

UNION COUNTY BOARD OF EDUCATION CONTRACT ROUTING SHEET

Contractor Name: Carolina Air Solutions
 Address: 9224 Stockport Place
 City, State, Zip: Charlotte, NC 28273
 Contact Name: Billy Garrison
 Telephone Number: 704.525.2400

UCPS Contract Number: 4-97308009

Purpose of Contract (location and brief description): East Union Middle School-Chiller Replacement

Submitting Department: Facilities Department

Date Submitted: 10.18.2023

Budget Account Number: FY24 BLDGSY

Funding Source: _____

Contract Amount: \$ 116,500.00

Contract Period: Completion by November 1, 2024

UCPS Employee to Contact: Penny Helms/Danny McManus

Phone Number: 704-296-3160

NOTE: Individuals listed below should initial, date, and forward this form after completing their responsibilities relating to this Contract.

1. Approved by Fund Owner/Acquire Vendor Signature and proper
Insurance Certificate with UCBOE NAMED as
CERTIFICATE HOLDER.

A. Insurance Certificate Reviewed/Approved by Risk Management

2. Approved by Appropriate Representative(s) of UCPS:

- ☒ UCPS Project Coordinator
☒ UCPS Department Head/School Principal
☒ Asst. Supt. for Administration & Operations
☐ Asst. Supt. for Human Resources
☐ Asst. Supt. for Instructional Programs Asst.
☐ Asst. Supt. of Student Support
☐ Chief School Performance Officer
☐ Chief Technology Officer

INITIAL

DATE

DS
 SH
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 K
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 CM

10/18/2023 | 2:03 PM E

10/18/2023 | 2:44 PM E

10/18/2023 | 6:04 PM E

10/19/2023 | 9:36 AM E

FORWARD TO UCPS GENERAL COUNSEL OFFICE

DS
 SS

DS
 KB

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 MM

10/19/2023 | 6:45 PM P

3. Approved by Legal Counsel

FORWARD TO SUPERINTENDENT/BOARD OF EDUCATION

4. Approved by Superintendent/Board of Education

FORWARD TO FINANCE

6. Pre-audited by Representative of Finance Officer

DS
 SM

10/20/2023 | 11:45 AM

Contract #: 4-97308009

CONTRACT FOR SERVICES

This Contract for Services ("Contract") is made and entered into 3rd day of October 2023 between The Union County Board of Education, with a mailing address of 400 North Church Street, Monroe, North Carolina 28112 ("UCBOE") and Carolina Air Solutions located at 9224 Stockport Place, Charlotte, North Carolina 28273 ("Vendor" or "Contractor" or "Service Provider").

For and in consideration of the mutual promises set forth in this Contract, the parties do mutually agree as follows:

1. Obligations of Vendor. The Vendor agrees to provide the services, goods, materials, equipment, and/or software (the "Services" and/or "Goods," as appropriate) to fully, timely and properly complete [East Union Middle Chiller Replacement] as more particularly described in the Scope of Work document attached hereto and incorporated herein by reference as Exhibit 1.

The UCBOE and Vendor recognize that time is of the essence to this Agreement and that the UCBOE will suffer financial loss if the work is not completed within the times specified herein. Both parties also recognize the delays, difficulties and expense involved in proving, in a legal or arbitration proceeding, the actual loss suffered by the UCBOE if the Work is not completed on time. Accordingly, in lieu of requiring such proof, the UCBOE and Vendor agree that as liquidated damages for delay (but not as penalty) the Vendor shall pay to the UCBOE for each day in excess of the term allowed for completion of the Work, the sum of \$200 as liquidated damages. The term of this Contract shall be Exhibit 1.

This Contract does not grant the Vendor the right or the exclusive right to provide specified Services and/or Goods to UCBOE. Similar Services and/or Goods may be obtained from sources other than the Vendor (or not at all) at the discretion of UCBOE.

The Vendor shall begin work immediately upon issuance of a written notice to proceed. The Vendor agrees to perform the Services and supply the Goods or in a timely, complete, and professional manner and in accordance with the terms and conditions of this Contract. Furthermore, the Vendor represents and warrants that (i) it is duly qualified and, if required by law, licensed to provide the Services and/or Goods; (ii) it will provide the Services and/or Goods in a manner consistent with the level of care and skill ordinarily exercised by contractors providing similar Services and/or Goods under similar conditions; (iii) it possesses sufficient experience, personnel, and resources to provide the Services and/or Goods; (iv) it shall provide the Services and/or Goods in compliance with applicable laws, statutes, ordinances, codes, orders, rules and regulations; and (v) its reports, if any, shall be complete, accurate, and unambiguous.

2. Obligations of UCBOE. UCBOE hereby agrees to pay to the Vendor for the faithful performance of this Contract, and the Vendor hereby agrees to provide all of the Services and/or Goods, for the sum not to exceed \$116,500.00, One Hundred Sixteen Thousand, Five Hundred Dollars. ("Contract Price").

3. Project Coordinator. Karl Todd is designated as the Project Coordinator for UCBOE. The Project Coordinator shall be UCBOE's representative in connection with the Vendor's performance under this Contract. UCBOE has complete discretion in replacing the Project Coordinator with another person of its choosing.
4. Vendor Supervisor. Billy Garrison is designated as the Vendor Supervisor for the Vendor. The Vendor Supervisor is fully authorized to act on behalf of the Vendor in connection with this Contract.
5. Terms and Methods of Payment. UCBOE will make payment after invoices are approved on a net 30-day basis. UCBOE will not pay for services or materials in advance without the prior approval of the Finance Officer. Vendor to submit invoices on the following schedule: Upon Completion
6. Standard Terms and Conditions: Vendor agrees to the Standard Terms and Conditions set forth as Attachment A attached hereto and incorporated herein by reference.
7. Counterpart Execution. This Contract may be executed and recorded in two or more counterparts, each of which shall be deemed an original and all of which, when taken together, shall constitute one and the same instrument. Each party shall be entitled to rely upon executed copies of this Contract transmitted by facsimile or electronic "PDF" to the same and full extent as the originals.

**[THE REST OF THIS PAGE HAS BEEN LEFT BLANK INTENTIONALLY]
[SIGNATURES ON NEXT PAGE]**

IN WITNESS WHEREOF, UCBOE and the Vendor have executed this Contract on the day and year first written above.

Carolina Air Solutions

Vendor Name

DocuSigned by:

Billy Garrison

10/26/2023 | 5:38 AM PDT

Signature of Authorized Representative

Date

20-2107707

Vendor's Federal Identification #

[if Contract is with Organization or Social Security Number if individual]

THE UNION COUNTY BOARD OF EDUCATION

DocuSigned by:

Kathly Heintel

10/26/2023 | 8:41 AM EDT

Authorized Representative

Date

This instrument has been preaudited
in the manner required by the School
Budget and Fiscal Control Act.

DocuSigned by:

Shanna McLamb

10/20/2023 | 11:45 AM PDT

Finance Officer

Date

DocuSigned by:

Sara Hymel

10/18/2023 | 2:03 PM EDT

UCPS Risk Management

Date

As to form

DocuSigned by:

Michelle Morris

10/19/2023 | 6:45 PM PDT

General Counsel

Date

Attachment A

Standard Terms and Conditions

I. Standard Terms and Conditions for All Contracts

1. Defined Terms, "Contract" means the agreement between UCBOE and Vendor which consists of the applicable Contract Documents. "Contract Documents" means: (i) any applicable purchase order between Vendor and UCBOE specifically including all terms and conditions set forth or referenced herein and on the face of a Purchase Order, (ii) any attachments hereto, (iii) any applicable solicitation documentation related to hereto (including without limitation any request for proposals or invitation for bids and Vendor's response thereto), and (iv) any other terms and conditions of a written agreement signed by Vendor and UCBOE that deals with the same subject matter. "Goods" means any supplies, materials, products or other tangible personal property provided by Vendor to UCBOE. "Purchase Order" mean any applicable purchase order issued by UCBOE. "Services" means services, specifically including without limitation construction services, design services, professional or consulting services and software as a service, "UCBOE" means the Union County Board of Education. "Vendor" means the party contracting with UCBOE and includes individual and entities that may be referred to in Contract Documents as "vendor", "seller", "service provider", or "contractor".
2. Written Agreement Signed by Both Parties; Acceptance of Purchase Order Terms and Conditions when there is not a Separate Written Agreement Signed by Both Parties. When a Contract is signed by both UCBOE and Vendor then the Purchase Order issued by UCBOE is for administrative convenience and is not part of the Contract Documents. When there is not a separate Contract signed by both UCBOE and Vendor, then Vendor's acknowledgment of the terms of any Purchase Order, without timely objection, or Vendor's shipment or performance of any part of a Purchase Order, constitutes an agreement to all terms and conditions set forth or referenced herein and on the face of the Purchase Order, together with the terms and conditions of any other applicable Contract Documents. The terms and provisions set forth in the Contract Documents shall constitute the entire agreement between Vendor and UCBOE with respect to the purchase by UCBOE of the Services and/or Goods work performed as described in the Contract Documents. In the event of any conflict between any terms and conditions of the Contract Documents, the terms and conditions most favorable to UCBOE shall control. A Purchase Order constitutes an offer by UCBOE and expressly limits acceptance to the terms and conditions stated therein. No additional or supplemental provision or provisions in variance herewith that may appear in Vendor's quotation, acknowledgment, invoice, or in any other communication from Vendor to UCBOE shall be deemed accepted by or binding on UCBOE. UCBOE hereby expressly rejects all such provisions which supplement, modify or otherwise vary from the terms of the Contract Documents, and such provisions are superseded by the terms and conditions stated in the Contract Documents, unless and until UCBOE's authorized representatives expressly assent, in writing, to such provisions. Stenographic and clerical errors and omissions by UCBOE are subject to correction.
3. Cancellation of Purchase Order. UCPS may cancel any Purchase Order or portion thereof without liability, if: (a) Vendor fails upon request to give reasonable assurance of timely performance or UCPS otherwise determines that it has reasonable grounds for insecurity regarding Vendor's performance; (b) conforming Goods or Services (including the quantities specified for delivery) are not delivered within the time specified or, if no time is specified, within a commercially reasonable time; (c) Vendor otherwise breaches the Contract and such breach is not corrected within thirty (30) days following written notice of breach; or (d) cancellation is otherwise required or allowed by law.
4. Quantities. Shipments must equal exact amounts ordered unless otherwise agreed in writing by UCBOE. The award of a term contract neither implies nor guarantees any minimum or maximum purchases. Materials received in excess of quantity specified on the purchase order , at UCBOE option's, may be returned at the Vendor's expense.
5. Prices. If Vendor's price or the regular market price of any of the Goods covered hereunder is lower than the price stated in the Contract Documents on the date of shipment of such Goods, Vendor agrees to give UCBOE the benefit of such lower price on any such Goods. In no event shall Vendor's price be higher than the price last quoted or last charged to UCBOE unless otherwise agreed in writing. No charges for transportation, boxing, crating, etc. are allowable unless such charges are included in the Contract Documents.
6. Invoices. It is understood and agreed that orders will be shipped at the established Contract prices in effect on dates orders are placed. Invoicing at variance with this provision may subject the Contract to cancellation.

Applicable North Carolina sales tax shall be invoiced as a separate item. Invoices shall be sent to UCBOE's accounts payable department with a copy to UCBOE Project Coordinator.

7. Freight on Board. All shipments of Goods are FOB destination unless otherwise stated in the Contract Documents. Any freight charges prepaid by Vendor are to be itemized on the invoice unless stated otherwise in writing by form of quote, bid, contract. In instances where Goods are shipped against this order by parties other than those specified on the Purchase Order, the third-party shipper must be instructed to list the UCBOE purchase order number on all packages, bills of lading, etc. to insure prompt identification of order.
8. Taxes. Taxes are included in the Contract Price. Applicable taxes shall be invoiced as a separate item for UCBOE's records.
9. Payment Terms. Payment terms are Net 30 days after receipt of correct invoice or acceptance of Goods, whichever is later.
10. Condition and Packaging. Unless otherwise provided by special terms and conditions or specifications, it is understood and agreed that any item offered or shipped has not been sold or used for any purpose and shall be in first class condition. All containers/packaging shall be suitable for handling, storage or shipment.
11. Safety Data Sheets. Safety Data Sheets must be provided with shipment of all chemicals."
12. Delays in Shipment. Time and date of delivery are of the essence, except when delay is due to causes beyond Vendor's reasonable control and without Vendor's fault or negligence.
13. Risk of Loss. Vendor shall have the risk of loss of and damage to the Goods subject to the Contract Documents until such Goods are delivered to the destination and accepted by UCBOE or its nominee.
14. Rejection. All Goods shall be received subject to UCBOE's inspection. Goods that are defective in workmanship or material or otherwise not in conformity with the requirements of the Contract Documents may be rejected and returned at Vendor's expense or may be accepted at a reduced price. UCBOE may require Vendor to promptly replace or correct any rejected Goods Services and, if Vendor fails to do so, UCBOE may contract with a third party to replace such Goods Services and charge Vendor the additional cost.
15. Warranties. Vendor warrants that all Goods delivered hereunder will be free from defects in materials and workmanship and will conform strictly to the specifications, drawings, or samples specified or furnished. This warranty shall survive any inspection, delivery, acceptance or payment by UCBOE of the Goods and shall run to UCBOE and any user of the Goods. This express warranty is in addition to Vendor's implied warranties of merchantability and fitness for a particular purpose which shall not be disclaimed. In addition to any other rights available at law or equity, UCBOE shall be entitled to all rights and remedies provided by the Uniform Commercial Code, Chapter 25 of the North Carolina General Statutes, for breach of express warranties and implied warranties of merchantability or fitness for a particular purpose, including but not limited to consequential and incidental damages.
16. Compliance with All Laws. Vendor warrants that all performance hereunder shall be in accordance with all applicable federal, state and local laws, regulations and orders. The right of Vendor to proceed may be terminated immediately by written notice if UCBOE determines that Vendor, its agent or another representative, has violated any provision of law.
17. Use of Federal Funds. If the source of funds for this Contract is federal funds, the following federal provisions apply pursuant to 2 C.F.R. § 200.326 and 2 C.F.R. Part 200, Appendix II (as applicable): Equal Employment Opportunity (41 C.F.R. Part 60); Davis-Bacon Act (40 U.S.C. 3141-3148); Copeland "Anti-Kickback" Act (40 U.S.C. 3145); Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708); Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387); Debarment and Suspension (Executive Orders 12549 and 12689); Byrd Anti-Lobbying Amendment (31 U.S.C. 1352); Procurement of Recovered Materials (2 C.F.R. § 200.322); and Record Retention Requirements (2 CFR § 200.324).
18. Registered Sex Offenders; Jessica Lunsford Act. Under North Carolina law, certain sex offenders are prohibited from coming onto school campuses. Vendor agrees to conduct an annual check of the N.C. Sex Offender and Public Protection Registration Program, the N.C. Sexually Violent Predator Registration Program and the National Sex Offender Registry for all of its employees whose job involves direct interaction with students as part of the job. UCBOE prohibits any personnel listed on such registries from being on any property owned or operated by UCBOE and from having any direct interaction with students. As a term of the Agreement, said checks must be performed by the Vendor and reported to UCBOE's Superintendent or designee, if Vendor's employees will be working directly with students. Under provisions set forth in the Jessica Lunsford Act under North Carolina law, the signature below certifies that neither Vendor nor any employee or agent of Vendor is

listed as a sex offender on the N.C. Sex Offender and Public Protection Registration Program, the N.C. Sexually Violent Predator Registration Program, and/or the National Sex Offender Registry.

19. Nondiscrimination. During the performance of the Contract, Vendor shall not discriminate against or deny the Contract's benefits to any person on the basis of sexual orientation, national origin, race, ethnic background, color, religion, gender, age or disability.
20. FERPA Electronically Stored Data Compliance: Vendor is expressly prohibited from selling or trading any education records or personally identifiable information acquired under the Agreement. Furthermore, Vendor agrees not to attempt to re-identify students from aggregated data. Further, Vendor will not use any personally identifiable information or education records to advertise or market to students of UCBOE or their parents. Any personally identifiable information and education records held by Vendor pursuant to the Agreement will be made available to UCBOE upon request. Vendor will store and process all data using appropriate administrative, physical, and technical safeguards to secure personally identifiable information and education records from unauthorized access, disclosure, and use. Vendor will conduct periodic risk assessments and remediate any identified security vulnerabilities in a timely manner. Vendor will also have a written incident response plan, to include prompt notification to UCBOE in the event of a security or privacy incident, as well as procedures for responding to a breach of data. Vendor agrees to share its incident response plan upon request. Vendor shall, for all personally identifiable data and education records in its possession and in the possession of any subcontractors, or agents to which it has transferred data as permitted herein, destroy or de-identify such data when such data is no longer needed to perform the Agreement. Vendor hereby agrees to abide by all Board of Education policies and procedures governing the confidentiality of student records and the responsible use of technology and internet safety. If Vendor experiences a security breach concerning any information covered by the Agreement, and such breach is covered by N.C.G.S. §75.61(14), then Vendor will (a) fully comply with Vendor's obligations under the N.C. Identity Theft Protection Act, (b) immediately notify UCBOE with the information listed in N.C.G.S. §75-65(d)(1-4), and (c) fully cooperate with UCBOE in carrying out its obligations under said Identity Theft Protection Act. Vendor will indemnify UCBOE for any breach of confidentiality or failure of its responsibilities to protect confidential information, and for cost of notification of affected persons as a result of its accidental or negligent release of personally identifiable information or education records provided to Vendor pursuant to the Agreement.
21. North Carolina Public Records Law: Vendor acknowledges that UCBOE is subject to the requirements of North Carolina's Public Records Law ("NCPRL"), N.C.G.S. § 132-1, et. seq. The Agreement and any related documents, papers, letters, maps, books, photographs, films, sound recordings, magnetic or other tapes, electronic data-processing records, artifacts, or other documentary material, regardless of physical form or characteristics, made or received by UCBOE in connection with the transaction of the Agreement may be considered a "public record," subject to disclosure under the NCPRL. UCBOE is under no obligation to notify Vendor prior to its compliance of its duties under NCPRL.
22. Conflict of Interest. Vendor represents and warrants that no member of UCBOE or any of its employees or officers who may obtain a direct benefit, personal gain or advantage for themselves or a relative or associate as a result of the Contract, subcontract or other agreement related to the Contract is in a position to influence or has attempted to influence the making of the Contract, has been involved in making the Contract, or will be involved in administering the Contract. Vendor also represents and warrants that, if the Contract is funded by any amount of federal funds, no violation of 2 C.F.R. § 200.318(c) or any other applicable federal conflict of interest law has occurred or will occur. Vendor shall cause this paragraph to be included in all Contracts, subcontracts and other agreements related to the Contract.
23. Gratuities. Vendor represents and warrants that no member of UCBOE or any of its employees has been or will be offered or given a gratuity to an official or employee of UCBOE in violation of applicable law or policy.
24. Kickbacks to Vendor. Vendor shall not permit any kickbacks or gratuities to be provided, directly or indirectly, to itself, its employees, subcontractors or subcontractor employees for the purpose of improperly obtaining or rewarding favorable treatment in connection with a UCBOE Contract or in connection with a subcontract relating to a UCBOE Contract. When Vendor has grounds to believe that a violation of this clause may have occurred, Vendor shall promptly report to UCBOE in writing the possible violation.
25. Iran Divestment Act. Vendor certifies that, as of the date listed below, it is not on the Final Divestment List, as created by the State Treasurer pursuant to N.C.G.S. § 143-6A-4, in violation of the Iran Divestment Act. In compliance with the requirements of the Iran Divestment Act and N.C.G.S. § 143C-6A-5(b), Vendor shall not

utilize in the performance of the contract any subcontractor that is identified on the Final Divestment List. The Final Divestment List can be found on the State Treasurer's website at the address www.nctreasurer.com/Iran and should be updated every 180 days.

26. Divestment from Companies that Boycott Israel. The Vendor certifies that it has not been designated by the North Carolina State Treasurer as a company engaged in the boycott of Israel pursuant to N.C.G.S. 147-86.81. It is the responsibility of each vendor or contractor to monitor compliance with this restriction. Contracts valued at less than \$1,000.00 are exempt from this restriction.
27. E-Verification. Vendor shall comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes
28. Indemnification. To the fullest extent permitted by law, Vendor shall indemnify and hold harmless UCBOE, its officers, agents, employees and assigns from and against all claims, losses, costs, damages, expenses, attorneys' fees and liability that any of them may sustain (a) arising out of Vendor's failure to comply with any applicable law, ordinance, regulation, or industry standard or (b) arising directly or indirectly out of Vendor's performance or lack of performance of the terms and conditions of the Contract. In the event that any Services and/or Goods sold and delivered or sold and performed under the Contract Documents shall be defective in any respect whatsoever, Vendor shall indemnify and save harmless UCBOE, its officers, agents, employees and assigns from all loss or the payment of all sums of money by reason of all accidents, injuries or damages to persons or property that shall happen or occur in connection with the use or sale of such Services and/or Goods and are contributed to by said condition. In the event Vendor, its employees, agents, subcontractors and or lower-tier subcontractors enter premises occupied by or under the control of UCBOE in the performance of the Contract Documents, Vendor agrees that it will indemnify and hold harmless UCBOE, its officers, agents, employees and assigns, from any loss, costs, damage, expense or liability by reason of property damage or personal injury of whatsoever nature or kind arising out of, as a result of, or in connection with such entry.
29. Insurance. Unless such insurance requirements are waived or modified by UCBOE or risk management ("DIRM"), Vendor certifies that it currently has and agrees to purchase and maintain during its performance under the Contract the following insurance from one or more insurance companies acceptable to UCBOE and authorized to do business in the State of North Carolina: Automobile - Vendor shall maintain bodily injury and property damage liability insurance covering all owned, non-owned and hired automobiles. The policy limits of such insurance shall not be less than \$1,000,000 combined single limit each person/each occurrence. Commercial General Liability - Vendor shall maintain commercial general liability insurance that shall protect Vendor from claims of bodily injury or property damage which arise from performance under the Contract. This insurance shall include coverage for contractual liability. The policy limits of such insurance shall not be less than \$1,000,000 combined single limit each occurrence/annual aggregate. Worker's Compensation and Employers' Liability Insurance - If applicable to Vendor, Vendor shall meet the statutory requirements of the State of North Carolina for worker's compensation coverage and employers' liability insurance. Vendor shall also provide any other insurance or bonding specifically recommended in writing by the DIRM or required by applicable law. Certificates of such insurance shall be furnished by Vendor to UCBOE and shall contain the provision that UCBOE be given 30 days' written notice of any intent to amend or terminate by either Vendor or the insuring company. Failure to furnish insurance certificates or to maintain such insurance shall be a default under the Contract and shall be grounds for immediate termination of the Contract.
30. Termination for Convenience. In addition to all of the other rights which UCBOE may have to cancel this Contract or an applicable Purchase Order, UCBOE shall have the further right, without assigning any reason therefore, to terminate the Contract (or applicable Purchase Order), in whole or in part, at any time at its complete discretion by providing 10 days' notice in writing from UCBOE to Vendor. If the Contract is terminated by UCBOE in accordance with this paragraph, Vendor will be paid in an amount which bears the same ratio to the total compensation as does the Services and/or Goods actually delivered or performed to the total originally contemplated in the Contract. UCBOE will not be liable to Vendor for any costs for completed Goods, Goods in process or materials acquired or contracted for if such costs were incurred prior to the date of this Contract or an applicable Purchase Order.
31. Termination for Default. UCBOE may terminate the Contract, in whole or in part, immediately and without prior notice upon breach of the Contract by Vendor. In addition to any other remedies available to UCBOE law or equity, UCBOE may procure upon such terms as UCBOE shall deem appropriate, Services and/or Goods

- substantially similar to those so terminated, in which case Vendor shall be liable to UCBOE for any excess costs for such similar goods, supplies, or services and any expenses incurred in connection therewith.
32. **Contract Funding.** It is understood and agreed between Vendor and UCBOE that UCBOE's obligation under the Contract is contingent upon the availability of appropriated funds from which payment for Contract purposes can be made. No legal liability on the part of UCBOE for any payment may arise until funds are made available to UCBOE's Finance Officer and until Vendor receives notice of such availability. Should such funds not be appropriated or allocated, the Contract shall immediately be terminated. UCBOE shall not be liable to Vendor for damages of any kind (general, special, consequential or exemplary) as a result of such termination.
 33. **Accounting Procedures.** Vendor shall comply with any accounting and fiscal management procedures prescribed by UCBOE to apply to the Contract and shall assure such fiscal control and accounting procedures as may be necessary for proper disbursement of and accounting for all project funds.
 34. **Improper Payments.** Vendor shall assume all risks attendant to any improper expenditure of funds under the Contract. Vendor shall refund to UCBOE any payment made pursuant to the Contract if it is subsequently determined by audit that such payment was improper under any applicable law, regulation or procedure. Vendor shall make such refunds within thirty (30) days after UCBOE notifies Vendor in writing that a payment has been determined to be improper.
 35. **Contract Transfer.** Vendor shall not assign, subcontract or otherwise transfer any interest in the Contract without the prior written approval of UCBOE.
 36. **Contract Personnel.** Vendor agrees that it has, or will secure at its own expense, all personnel required to provide the Services and/or Goods set forth in the Contract.
 37. **Key Personnel.** Vendor shall not substitute for key personnel (defined as those individuals identified by name or title in the Contract Documents or in written communication from Vendor) assigned to the performance of the Contract without prior written approval from UCBOE Project Coordinator (the individual at UCBOE responsible for administering the Contract).
 38. **Contract Modifications.** The Contract may be amended only by written amendment duly executed by both UCBOE and Vendor.
 39. **Relationship of Parties.** Vendor is an independent contractor and not an employee of UCBOE. The conduct and control of the work will lie solely with Vendor. The Contract shall not be construed as establishing a joint venture, partnership or any principal-agent relationship for any purpose between Vendor and UCBOE. Employees of Vendor shall remain subject to the exclusive control and supervision of Vendor, which is solely responsible for their compensation.
 40. **Advertisement.** The Contract will not be used in connection with any advertising by Vendor without prior written approval by UCBOE.
 41. **Monitoring and Evaluation.** Vendor shall cooperate with UCBOE, or with any other person or agency as directed by UCBOE, in monitoring, inspecting, auditing or investigating activities related to the Contract. Vendor shall permit UCBOE to evaluate all activities conducted under the Contract. UCBOE has the right at its sole discretion to require that Vendor remove any employee of Vendor from UCBOE Property and from providing Services and/or Goods under the Contract following provision of notice to Vendor of the reasons for UCBOE's dissatisfaction with the Services and/or Goods of Vendor's employee.
 42. **Financial Responsibility.** Vendor is financially solvent and able to perform under the Contract. If requested by UCBOE, Vendor agrees to provide a copy of its latest audited annual financial statements or other financial statements as deemed acceptable by UCBOE's Finance Officer. In the event of any proceedings, voluntary or involuntary, in bankruptcy or insolvency by or against Vendor, the inability of Vendor to meet its debts as they become due or in the event of the appointment, with or without Vendor's consent, of an assignee for the benefit of creditors or of a receiver, then UCBOE shall be entitled, at its sole option, to cancel any unfilled part of the Contract without any liability whatsoever.
 43. **Governmental Restrictions.** In the event any governmental restrictions are imposed which necessitate alteration of the material, quality, workmanship or performance of the items offered prior to their delivery, it shall be the responsibility of the Vendor to notify, in writing, the issuing purchasing office at once, indicating the specific regulation which required such alterations. UCBOE reserves the right to accept any such alterations, including any price adjustments occasioned thereby, or to cancel the Contract.
 44. **Inspection at Vendor's Site.** UCBOE reserves the right to inspect, at a reasonable time, the equipment/item, plant or other facilities of a prospective contractor prior to Contract award, and during the Contract term as

necessary for UCBOE determination that such equipment/item, plant or other facilities conform with the specifications/requirements and are adequate and suitable for the proper and effective performance of the Contract.

45. Confidential Information. All information about UCBOE provided to the Vendor or its officers, employees, agents, representatives and advisors (the "Vendor Representatives"), and all copies or other full or partial reproductions thereof and notes, memoranda or other writings related thereto created by Vendor or any Vendor Representative, regardless of whether provided before or after the date of the Contract and regardless of the manner or medium in which it is furnished, is referred to as "Confidential Information". Confidential Information does not include any information that (a) is or becomes generally available to the public other than as a result of an impermissible disclosure by Vendor, (b) was known by or available on a nonconfidential basis to Vendor before it was disclosed by UCBOE or (c) becomes available to Vendor on a nonconfidential basis from a third party whom Vendor does not know to be bound by a confidentiality agreement with, or have an obligation of secrecy to, UCBOE. Except as and to the extent required by law or order or demand of any governmental or regulatory authority, Vendor and Vendor Representatives will (x) keep all Confidential Information confidential and (y) will only disclose or reveal any Confidential Information to Vendor Representatives who must have the information to fulfill Vendor's obligations under the Contract and who agree to observe the terms of this Section. Vendor and Vendor Representatives will not use the Confidential Information for any purpose other than fulfilling Vendor's obligations under the Contract. By way of example and not limitation, Vendor shall not sell, market, or commercialize Confidential Information, create derivative products or applications based on Confidential Information. If Vendor is requested or required, pursuant to applicable law or regulation or by legal process, to disclose any Confidential Information, Vendor will provide UCBOE with prompt and timely notice of the requests or requirements so that UCBOE can seek an appropriate protective order or other remedy and will not be prejudiced by delay. If UCBOE does not obtain a protective order or other remedy, Vendor will only disclose that portion of the Confidential Information which Vendor's legal counsel determines Vendor is required to disclose. Upon termination of the Contract or otherwise upon UCBOE's request, Vendor will promptly deliver to UCBOE all Confidential Information in the possession of Vendor or the Vendor Representatives.

Student Information: If, during the course of Vendor's performance of the Contract, Vendor should obtain any information pertaining to students or students' official records, Vendor agrees to keep any such information confidential and to not disclose or permit it to be disclosed, directly or indirectly, to any person or entity. The Contract shall not be construed by either party to constitute a waiver of or to in any manner diminish the provisions for confidentiality of students' records. Additionally, pursuant to N.C.G.S. 115C-401.1, it is unlawful for a person who enters into a contract with a local board of education to sell personally identifiable information that is obtained from a student as a result of that person's performance under the Contract.

Employee Personnel Information: If, during the course of Vendor's performance of the Contract, Vendor should obtain any information pertaining to employees of UCBOE's personnel records, Vendor agrees to keep any such information confidential and to not disclose or permit it to be disclosed, directly or indirectly, to any person or entity. This section will survive the termination of this Contract.

46. Intellectual Property. Vendor agrees, at its own expense, to indemnify, defend and save UCBOE harmless from all liability, loss or expense, including costs of settlement and attorney's fees, resulting from any claim that UCBOE's use, possession or sale of the Services and/or Goods infringes any copyright, patent or trademark or is a misappropriation of any trade secret.
47. No Pre-Judgment or Post-Judgment Interest. In the event of any action by Vendor for breach of contract in connection with the Contract, any amount awarded shall not bear interest either before or after any judgment, and Vendor specifically waives any claim for interest.
48. Background Checks. At the request of UCBOE's Project Coordinator, Vendor (if an individual) or any individual employees of Vendor shall submit to UCBOE criminal background check and drug testing procedures.
49. Mediation. If a dispute arises out of or relates to the Contract, or the breach of the Contract, and if the dispute cannot be settled through negotiation, the parties agree to try in good faith to settle the dispute by mediation administered by the American Arbitration Association under its Commercial Mediation Rules before resorting to litigation.

50. No Third-Party Benefits. The Contract shall not be considered by Vendor to create any benefits on behalf of any third party. Vendor shall include in all contracts, subcontracts or other agreements relating to the Contract an acknowledgment by the contracting parties that the Contract creates no third-party benefits.
51. Force Majeure. Neither party shall be responsible to the other for any losses resulting from the failure to perform any terms or provisions of the Agreement if the party's failure to perform is attributable to war, riot or other disorder, strike or other work stoppage; fire; flood; storm; illness; pandemic, communicable disease, or any other act not within the control of the party whose performance is interfered with, and which, by reasonable diligence, such party is unable to prevent. However, UCBOE will be entitled to a refund for fees paid on account of services not rendered by Vendor including any and all deposits.
52. Ownership of Documents; Work Product. All documents created pursuant to the Contract shall, unless expressly provided otherwise in writing, be owned by UCBOE. Upon the termination or expiration of the Contract, any and all finished or unfinished documents and other materials produced by Vendor pursuant to the Contract shall, at the request of UCBOE, be turned over to UCBOE. Any technical knowledge or information of Vendor which Vendor shall have disclosed or may hereafter disclose to UCBOE shall not, unless otherwise specifically agreed upon in writing by UCBOE, be deemed to be confidential or proprietary information and shall be acquired by UCBOE free from any restrictions as part of the consideration of the Contract.
53. Strict Compliance. UCBOE may at any time insist upon strict compliance with these terms and conditions notwithstanding any previous course of dealing or course of performance between the parties to the contrary.
54. General Provisions. UCBOE's remedies as set forth herein are not exclusive. Any delay or omission in exercising any right hereunder, or any waiver of any single breach or default hereunder, shall not be deemed to be a waiver of such right or of any other right, breach, or default. If action be instituted by Vendor hereunder, UCBOE shall be entitled to recover costs and reasonable attorney's fees. Vendor may not assign, pledge, or in any manner encumber Vendor's rights under this Contract or applicable Purchase Order or delegate the performance of any of its obligations hereunder, without UCBOE's prior, express written consent.
55. Contract Situs. All matters, whether sounding in contract or tort relating to the validity, construction, interpretation and enforcement of the Contract, will be determined in Union County, North Carolina. North Carolina law will govern the interpretation and construction of the Contract.
56. Severability. Any provision of this Contract that is determined by any court of competent jurisdiction to be invalid or unenforceable will not affect the validity or enforceability of any other provision. Any provision of the Contract held invalid or unenforceable only in part or degree will remain in full force and effect to the extent not held invalid or unenforceable.

II. Additional Standard Terms and Conditions for Construction Contracts

1. Supervision and Provision for Labor and Supplies. The Vendor will supervise and direct the construction work (the "Work") and shall furnish, provide, and pay for all labor, materials, equipment, machinery, utilities, and services reasonably necessary for the execution and completion of the Work.
2. Coordination of Work and Notification of Progress. The Vendor agrees to coordinate its Work with the work of any other separate contractors or with the work of UCBOE's own forces to avoid delaying or interfering with their work. Vendor shall enforce good order and discipline among his employees and subcontractors on the Project. The Vendor further agrees to inform UCBOE on a regular basis or at UCBOE's request of the progress of the Work.
3. Provision for all Permits, Licenses, and Inspections. Unless otherwise provided, the Vendor shall secure and pay for all permits, licenses, and inspections necessary for the proper execution and completion of the Work.
4. Cleanliness. Vendor shall keep the Project reasonably free from waste materials or rubbish resulting from the Vendor's operations.
5. Additional Warranties. The Vendor warrants that the Vendor has visited the location of the Project and is familiar with all field conditions bearing upon the Vendor's performance of the Work; that the materials and equipment furnished under the Contract are of good quality and new (unless otherwise permitted); that the Work is non-negligent and meets or exceeds the standards ordinarily observed in the industry; and that the Work conforms to the requirements of the Contract and to all applicable codes, ordinances, laws, or regulations. The Vendor further warrants and promises that the Work shall be free from defects

and nonconformities in materials and workmanship for a period of one year from the later of the Date of Completion, which is the date UCBOE accepts the Work or such date as the Vendor actually completes all the Work (the "Date of Completion"). During such period, the Vendor will remedy at Vendor's expense nonconformities or defects in the Work within a reasonable time after receiving notice thereof from UCBOE.

6. Indemnity for Subcontractor Payment. In addition to the indemnification obligations contained in the attached terms and conditions to this Contract, the Vendor further agrees to defend and indemnify UCBOE from and against all claims, damages, losses, and expenses, including reasonable attorneys' fees, arising out of the Vendor's failure to pay subcontractors or materials suppliers.
7. Change Orders. The Vendor agrees that UCBOE may order changes in the general scope of the Work, including additions, deletions, and similar revisions. The parties agree to adjust the Contract Price and Date of Completion to reflect the effects of such changes, which adjustments shall be authorized only upon execution of a written change order (a "Change Order"). In case of emergency or extenuating circumstances or if a construction contingency is provided as stated below, approval of changes may be obtained verbally by telephone or field orders approved by UCBOE Project Coordinator and promptly thereafter substantiated in writing as outlined under normal procedures. The amount of any increase or decrease in the Contract Price shall be by mutual acceptance of a total amount supported by sufficient data and information to substantiate the change. Any decrease in Contract Price for a decrease in the Work will be the reasonable costs of the Work deleted, including a reasonable amount for the decrease in the Vendor's overhead.
8. Performance/Payment Bond. If required by law and/or the bidding documentation, the Vendor agrees to provide a Performance Bond and Labor and Material Payment Bond for its faithful performance in a form reasonably satisfying to UCBOE.
9. Payments Withheld. The UCBOE may withhold payment for the following reasons to the extent permitted under N.C. Gen. Stat. § 143-134.1(e): (1) defective Work not remedied; (2) third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to UCBOE is provided by the Vendor; (3) failure of the Vendor to make payments properly to subcontractors or for labor, materials or equipment; (4) reasonable evidence that the Work will not be completed with the time specified, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; (5) failure to carry out the Work in accordance with the Contract Documents; (6) failure to provide sales tax documentation in accordance with subparagraph 9.3.5; (7) failure or refusal of the Vendor to submit the required information on minority business enterprises; and (8) failure of the Vendor to comply with (a) the provisions of the Sedimentation and Pollution Control Act (N.C. Gen. Stat. § 113A-50 *et seq.*), and/or (b) any Notice of Violation issued by the North Carolina Department of Natural Resources.
10. Retainage. For public construction contracts costing an amount equal to or greater than \$100,000, the UCBOE will retain five percent of the amount of each progress payment on the project for as long as is authorized by N.C. Gen. Stat. § 143-134.1. At all times during the Project, the UCBOE may retain the maximum funds allowed by N.C. Gen. Stat. § 143-134.1. The UCBOE specifically reserves the right to withhold additional funds as authorized by this Contract and N.C. Gen. Stat. § 143-134.1. The Vendor may pay each subcontractor no later than seven days after receipt of payment from the UCBOE and in accordance with N.C. Gen. Stat. § 143-134.1 the amount to which the subcontractor is entitled, reflecting percentages actually retained from payments to the Vendor on account of the subcontractor's portion of the Work. The Vendor shall, by appropriate agreement with each subcontractor, require each subcontractor to make payments to sub-subcontractors in a similar manner and in accordance with N.C. Gen. Stat. § 143-134.1.
11. The Vendor shall use and submit applications for payment using a form reasonably satisfactory to UCBOE ("Application for Payment"). The Contractor shall submit with each Application for Payment a completed "Statement of Sales Tax Paid" and "Minority Business Enterprise" documentation in a form acceptable to UCBOE.

III. Additional Standard Term and Condition for Designer Contracts (which include Architectural, Engineering, Surveying, and Technical Services)

Additional Insurance. In addition to the insurance required pursuant to Section 22 of the Standard Terms and Conditions for All Contracts, the Vendor certifies that it currently has and agrees to purchase and maintain during its performance under the Contract the following insurance from one or more insurance companies acceptable to UCBOE and authorized to do business in the State of North Carolina: Professional liability insurance in commercially reasonable amounts as reasonably determined by UCBOE.

IV. Additional Standard Terms and Conditions for Information Technology Contracts

1. Definitions.

"Hardware" means the hardware the Vendor utilizes in the Hosted Environment for delivery and maintenance of the Hosted Software Services.

"Hosted Environment" means the Hardware, system software, hosting support software, network connectivity, and facility used by Vendor to support the Hosted Software Services.

"Hosted Software Services" means the application, including the Hosted Software and any applicable Third-Party Software, as run on the Hosted Environment.

"Hosted Software" means the software owned and controlled by Vendor or Vendor's third-party contractor that supports the Hosted Software Services.

"Support Services" means application and technical support required to maintain the performance, uptime and connectivity of the Hosted Software Services for UCBOE access and use, including without limitation, telephone support, error correction, maintenance, and installation of Updates and Upgrades to the Hosted Software.

"Updates" means (i) modifications to or releases of the Hosted Software that (a) add new features, functionality, and/or improved performance, (b) operate on new or other databases, operating systems, or server platforms or (c) extend the Hosted Software functionality to take advantage of advances in coding language, hardware, network or wireless infrastructures; and (ii) deviation corrections, bug or error fixes, patches, workarounds, and maintenance releases.

"Upgrades" means any new version or new release of the Hosted Software typically provided on an annual or bi-annual basis by the Vendor that includes new features, functions, support or service that were not in place with the immediately prior version.

2. Grant of License. Vendor grants to UCBOE for the term of this Contract a non-exclusive, non-transferable license to access and use over the internet the Hosted Software (the "License").
3. Updates and Upgrades. Vendor will make certain limited and applicable Hosted Software Updates and Upgrades available to UCBOE at no additional cost. All such Updates and Upgrades shall automatically become subject to the benefits and terms of this Contract and shall automatically be considered part of the License granted under this Contract.
4. Security. Vendor's Hosted Environment shall maintain security measures in place to help protect against the loss, misuse, and alteration of the Hosted Software Services, and specifically the Confidential Information provided to Vendor by UCBOE.
5. Warranties. Vendor warrants the following: (a) Vendor has the full authority to grant the License; (b) the Hosted Software is free from material defects or viruses; (c) the Hosted Software contains no disabling devices; and (d) the Hosted Software conforms to all material specifications set forth in the documentation and any other written material provided to UCBOE for any purpose. Without limiting any other remedies available to UCBOE under this Contract, at law or in equity, in the event that any Hosted Software does not conform to the warranties set forth for the Hosted Software herein, Vendor shall, at UCBOE's option, promptly correct or replace such Hosted Software and, in either case, Vendor shall perform any Support Services or other work required to restore the Hosted Software to the state that existed prior to any such breach, all at Vendor's expense. UCBOE reserves the right to reject the Hosted Software and to hold Vendor responsible for any loss, direct or indirect, caused by any such breach of warranty. In the event Vendor is or becomes aware of a problem with any item of Hosted Software, Vendor shall notify UCBOE upon such determination. Acceptance or use of the Hosted Software shall not constitute a waiver of any claim under any warranty.
6. Effect of Termination and Orderly Transition. Upon termination or expiration of this Contract for any reason, Vendor will cooperate in good faith with UCBOE to provide for an orderly transfer of the Goods and Services

and Confidential Information to UCBOE or UCBOE's successor vendor ("Orderly Transition") and according to the terms of this section.

- a. **Scope of Work for Orderly Transition.** Within thirty (30) days of notification by UCBOE that it will transfer Goods and Services to itself or a successor vendor, the parties will create and execute a scope of work document detailing tasks, the responsible parties for individual tasks, and timeframes for completion of tasks necessary to complete an Orderly Transition. The final, executed Orderly Transition scope of work shall be incorporated into this Contract and become subject to its terms. Vendor's failure to (a) cooperate in developing the Orderly Transition scope of work, (b) execute an Orderly Transition scope of work, or (c) abide by the executed Orderly Transition scope of work shall be deemed a material breach of this Contract.
 - b. **Time Frame.** Unless otherwise mutually agreed in an executed Orderly Transition scope of work, Vendor shall continue to provide Goods and Services while UCBOE migrates its Confidential Information from Vendor's Hosted Software Services in the Orderly Transition process. Vendor agrees that, as part of the Orderly Transition process and within the specified time frame, it will transfer to UCBOE all of the Confidential Information provided to Vendor by UCBOE pursuant to this Contract. Vendor will provide the Confidential Information in commercially reasonable electronic format as agreed in the Orderly Transition scope of work at no additional cost.
 - c. **Time and Material Costs Only.** UCBOE will be obligated to pay for time and materials at a reasonable hourly rate of no more than \$75/hour for the Orderly Transition. No other fees will be assessed for the Orderly Transition. Fees shall be agreed upon in advance as part of developing the scope of work referenced in subsection (a) above.
 - d. **Destruction of Confidential Information after Orderly Transition.** Unless otherwise mutually agreed in an executed Orderly Transition scope of work, Vendor agrees that after returning all Confidential Information to UCBOE pursuant to subsection (b) above it will destroy all remaining copies of Confidential Information and back-up Confidential Information in its possession, contained in or on any medium (such as a storage area network or "SAN") or as may be stored offsite, within thirty (30) days of completion of Orderly Transition. Vendor shall provide UCBOE with a detailed summary of the destruction process and standards to be utilized by Vendor with respect to the Confidential Information, and UCBOE shall approve such process and standards prior to Vendor commencing such destruction.
7. **Intellectual Property Warranty.** In addition to the warranties set forth elsewhere in this Contract with respect to the Goods and Services, Vendor expressly represents, warrants and covenants that neither the furnishing of Hosted Services to UCBOE hereunder, nor does the Hosted Software, violate, in whole or in part, any provision of any law, common law or regulation concerning copyrights, trade secrets, trademarks, tradenames, service marks, patents or other provisions regulating or concerning intellectual property rights.
 8. **Additional Indemnification.** To the fullest extent permitted by law, Vendor shall indemnify, defend and hold harmless UCBOE, its and directors, officers, managers, employees and agents, from all suits, claims, costs, damages and other liabilities, including reasonable attorneys' fees as incurred by counsel of UCBOE's choice, relating to or arising from (a) Vendor's failure to maintain the security and integrity of Confidential Information, the Hosted Software Services and the Hosted Environment; (b) any claim for infringement of any copyright, trade secret, trademark, tradename, service mark, patent, or other law or regulation concerning intellectual and/or proprietary property rights; and (c) any claims by third party interests in the Hosted Software.
 9. **Data Use.** Notwithstanding the foregoing, Vendor acknowledges and agrees that all Confidential Information is proprietary to and owned exclusively by UCBOE, whether provided in tangible or electronic form and whether entered into any software or Hosted Software Services owned or licensed by Vendor (including without limitation the Hosted Software and Hosted Software Services) or otherwise provided in connection with any products provided and services performed by Vendor (including without limitation the Goods and Services) and whether to, by or through a Vendor-affiliated ASP or other Hosted Software Services. Furthermore, Vendor shall not sell, market, or commercialize Confidential Information, create derivative products or applications based on Confidential Information or otherwise use Confidential Information in any manner unrelated to the performance of Vendor's obligations under the Contract. Vendor shall not share Confidential Information with any parent or subsidiary company of Vendor or any other Vendor-affiliated entity without the express prior written consent of UCBOE detailing the scope of allowable disclosure. Vendor agrees that if it breaches this

section, UCBOE may, at its option, pursue any or all of the following remedies: (a) immediately terminate this Contract without liability to Vendor; (b) seek an injunction without posting a bond; and (c) pursue whatever other remedies may be available to it at law, in equity or pursuant to this Contract.

SCOPE OF WORK

INTRODUCTION: Union County Public Schools is soliciting bids from qualified Contractors to replace the existing chiller at the project site listed below.

Project Site: East Union Middle School
6010 Marshville Boulevard, Marshville, NC 28103

Existing Conditions

Chillers are located within a fenced area on a concrete pad.

Electrical service is 208/230 volt.

East Union Middle School's Chiller is a 70 ton Trane, Model No. RTAA070AYL01A3N03.

The new chiller is to be controlled by the existing BAS controller and it will be the Contractor's responsibility to coordinate the control integration through Control Stop. The Contractor will be responsible for all wiring required to establish the proper control between the Chiller and the Chiller Pump as well as the LAN cable that is required to add the Chiller Bacnet Card to the Network via an IP which will be provided by UCPS. The integration will be commissioned by Control Stop once the chillers are installed and the chiller factory startup has been satisfactorily performed and completed by the equipment manufacturer.

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PART 1: GENERAL

1.01 SUMMARY

A. Section includes design, performance criteria, refrigerants, controls, and installation requirements for air-cooled scroll compressor chillers.

1.02 REFERENCES

A. Comply with applicable Standards/Codes of AHRI 550/590, ANSI/ASHRAE 15, ETL, CETL, NEC, and OSHA as adopted by the State.

B. Units shall meet the efficiency standards of the current version of ASHRAE Standard 90.1, and FEMP standard 2012.

1.03 SUBMITTALS

A. Submit shop drawings and product data in accordance with the specifications.

B. Submittals shall include the following:

1. Dimensioned plan and elevation view drawings, required clearances, and location of all field connections
2. Summary of all auxiliary utility requirements such as electricity, water, etc. Summary shall indicate quality and quantity of each required utility.
3. Single line schematic drawing of the field power hookup requirements, indicating all items that are furnished.
4. Schematic diagram of control system indicating points for field interface/connection.
5. Diagram shall fully delineate field and factory wiring.
6. Installation and operating manuals.

1.04 QUALITY ASSURANCE

A. Qualifications: Equipment manufacturer must specialize in the manufacture of the products specified and have five years experience with the type of equipment and refrigerant offered.

B. Regulatory Requirements: Comply with the codes and standards specified.

C. Chiller manufacturer plant must be ISO Registered.

1.05 DELIVERY AND HANDLING

A. Chiller shall be delivered to the job site completely assembled and charged with refrigerant and oil by the manufacturer.

B. Comply with the manufacturer's instructions for rigging and handling equipment.

1.06 WARRANTY

A. Standard Warranty (Domestic): The refrigeration equipment manufacturer's guarantee shall be for a period of one year from date of equipment start-up but not more than 18 months from shipment. The guarantee shall provide for repair or replacement due to failure by material and workmanship that prove defective within the above period, excluding refrigerant.

B. 1st Year Labor Warranty: Entire unit

C. Extended Compressor Warranty: Four (4) years extended compressor warranty, parts only.

D. Refrigerant Warranty: One (1) year R410A refrigerant.

1.07 MAINTENANCE

A. Maintenance of the chillers shall be the responsibility of the owner and performed in accordance with the manufacturer's instructions.

PART 2: PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Daikin Applied

B. Trane

C. Carrier

2.02 UNIT DESCRIPTION

A. Provide and install as shown on the plans factory-assembled, factory-charged air-cooled scroll compressor packaged chillers in the quantity specified. Each chiller shall consist of hermetic tandem scroll compressor sets (total four compressors), brazed plate evaporator, air-cooled condenser section, microprocessor-based control system and all components necessary for controlled unit operation.

B. Chiller shall be functionally tested at the factory to ensure trouble free field operation.

2.03 DESIGN REQUIREMENTS

A. Flow Range: The chiller shall have the ability to support variable flow range down to 40% of nominal design (based on AHRI conditions).

B. Operating Range: The chiller shall have the ability to control leaving chilled fluid temperature from 15F to 65F.

C. General: Provide a complete scroll compressor packaged chiller as specified herein and as shown on the drawings. The unit shall be in accordance with the standards referenced in section 1.02 and any local codes in effect.

D. Performance: Refer to the schedule of performance on the drawings. The chiller shall be capable of stable operation to a minimum percentage of full load (without hot gas bypass) of 17%. Performance shall be in accordance with AHRI Standard 550/590.

E. Performance: Refer to the schedule of performance on the drawings. The chiller shall be capable of stable operation to a minimum percentage of full load (without hot gas bypass) of 25%. Performance shall be in accordance with AHRI Standard 550/590.

F. Acoustics: Sound pressure levels for the unit shall not exceed the following specified levels (See performance schedules or technical data sheets) . All manufacturers shall provide the necessary sound treatment (parts and labor) to meet these levels if required. Sound data shall be provided with the quotation. Test shall be in accordance with AHRI Standard 370.

2.04 CHILLER COMPONENTS

A. Compressor

1. The compressors shall be sealed hermetic, scroll type with crankcase oil heater and suction strainer. The compressor motor shall be refrigerant gas cooled, high torque, hermetic induction type, two-pole, with inherent thermal protection on all three phases and shall be mounted on RIS vibration isolator pads. The compressors shall be equipped with an internal module providing compressor protection and communication capability.

B. Evaporator

1. The evaporator shall be a compact, high efficiency, dual circuit, brazed plate-to-plate type heat exchanger consisting of parallel stainless steel plates. The water-side working pressure shall be a minimum of 653 psig (4502 kPa). Vent and drain connections shall be provided in the inlet and outlet chilled water piping by the installing contractor. Evaporators shall be designed and constructed according to, and listed by, Underwriters Laboratories (UL).
2. The evaporator shall be protected with an external, electric resistance heater plate and insulated with 3/4" (19mm) thick closed-cell polyurethane insulation. This combination shall provide freeze protection down to -20°F (-29°C) ambient air temperature.
3. The water-side maximum design pressure shall be rated at a minimum of 435 psig (3000 kPa). Evaporators shall be designed and constructed according to, and listed by Underwriters Laboratories (UL).
4. The water-side maximum design pressure shall be rated at a minimum of 653 psig (4502 kPa). Evaporators shall be designed and constructed according to, and listed by Underwriters Laboratories (UL).

C. Condenser

1. Condenser fans shall be propeller type arranged for vertical air discharge and individually driven by direct-drive fan motors. The fans shall be equipped with a heavy-gauge vinyl-coated fan guard. Fan motors shall be TEAO type with permanently lubricated ball bearings, inherent overload protection, three-phase, direct-drive, 1140 rpm. Each fan section shall be partitioned to avoid cross circulation.
2. Coil shall be microchannel design and shall have a series of flat tubes containing multiple, parallel flow microchannels layered between the refrigerant manifolds. Tubes shall be 9153 aluminum alloy. Tubes

made of 3102 alloy or other alloys of lower corrosion resistance shall not be accepted. Coils shall consist of a two-pass arrangement. Each condenser coil shall be factory leak tested with high-pressure air under water. Coils shall withstand 1000+ hour acidified synthetic sea water fog (SWAAT) test (ASTM G85-02) at 120°F (49°C) with 0% fin loss and develop no leaks.

D. Refrigerant Circuit

1. Each of the two refrigerant circuits shall include a replaceable-core refrigerant filter-drier, sight glass with moisture indicator, liquid line solenoid valve (no exceptions), expansion valve, and insulated suction line.

E. Construction

1. Unit casing and all structural members and rails shall be fabricated of pre-painted or galvanized steel. Painted parts shall be able to meet ASTM B117, 1000-hour salt spray test.

2. Upper section of unit shall have protective and decorative louvers covering the coils and unit end; base section of unit shall have protective, 12 GA, PVC-coated, wire grille guards and have painted steel wraps enclosing the coil end sections and piping.

F. Control System

1. A centrally located weatherproof control panel shall contain the field power connection points, control interlock terminals, and control system. Box shall be designed in accordance with NEMA 3R rating. Power and starting components shall include factory circuit breaker for fan motors and control circuit, individual contactors for each fan motor, solid-state compressor three-phase motor overload protection, inherent fan motor overload protection and two power blocks (one per circuit) for connection to remote, contractor supplied disconnect switches. Hinged access doors shall be lockable. Barrier panels or separate enclosures are required to protect against accidental contact with line voltage when accessing the control system.

2. Shall include optional single-point connection to a non-fused disconnect switch with through-the-door handle and compressor circuit breakers.

G. Unit Controller

1. An advanced DDC microprocessor unit controller with a 5-line by 22-character liquid crystal display provides the operating and protection functions. The controller shall take preemptive limiting action in case of high discharge pressure or low evaporator pressure. The controller shall contain the following features as a minimum:
2. The unit shall be protected in two ways: (1) by alarms that shut the unit down and require manual reset to restore unit operation and (2) by limit alarms that reduce unit operation in response to some out-of-limit condition. Shut down alarms shall activate an alarm signal.

3. Shutdown Alarms

- a. No evaporator water flow (auto-restart)
- b. Sensor failures
- c. Low evaporator pressure
- d. Evaporator freeze protection
- e. High condenser pressure
- f. Outside ambient temperature (auto-restart)
- g. Motor protection system
- h. Phase voltage protection (Optional)

4. Limit Alarms

- a. Condenser pressure stage down, unloads unit at high discharge pressures.
- b. Low ambient lockout, shuts off unit at low ambient temperatures.
- c. Low evaporator pressure hold, holds stage #1 until pressure rises.
- d. Low evaporator pressure unload, shuts off one compressor.

5. Unit Enable Section

- a. Enables unit operation from either local keypad, digital input, or BAS

6. Unit Mode Selection

- a. Selects standard cooling, ice, glycol, or test operation mode

7. Analog Inputs:

- a. Reset of leaving water temperature, 4-20 mA\
- b. Current Limit

8. Digital Inputs

- a. Unit off switch
- b. Remote start/stop
- c. Flow switch
- d. Ice mode switch, converts operation and setpoints for ice production
- e. Motor protection

9. Digital Outputs

- a. Shutdown alarm; field wired, activates on an alarm condition, off when alarm is cleared
- b. Evaporator pump; field wired, starts pump when unit is set to start

10. Condenser fan control - The unit controller shall provide control of condenser fans based on compressor discharge pressure.

11. Building Automation System (BAS) Interface

- a. Factory mounted DDC controller(s) shall support operation on a BACnet®, Modbus® or LONMARK ® network via one of the data link / physical layers listed below as specified by the successful Building Automation System (BAS) supplier. Each of the Chillers in the scope of work shall have a Bacnet Card

install on the Chiller that is capable of communicating using Bacnet over IP.

b. BACnet MS/TP master (Clause 9)

c. BACnet IP, (Annex J)

d. BACnet ISO 8802-3, (Ethernet)

e. LONMARK FTT-10A. The unit controller shall be LONMARK® certified.

f. The information communicated between the BAS and the factory mounted unit controllers shall include the reading and writing of data to allow unit monitoring, control and alarm notification as specified in the unit sequence of operation and the unit points list.

g. For chillers communicating over a LONMARK network, the corresponding LONMARK External Interface File (XIF) shall be provided with the chiller submittal data.

h. All communication from the chiller unit controller as specified in the points list shall be via standard BACnet objects. Proprietary BACnet objects shall not be allowed. BACnet communications shall conform to the BACnet protocol (ANSI/ASHRAE135-2001). A BACnet Protocol Implementation Conformance Statement (PICS) shall be provided along with the unit submittal.

2.05 OPTIONS AND ACCESSORIES

A. The following options are to be included:

1. Hot Gas Bypass: allows unit operation to 10 percent of full load. Includes factory-mounted hot gas bypass valve, solenoid valve, and manual shutoff valve for each circuit.

2. Low Ambient Control: Fan VFD allows unit operation from 32°F down to -10°F (-23.3 C).

3. High Ambient Control Panel for operation from 105°F up to 125°F ambient temperatures

4. Ground Fault Protection: Factory installed circuit breaker to protect equipment from damage from line-to-ground fault currents less than those required for conductor protection.
5. Phase loss with under/over voltage protection and with LED indication of the fault type to guard against compressor motor burnout.
6. The following accessories are to be included:
 - a. Spring vibration isolators for field installation or Rubber-in-shear vibration isolators for field installation that are a minimum of 3 inches tall and one solid piece.
 - b. Factory-mounted thermal dispersion type flow switch.
 - c. Field-mounted, paddle type, chilled water flow switch field wired to the control panel.
 - d. Wye strainer, to be installed at the evaporator inlet and sized for the design flow rate, with perforation diameter of 0.063" with blowdown valve and Victaulic couplings (factory mounted or field installed).
 - e. 115V GFI convenience outlet
 - f. Factory installed hail guards.

2.06 ELECTRICAL ISSUES

- a. There is a wide variance of electrical requirements per chiller manufacturer. Electrical Contractor shall verify existing Electrical Service.
- b. Existing Electrical Disconnect may be reused provided (1) proper voltage and breaker sizes are per the electrical data provided by the equipment manufacturer and (2) the wire and breaker sizes meet or exceed the electrical code.
- c. Contractor will be responsible for all electrical upgrades, if needed. This consideration shall be part of the bid price.
- d. Contractor shall provide constant speed starter.

2.06 ADDITIONAL ISSUES

- a. Upgrade chiller controls and electrical connections as required to protect chiller against freezing, etc.
- b. Refrigerant from existing chiller shall be recovered and returned to UCPS for future use. This cost shall be included in the bid amount.

2.07 FLOW

- a. The chilled water pump shall be balanced as required.

2.08 MISCELLANEOUS MATERIALS:

- a. Contractor shall furnish all materials/parts necessary to provide a turn-key project to include, but not limited to:
- b. Pipe Supports
 1. Hangers
 2. Wiring
 3. Disconnects
 4. Heat Tape
 5. Provide Alternate Pricing for Hail Guards on the Chiller
 6. Isolation Valves
 7. Thermometers and Gauges on CHW S & R
 8. Piping, fittings required to adapt existing piping to new chiller connections.

PART 3: INSTALLATION:

3.01 Contractor shall perform the following:

- A. Contractor shall disconnect, remove and properly dispose of existing Chiller after usable parts are removed by UCPS.
- B. Install new Chiller (provided by Contractor) on pad approved by manufacturer. The existing pad may be used if Contractor determines (1) existing pad is secure, (2) meets manufacturer recommendations and (3) pad extends at least 4 inches beyond the equipment footprint on all sides.
- C. Installation shall be in strict accordance with manufacturer's requirements, shop drawings, and contract documents.
- D. Adjust and level chiller in alignment on supports.
- E. Adapt existing piping for new chiller.
- F. Coordinate controls with UCPS.
- G. Install proper charge of Refrigerant and oil (R-22 will not be accepted).
- H. Provide factory testing and starting of machine, and instruct the Owner in its proper operation and maintenance (Factory Start-up).
- I. Isolation valves are in place so the system will not have to be drained.
- J. Verify Heat Tape Operation.
- K. Adjust and level chiller in alignment on supports.
- L. Coordinate electrical installation with electrical contractor.
- M. Coordinate controls with control contractor.

N. Install a field-supplied or optional manufacturer-supplied strainer in the chilled water return line at the evaporator inlet that meets manufacturer perforation size specifications.

O. Additional Requirements of Contractor:

1. Representatives of Contractor shall refrain from tobacco use on UCPS property.
2. Contractor shall perform daily cleanup and dispose debris off UCPS property.
3. Contractor shall be responsible for obtaining all applicable permits and inspections for the mechanical and electrical work being performed and submit such documentation to the assigned UCPS Project Coordinator.
4. All work shall be performed by a Mechanical and Electrical Contractors properly licensed within the state of North Carolina.
5. Project shall be completed while complying with all state, federal, and local codes and guidelines.
6. Contractor shall provide all material, supervision, workmanship necessary for a complete working system whether specified or implied. A Turn-Key Job is required. vii. Contractor is responsible for field-verifying all components of this project prior to bid submittal. This includes, but not limited to, examining existing equipment, electrical panels, concrete pad, and mechanical room to ensure proposed equipment is compatible with existing. A. Install in strict accordance with manufacturer's requirements, shop drawings, and contract documents.

P. START-UP

1. A. Provide testing and starting of machine, and instruct the Owner in its proper operation and maintenance.

PART 4: HVAC CONTROLS

4.01 Controls:

A. New Chiller is to be controlled by existing BAS controller in mechanical room. The new chillers will have BacNet cards installed on them and the Control Contractor will be responsible for providing the integration for the BacNet card on the existing Tridium AX server. The Control Contractor will ensure that all BacNet points that are available on the chiller will be accessible on the AX server and FX 70 Jace or N4 Jace that exists on site. Contractor shall provide necessary wiring to control new chiller from the existing controller. If additional inputs/outputs are required, the contractor is responsible for providing a new Vanguard controller and integration of new controller on the existing AX or N4 Jace. Graphics for new chiller are to be updated on the UCPS Tridium AX server to reflect data from the new chiller.

B. The following sensors are required:

1. Entering Evaporator Water Temperature
2. Leaving Evaporator Water Temperature
3. The following Control is to be provided:
4. Chiller Start/Stop
5. Chilled Water Pump Start/Stop controlled by the Chiller
6. Chilled Water Flow Status
7. Chilled Water Pump Status

C. The following Contractors are approved for the control installation:

1. Carolina Air Solutions (Billy Garrison)
2. Platinum Building Automation (Jason Williams)
3. Environmental Controls and Mechanical (Brett Downs)

D. Note: The above is a recommended parts list but may not include all devices needed to complete the project. Contractor is responsible for verifying and including all required materials for a turn-key stand-alone control installation.

PART 5: TRAINING AND DEMONSTRATION

5.01 Contractor shall perform the following:

- A. Training for Owner's maintenance personnel shall be a minimum of 1 hour, and shall include troubleshooting, servicing, and maintaining equipment. This training shall be provided within 30 days of project completion.

PART 6: WARRANTY:

6.01 Contractor shall provide the following:

- A. Unless otherwise specified, unconditionally guarantee in writing the materials, equipment, workmanship, and labor to effect repairs for a period of not less than one (1) year and for five (5) years on the compressor from date of acceptance by Union County Public Schools (Parts and Labor).
- B. Transfer manufacturer's warranties to the Owner in addition to the General System Guarantee. Detail specific parts within equipment that are subject to separate conditional warranty. Warranty proprietary equipment and systems involved in this contract during the guarantee period. Final payment shall not relieve the Contractor of these obligations.

- C. Effect replacement or substitutions of equipment within 24 hours of first notification with components equal to or better than the original. Complete repairs to equipment within 48 hours. If repairs cannot be completed during this time period, or if ordering of parts is required, forward to the Customer every 24 hours documentation of progress of repairs. This repair capability is mandatory.

PART 7: QUALIFICATION REQUIREMENTS

- 7.01 Minimum 48 hours of request, bidder must provide the following documentation:
 - A. Contractor has work satisfactorily for a minimum of three (3) years on systems of this type and size.
 - B. Contractor must be properly licensed in the state of North Carolina to perform work outlined in Scope of Work.

PART 8: SCHEDULE

- 8.01 Contractor shall list the number of consecutive calendar days required for completion from notice to proceed on the Cost Proposal/Execution of Proposal Form. All work shall be coordinated with the assigned UCPS Project Coordinator to ensure no disruption to school activities.

Chiller Replacement
East Union Middle School
BID NO. 4-97308009

COST PROPOSAL/EXECUTION OF PROPOSAL

By submitting this proposal, the potential contractor certifies the following:

This proposal is signed by an authorized representative of the firm.

The cost and availability of all equipment, materials, and supplies, including taxes, associated with performing the services described herein have been determined and included in the proposed cost.

All labor costs, direct and indirect, have been determined and included in the proposed cost.

The offeror is aware of prevailing conditions associated with performing these services.

The potential contractor has read and understands the conditions set forth in this bid and agrees to them with no exceptions.

Therefore, in compliance with this Request for Proposals, and subject to all conditions herein, the undersigned offers and agrees, if this proposal is accepted within 90 days from the date of the opening, to furnish the subject services for a cost not to exceed:

All Inclusive Total: \$ 116500.00 Manufacturer/Model No. Pailkin CCD: 365
* Current Production MODEL # AG207IE
42-44 weeks
 *CCD- Consecutive Calendar Days required for substantial completion from notice to proceed

Subcontractors:

| | | |
|-----------------------------------|--------------------------|-------------------------|
| Company Name: <u>HRS Electric</u> | Trade: <u>Electrical</u> | License No. <u>8552</u> |
| Company Name: <u>AME</u> | Trade: <u>CRANE</u> | License No. <u>N/A</u> |
| Company Name: <u>Control Stop</u> | Trade: <u>Controls</u> | License No. <u>N/A</u> |

Acknowledge Receipt:

Addendum 1: ✓ Addendum 2: _____ Addendum 3: _____ Addendum 4: _____

Execute Proposal:

OFFEROR: Carolina Air Solutions

FEDERAL ID NO. 20-2107707 LICENSE NO. 17879

ADDRESS: 9224 Stockport Pl CITY, STATE, ZIP Charlotte, NC 28273

TELEPHONE NUMBER: 704-525-2400 FAX: 704-525-6800 EMAIL: billy@CarolinaAirSolutions.com

BY: Billy Garrison (Signature) TITLE: Operation DATE: 9-11-23
Billy Garrison (Typed or printed name) MANAGER

TRAILBLAZER® Packaged Air-Cooled Scroll Chiller



| Job Information | | Technical Data Sheet |
|------------------|----------------------|----------------------|
| Job Name | UCPS - East Union MS | |
| Date | 9/10/2023 | |
| Submitted By | Chase Crowder | |
| Software Version | 14.30 | |
| Unit Tag | CH-01 | |



Image may not represent ordered unit

| Unit Overview | | | | | |
|---------------|--------------|----------------------|-------------------|--------------------------|---|
| Model Number | Capacity ton | Voltage | Unit Starter Type | ASHRAE 90.1 | LEED Enhanced Refrigerant Management Credit |
| AGZ071E | 64.78 | 208 v / 60 Hz / 3 Ph | Across the Line | '07, '10, '13, '16 & '19 | Pass |

| Unit | | |
|---|--|---------------|
| Unit Type | Platform | Unit Revision |
| Air-Cooled Scroll Compressor Chiller | Packaged | 0B |
| Head Pressure | Tubing | |
| VFD w/Line Reactors & Control Box Heaters [Low Ambient] | Replaceable Filter Dryer with Discharge & Liquid Valves, with HGBP | |
| Unit Controls | Display | |
| Electronic Expansion Valve | On Controller only | |
| Refrigerant Type | Refrigerant Weight | |
| R410A | 46 lb (per unit) | |
| Pump Controls | | |
| Dual Evaporator Pumps - Dual Control Output | | |
| Approval | | |
| ETL/cETL, AHRI & ASHRAE 90.1 | | |
| Evaporator | | |

Water Volume: 3.2 gal

Connection Hand: Left Hand Connections

Connection Size: 2.5 in

Insulation: Single Layer Insulation to Suction at each Compressor

| Entering Fluid Temperature | Leaving Fluid Temperature | Fluid Type | Fluid Flow | Fluid Flow Min / Max | Pressure Drop | Pressure Drop Min / Max | Fouling Factor |
|----------------------------|---------------------------|------------|------------|----------------------|--------------------------|---------------------------------|------------------------------------|
| 54.00 °F | 44.00 °F | Water | 155.0 gpm | 62.2/ 259.2 gpm | 7.40 ft H ₂ O | 1.40 / 19.5 ft H ₂ O | 0.000100 °F.ft ² .h/Btu |

Note: Evaporator Pressure Drop does not include a strainer. Minimum flow is based on a Variable Flow Pumping System Type and applies to part load conditions only.

| Condenser | | | |
|--------------------------------|--|--------------|------------------------------------|
| Coil Fins: | MicroChannel | | |
| Guards: | Condenser Coil Louvers & Base Frame Wire Grilles | | |
| Design Ambient Air Temperature | Altitude | Fan Diameter | Minimum Design Ambient Temperature |
| 95.0 °F | 0.000 ft | 30.0 in | 0.0 °F |

TRAILBLAZER® Packaged Air-Cooled Scroll Chiller



Unit Performance

| Design | | | | | | | | | | |
|---|--------|---|-------------------|--------------------------------|-------------------|---|-------------------------|------------------------|----------------------|----------------|
| Capacity | | | Input Power | | Efficiency (EER) | | | | IPLV,IP (EER)* | |
| 64.78 ton | | | 76.01 kW | | 10.23 Btu/W.h | | | | 16.29 Btu/W.h | |
| Performance Points rated at AHRI Ambient Relief | | | | | | | | | | |
| Point # | % Load | Unit | Input Power kW | Efficiency (EER) Btu/W.h | Fluid Flow gpm | Evaporator | | | Condenser | |
| | | Capacity ton | | | | Pressure Drop ft H ₂ O | Entering Fluid °F | Leaving Fluid °F | Ambient Air °F | Altitude ft |
| 1 | 100.0 | 64.78 | 76.01 | 10.23 | 155.0 | 7.40 | 54.00 | 44.00 | 95.0 | 0.000 |
| 2 | 90.0 | 58.30 | 59.93 | 11.67 | 155.0 | 7.40 | 53.00 | 44.00 | 89.0 | 0.000 |
| 3 | 80.0 | 51.82 | 47.27 | 13.16 | 155.0 | 7.40 | 52.00 | 44.00 | 83.0 | 0.000 |
| 4 | 70.0 | 45.34 | 37.05 | 14.69 | 155.0 | 7.40 | 51.00 | 44.00 | 77.0 | 0.000 |
| 5 | 60.0 | 38.87 | 28.76 | 16.22 | 155.0 | 7.40 | 50.00 | 44.00 | 71.0 | 0.000 |
| 6 | 50.0 | 32.39 | 21.93 | 17.73 | 155.0 | 7.40 | 49.00 | 44.00 | 65.0 | 0.000 |
| 7 | 40.0 | 25.91 | 16.76 | 18.55 | 155.0 | 7.40 | 48.00 | 44.00 | 59.0 | 0.000 |
| 8 | 30.0 | 19.43 | 12.04 | 19.37 | 155.0 | 7.40 | 47.00 | 44.00 | 55.0 | 0.000 |
| 9 | 20.0 | This point is below the chiller minimum load without hot gas bypass (HGBP) but will run here with use of HGBP | | | | | | | | |
| 10 | 10.0 | This point is below the chiller minimum load without hot gas bypass (HGBP) but will run here with use of HGBP | | | | | | | | |

* IPLV reflects AHRI standard rating conditions with water and does not change with user defined conditions

Sound (without insulation)

| Sound Pressure (at 30 feet) | | | | | | | | | | | |
|-----------------------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|----------------|-----------------|-----------------|-----------------|
| 63 Hz dB | 125 Hz dB | 250 Hz dB | 500 Hz dB | 1 kHz dB | 2 kHz dB | 4 kHz dB | 8 kHz dB | Overall dBA | 75% Load dBA | 50% Load dBA | 25% Load dBA |
| 68 | 68 | 67 | 62 | 60 | 54 | 49 | 44 | 65 | 64 | 63 | 62 |
| Sound Power | | | | | | | | | | | |
| 63 Hz dB | 125 Hz dB | 250 Hz dB | 500 Hz dB | 1 kHz dB | 2 kHz dB | 4 kHz dB | 8 kHz dB | Overall dBA | 75% Load dBA | 50% Load dBA | 25% Load dBA |
| 95 | 95 | 94 | 89 | 87 | 81 | 76 | 71 | 92 | 91 | 90 | 89 |

Octave band is non 'A' weighted and overall readings are 'A' weighted. Sound data rated in accordance with AHRI Standard-370.

Physical

| Unit | | | | |
|---------|--------|--------|------------------|-------------------|
| Length* | Height | Width* | Shipping Weight* | Operating Weight* |
| 94 in | 100 in | 88 in | 3639 lb | 3664 lb |

*Shipping and Operating Weights are based on 'worst case' unit configuration variations and include the below listed Option weights but do not include the weights of any Accessories. Contact Chiller Applications for additional information.

| Option Weights | |
|----------------|--------|
| Louvers: | 167 lb |
| Total: | 167 lb |

Note: Option weights shown may be 'worst case' and should not be used to calculate unit weight without the option present.

TRAILBLAZER® Packaged Air-Cooled Scroll Chiller



Electrical

| Unit Electrical Data | | | | |
|--|--|---------------------|----------------------|-----------------------|
| Voltage | Starter Type | Fan Motor Quantity | LRA Fan Motor (each) | FLA Fan Motors (each) |
| 208 V / 60 Hz / 3 Ph | Across the Line | 4 | 31.7 A | 7.8 A |
| Power Connection Type: | Single Point Disconnect Switch with Circuit Protection | | | |
| Short Circuit Current Rating: | 5 kA | | | |
| Phase Voltage: | Phase & Under/Over Voltage Protection with LED | | | |
| Single Point Power Connection | | | | |
| Minimum Circuit Ampacity (MCA): | 320 A | | | |
| Recommended Overcurrent Protection Size: | 350 A | | | |
| Maximum Overcurrent Protection Size(MOCP): | 350 A | | | |
| Lug Connection Size: | (2) 3/0 - 500 MCM | | | |
| Compressor Electrical Data | | | | |
| Compressor Type | | Compressor Quantity | | Starter Type |
| Scroll | | 4 | | Across the Line |
| Circuit #: | 1 | | 2 | |
| Compressor #: | 1 | 3 | 2 | 4 |
| Rated Load Amps (RLA): | 55.8 A | 72.4 A | 55.8 A | 72.4 A |
| Inrush Current: | 340 A | 538 A | 340 A | 538 A |

Note: Power wiring connections to the chiller may be done with either copper or aluminum wiring. Wire should be sized per NEC and/or local codes. Wire sizing and wire count must fit in the power connection lug sizing listed above. Please contact your local sales office for more information.

Options

| Basic Unit | |
|-----------------------|--|
| Control Box Ambient: | High Ambient with Exhaust Fans (125°F maximum) |
| Electrical | |
| Ground Fault: | Unit Ground Fault Protection |
| Unit Options: | 115V Convenience Outlet |
| Water Flow Indicator: | Thermal Dispersion Type |

Warranty

| | |
|-------------------------------|--|
| Unit Startup | Domestic |
| Standard Warranty: | 1st Year Entire Unit Parts & Labor |
| Extended Compressor Warranty: | Compressor Only; extended 4 years parts only (5 Years Total) |
| Refrigerant Warranty | 1 Year Total |

AHRI Certification



Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages 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.

TRAILBLAZER® Packaged Air-Cooled Scroll Chiller



| Accessories | |
|-------------|--|
| Optional | |
| Part Number | Description |
| 332325101 | RIS Isolator Kit; AGZ: Packaged, Microchannel, Al&Cu Fins, 030-071E (non-Seismic), 25-65D, 30-65C; M'Chnl, 75-101E (non-S'mc); Al Fin, 70C/D; Remote, Al&Cu Fin, 30-70E (non-S'mc); Pump Pkg, M'Chnl&Al Fin, 30-65E (non-S'mic); Cu Fin, 30-55E(non-S'mic) |
| 350147415 | MT III Comm Mod for Chillers, BACnet IP |
| 331758949 | Strainer Kit, Grooved; AGZ056, 061, 065, 071E |



Contractors Bonding and Insurance Company ☐
 9025 N. Lindbergh Dr. Peoria, IL 61615
 P.O. Box 3967 Peoria, IL 61612-3967
 Phone: 309-692-1000 Fax: 309-683-1610

BID BOND

KNOW ALL MEN BY THESE PRESENTS,

That We, Carolina Air Solutions, Inc.
 of Charlotte, NC
 as Principal, and Contractors Bonding and Insurance Company ☐ of Peoria,
Illinois, as Surety, an Illinois corporation duly licensed to
 do business in the State of North Carolina, are held and firmly bound unto
Union County Schools, as Obligee, in the penal sum of
Five percent of the contract amount (5%),
 for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and
 assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, That whereas the Principal has submitted, or is about to submit, a
 proposal or a bid to the Obligee on a contract for East Union MS Chiller Replacement.

NOW, THEREFORE, if the aforesaid principal shall be awarded the contract, the said principal will within the period specified
 therefore, or if no period be specified, within ten (10) days after the notice of such award enter into a contract and give bond for
 the faithful performance of the contract, then this obligation shall be null and void, otherwise the principal and the surety will
 pay unto the obligee the difference in money between the amount of the bid of said principal and the amount for which the
 obligee may legally contract with another party to perform the work if the latter amount be in excess of the former, in no event
 shall the liability hereunder exceed the penal sum hereof.

PROVIDED AND SUBJECT TO THE CONDITION PRECEDENT, that any suits at law or proceedings in equity brought or to
 be brought against the Surety to recover any claim hereunder must be instituted and service had upon the Surety within ninety
 (90) days after the acceptance of said bid of the Principal by the Obligee.

SIGNED, SEALED AND DATED this 6th day of September, 2023.

Carolina Air Solutions, Inc.
 Principal
 By: Billy Durr

Contractors Bonding and Insurance Company ☐
 By: Stacie Brown
 Stacie Brown Attorney in Fact

ADDRESS ALL CORRESPONDENCE TO:
Contractors Bonding and Insurance Company ☐
 9025 N. Lindbergh Dr. Peoria, IL 61615
 P.O. Box 3967 Peoria, IL 61612
 309-692-1000

C0006304-10,0

POWER OF ATTORNEY**RLI Insurance Company
Contractors Bonding and Insurance Company**9025 N. Lindbergh Dr. Peoria, IL 61615
Phone: 800-645-2402**Know All Men by These Presents:**

That this Power of Attorney is not valid or in effect unless attached to the bond which it authorizes executed, but may be detached by the approving officer if desired.

That **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, each an Illinois corporation, (separately and together, the "Company") do hereby make, constitute and appoint:

Don Hanson, Stacie Brown, Brad Causey, Trena Moelker, Kathryn Calkins, Rick Craig, Bill Bobbitt, jointly or severally

in the City of Charlotte, State of North Carolina its true and lawful Agent(s) and Attorney(s) in Fact, with full power and authority hereby conferred, to sign, execute, acknowledge and deliver for and on its behalf as Surety, in general, any and all bonds and undertakings in an amount not to exceed Twenty Five Million Dollars (\$25,000,000.00) for any single obligation.

The acknowledgment and execution of such bond by the said Attorney in Fact shall be as binding upon the Company as if such bond had been executed and acknowledged by the regularly elected officers of the Company.

RLI Insurance Company and/or **Contractors Bonding and Insurance Company**, as applicable, have each further certified that the following is a true and exact copy of a Resolution adopted by the Board of Directors of each such corporation, and is now in force, to-wit:

"All bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, any Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or Agents who shall have authority to issue bonds, policies or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile."

IN WITNESS WHEREOF, the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, as applicable, have caused these presents to be executed by its respective Vice President with its corporate seal affixed this 14th day of December, 2022.



**RLI Insurance Company
Contractors Bonding and Insurance Company**

By: B. W. Davis
Barton W. Davis Vice President

State of Illinois }
County of Peoria } SS

CERTIFICATE

On this 14th day of December, 2022, before me, a Notary Public, personally appeared Barton W. Davis, who being by me duly sworn, acknowledged that he signed the above Power of Attorney as the aforesaid officer of the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company** and acknowledged said instrument to be the voluntary act and deed of said corporation.

I, the undersigned officer of **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company**, do hereby certify that the attached Power of Attorney is in full force and effect and is irrevocable; and furthermore, that the Resolution of the Company as set forth in the Power of Attorney, is now in force. In testimony whereof, I have hereunto set my hand and the seal of the **RLI Insurance Company** and/or **Contractors Bonding and Insurance Company** this 16th day of September, 2023.

By: Catherine D. Glover
Catherine D. Glover Notary Public

**RLI Insurance Company
Contractors Bonding and Insurance Company**

By: Jeffrey D. Dick
Jeffrey D. Dick Corporate Secretary



Attach AFFIDAVIT A or AFFIDAVIT B to the Bid**State of North Carolina AFFIDAVIT A - Listing of the Good Faith Effort**County of MecklenburgAffidavit of CAROLINA Air Solutions
(Name of Bidder)**I have made a good faith effort to comply under the following areas checked:****Bidder must earn at least 50 points from the Good Faith Efforts list for their bid to be considered responsive.**

- ☒ **1 - (10 Points)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- ☒ **2 - (10 Points)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- ☒ **3 - (15 Points)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- ☒ **4 - (10 Points)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- ☒ **5 - (10 Points)** Attended pre-bid meetings scheduled by the public owner.
- ☒ **6 - (20 Points)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- ☒ **7 - (15 Points)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- ☒ **8 - (25 Points)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- ☒ **9 - (20 Points)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- ☒ **10 - (20 Points)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

In accordance with GS143-128.2(d) and Board of Education Policy the undersigned will enter into a formal agreement with the firms listed in the Identification of Minority, Women, and Small Business Participation schedule conditional upon execution of a contract with the Owner. Failure to abide by this statutory provision will constitute a breach of the contract. The undersigned hereby certifies that he or she has read the terms of the Minority, Women, and Small Business Enterprise commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: 9-11-23Name of Authorized Officer: Billy GARRISONSignature: Billy GarrisonTitle: Operations MANAGERState of NORTH CAROLINA County MECKLENBURGSubscribed and sworn to before me this 11 day of SEPTEMBER 2023Notary Public Steph [Signature]My commission expires 5.30.2028

Updated MWSBE Information Construction as of 05.16.18

I, CAROLINA Air Solutions
(Name of Bidder)

Firm Name, Address and Phone #

Work Type

*Minority
Category

**HUB
Certified
(Y/N)

[illegible]

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

The total value of minority business contracting will be (\$) 0.

Do not submit with bid Do not submit with bid Do not submit with bid Do not submit with bid

State of North Carolina - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.

This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the _____
(Name of Bidder)

(Project Name)
Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below.

Attach additional sheets if required

| Name and Phone Number | *Minority Category | **HUB Certified Y/N | Work Description | Dollar Value |
|-----------------------|--------------------|---------------------|------------------|--------------|
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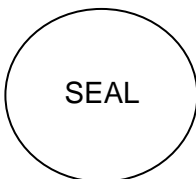
*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____



Signature: _____

Title: _____

State of _____, County of _____

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

Notary Public _____

My commission expires _____

Do not submit with the bid Do not submit with the bid Do not submit with the bid Do not submit with the bid Do not submit with the bid

State of North Carolina AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify that on the
(Name of Bidder)

(Project Name)
Project ID# _____ Amount of Bid \$ _____

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

| Name and Phone Number | *Minority Category | **HUB Certified Y/N | Work Description | Dollar Value |
|-----------------------|--------------------|---------------------|------------------|--------------|
| | | | | |
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| | | | | |
| | | | | |
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*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

- Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.
- Copies of quotes or responses received from each firm responding to the solicitation.
- A telephone log of follow-up calls to each firm sent a solicitation.
- For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.
- Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.
- Copy of pre-bid roster
- Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.
- Letter detailing reasons for rejection of minority business due to lack of qualification.
- Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

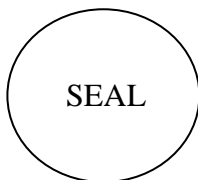
Do not submit with the bid Do not submit with the bid Do not submit with the bid Do not submit with the bid Do not submit with the bid

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date: _____ Name of Authorized Officer: _____

Signature: _____

Title: _____



State of _____, County of _____

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

Notary Public _____

My commission expires _____



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Monroe, NC 28112
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www.ucps.k12.nc.us

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Gary Sides

Superintendent
Dr. Andrew G. Houlihan

ADDENDUM 1

**PROJECT: East Union Middle School-Chiller Replacement
4-97308009**

DUE DATE: 3:30 p.m., September 14, 2023

Contractor shall fulfill all requirements listed within the bid documents, including additions and changes noted below.

Add: Refrigerant will be recovered and parts deemed beneficial for reuse will removed prior to Contractor arriving onsite.

End of Addendum

Growing Possibilities.

In compliance with federal law, UCPS administers all educational programs, employment activities and admissions without discrimination against any person on the basis of gender, race, color, religion, national origin, age or disability.