-1/2 (1181) | 46-3/8 (1178) | 12 (305) | 14 (356) | 36-1/2 (927) | 18-1/4 (464) | 7/8 (22) | 4-1/16 (103) | 18-7/8 (479) | 18 (457) | 5 (127) | 4-1/8 (105) | 5 (127) |
| 256T | 16 (406) | 46-1/2 (1181) | 48-1/8 (1222) | 12 (305) | 14 (356) | 36-1/2 (927) | 18-1/4 (464) | 7/8 (22) | 4-1/16 (103) | 18-7/8 (479) | 18 (457) | 5 (127) | 4-1/8 (105) | 5 (127) |
| 284TS | 16 (406) | 46-1/2 (1181) | 47-3/8 (1203) | 13 (330) | 14 (356) | 36-1/2 (927) | 18-1/4 (464) | 7/8 (22) | 4-1/16 (103) | 21 (533) | 19 (483) | 5 (127) | 4-1/8 (105) | 5 (127) |
| 286TS | 16 (406) | 46-1/2 (1181) | 48-7/8 (1203) | 13 (330) | 14 (356) | 36-1/2 (927) | 18-1/4 (464) | 7/8 (22) | 4-1/16 (103) | 21 (533) | 19 (483) | 5 (127) | 4-1/8 (105) | 5 (127) |
| 324TS | 16 (406) | 46-1/2 (1181) | 50-7/8 (1292) | 12 (305) | 14 (356) | 36-1/2 (927) | 18-1/4 (464) | 7/8 (22) | 4-1/16 (103) | 21 (533) | 18 (457) | 5 (127) | 4-1/8 (105) | 5 (127) |

STUFFING BOX

| MOTOR FRAME | HA | HB | HC MAX | HD | 2HE | HF ₁ | HF ₂ | HH | HL | HM MAX | HO | HP | Y | Z |
|-------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-------------|-----------------|-----------------|-----------------|-----------|----------------|------------|
| "S" FRAME | | | | | | | | | | | | | | |
| 56 | 14-5/8 (371) | 34-5/8 (879) | 33-1/8 (841) | 9-3/4 (248) | 12-7/8 (327) | 28-5/8 (727) | - | 3/4 (19) | 2-15/16 (75) | 13-3/8 (340) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |
| 143T | 14-5/8 (371) | 34-5/8 (879) | 33-1/4 (845) | 9-3/4 (248) | 12-7/8 (327) | 28-5/8 (727) | - | 3/4 (19) | 2-15/16 (75) | 13-1/2 (343) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |
| 145T | 14-5/8 (371) | 34-5/8 (879) | 34-1/4 (870) | 9-3/4 (248) | 12-7/8 (327) | 28-5/8 (727) | - | 3/4 (19) | 2-15/16 (75) | 13-1/2 (343) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |
| 182T | 14-5/8 (371) | 34-5/8 (879) | 37 (940) | 9-3/4 (248) | 12-7/8 (327) | 28-5/8 (727) | - | 3/4 (19) | 2-15/16 (75) | 15 (381) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |
| 184T | 14-5/8 (371) | 34-5/8 (879) | 37-3/4 (959) | 9-3/4 (248) | 12-7/8 (327) | 28-5/8 (727) | - | 3/4 (19) | 2-15/16 (75) | 15 (381) | 15-3/4 (400) | 3 (76) | 4-1/8 (105) | 5 (127) |

"L" FRAME

| MOTOR FRAME | HA | HB | HC MAX | HD | 2HE | HF ₁ | HF ₂ | HH | HL | HM MAX | HO | HP | Y | Z |
|-------------|-------------|------------------|------------------|-------------|-------------|------------------|-----------------|-------------|-----------------|-----------------|-------------|------------|----------------|------------|
| "L" FRAME | | | | | | | | | | | | | | |
| 215T | 16 (406) | 46-1/2 (1181) | 45 (1143) | 11 (279) | 14 (356) | 36-1/2 (927) | 18-1/4 (464) | 7/8 (22) | 4-1/16 (103) | 16-7/8 (429) | 17 (432) | 5 (127) | 4-1/8 (105) | 5 (127) |
| 254T | 16 (406) | 51-3/4 (1314) | 48-3/4 (1238) | 12 (305) | 14 (356) | 41-3/4 (1060) | 20-7/8 (530) | 7/8 (22) | 4-1/16 (103) | 18-7/8 (479) | 18 (457) | 5 (127) | 4-1/8 (105) | 5 (127) |
| 256T | 16 (406) | 51-3/4 (1314) | 50-1/2 (1283) | 12 (305) | 14 (356) | 41-3/4 (1060) | 20-7/8 (530) | 7/8 (22) | 4-1/16 (103) | 18-7/8 (479) | 18 (457) | 5 (127) | 4-1/8 (105) | 5 (127) |
| 284TS | 16 (406) | 51-3/4 (1314) | 49-3/4 (1264) | 13 (330) | 14 (356) | 41-3/4 (1060) | 20-7/8 (530) | 7/8 (22) | 4-1/16 (103) | 21 (533) | 19 (483) | 5 (127) | 4-1/8 (105) | 5 (127) |
| 286TS | 16 (406) | 51-3/4 (1314) | 51-1/4 (1302) | 13 (330) | 14 (356) | 41-3/4 (1060) | 20-7/8 (530) | 7/8 (22) | 4-1/16 (103) | 21 (533) | 19 (483) | 5 (127) | 4-1/8 (105) | 5 (127) |

Dimensions are subject to change. Not to be used for construction purposes unless certified.

City of Ocala – 275 Ton Chiller Replacement

Schedule of Events & Safety Plan

Project Duration: Friday 11:00 AM – Sunday 6:00 PM

FRIDAY – DAY 1

11:00 AM – Mobilization, site safety briefing, barricade setup.
12:00 PM – Electrical contractor begins disconnecting and disassembling all electrical components.
2:00 PM – Forklift mobilized to begin cutting and removing the existing steel pergola covering the chiller.
5:00 PM – Complete electrical isolation, confirm lockout/tagout, prep site for crane operations.

SATURDAY – DAY 2

7:00 AM – Crane and rigging crew on site.
7:30 AM – Begin rigging and removal of existing chiller using crane.
10:30 AM – Remove existing chilled water pump.
11:30 AM – Set new Bell & Gossett pump.
1:00 PM – Set new 275-ton chiller using crane and spreader bar.
3:00 PM – Electrical contractor begins installation of new VFDs and reconnection of chiller power.
5:00 PM – Forklift used to reinstall or lift new steel pergola components over the chiller.

SUNDAY – DAY 3

8:00 AM – Piping reconnections, insulation, gauges, and diffuser installation.
11:00 AM – Electrical finalization and commissioning checks.
1:00 PM – System vacuum, charging, and startup sequence.
3:00 PM – Operational testing, BAS verification, sensor and VFD programming.
5:30 PM – Final walkthrough and site cleanup.
6:00 PM – Chiller must be fully operational and online.

SAFETY PLAN

- Daily safety briefings and job hazard analysis before any work begins.
- Mandatory PPE: safety glasses, gloves, steel-toe boots, hard hats, high-visibility vests.
- Lockout/Tagout will be performed prior to any electrical or mechanical disconnection.
- Crane operations supervised by certified lift director; exclusion zone enforced.
- Forklift operations restricted to certified operators only; spotter required at all times.
- Cutting and removal of steel pergola performed using controlled hot-work procedures.
- Rigging inspected before each lift; no personnel allowed under suspended loads.
- All work areas kept clean and clear of trip hazards throughout the project.

City of Ocala – 275 Ton Chiller Replacement Timeline & Safety Plan

FRIDAY – DAY 1 (11:00 AM Start)

Mobilization & Safety Setup

Electrical Disconnect

Tear Down Chiller & Pump

Cut & Remove Steel Pergola (Forklift)

SATURDAY – DAY 2

Crane Mobilization & Setup

Remove Existing Chiller

Remove & Install Pump

Set New Chiller (Crane)

Electrical Reconnect & VFD Install

Install New Pergola (Forklift)

SUNDAY – DAY 3

Piping & Insulation Work

Electrical Finalization

Startup, Vacuum & Charging

Operational Testing

Chiller Fully Running by 6 PM

SAFETY PLAN

- Mandatory daily safety meetings before work begins.
- Full PPE: hard hats, gloves, steel-toe boots, high visibility vests, safety glasses.
- Lockout/Tagout for all electrical and mechanical isolation.
- Crane operations supervised by certified lift director; exclusion zones enforced.
- Rigging inspected prior to each lift; no personnel under any suspended load.
- Only certified forklift operators; spotter required.
- Controlled hot-work procedures for pergola cutting.
- Keep all pathways clear, maintain clean site at all times.