

**TEXAS MILITARY DEPARTMENT**  
**INVITATION FOR BIDS**  
**Water Chiller**

**IF NOT BIDDING -- DO NOT RETURN THIS COVER FORM**  
**BIDDER AGREES TO COMPLY WITH ALL TERMS &**  
**CONDITIONS OF THIS IFB**

<b>AGENCY TO INVOICE</b>
Texas Military Department
P. O. Box 5218
Austin, Texas 78763-5218

**BID ISSUE DATE: 07/19/2021**  
**BID CLOSING DATE: 08/17/2021 @ 1:00pm**  
**BID NUMBER: TMD21-21041011v2**

**FAILURE TO SIGN WILL DISQUALIFY BID**

**DESTINATION OF GOODS IF DIFFERENT THAN ABOVE**

Texas Military Department
149TH CES/TXANG
1413 Billy Mitchell Blvd., BLDG 933
JBSA Lackland AFB, TX. 78236

**WHEN BIDDING:**

Each bid must be placed in a separate envelope with bid opening date and bid number annotated in the lower left corner on SEALED BID ENVELOPE.

**RETURN SEALED BIDS TO:**

Texas Military Department  
P. O. Box 5218  
Austin, TX 78763-5218  
**OR HAND DELIVER TO:** 2200 W. 35<sup>th</sup> St.  
Building 11, 2<sup>nd</sup> Floor 8:00AM - 5:00PM)  
**OR ELECTRONIC MAIL TO:**  
[Ronald.Bullock@military.texas.gov](mailto:Ronald.Bullock@military.texas.gov)

AUTHORIZED SIGNATURE

DATE

By signing this bid, Bidder certifies that if a Texas address is shown as the address of the Bidder, Bidder qualifies as a Texas Bidder as defined in Section 2155.444 of the Texas Government Code.

**VENDOR CONTACT INFORMATION AND IDENTIFICATION**

Company Name: \_\_\_\_\_

Company Remit Payment to Address: \_\_\_\_\_

City, State and Zip Code: \_\_\_\_\_

Printed Name of Representative: \_\_\_\_\_

Email Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

CPA Vendor Number: \_\_\_\_\_

Before payees can receive payments from the State of Texas, they must first be set up on Texas Identification Number System (TINS) with a unique 11-digit Texas Identification Number (TIN).

**Bidder's Texas Identification Number:** \_\_\_\_\_

THE FEDERAL EMPLOYERS IDENTIFICATION NUMBER (EIN) WILL BE USED TO ESTABLISH A TEXAS IDENTIFICATION NUMBER:

**Bidder's Federal EIN:** \_\_\_\_\_

Every Bidder MUST have an Employer Identification Number (EIN) prior to receiving payment under an awarded contract. This is being required in an effort to minimize identity theft. For information on obtaining your EIN, you may call the IRS at 800-829-4933 or visit the following web site:  
<http://www.irs.gov/businesses/>

**CHECK HERE IF BIDDER IS A SOLE OWNERSHIP OR PARTNERSHIP:**

**PREFERENCES**

See page 77 and Appendix 21 of the State of Texas Procurement and Contract Management Guide regarding preferences.

Check below to claim a preference under CPA's 34 TAC Rule 20.306

- |  |   |
|--|---|
| <input type="checkbox"/> Goods produced or offered by a Texas Bidder that is owned by a Texas resident service-disabled veteran              | <input type="checkbox"/> Products made of recycled, remanufactured, or environmentally sensitive materials including recycled steel |
| <input type="checkbox"/> Goods produced in Texas or offered by a Texas Bidder that is not owned by a Texas resident service-disabled veteran | <input type="checkbox"/> Energy Efficient Products  |
| <input type="checkbox"/> Agricultural products grown in Texas  | <input type="checkbox"/> Rubberized asphalt paving material   |
| <input type="checkbox"/> Agricultural products offered by a Texas Bidder   | <input type="checkbox"/> Recycled motor oil and lubricants  |
| <input type="checkbox"/> Services offered by a Texas Bidder that is owned by a Texas resident service-disabled veteran                       | <input type="checkbox"/> Products produced at facilities located on formerly contaminated property                                  |
| <input type="checkbox"/> Services offered by a Texas Bidder that is not owned by a Texas resident service disabled veteran                   | <input type="checkbox"/> Products and services from economically depressed or blighted areas  |
| <input type="checkbox"/> Texas Vegetation Native to the Region   | <input type="checkbox"/> Vendors that meet or exceed air quality standards  |
| <input type="checkbox"/> USA produced supplies, materials or equipment   | <input type="checkbox"/> Recycled or Reused Computer Equipment of Other Manufacturers   |
| <input type="checkbox"/> Products of persons with mental or physical disabilities  | <input type="checkbox"/> Foods of Higher Nutritional Value  |



**TEXAS MILITARY DEPARTMENT  
INVITATION FOR BIDS  
Continuation Page(s)**

**Class & Item: 031-03, 031-13, 031-67, 910-36, 914-30, & 962-86**

**1. INVITATION:**

In accordance with the provisions of Texas Government Code §2156.063, Solicitation of Bids, the Texas Military Department (TMD) is seeking bids for the removal of an existing 70-ton Water Chiller and replace with a new 70-ton air cooled oil-free magnetic bearing Trane chiller.

Any award resulting from this solicitation shall be performed in accordance with the attached Attachments A: Bid Price Sheet, Attachment B: Scope of Work, Attachment C: TMD Standard Terms and Conditions, Attachment D: Insurance Requirements, Attachment E – HUB Subcontracting Plan (HSP), and Attachment F – Test and Balance Procedures.

All submissions will be reviewed to ensure that the vendor submission meets or exceeds the minimum qualifications. TMD will evaluate all bids received and will award based on best value to the State of Texas and the Texas Military Department.

**2. Term of Contract**

The Contract shall commence upon the issuance of a Purchase Order (PO) or Notice of Award by the TMD and shall automatically expire on **November 30, 2021**. At the sole option of the TMD, the Contract may be extended a total of three (3) months.

**3. SCHEDULE OF EVENTS:**

The following Schedule of Events for this IFB may be modified as required.

<b>Event</b>	<b>Date</b>
Bid Issued Date	07/19/2021
Pre-Bid Site Conference	08/04/2021 @ 1:00pm
Deadline for Submission of Questions	08/06/2021 @ 1:00pm
Questions and Answers Document Posted	08/10/2021
Deadline for Submission of Bids/Bid Opening	08/17/2021 @ 1:00pm

Bid opening shall take place at:  
Texas Military Department – Camp Mabry  
Building 11, 2<sup>nd</sup> Floor 2200 West 35<sup>th</sup> Street  
Austin, Texas 78703

#### 4. **MANDATORY PRE-BID SITE CONFERENCE**

A **PRE-BID SITE CONFERENCE** will be held. The site conference allows Bidders opportunities to ask TMD questions or clarify provisions of this IFB. Bidders are requested to review all documents prior to the mandatory pre-bid site conference and come prepared with questions. Bidders are encouraged to notify the point of contact regarding attendance of the mandatory pre-bid site conference, **no later than 07/26/2021**. Be prepared to provide Name(s) and Phone Number(s) of all representatives who plan to attend. Any questions must be submitted in accordance with Section 5 in this IFB.

RSVP with names and ID information No Later Than 07/26/2021 so that a visitor pass can be generated prior to your arrival.

Site Location:

Texas Military Department  
149TH CES/TXANG  
1413 Billy Mitchell Blvd., BLDG 933  
JBSA Lackland AFB, TX. 78236

#### 5. **HUB SUBCONTRACTING PLAN**

TMD has identified probable subcontracting opportunities for part or all of the contract. Bidders must complete and return the HUB Subcontracting Plan (HSP) documentation with the Response to be considered responsive. **TMD will reject Responses received without the HSP as a material failure to comply with the requirements of this Solicitation.**

NIGP Class/Item	
031-03	Air Conditioners Systems, Commercial and Industrial, Including Parts and Accessories
031 -13	Chillers, Heat Exchangers and Receivers
031-67	HVAC Equipment, Accessories and Supplies
910-36	Heating, Air Conditioning, and Ventilation Maintenance, Repair, and Installation Services
914-30	Concrete
962-86	Transportation of Goods and Other Freight Services

This list is neither mandatory nor exhaustive. Other areas of subcontracting may be more appropriate given the Bidder's business structure and internal resources.

A courtesy review of an HSP is available to assist Bidders in providing a complete and responsive HSP and determine whether any deficiencies exist. **Bidders are highly encouraged to take advantage of the**

**courtesy review.** To request a courtesy review, submit the completed HSP and all supporting documentation in a PDF format to Ronald Bullock via email to [Ronald.Bullock@military.texas.gov](mailto:Ronald.Bullock@military.texas.gov) no later than five (5) working days prior to Response due date.

Email for Courtesy Review: Ronald Bullock

Email Subject Line: HSP Courtesy Review, Solicitation No., Due Date

This courtesy review may only identify possible deficiencies. The final compliance determination will be made on the HSP submitted with the Response to this Solicitation. Please contact the point-of-contact with any questions regarding HSP compliance at: (512) 782-6786.

**6. QUESTIONS:**

- A. Bidders must send all questions regarding this IFB to the TMD Point-of-Contact identified in Section 7 by the due date indicated in the Schedule of Events in Section 2 to Ronald L Bullock, via email at [Ronald.Bullock@military.texas.gov](mailto:Ronald.Bullock@military.texas.gov). This will document proof of delivery date and time. Please address the email subject line with Bid Name, Bid Number (Question Submission).
- B. All questions should be as detailed as possible and cite the specific IFB section and paragraph number(s) to which the question refers.
- C. The individual(s) listed above may be emailed for clarification of the scope of work only. No authority is intended or implied that scope of work may be amended, or alternates accepted prior to bid opening without written approval of TMD.
- D. Contact with personnel other than contact listed above regarding this IFB may be grounds for bid response disqualification.

**7. ADDENDA TO IFB SOLICITATION:**

- A. Any changes to the solicitation, deadline dates, and all responses to questions will be posted as addenda on the Electronic State Business Daily (ESBD): <http://www.txsmartbuy.com/sp>. All addenda are part of the IFB. No other explanations, interpretations, or changes will be considered official or binding.
- B. It is the responsibility of the Bidder to periodically check the ESBD for updates to the solicitation prior to submitting a bid. The Bidder's failure to periodically check the ESBD will in no way release the selected Bidder from "addenda or additional information" resulting in additional costs to meet the requirement of the IFB.
- C. Bidders are required to acknowledge the Addendum by returning the signed Addendum with the Proposal or by including a written acknowledgement of the Addendum in the Proposal. Failure to acknowledge any and all addenda, either by signing and returning the Addendum or by acknowledging in writing in the Proposal may result in submission disqualification.

8. **SUBMISSION REQUIREMENTS:**

- A. By submitting a response to this solicitation, Bidder certifies that they meet all the terms and conditions listed within this solicitation and all accompanying attachments.
- B. All bids must be organized and submitted in the order established by this Section. Failure to arrange the bid in the manner set forth in this IFB and/or failure to include all required documents may result in disqualification.
- C. Bidder shall submit the following:
  - i. Executed Invitation for Bids cover form signed with Vendor Contract Information, TIN, and EIN information completed. Bidder must ensure that all areas requiring information is complete. Failure to submit a signed form may result in disqualification.
  - ii. Attachment A: Completed Bid Price Sheet.
  - iii. Attachment C: TMD Standard Terms and Conditions
  - iv. Attachment D: Insurance Requirements
- D. Each bid shall be in an envelope/package/file, properly addressed and marked clearly on the outside that a bid proposal for this Project is enclosed:
  - i. The Bidder shall indicate the business name and address in the upper left corner.
  - ii. In the lower left corner, the Bidder shall indicate "Invitation for Bid – TMD 21-21041011v2" and the bid opening date and time.
  - iii. Secure all documents in a manner that readily permits copying, i.e., binder clips or three-ring notebook.
- E. Delivery of Response: Bidders are invited to submit sealed bids in response to this Invitation for Bid (IFB). Overnight/Express mail, standard mail, electronic mail, or hand deliver the sealed Invitation for Bid (IFB) to the:

Texas Military Department  
Attn: Ronald L. Bullock  
2200 West 35th Street, Bldg. 11  
Austin, TX 78703

or via U.S. Postal Service to:

Texas Military Department  
Attn: Ronald L. Bullock  
P.O. Box 5218, Bldg. 11  
Austin, TX 78763-5218

Or via Electronic Mail to:  
[Ronald.Bullock@military.texas.gov](mailto:Ronald.Bullock@military.texas.gov)

- F. No penalty or other responsibility shall be assigned to TMD's representative for the premature opening of any bid not properly addressed and identified.

It is the Bidder's responsibility to ensure the IFB response is received by the deadline listed in *Section 2. Schedule of Events* of this solicitation. TMD will not be responsible for bids being received late, illegible, incomplete, or otherwise non-responsive. Any bid received after the specified deadline will not be considered under any circumstance and will be returned to Bidder unopened.

\*\*Due to security requirements at Camp Mabry if hand delivering, please allow sufficient time to deliver bid. You must have a valid driver's license to operate a vehicle on Camp Mabry.\*\*

G. The Bidder is responsible for all costs incurred in the preparation and submission of a response.

H. Responses become TMD records and cannot be returned.

I. Bid cannot be altered or amended after opening time. Any alterations made before opening time must be initialed by Bidder or an authorized agent. Only corrections, deletions, or additions to bid proposal forms shall be made by electronic communication provided such communication is received in correct and comprehensive form prior to the opening time of bids and is confirmed by letter over the signature of the Bidder.

J. TMD may reject bid responses that do not comply with requirements in the IFB solicitation and state and federal laws. TMD may accept or reject all or any part of any bid response, waive procedures for submitting bid responses, waive informalities and/or minor technicalities, and award by item or groups of items, whichever best serves the interests of TMD. TMD may also cancel this procurement and withdraw this IFB solicitation at any time before a contract is signed by TMD. TMD shall be the sole judge of the best interests of TMD. TMD may award one or more contracts for all or part of the IFB.

K. Public Information: Contractor is required to make any information created or exchanged with the state pursuant to this Contract, and not otherwise excepted from disclosure under the Texas Public Information Act, available in PDF or other format that is accessible by the public at no additional charge to the state.

L. The bid response is a public record. By signing and submitting a response, Bidder hereby acknowledges:

- i. That the bid response and subsequent documents submitted to TMD are subject to the Texas Public Information Act (PIA);
- ii. That it is the Bidder's obligation to specifically identify information it contends to be confidential or proprietary and accepts that TMD may in its sole discretion deem a bid response as non-compliant; and
- iii. That Bidder grants a royalty-free, non-revocable, world-wide, perpetual license to reproduce any copyrighted portions of the bid response and subsequent documents to comply with Legislative Budget Board (LBB) reporting requirements, PIA disclosures, or any other reporting requirements mandated by law or statute.

M. Bidders are invited to submit a bid response to this Invitation for Bids (IFB) via email to [Ronald.Bullock@military.texas.gov](mailto:Ronald.Bullock@military.texas.gov).

**9. CHANGES AND EXCEPTIONS TO THE TERMS AND CONDITIONS:**

Exceptions that are not advantageous to TMD may result in disqualification of the bid response.

**10. BOND REQUIREMENTS:**

- A. The Bidder shall provide TMD, at its own expense, within ten (10) working days of notification of intent to award by the TMD Buyer, in accordance with the provisions of Government Code Title 10, Section 2253.021. The required Bonds as stipulated: Payment Bond in the amount of the Bid on all Bids over \$25,000 for the sole protection of those supplying labor, materials, and/or equipment. Subcontractors are not required by TMD to execute a Payment Bond.
- B. Failure of Bidder to provide required Bond within the time frame stipulated above may result in disqualification of Bid.
- C. Bond shall remain in effect and in full force per applicable Law and until documented acceptance by TMD of work performed.
- D. Bond provided shall meet the criteria established in Texas Government Code Title 10, Section 2253.021. Link to Gov't Code can be found at:

Reference: [GOVERNMENT CODE CHAPTER 2253. PUBLIC WORK PERFORMANCE AND PAYMENT BONDS \(texas.gov\)](http://GOVERNMENT CODE CHAPTER 2253. PUBLIC WORK PERFORMANCE AND PAYMENT BONDS (texas.gov))

**11. WARRANTY REQUIREMENTS:**

Manufacturer's Standard Warranty for the Chiller shall be the standard manufacturer warranty. Successful Bidder shall furnish manufacturer's warranty to receiving location at time of delivery. The Successful Bidder shall provide the following information:

The name, phone contact information and address of servicing dealer nearest to the F.O.B. point who will perform the warranty work.

Warranty Service Respondents are required to complete and return with Response, Attachment D – Authorized Warranty Service Provider contact information.

After the Customer contacts the Contractor's authorized warranty service provider, the service representative shall take any necessary action to correct problems covered by the warranty.

**12. EVALUATION CRITERIA:**

**A. Responsiveness**

TMD may waive minor or immaterial requirements in the submission process. TMD will disqualify any Response that does not conform to the solicitation requirements in any material respect as nonresponsive. For example, failure to sign the Response, or to return a required HUB plan, will result in disqualification.

B. Vendor Performance Data.

TMD will consider a vendor's past performance in compliance with applicable provisions of §§ 2155.074, 2155.075, 2156.007, 2157.003, and 2157.125 of the Government Code. The following examples indicate poor past performance:

- A score of less than a C in the Vendor Performance Tracking System
- Currently under a Corrective Action Plan for a TMD contract
- Repeated negative Vendor Performance Reports for the same reason
- A record of repeated non-responsiveness to vendor performance issues
- Cancellation of purchase orders in the previous 12 months for non-performance such as late delivery

Vendor performance information is located on the CPA web site at: <http://www.txsmartbuy.com/vpts>.

Investigations. TMD may check references and consult other customers regarding past performance. TMD may examine sources of vendor performance including, but not limited to, notices of termination, cure notices, assessments of liquidated damages, litigation, audit reports, and non-renewals of contracts. Such sources of vendor performance may include any governmental entity, whether an agency or political subdivision of the State of Texas, another state, or the Federal government. Further, TMD may initiate examinations of vendor performance based upon media reports. Any such investigations shall be at the sole discretion of TMD.

13. **BEST VALUE:**

TMD will determine best value for the state as directed by Texas Government Code § 2156.007 when awarding a Contract to a Respondent. In determining the best value, TMD shall consider the following best value factors:

- (1) Price of the item, to include total cost of ownership, such as installation costs, life cycle costs, and warranty provisions.
- (2) Compliance with the stated specifications coupled with the quality and reliability of the goods and services, such as fitness for use that meets or exceeds Customers' expectations, and the characteristics of the product or service that bear on its ability to meet the stated needs.
- (3) Delivery time after receipt of purchase order (ARO).
- (4) Indicators of probable performance under the Contract, to include: vendor's past performance; financial resources; ability, capacity, and skill to perform the contract or provide the service required; experience or demonstrated capability and responsibility; references; and the vendor's ability to provide reliable maintenance agreements and support.
- (5) Other relevant factors, such as the vendor's ability to comply with laws relating to the goods or services, the vendor's anticipated economic impact to the state or a subdivision of the state, including potential tax revenue and employment, the effect of a purchase on agency.

14. **AWARD PROCESS:**

TMD will consider best value for the State as directed by Texas Government Code § 2156.007 when awarding a Contract to a Bidder.

If the solicitation is awarded, TMD will issue a Purchase Order or Notice of Award to the successful Bidder. However, there is no guarantee that an award or any Contract will result from this solicitation.

**15. ORDER OF PRECEDENCE:**

- A. Any conflicts in terms and conditions shall be resolved with precedence given to the following order of descending priority:
- B. The TMD Contract and/or PO;
- C. The provisions contained in the Invitation for Bids, including its attachments, forms, exhibits, and any Addenda; and
- D. Successful Bidder's bid response to IFB.

**16. TMD STANDARD TERMS AND CONDITIONS:**

Successful Bidder shall adhere to the Terms and Conditions as outlined in **Attachment C – TMD Standard Terms and Conditions**.

**17. CONTRACT MANAGEMENT:**

TMD Contract Administrator or Designee shall:

- A. Monitor the performance of the Contract. Any non-compliance issues shall be documented in writing and presented to successful Bidder.
- B. Monitor the quality and acceptability of the requested services and the manner of performance, and rate of progress of the work.
- C. Determine if the services performed are not acceptable and request the successful Bidder visit the site/facility to review and correct all non-performance issues immediately.
- D. Perform, at any time, an audit to ensure compliance with the Terms and Conditions of this Contract.
- E. Immediately document in writing all non-compliance issues and present to the successful Bidder in person, by mail, or e-mail.
- F. Request, at their discretion, an on-site meeting, if warranted, with the successful Bidder and/or successful Bidder's designated supervisor to take immediate action to remedy non-compliance issues in the timeframe provided in the written documentation and/or as documented at the on-site meeting.
- G. Request the successful Bidder to remove any employee for cause, including but not limited to: Poor or non- performance of work, theft, abusive language/behavior, and/or improper attire, in accordance with the Terms and Conditions of the Contract.

H. Make temporary changes in the assignments, tasks, and task frequencies. Such changes shall not be considered modification of the Contract and shall not affect the amount of payment to the successful Bidder.

18. **PAYMENT:**

Invoices shall be submitted to:

Texas Military Department, Accounts Payable  
P.O. Box 5218  
Austin, TX 78763-5218  
or via email at: [accountspayable@military.texas.gov](mailto:accountspayable@military.texas.gov)

- A. Contractor shall submit an itemized invoice.
- B. TMD will incur no penalty for late payment, if payment is made in thirty (30) or fewer days from receipt of goods or services and an uncontested invoice. Payment shall be made in accordance with Texas Government Code, Chapter 2251.
- C. All invoices shall be verified and certified by the designated representative or alternate representative.
- D. After invoice is verified, certified, and accepted for payment, a state warrant shall be issued to the successful Bidder utilizing funds made available by the state/federal government.

## **ATTACHMENTS LIST**

Attachment A – Bid Price Sheet

Attachment B – Scope of Work

Attachment C – TMD Standard Terms and Conditions

Attachment D – Insurance Requirements

Attachment E – HUB Subcontracting Plan (HSP)

Attachment F – Test and Balance Procedures

## ATTACHMENT A – BID PRICE SHEET

### INSTRUCTIONS:

- a. Bidder shall complete all sections of this pricing form.
- b. Bidder shall provide a price for the applicable line items, even if the price is zero (\$0). Prices should reflect the cost of that line item only.
- c. Bidder shall provide any pricing amount assumptions for each Deliverable in reference to amounts and/or pricing conditions by outlining them (if any) in Table 2: Pricing Assumptions.
- d. Bidder shall not modify pricing line items or any other portion of Attachment A – Price Sheet. The only exception is that Bidder may add additional rows as needed to Table 2: Pricing Assumptions.

<b>Line Item</b>	<b>Deliverable</b>	<b>Qty</b>	<b>Unit of Measure</b>	<b>Price</b>
1.	Class & Item: 031-03, 031-13 Chiller Manufacturer Name: Trane Artic Chill Manufacturer Model No: TACA100 Or newer model or equivalent  Existing Equipment: Chiller Make: <b>Carrier Aqua Snap</b> Model No.: 30RBA0806—0---3 Serial No.: 2105Q70832	1	EA	
2.	Class & Item: 031-03, 031-13, 031-67 Parts and Materials Note to Bidder: Provide a line-item breakdown of all parts and materials to be used for this project.	1	JOB	
3.	Class & Item: 910-36 Labor	1	JOB	
	<b>TOTAL</b>			

**Table 2: Pricing Assumptions**

**PRICING ASSUMPTIONS:** Bidder shall provide any pricing amount assumptions for each Deliverable in reference to amounts and/or pricing conditions by outlining them (if any) in Table 2: Pricing Assumptions. Bidder may add additional rows as needed.

#	Assumption
1	
2	
3	

## ATTACHMENT B – SCOPE OF WORK

### 1. **Requirements:**

- a. The work includes to permanently remove the top cover of the metal fence to allow the crane to remove existing 70-ton Water Chiller and install the new Water chiller.
- b. Disconnect the existing water supply and return lines, DDC controls, flow switch, and adapters with bypass valves.
- c. Remove the existing water pump and motor to be returned to the government. Disconnect existing electrical wiring and remove the existing disconnect.
- d. Remove and disconnect existing piping and water thermometers.
- e. Construct a concrete pad to the appropriate size as needed depending on the new Chiller dimensions. (Note to Bidder: Successful Bidder shall submit specific details with their response on how this requirement will be met).
- f. Provide and install a new 70-ton air cooled oil-free magnetic bearing Trane chiller with low noise aeroacoustics fans, BACnet control interface and variable speed condensing fan motor.

Product/Model Number or Equal: Trane Artic Chill TACA100

- g. Provide and install vibration isolators at each mounting location.
- h. Reconnect unit to existing DDC system to monitor and control sensors including start/stop, supply/return temperature, status, and alarm notifications.
- i. Systems must be fully operational equal to existing unit and with no loss of system functionality and must be seen in the front-end computer located at Bldg. 970.
- j. Contractor will provide start up and training by an authorized representative. Provide and install new communication bus. The training shall consist of a minimum of three (3) TMD personnel. Dates and Times to be coordinated by TMD after award.
- k. Reconnect chiller valves and adapters with bypass valves if removed during the reinstallation of the new chiller.
- l. Install two (2) new Centrifugal pumps that are compatible with the new chiller unit in which one (1) will work as a backup.
- m. Product/Model Number or Equal: **Make: THRUSH PRODUCTS, Model # 1 1/2 X2X9PF2GBF, Serial # 24937 2** Provide and install Variable Frequency Drive (VFD)'s for both Centrifugal pumps.
- n. Provide and install necessary piping to install secondary pump.
- o. Provide and install new flow switch, chiller hail guards, cast iron bleeders, water pressure gauge, tee valve with isolation valve, shutoff valves, and regulating valves.
- p. Provide and install cleanable strainer at the water inlet.
- q. All electrical work must conform to all applicable Electric Code 2020(NEC) Guidelines, and any local and states codes.
- r. Provide and install new three (3) pole fusible NEMA 3R fusible disconnect switch and reconnect all the electrical wirings.
- s. Supply and return pipes will be reconnected maintaining existing bypass capabilities.

- t. Water thermometers will also be installed in the wells for the water line.
- u. Provide and install vibration isolators and piping insulation for all water piping.
- v. Provide and install air vents on entering and leaving chilled water piping.
- w. Chilled and condenser water piping and accessories must be provided and install Chilled, Chilled-hot, and Condenser Water Piping Systems.
- x. Refrigerant piping for split-systems water chillers must be provided and installed
- y. Perform a fresh-water flush and add necessary chemicals to maintain manufacturers recommended ranges in the hot and cold loops and provide final results.
- z. Testing and treatment of water loops will be performed by National Aluminum Company Limited (NALCO) at contractor's expense.
- aa. Perform a test and balance for the chilled water systems per, Attachment F and report the data as required by Associated Air Balance Council (AABC), National Environmental Balancing Bureau (NEBB) and, Testing Adjusting and Balancing Bureau (TAB) standard procedures, including refrigeration operational data.

## **2. Occupancy of Premises:**

- a. Building(s) will be occupied during performance of work under this Contract.
- b. Before work is started, arrange with the Contracting Officer a sequence of procedure, means of access, space for storage of materials and equipment, and use of approaches, corridors, and stairways.

## **3. Existing Work:**

In addition to Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements:

- a. Contractor will remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.
- b. Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer (TBD).
- c. At the completion of operations, existing work must be in a condition equal to or better than that which existed before new work started.
  - i. Reconfiguration of plumbing lines will all be newly insulated, compressor motor operations on magnetic bearings (only offered on 100-ton units) as opposed to scroll motor bearings, this unit is rated at 100 tons as opposed to 80 tons which will not support the new update to this building which will require an additional 15 tons of cooling.

## **4. Salvage Material and Equipment:**

- a. Items designated by the Contracting Manager, to be salvaged and remain the property

of the Government.

- b. Segregate, itemize, deliver, and off-load the salvaged property at the Government designated storage area located within a mile of the construction site.
- c. Provide a salvage plan, listing material and equipment to be salvaged, and their storage location.
- d. Maintain property control records for material or equipment designated as salvage.
- e. Use a system of property control that is approved by the Contracting Officer.
- f. Contractor will dispose of existing equipment once approved by the Contract Officer.

## ATTACHMENT D – INSURANCE REQUIREMENTS TEXAS MILITARY DEPARTMENT

The Contractor shall procure, comply and maintain at its expense during the term of the Contract or any extensions thereof, insurance as listed below. Insurance shall be written by companies acceptable to Texas Military Department (TMD) and authorized to do business in the State of Texas. Policies shall include terms and provisions indicated below. The Contractor shall provide and make available, at no cost to TMD, copies of policy declaration pages and policy endorsements and furnish evidence of the following:

- 1. Workers' Compensation and Employers' Liability** - The Contractor shall maintain Workers' Compensation insurance coverage in accordance with statutory limits and maintain such coverage throughout the life of this Contract. Coverage A – Workers' Compensation (WC) Statutory limits for the State of Texas or for any state the Contractor's employee resides in. Coverage B – Employer's Liability (EL) \$1,000,000 each accident limit / \$1,000,000 Disease Policy / \$1,000,000 Disease each employee limit. The Contractor shall waive all rights against TMD, its board, trustees, officers, employees, agents, and volunteers for recovery of damages to the extent they are covered by WC and EL.
- 2. Business Automobile Liability Insurance** - Contractor shall maintain Business Automobile insurance coverage for all owned, hired, and non-owned vehicles, with a minimum combined single limit of \$1,000,000 for each accident for bodily injury and property damage. Such insurance will include coverage for loading and unloading hazards. If Contractor will carry pollutants or hazardous materials, endorsements for Pollution Liability Coverage for Automobile and Motor Carrier Act will be included. The Contractor shall waive all rights against TXDPS, its board, trustees, officers, employees, agents, and volunteers for recovery of damages to the extent they are covered by the business auto liability insurance (or any other applicable auto physical damage coverage.)
- 3. Commercial General Liability Insurance Coverage** - The Contractor shall maintain Commercial General Liability insurance coverage that will include, but not be limited to, Premises/Operations, Personal & Advertising Injury, Products/Completed Operations, Independent Contractors and Contractual Liability.  
\$1,000,000.00 each occurrence  
\$2,000,000.00 General Aggregate limit,  
\$2,000,000.00 Products and Completed Operations,  
\$1,000,000.00 Personal/Advertising injury,  
\$50,000 Damage to Premises  
\$5,000 Medical Payments
- 4. Umbrella/Excess Liability:** The Contractor may combine its primary and Excess/Umbrella Liability limits to meet the minimum required coverage for any line of coverage; however, if it chooses this option, the coverage will be written at least as broad as those requirements defined above.  
\$1,000,000 Minimum Limit
- 5. Additional Provisions** - The Contractor shall ensure that with respect to the above required insurance, all insurance contracts and certificates of insurance will contain and state, in writing the following provisions:

All insurance coverage will be provided by insurance carrier(s) duly licensed, admitted and authorized to do business in Texas. All insurance carriers will be, at a minimum, rated "A" or better by A.M. Best or equivalent rating by a similar insurance rating service.

The limits required herein are the minimum acceptable limits. These limits will not to be construed as being the maximum the Contractor may wish to purchase for its own benefit.

The Contractor and any subcontractor hereunder agrees in the performance of the work to comply with (i) all applicable fire safety requirement of the National Fire Protective Association, (ii) all Federal, State and local laws pertaining to fire protection, and (iii) the rules and regulations pertaining to facility protection as prescribed by the Adjutant General's Department

Each policy of required insurance shall provide for ten (10) days written notice of cancellation to the Texas Military Department and include the following provisions. "It is a condition of this policy that the Company shall furnish written notice to Texas Military Department and address ten (10) days in advance of any reduction in, or cancellation of this policy."

Insurance shall be effective, and evidence of acceptable insurance furnished to the Texas Military Department, prior to commencing any operations under this Contract. The Contractor's insurance coverage will continue in full force and effect during the term of this Contract. Proof of insurance policies in a form acceptable to TMD will be delivered prior to the effective date of this Contract

Policy Coverages will not be canceled, non-renewed or materially changed except after thirty (30) days written notice by certified mail addressed to:

Texas Military Department  
Attn: Ronald L. Bullock  
PO Box 5218  
Austin, TX 78763-5218

Provide that the Contractor's insurance is primary insurance as respects to the Texas Military Department, its Officers, and Employees and Elected Representatives.

**Attachment C**  
**Texas Military Department**  
**Standard Terms and Conditions**

**I. Affirmations and Certifications**

Bidders must acknowledge the following affirmations and certifications and certify that they are true by signing below. **Failure to sign these Standard Terms and Conditions shall void the Bidder's submission.** If any assurance is shown to be false, the Contract may be terminated, payment withheld, and the Bidder shall be liable to Texas Military Department (TMD) for attorney's fees and the costs necessary to complete the contract, including the cost of advertising and awarding a subsequent contract:

**1. Abortion Provider and Affiliate Transactions Prohibited**

Bidder represents and warrants that the Contract is not a taxpayer resource transaction prohibited by Section 2272.003 of the Texas Government Code and that payments made by TMD to Bidder and Bidder's receipt of appropriated funds under the Contract are not prohibited by Article IX, Section 6.25 of the General Appropriations Act.

**2. Antitrust Affirmation**

The undersigned affirms under penalty of perjury of the laws of the State of Texas that (1) in connection with this Solicitation, neither I nor any representative of the Bidder have violated any provision of the Texas Free Enterprise and Antitrust Act, Tex. Bus. & Comm. Code Chapter 15; (2) in connection with this Solicitation, neither I nor any representative of the Bidder have violated any federal antitrust law; and (3) neither I nor any representative of the Bidder have directly or indirectly communicated any of the contents of this Solicitation to a competitor of the Bidder or any other company, corporation, firm, partnership, or individual engaged in the same line of business as the Bidder. Bidder assigns to TMD all of Bidder's rights, title and interest in and to all claims and causes of action Bidder may have under the antitrust laws of Texas or the United States for overcharges associated with this solicitation or any resulting Contract.

**3. Buy Texas Affirmation**

In accordance with Section 2155.4441 of the Texas Government Code Bidder agrees that during the performance of a contract for services it shall purchase products and material produced in Texas when they are available at a price and time comparable to products and materials produced outside this State.

**4. Child Support Obligation Affirmation**

Under Section 231.006(d) of the Texas Family Code, regarding child support, Bidder certifies that the individual or business entity named in this Response is not ineligible to receive the specified payment and acknowledges that the contract may be terminated, and payment may be withheld, if this certification is inaccurate. Furthermore, any Bidder subject to Section 231.006 of the Texas Family Code must include in the Response the names and social security numbers of each person with at least 25% ownership of the business entity submitting the Response. Enter the name and social security numbers (SSN) for each person below. Failure of an organization to provide the above information shall result in the disqualification of the Response.

Name:		SSN:
-------	--	------

Name:		SSN:	
Name:		SSN:	

**FEDERAL PRIVACY ACT NOTICE:** This notice is given pursuant to the Federal Privacy Act. Disclosure of your Social Security Number (SSN) is required under section 231.006(c) and Section 231.302(c)(2) of the Texas Family Code. The SSN will be used to identify persons that may owe child support and will be kept confidential to the fullest extend allowed under Section 231.302(c), Texas Family Code.

5. Computer Equipment Recycling Program

If Bidder is submitting a Response for the purchase or lease of computer equipment, then Bidder certifies its compliance with Subchapter Y, Chapter 361, of the Texas Health and Safety Code related to the Computer Equipment Recycling Program and the Texas Commission Environmental Quality rules in 30 TAC Chapter 328.

6. Contracting Information Responsibilities (ONLY for Contracts with a stated expenditure of at least \$1 million in public funds for the purchase of goods or services by the governmental body, or results in the expenditure of at least \$1 million in public funds for the purchase of goods or services by the governmental body in a fiscal year of the governmental body)

Bidder represents and warrants that it will comply with the requirements of Section 552.372(a) of the Texas Government Code. Except as provided by Section 552.374(c) of the Texas Government Code, the requirements of Subchapter J, Chapter 552 of the Government Code, may apply to the Contract and the Bidder agrees that the Contract can be terminated if the Bidder knowingly or intentionally fails to comply with a requirement of that subchapter.

7. Cybersecurity Training (ONLY applies to Solicitations and Contracts where Contractors have access to a state computer system or database)

Bidder shall ensure that any Bidder employee or subcontractor employee who has access to a state computer system or database shall complete a cybersecurity training program certified under Section 2054.519 of the Texas Government Code. Such training is required to occur during the Contract term and the renewal period. Bidder shall provide TMD with verification of the completion of the requisite training.

8. Dealings with Public Servants Affirmation

Pursuant to Section 2155.003 of the Texas Government Code, Bidder represents and warrants that it has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or services to a public servant in connection with the submitted Response.

9. Debts and Delinquencies Affirmation

Bidder acknowledges and agrees that, to the extent Bidder owes any debt including, but not limited to, delinquent taxes, delinquent student loans, and child support owed to the State of Texas, and payments or other amounts Bidder is otherwise owed under the contract may be applied toward any dept Bidder owes the State of Texas until the debt is paid in full. These provisions are effective at any time Bidder owes any such debt or delinquency.

10. Disclosure of Prior State Employment

In accordance with Section 2254.003 of the Texas Government Code, relating to consulting services, Bidder certifies that it does not employ an individual who has been employed by TMD or another agency at any time during the two years preceding the submission of the Response or, in the alternative, Bidder has disclosed in its Response the following: (i) the nature of the previous employment with TMD or the other agency; (ii) the date the employment was terminated; and (iii) the annual rate of compensation for the

employment at the time of its termination.

**11. Entities that Boycott Israel**

If Bidder is required to make a certification pursuant to Section 2271.001 of the Texas Government Code, Bidder certifies that Bidder does not boycott Israel and will not boycott Israel during the term of the Contract resulting from this solicitation. If Bidder does not make that certification, Bidder must indicate that in its Response and state why the certification is not required.

**12. E-Verify Program (ONLY applies to Solicitations and Contracts for services from agencies that are under the direction of the Governor)**

Bidder certifies that for Contracts for services, Bidder shall utilize the U.S. Department of Homeland Security's E-Verify system during the term of the contract to determine the eligibility of:

- All persons employed by Bidder to perform duties within Texas; and
- All persons, including subcontractors, assigned by Bidder to perform work pursuant to the contract within the United States of America.

The Bidder shall provide, upon request of TMD, an electronic or hardcopy screenshot of the confirmation or tentative non-confirmation screen containing the E-Verify case verification number for attachment to the Form I-9 for the three most recent hires that match the criteria above, by the Bidder, and Bidder's subcontractors, as proof that this provision is being followed.

If it is determined that Bidder has violated the certification set forth in this Section, then (1) Bidder shall be in breach of Contract, (2) TMD shall have the option to terminate the Contract for cause without prior notice, and (3) in addition to any other rights or remedies available to TMD under the Contract, Bidder shall be responsible for all costs incurred by TMD to obtain substitute services to replace the terminated Contract.

**13. Excluded Parties**

Bidder certifies that it is not listed on the federal government's terrorist watch list as described in Executive Order 13224.

**14. Executive Head of a State Agency Affirmation**

Under Section 669.003 of the Texas Government Code; relating to contracting with an executive head of a state agency, Bidder represents that no person who served as an executive of TMD, in the past four (4) years, was involved with or has any interest in the contract. If Bidder employs or has used the services of a former executive of TMD, then Bidder shall provide the following information in the Response:

Name of Former Executive: \_\_\_\_\_

Name of State Agency: \_\_\_\_\_

Date of Separation: \_\_\_\_\_

Position with Bidder: \_\_\_\_\_

Date of Employment with Bidder: \_\_\_\_\_

**15. False Statements**

Bidder represents and warrants that all statements and information prepared and submitted in this document are current, complete, true, and accurate. Submitting a Response with a false statement or material misrepresentations made during the performance of a contract is a material breach of contract and may void the submitted Response and any resulting contract.

**16. Financial Participation Prohibited Affirmation**

Under Section 2155.004(b) of the Texas Government Code, Bidder certifies that the individual or business entity named in this Response or any contract resulting from this solicitation is not ineligible to receive the specified contract and acknowledges that the contract may be terminated and payment withheld if this certification is inaccurate. Section 2155.004 prohibits a person or entity from receiving a state contract if they received compensation for participating in preparing the solicitation or specifications for the contract.

**17. Foreign Terrorist Organizations**

Bidder represents and warrants that it is not engaged in business with Iran, Sudan, or a foreign terrorist organization, as prohibited by Section 2252.152 of the Texas Government Code. Refer to the list located at <https://comptroller.texas.gov/purchasing/publications/divestment.php>

**18. Former Agency Employees**

Bidder represents and warrants that none of its employees including, but not limited to, those authorized to provide services under the contract, were former employees of TMD during the twelve (12) month period immediately prior to the date of execution of the contract.

**19. Human Trafficking Prohibition**

Under Section 2155.0061 of the Texas Government Code, the Bidder certifies that the individual or business entity named in this Response is not ineligible to receive the specified Contract and acknowledges that this Contract may be terminated and payment withheld if this certification is inaccurate.

**20. No Conflicts of Interest**

Bidder represents and warrants that the provision of goods and services or other performance under the contract will not constitute an actual or potential conflict of interest or reasonably create an appearance of impropriety.

**21. Prior Disaster Relief Contract Violation**

Under Sections 2155.006 and 2261.053 of the Texas Government Code, the Bidder certifies that the individual or business entity named in this Response or contract is not ineligible to receive the specified contract and acknowledges that this contract may be terminated and payment withheld if this certification is inaccurate.

**22. Signature Authority**

By submitting the Response, Bidder represents and warrants that the individual submitting this document and the documents made part of this Response is authorized to sign such documents and on behalf of the Bidder and to bind the Bidder under any contract that may result from the submission of this Response.

**23. Suspension and Debarment**

Bidder certifies that it and its principals are not suspended or debarred from doing business with the state or federal government as listed on the State of Texas Debarred Vendor List maintained by the Texas Comptroller of Public Accounts and the System for Award Management (SAM) maintained by the General Services Administration.

**24. Television Equipment Recycling Program (ONLY for Contracts for the purchase or lease of covered television equipment as defined by Section 361.91(3) of the Texas Health and Safety Code)**

Bidder certifies its compliance with Subchapter Z, Chapter 361 of the Texas Health and Safety Code, related to the Television Equipment Recycling Program.

**25. Texas Bidder Affirmation**

Bidder certifies that if a Texas address is shown as the address of the Bidder on the Response, Bidder qualifies as a Texas Bidder as defined in Section 2155.444(c) of the Texas Government Code.

Corporations submitting Responses to TMD **shall provide** the following information:

Federal Employee ID #: \_\_\_\_\_

Texas Identification Number System (TINS): \_\_\_\_\_

Full Entity Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

**II. Required Clauses**

**1. Disaster Recovery Plan**

Upon request of TMD, Bidder shall provide copies of its most recent business continuity and disaster recovery plans.

**2. Dispute Resolution**

The dispute resolution process provided for in chapter 2260 of the Texas Government Code must be used to attempt to resolve any dispute arising under the Contract.

**3. Excess Obligations Prohibited**

Any contract resulting from this solicitation is subject to termination or cancellation, without penalty to TMD, either in whole or in part, subject to the availability of state funds. TMD is a state agency whose authority and appropriations are subject to actions of the Texas Legislature. If TMD becomes subject to a legislative change, revocation of statutory authority, or lack of appropriated funds which would render TMD's or Bidder's delivery or performance under the Contract impossible or unnecessary, the Contract will be terminated or cancelled and be deemed null and void. In the event of a termination or cancellation under this Section, TMD will not be liable to the Bidder for any damages, that are caused or associated with such termination, or cancellation, and TMD will not be required to give prior notice.

**4. Governing Law and Venue**

The Contract shall be governed by and construed in accordance with the laws of the State of Texas, without regard to the conflicts of law provisions. The venue of any suit arising under the Contract is fixed in any court of competent jurisdiction of Travis County, Texas, unless the specific venue is otherwise identified in a statute which directly names or otherwise identifies its applicability to TMD.

**5. Indemnification**

BIDDER SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS THE STATE OF TEXAS AND TMD, AND/OR THEIR OFFICERS, AGENTS, EMPLOYEES, REPRESENTATIVES, CONTRACTORS, ASSIGNEES, AND/OR DESIGNEES FROM ANY AND ALL LIABILITY, ACTIONS, CLAIMS, DEMANDS, OR SUITS, AND ALL RELATED COSTS, ATTORNEY FEES, AND

EXPENSES ARISING OUT OF, OR RESULTING FROM ANY ACTS OR OMISSIONS OF THE BIDDER OR ITS AGENTS, EMPLOYEES, SUBCONTRACTORS, ORDER FULFILLERS, OR SUPPLIERS OF SUBCONTRACTORS IN THE EXECUTION OR PERFORMANCE OF THE CONTRACT AND ANY PURCHASE ORDERS ISSUED UNDER THE CONTRACT. THE DEFENSE SHALL BE COORDINATED BY THE BIDDER WITH THE OFFICE OF THE TEXAS ATTORNEY GENERAL WHEN TEXAS STATE AGENCIES ARE NAMED DEFENDANTS IN ANY LAWSUIT AND THE BIDDER MAY NOT AGREE TO ANY SETTLEMENT WITHOUT FIRST OBTAINING THE CONCURRENCE FROM THE OFFICE OF THE TEXAS ATTORNEY GENERAL. THE BIDDER AND TMD AGREE TO FURNISH TIMELY WRITTEN NOTICE TO EACH OTHER OF ANY SUCH CLAIM.

THIS PARAGRAPH IS NOT INTENDED TO AND SHALL NOT BE CONSTRUED TO REQUIRE BIDDER TO INDEMNIFY OR HOLD HARMLESS THE STATE OR TMD FOR ANY CLAIMS OR LIABILITIES RESULTING FROM THE NEGLIGENT ACTS OR OMISSIONS OF TMD OR ITS EMPLOYEES.

**6. Public Information Act**

Information, documentation, and other material in connection with this solicitation or any resulting Contract may be subject to public disclosure pursuant to Chapter 552 of the Texas Government Code (the "Public Information Act"). In accordance with Section 2252.907 of the Texas Government Code, Bidder is required to make any information created or exchanged with the State pursuant to the Contract, and not otherwise excepted from disclosure under the Texas Public Information Act, available in a format that is accessible by the public at no additional charge to the State. Any part of the solicitation response that is of a confidential or proprietary nature must be clearly and prominently marked as such by the Bidder.

**7. State Auditor's Right to Audit**

The state auditor may conduct an audit or investigation of any entity receiving funds from the state directly under the Contract or indirectly through a subcontract under the Contract. The acceptance of funds directly under the Contract or indirectly through a subcontract under the Contract acts as acceptance of the authority of the state auditor, under the direction of the legislative audit committee, to conduct an audit or investigation in connection with those funds. Under the direction of the legislative audit committee, an entity that is the subject of an audit or investigation by the state auditor must provide the state auditor with access to any information the state auditor considers relevant to the investigation or audit. Bidder will ensure that this clause concerning the authority to audit funds received indirectly by subcontractors through Bidder and the requirement to cooperate is included in any subcontract awards.

**8. Terms and Conditions Attached to Response**

Any terms and conditions attached to a Response will not be considered unless specifically referred to in the Response.

**III. Additional Clauses**

**1. Abandonment or Default**

If Bidder defaults on this Contract, Texas Military Department reserves the right to cancel this Contract without notice and either re-solicit or re-award the Contract to the next best responsive and responsible Bidder. The defaulting Bidder will not be considered in the re-solicitation and may not be considered in future solicitations for the same type of work, unless the specification or scope of work significantly changed. The period of suspension will be determined by the agency based on the seriousness of the default.

**2. Agency's Right to Audit**

Bidder will make available at reasonable times and upon reasonable notice, and for reasonable periods, work papers, reports, books, records, and supporting documents kept current by Bidder pertaining to the Contract for purposes of inspecting, monitoring, auditing, or evaluating by TMD and the State of Texas.

**3. Americans with Disabilities Act**

Bidder represents and warrants its compliance with the requirements of the Americans With Disabilities Act (ADA) and its implementing regulations, as each may be amended.

**4. Assignment**

Bidder shall not assign its rights under the Contract or delegate the performance of its duties under the Contract without prior written approval from TMD. Any attempted assignment in violation of this provision is void and without effect.

**5. Binding Effect**

The Contract shall inure to the benefit of, be binding upon, and be enforceable against, each Party and their respective permitted successors, assigns, transferees and delegates.

**6. Change in Law and Compliance with Laws**

Any alterations, additions, or deletions to the terms of the Contract that are required by changes in federal or state law or regulations are automatically incorporated into the Contract without written amendment hereto, and shall become effective on the date designated by such law or by regulation.

**7. Damage to Government Property**

Bidder shall be liable for all damage to government-owned, leased, or occupied property and equipment caused by the Bidder and its employees, agents, subcontractors, and suppliers, including any delivery or cartage company, in connection with any performance pursuant to the Contract. Bidder shall notify TMD in writing of any such damage within one (1) calendar day. Bidder is responsible for the removal of all debris resulting from work performed under the Contract.

**8. Delivery**

If delay is foreseen, Bidder shall give written notice to TMD immediately upon discovering a delay will occur. Bidder must keep TMD advised at all times of status of progress for the services being provided. Default in meeting deliverable timelines (without accepted reasons) or failure to meet deliverable specifications authorizes TMD to purchase the services of this solicitation elsewhere and charge any increased costs for the services, including the cost of rebidding, to the Bidder. No substitutions are permitted without written approval of TMD.

**9. Disclosure of Interested Parties**

Bidder represents and warrants that if selected for award of a contract as a result of the solicitation, Bidder will submit to TMD a Certificate of Interested Parties prior to Contract execution in accordance with Section 2252.908 of the Texas Government Code. This Section applies only to a Contract of a governmental agency or state agency that:

- a. Requires an action or vote by the governing body of the entity or agency before the Contract may be signed; or
- b. Has a value of at least one million dollars

**10. Disclosure of Potential Conflicts of Interest; Certain Contracts Prohibited**

Pursuant to Section 2261.252 of the Texas Government Code, the Department may not enter into a Contract for the purchase of goods or services with a private vendor if certain positions within the agency including the Adjutant General, Executive Director, General Counsel or the Procurement Director or their covered family members have a financial interest in the vendor. Any contract found to violate Government Code 2261.252 is void.

**11. Discounts**

If Bidder at any time during the term of the Contract provides a discount on the final Contract costs, Bidder will notify TMD in writing ten (10) calendar days prior to effective date of discount. TMD will generate a Purchase Order Change Notice and send a revised Purchase Order to Bidder.

**12. Drug-Free Workplace**

Bidder represents and warrants that it shall comply with the applicable provisions of the Drug-Free Workplace Act of 1988 (41 U.S.C. § 701 et seq.) and maintain a drug-free work environment.

**13. Electrical Items (if applicable)**

All electrical items must meet all applicable OSHA standards and regulations and bear the appropriate listing from Underwriters Laboratory (UL), Factory Mutual Resource Corporation (FMRC), or National Electrical Manufacturers Association (NEMA).

**14. Entire Agreement**

Any Contract resulting from this solicitation represents the entire agreement between the parties. No prior agreement or understanding, oral or otherwise, of the parties or their agents will be valid or enforceable unless embodied in the Contract documents.

**15. Equal Employment Opportunity**

Bidder represents and warrants its compliance with all applicable duly enacted state and federal laws governing equal employment opportunities.

**16. Federal Occupational Safety and Health Law**

Bidder represents and warrants that all articles and services shall meet or exceed the safety standards established and promulgated under the Federal Occupational Safety and Health Act of 1970, as amended (29 U.S.C Chapter 15).

**17. Force Majeure**

Neither Bidder nor TMD shall be liable to the other for any delay in, or failure of performance, of any requirement included in the Contract caused by force majeure. The existence of such causes of delay or failure shall extend the period of performance until after the causes of delay or failure have been removed provided the non-performing party exercises all reasonable due diligence to perform. Force majeure is defined as acts of God, war, fires, explosions, hurricanes, floods, failure of transportation, or other causes that are beyond the reasonable control of either party and that by exercise of due foresight such party could not reasonably have been expected to avoid, and which, by the exercise of all reasonable due diligence, such party is unable to overcome. Each party must inform the other in writing, with proof of receipt, within three (3) business days of the existence of such force majeure, or otherwise waive this right as a defense.

**18. Fraud, Waste, and Abuse**

By submitting a response, Bidder represents and warrants that it has read and understood and will comply with TMD's Anti-Fraud Policy, found at <https://www.comptroller.texas.gov/about/policies/ethics.php>, as such Policy currently reads and as it is amended throughout the term of the Contract.

**19. Immigration**

Bidder represents and warrants that it shall comply with the requirements of the Immigration and Nationality Act (8 U.S.C § 1101 et seq.) and all subsequent immigration laws and amendments.

**20. Independent Contractor**

Bidder acknowledges and agrees that it is furnishing products and services in the capacity of an independent contractor and that Bidder and its personnel are not employees of TMD or the State of Texas.

**21. Legal and Regulatory Actions**

Bidder represents and warrants that it is not aware of and has received no notice of any court or governmental agency actions, proceedings or investigations, etc., pending or threatened against Bidder or any of the individuals or entities included in the Response within the five (5) calendar years immediately preceding the submission of the Response that would or could impair Bidder's performance under the Contract, relate to the solicited or similar goods or services, or otherwise be relevant to TMD's consideration of the Response. If Bidder is unable to make the preceding representation and warranty, then Bidder instead represents and warrants that it has included as a detained attachment in its Response a complete disclosure of any such court or governmental agency actions, proceedings or investigations, etc. that would or could impair Bidder's performance under the Contract, relate to the solicited or similar goods or services, or otherwise be relevant to TMD's consideration of the Response. In addition, Bidder represents and warrants that it shall notify TMD in writing within five (5) business days of any changes to the representation or warranties in this clause and understands that failure to so timely update TMD shall constitute breach of Contract and may resulting in immediate termination of the Contract.

**22. License Grant**

Bidder hereby grants to TMD a non-exclusive, perpetual, irrevocable, worldwide, transferable, fully paid, royalty-free, right and license:

- a. To reproduce, modify, distribute, store, publicly perform, publicly display, create derivative works of, and otherwise exploit the deliverables, in each case without any restrictions and without accounting to Bidder; and
- b. To sublicense any or all such rights to third parties.

**23. Limitation on Authority**

Bidder shall have no authority to act for or on behalf of TMD or the State of Texas except as expressly provided for in the Contract; no other authority, power or use is granted or implied. Bidder may not incur any debt, obligation, expense or liability of any kind on behalf of TMD or the State of Texas.

**24. Lobbying Prohibition**

Bidder represents and warrants that TMD's payments to the Bidder and Bidder's receipt of appropriated or other funds under the Contract are not prohibited by Sections 556.005 or 556.0055 of the Texas Government Code, relating to the prohibition of using state funds for lobbying activities.

**25. Media Releases**

Bidder shall not use TMD's name, logo, or other likeness in any press release, marketing material, or other announcement without TMD's prior written approval. TMD does not endorse any vendor, commodity, or service. Bidder is not authorized to make or participate in any media releases or public announcements pertaining to this procurement, the Response or the services to which they related without TMD's prior written consent, and then only in accordance with explicit written instructions from TMD.

**26. No Felony Criminal Convictions**

Bidder represents that neither Bidder nor any of its employees, agents, or representatives, including any subcontractors and employees, agents, or representatives of such subcontractors, have been convicted of felony criminal offense or that if such a conviction has occurred Bidder has fully advised TMD in writing of the facts and circumstances surrounding the convictions.

**27. No Implied Waiver**

The failure of a Party to insist at any time upon the strict performances of any covenant or agreement or to exercise any option, right, power, or remedy contained in the Contract shall not be construed as a waiver or a relinquishment thereof for the future.

**28. No Quantity Guarantees**

TMD makes no express or implied warranty whatsoever that any minimum compensation or minimum quantity will be guaranteed under the Contract.

**29. No Third-Party Beneficiaries**

Nothing contained in the Contract resulting from this solicitation, either expressed or implied, is intended to confer on any person other than the Parties, or their respective permitted successors, assigns, transferees or delegates, any interests, rights, remedies, obligations or liabilities pursuant to, or by reason of, the Contract.

**30. Patents, Trademarks, and Copyrights**

Bidder agrees to defend and indemnify the TMD and State from claims involving infringement or violation of patents, trademarks, copyrights, trade secrets, or other proprietary rights, arising out of the TMD's or the State's use of any good or service provided by the Bidder as a result of this solicitation.

**31. Permits, Certifications, and Licenses**

Bidder represents and warrants that it has determined what licenses, certifications and permits are required to perform services under the Contract and will acquire all applicable licenses, certifications, and permits prior to starting any work under the Contract.

**32. Prompt Payment**

Payment shall be made in accordance with Chapter 2251 of the Texas Government Code, commonly known as the Texas Prompt Payment Act. Chapter 2251 of the Texas Government Code shall govern remittance of payment and remedies for late payment and non-payment.

**33. Property Rights**

For purposes of the Contract, the term "Work Product" is defined as all work papers, materials, approaches, designs, specifications, systems, software, programs, source code, documentation, methodologies, concepts, intellectual property or other property and/or results of the services that are developed, produced, generated or provided to TMD in connection with, or as a result of, the services provided under the

Contract. TMD and Bidder intend this agreement to be a Contract for the services and each considers and expressly intends and agrees that the Work Product to be rendered by Bidder shall be a work-made-for-hire. Bidder and Bidder's employees will have no rights in or ownership of the Work Product or any other property of TMD. Bidder acknowledges and agrees that the Work Product (and all rights therein, including without limitation all intellectual property rights) belongs to and shall be the sole and exclusive property of TMD. If for any reason the Work Product would not be considered a work-made-for-hire under applicable law, Bidder does hereby irrevocably sell, assign, and transfer to TMD, its successors and assigns, the entire right, title and interest in and to the Work Product and any and all intellectual property rights embedded therein or associated therewith, and in and to all works based upon, derived from, or incorporating the Work Product, and in and to all income, royalties, damages, claims and payments now or hereafter due or payable with respect thereto, and in and to all causes of action, either in law or in equity for past, present, or future infringement based on the copyrights, and in and to all rights corresponding to the foregoing. Bidder agrees to execute all papers and to perform such other property rights, as TMD may deem necessary to secure for TMD or its designee the rights herein assigned. In the event that Bidder has any rights in and to the Work Product that cannot be assigned to TMD, Bidder hereby grants to TMD an exclusive, worldwide, royalty-free, irrevocable, and perpetual license to directly and indirectly reproduce, distribute, modify, create derivative works of, publicly perform and publicly display, such rights to make, have made, use, sell and offer for sale any products developed by practicing such rights, and to otherwise use such rights, with the right to sublicense such rights through multiple levels of sublicenses. No later than the first calendar day after the termination or expiration of the Contract or upon TMD's request, Bidder shall deliver to TMD all completed, or partially completed, Work Product and any and all version thereof. Failure to timely deliver such Work Product will be considered a material breach of the Contract. Bidder will not make or retain any copies of the Work Product or any and all documentation for the other products and results of the services without the prior written consent of TMD.

**34. Protest Procedures**

Any actual or prospective Respondent who is aggrieved in connection with this solicitation, evaluation, or award of any Contract resulting from this solicitation may formally protest as provided in Texas Military Department rules at 37 TAC Rule 134.1.

**35. Records Retention**

Bidder shall maintain and retain all records relating to the performance of the Contract including supporting fiscal documents adequate to ensure that claims for contract funds are in accordance with applicable State of Texas requirements. These records will be maintained and retained by Bidder for a period of seven (7) years after the Contract expiration date or until all audit, claim, and litigation matters are resolved, whichever is later.

**36. Refund**

Bidder will promptly refund or credit within thirty (30) calendar days any funds erroneously paid by TMD which are not expressly authorized under the Contract.

**37. Restricted Employment for Certain State Personnel**

Pursuant to Section 572.069 of the Texas Government Code, Bidder certifies that it has not employed and will not employ a former state officer or employee who participated in a procurement or contract negotiations for TMD involving the Bidder within two (2) years after the date that the Contract is signed or the procurement is terminated or withdrawn. This certification only applies to former state officers or employees whose state services or employment ceased on or after September 1, 2015.

**38. Secure Erasure of Hard Disk Capability**

All equipment provided to TMD by Bidder that is equipped with hard disk drives (i.e., computers, telephones, printers, fax machines, scanners, multifunction devices, etc.) shall have the capability to securely erase data written to the hard drive prior to final disposition of such equipment, either at the end of the equipment's useful life or the end of the related services agreement for such equipment, in accordance with 1 TAC § Chapter 202.

**39. Severability**

If any provision of the Contract is construed to be illegal or invalid, such construction will not affect the legality or validity of any of its other provisions. The illegal or invalid provision will be deemed severable and stricken from the Contract as if it had never been incorporated herein, but all other provisions will continue in full force and effect.

**40. Smoke-Free Agency**

TMD has a policy of being a smoke-free agency which includes but is not limited to electronic cigarettes. The policy reflects TMD's commitment to providing a healthy environment for all employees and visitors. This policy prohibits smoking within any state building or on the grounds. Bidder, by acceptance of the Contract, agrees to abide by this policy when on TMD property.

**41. Sovereign Immunity**

The Parties of any Contract expressly agree that no provision of the Contract is in any way intended to constitute a waiver by TMD or the State of Texas of any immunities from suit or from liability that TMD or the State of Texas may have by operation of law.

**42. Subcontractors**

Bidder may not subcontract any or all of the work and/or obligations due under the Contract without prior written approval of TMD. Subcontracts, if any, entered in to by the Contractor shall be inwriting and be subject to the requirements of the contract. Should Bidder subcontract any of the services required in the Contract, Contractor expressly understands and acknowledges that in entering into such subcontract(s), TMD is in no manner liable to any subcontractor(s) of Bidder. In no event shall this provision relieve Bidder of the responsibility for ensuring that the services performed under all subcontracts are rendered in compliance with the Contract.

**43. Survival**

Expiration or termination of the Contract for any reason does not release the Bidder from any liability or obligation set forth in the Contract that is expressly stated to survive any such expiration or termination, that by its nature would be intended to be applicable following any such expiration or termination, or that is necessary to fulfill the essential purpose of the Contract, including without limitation the provisions regarding warranty, indemnification, confidentiality, and rights and remedies upon termination.

**44. Taxes**

Purchases made for State of Texas use are exempt from the State Sales Tax and Federal Excise Tax. TMD will furnish Tax Exemption Certificates upon request. Bidder represents and warrants that it shall pay all taxes or similar amounts resulting from the Contract including, but not limited to, any federal, State, or local income, sales or excise taxes of Bidder or its employees. TMD shall not be liable for any taxes resulting from the Contract.

#### **45. Termination for Convenience**

TMD reserves the right to terminate the contract at any time, in whole or in part, without cost or penalty, by providing thirty (30) calendar days' advance written notice, if TMD determines that such termination is in the best interest of the state. In the event of such a termination, Bidder must, unless otherwise mutually agreed upon in writing, cease all work immediately upon the effective date of termination. TMD shall be liable for payments limited only to the portion of work TMD authorized in writing and which Bidder has completed, delivered to TMD, and which has been accepted by TMD. All such work shall have been completed, in accordance with contract requirements, prior to the effective date of termination. TMD shall have no other liability, including no liability for any costs associated with the termination.

#### **46. Termination for Failure**

If the termination of the Contract is for failure of the Bidder to fulfill the Contract obligations, TMD may complete the work by Contract or otherwise and the Bidder will be liable for any additional cost incurred by TMD.

If, after termination for failure to fulfill Contract obligations, it is determined that the Bidder had not failed, the rights and obligations of the parties will be the same as if the termination had been issued for the convenience of TMD.

#### **47. Trademark License**

TMD hereby grants to Bidder, for the term of the Contract, a limited, non-exclusive, royalty-free, non-assignable, non-transferable license to reproduce TMD's trademarks on published materials in the United States related to the performance of the Contract, provided that such license is expressly conditional upon, and subject to, the following:

- Bidder is in compliance with all provisions of the Contract;
- Bidder's use of the trademarks is strictly in accordance with the quality standards and in conformance with the reproduction requirements communicated by TMD;
- Bidder takes no action to damage the goodwill associated with the trademarks, and refrains from any attempt to contest, attack, dispute, challenge, cancel and/or oppose TMD's right, title and interest in the trademarks or their validity;
- Bidder makes no attempt to sublicense any rights under this trademark license; and
- Bidder complies with any marking requests TMD may make in relation to the trademarks, including without limitation to the phrase "Registered Trademark", the symbol "TM", the registered trademark symbol "®" and/or any equivalent thereof.

#### **48. Trademark Ownership**

Bidder hereby acknowledges and agrees that the trademarks remain the exclusive property of TMD, that all right, title and interest in and to the trademarks is exclusively held by TMD, and all goodwill associated with such trademarks inures solely to TMD.

#### **49. Unfair Business Practices**

Bidder represents and warrants that it has not been the subject of allegations of Deceptive Trade Practices violations under chapter 17 of the Texas Business and Commerce Code, or allegations of any unfair business practice in any administrative hearing or court suit and that Bidder has not been found to be liable for such practices in such proceedings. Bidder certifies that it has no officers who have served as officers of other entities who have been the subject of allegations of Deceptive Trade Practices violations or allegations of any unfair business practices in an administrative hearing or court suit and that such officers

have not been found to be liable for such practices in such proceedings.

**50. Unresolved Audit Exceptions**

The Bidder has no unresolved audit exceptions with TMD. An unresolved audit exception is an exception for which the Bidder has exhausted all administrative and/or judicial remedies and refuses to comply with any resulting demand for payment.

**51. Use of State Property**

Bidder is prohibited from using State Property for any purpose other than performing Services authorized under the Contract. State Property includes, but is not limited to, TMD's office space, identification badges, TMD Information technology equipment and networks (e.g. laptops, portable printers, cell phones, iPads, external hard drives, data storage devices, any TMD-issued software, and TMD Virtual Private Network (VPN Client)), and any other resources of TMD. Bidder shall not remove State Property from the continental United States. In addition, Bidder may not use any computing devices to access TMD's network or e-mail while outside of the continental United States. Bidder shall not perform any maintenance services on State Property unless the Contract expressly authorizes such services. During the time that State Property is in the possession of Bidders, Bidder shall be responsible for (i) all repair and replacement charges incurred by TMD that are associated with loss of State Property or damage beyond normal wear and tear and (ii) all charges attributable to Bidder's use of State Property that exceeds the Contract scope. Bidder shall fully reimburse such charges to TMD within ten (10) calendar days of Bidder's receipt of TMD's notice of amount due. Use of State Property for a purpose not authorized by Contract shall constitute breach of Contract and may result in termination of the Contract and the pursuit of other remedies available to TMD under Contract, at law, or in equity.

**52. Waiver of Consequential Damages**

NOTWITHSTANDING ANY OTHER PROVISION TO THE CONTRARY HEREIN, NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS OF PROFITS, ANTICIPATED OR OTHERWISE, OR LOSS OF REVENUES IN CONNECTION WITH OR ARISING OUT OF, OR IN CONNECTION WITH, THE SUBJECT MATTER OF THIS CONTRACT.

**BIDDER ACKNOWLEDGMENT AND CERTIFICATION**

Bidder hereby certifies that it has received, reviewed, and accepted the solicitation and the included statement of work, forms, terms, requirements, and conditions. The Bidder hereby acknowledges that it can meet all of the requirements as stated in the solicitation excluding any requirements it took exception to, as explicitly set forth in its Response.

The Bidder also certifies that the information included in its Response and on this form is, to the best of its knowledge, complete and accurate and that it shall update all such information at any time that such information changes. The Bidder certifies that the person signing this form is authorized to sign on its behalf.

**Failure to sign these Standard Terms and Conditions shall void the Bidder's submission.**

\_\_\_\_\_  
(Signature of Authorized Representative)

\_\_\_\_\_  
(Printed Name of Authorized Representative)

\_\_\_\_\_  
(Title of Authorized Representative)

\_\_\_\_\_  
(Date)

\_\_\_\_\_  
(Solicitation Number)

## ATTACHMENT F – TEST AND BALANCE PROCEDURES

### **TEXAS AIR NATIONAL GUARD**

**BUILDING #917**

**SAN ANTONIO, TEXAS**

### **TEST AND BALANCE PROCEDURES FOR CONSTANT VOLUME AIR HANDLERS**

- A. Verify the construction team responsibilities for system installation and start up are complete.
- B. Record unit nameplate data.
- C. Confirm that the correct air filters have been installed.
- D. Verify that all manual branch and outlet volume dampers are locked 100% open.
- E. Measure the motor operating amperage.
- F. Measure motor voltage.
- G. Confirm that the voltage and amperage matches the motor rating.
- H. Verify correct rotation.
- I. Check for unusual noises indicating mechanical malfunction.
- J. Measure fan RPM and compare to design RPM.
- K. Air handling units (AHU) equipped with a fixed outside air damper should be set to an appropriate position as a starting point.
- L. The OA damper for air handling units using mechanical cooling should be adjusted to a position estimated to equal the minimum design airflow.
- M. Measure the AHU total air volume by the most accurate method available. The method used is at the discretion and judgment of the NEBB Qualified TAB Supervisor based on the configuration of the unit and its ductwork.
- N. Adjust fan airflow to meet design requirements if necessary.
- O. Determine the method for adjusting outlets – proportional or stepwise, and balance the inlets and outlets in accordance with the prescribed procedures.
- P. At the conclusion of all inlet and outlet balancing, re-adjust the AHU minimum outside air ventilation rate, if required. Mark all branch duct dampers after final adjustments.
- Q. Record final unit data, prepare the report forms, and submit as required.

### **HYDRONIC SYSTEM BALANCING PROCEDURES**

- A. Verify that all manual valves are open or preset as required, and all temperature control (automatic) valves are in the open position.
- B. With the pump(s) off, observe and record system static pressure at the pump(s).
- C. Place the systems into operation, check that all air has been vented from the piping systems and allow flow conditions to stabilize.
- D. Verify that the system compression tank(s) and automatic water fill valve are operating and set properly.
- E. Record the operating voltage and amperage of the pump(s) and compare these with the nameplate ratings and thermal overload heater ratings. Verify the speed (rpm) of each pump.

- F. Measure the shut-off head of the operating pump by slowly closing a valve or balancing cock in the pump discharge piping. Record the discharge and suction pressures at the pump gauge connections and determine shut-off head.
- G. Using shut-off head, determine and verify each pump's impeller size and operating curve. Compare this data with the submittal data curves.
- H. Using the total operating head, read the pump water flow from the previously established corrected pump curve. If available, verify the pump curve data from flow meters and/or calibrated balancing valves.
- I. If the measured total head is greater than the design total head, the water flow will be lower than designed.
- J. If the measured total head is less than design, water flow will be greater; in which case the pump discharge pressure should be increased by partially closing the discharge balancing valve until the system water flow is approximately 110 percent of design.
- K. Record the suction and discharge pressures and the water flow.
- L. An initial recording of the flow distribution throughout the system shall be made without making any adjustments. This can be performed by using the existing flow measuring devices, or pressure / temperature ports, in the system, including any balancing devices at equipment (i.e. chillers, boilers, hot water exchangers, hot water coils, chilled water coils, etc).
- M. Take a complete set of pressure drop measurements through all equipment and compare this with submittal data readings. Determine which circuits have high or low water flow. Low circuits may be air bound. Check and vent air if present in low flow circuits and retake readings.
- N. Compare actual total system flow with design requirements.
- O. Use the proportional balancing method, adjust the flow rates through the equipment.
- P. After all final adjustments have been completed, perform a final check of the pressures and the flow of all pumps and equipment. Re-measure the voltage and amperage of pump motors and record the data.
- Q. After all TAB work has been completed, set all memory stops and mark or score all balancing devices at final set points.
- R. Record final unit data, prepare the report forms and submit as required.

**TEXAS AIR NATIONAL GUARD**  
**BUILDING #917**  
**SAN ANTONIO, TEXAS**

**TEST AND BALANCE PROCEDURES FOR**  
**VAV AHU'S AND TERMINAL UNITS**

**Test and Balance will be performed in accordance with NEBB Procedural Standards and applicable ASHRAE air balance and system balancing requirements.**

- A. Verify the construction team responsibilities for system installation and start up are complete.
- B. Record unit nameplate data.
- C. Confirm that the correct air filters have been installed.
- D. Verify that all manual branch and outlet volume dampers are locked 100% open.
- E. Measure the motor operating amperage.
- F. Measure motor voltage.
- G. Confirm that the voltage and amperage matches the motor rating.
- H. Verify correct rotation.
- I. Check for unusual noises indicating mechanical malfunction.
- J. Measure fan RPM and compare to design RPM.
- K. Air handling units (AHU) equipped with a fixed outside air damper should be set to an appropriate position as a starting point.
- L. The OA damper for air handling units using mechanical cooling should be adjusted to a position estimated to equal the minimum design airflow.
- M. Verify that adequate supply duct static pressure is available to allow balancing of VAV boxes.
- N. Calibrate the volume controllers on each VAV terminal unit using the manufacturer's recommended procedures.
- O. Balance the outlets on each terminal unit.
- P. Identify the VAV terminal unit(s) that is (are) the most difficult to satisfy at the existing supply fan airflow and static pressure. Measure the static pressure at this unit. The entering static pressure at this VAV box should be no less than the sum of the VAV box manufacturer recommended minimum inlet static pressure plus the static pressure or resistance of the ductwork and the terminals on the discharge side of the VAV box. Adjust system static pressure to the minimum value necessary to maintain design airflow at this terminal unit(s). This setpoint information should be provided to the appropriate project personnel.
- Q. Measure the AHU total air volume by the most accurate method available. The method used is at the discretion and judgment of the NEBB Qualified TAB Supervisor based on the configuration of the unit and its ductwork.
- R. If necessary, adjust fan airflow to meet design requirements.
- S. Test and record the operating static pressure at the sensor that controls the HVAC unit fan, if provided, and verify the operation of the static pressure controller.
- T. At the conclusion of all system balancing, adjust and verify the AHU minimum outside air ventilation rate, if required.
- U. Record final unit data, prepare the report forms, and submit as required.