



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
 DJS010282

PAGE
 1

ADDRESS CORRESPONDENCE TO ATTENTION OF:
 JOHN ABBOTT
 304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

Casto Technical Services
 540 Leon Sullivan Way
 Charleston WV 25322

DIVISION OF JUVENILE SERVICES
 WV INDUSTRIAL HOME FOR YOUTH
 7 INDUSTRIAL BOULEVARD
 INDUSTRIAL, WV
 26375 304-558-6029

| DATE PRINTED | TERMS OF SALE | SHIP VIA | F.O.B. | FREIGHT TERMS |
|--------------|---------------|----------|--------|---------------|
| 02/23/2010 | | | | |

BID OPENING DATE: 03/02/2010 BID OPENING TIME 01:30PM

| LINE | QUANTITY | UOP | CAT NO | ITEM NUMBER | UNIT PRICE | AMOUNT |
|--|----------|-----|--------|------------------------------------|------------|--------------|
| ADDENDUM #01 | | | | | | |
| THIS ADDENDUM IS ISSUED TO ANSWER VENDOR QUESTIONS, AND PROVIDE THE PRE-BID SIGN-IN SHEET, PER THE ATTACHED DOCUMENTATION. | | | | | | |
| NO ADDITIONAL QUESTIONS WILL BE ACCEPTED | | | | | | |
| 0001 | 1 | LS | 910-36 | HVAC MAINTENANCE & REPAIR SERVICES | | |
| ***** THIS IS THE END OF RFQ DJS010282 ***** TOTAL: | | | | | | \$132,288.00 |

RECEIVED
 2010 MAR -2 PM 1:21
 WASHINGTON DIVISION

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE: Traci B. Ray TELEPHONE: 304-346-0549 DATE: March 2, 2010

TITLE: Regional Account Manager IN 550539186 ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**GENERAL TERMS & CONDITIONS
REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)**

- 1 Awards will be made in the best interest of the State of West Virginia
2. The State may accept or reject in part, or in whole, any bid
3. Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required \$125 fee.
4. All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30
5. Payment may only be made after the delivery and acceptance of goods or services
6. Interest may be paid for late payment in accordance with the *West Virginia Code*
7. Vendor preference will be granted upon written request in accordance with the *West Virginia Code*
8. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.
9. The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller
10. The laws of the State of West Virginia and the *Legislative Rules* of the Purchasing Division shall govern the purchasing process
11. Any reference to automatic renewal is hereby deleted The Contract may be renewed only upon mutual written agreement of the parties
12. **BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order
13. **HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at www.state.wv.us/admin/purchase/vrc/hipaa.htm and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor
14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>
15. **LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities
16. **ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or Fraud I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

INSTRUCTIONS TO BIDDERS

1. Use the quotation forms provided by the Purchasing Division Complete all sections of the quotation form
- 2 Items offered must be in compliance with the specifications Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid The Purchasing Division may waive minor deviations to specifications
3. Unit prices shall prevail in case of discrepancy All quotations are considered F O B destination unless alternate shipping terms are clearly identified in the quotation
4. All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O Box 50130, Charleston, WV 25305-0130
- 5 Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W Va. C S R §148-1-6 6)

Addendum #1 DJS010282

HVAC Maintenance

1 Question: Is Oil Analysis as stated on page 1 of the Service Agreement excluded from the Agreement?

Answer: Yes

2 Question: There are similar items found under Exclusions that are on other pages required. Can you clarify?

Answer: Yes. There will be **No** lubrication, **No** belt replacement, **No** filter replacement. This will be done by the Maintenance Staff at the Industrial Home. Under exclusions, #5, the cleaning of the evaporator coils **will** be done by the vendor with assistance from the Maintenance Staff at the Industrial Home.

3. Question: Who is supplying the Belts and Filters?

Answer: The West Virginia Division of Juvenile Services

SIGN IN SHEET

Request for Proposal No. DJS 010282

Page 1 of 2

PLEASE PRINT

Date: Feb. 17.10

* PLEASE BE SURE TO PRINT LEGIBLY - IF POSSIBLE, LEAVE A BUSINESS CARD

| FIRM & REPRESENTATIVE NAME | MAILING ADDRESS | TELEPHONE & FAX NUMBERS |
|---|------------------------------|---------------------------------|
| Company: <u>Tri-state Roofing & Sheet Metal Co.</u> | <u>PO Box 892</u> | PHONE <u>304-328-5244</u> |
| Rep: <u>Don Weitz</u> | <u>Morgantown WV 26507</u> | TOLL FREE <u>1-800-926-8264</u> |
| Email Address: <u>estrimer@tri-state-services.com</u> | | FAX <u>304-328-5248</u> |
| Company: <u>Casto Technical</u> | <u>540 Leon Sullivan Way</u> | PHONE <u>304-346-0549</u> |
| Rep: <u>Traci B Ray</u> | <u>Charleston, WV 25322</u> | TOLL FREE <u>800-232-2221</u> |
| Email Address: <u>tray@castotech.com</u> | | FAX <u>304-346-8920</u> |
| Company: <u>Casto Technical Services</u> | <u>540 Leon Sullivan Way</u> | PHONE <u>304-346-0549</u> |
| Rep: <u>Barry Justice</u> | <u>Charleston WV 25322</u> | TOLL FREE <u>800-232-2221</u> |
| Email Address: <u>bjustice@castotech.com</u> | | FAX <u>304-346-8920</u> |
| Company: <u>Murray Sheet Metal</u> | <u>3112-7th St</u> | PHONE <u>304-488-5431</u> |
| Rep: <u>Pick Dawson</u> | <u>Parkersburg, WV 26104</u> | TOLL FREE |
| Email Address: <u>pickd@murray-sheetmetal.com</u> | | FAX <u>304-488-4603</u> |
| Company: <u>CARRIER CORP</u> | <u>503 MORGANTOWN AVE</u> | PHONE <u>304-366-4100</u> |
| Rep: <u>JIM GALLAGHER</u> | <u>FAIRMONT, WV 26554</u> | TOLL FREE <u>1-800-953-4446</u> |
| Email Address: <u>JAMES.W.GALLAGHER@GARRER.UTC.COM</u> | | FAX <u>304-366-4468</u> |

SIGN IN SHEET

Page 2 of 2

Request for Proposal No. DSJ010282

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| FIRM & REPRESENTATIVE NAME | MAILING ADDRESS | TELEPHONE & FAX NUMBERS |
|--|-----------------------|---------------------------------|
| Company: <u>ROCK BRANCH MECHANICAL</u> | <u>132 HARRIS DR</u> | PHONE <u>304-755-0373</u> |
| Rep: <u>GREG SCHOOLCRAFT</u> | <u>POCA WVA 25159</u> | TOLL FREE <u>1-888-465-6233</u> |
| Email Address: <u>ROSE SEABOLT 9T WV DSL.NET</u> | | FAX <u>309-755-5270</u> |
| Company: _____ | _____ | PHONE _____ |
| Rep: _____ | _____ | TOLL FREE _____ |
| Email Address: _____ | _____ | FAX _____ |
| Company: _____ | _____ | PHONE _____ |
| Rep: _____ | _____ | TOLL FREE _____ |
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| 0001 | 1 | LS | | 910-36 | \$ \$11 024 00 Monthly | \$132,288 00 Annual |
| <p>HVAC MAINTENANCE & REPAIR SERVICES</p> <p>OPEN-END CONTRACT TO PROVIDE HVAC MAINTENANCE & REPAIR SERVICES FOR THE WEST VIRGINIA DIVISION OF JUVENILE SERVICES, INDUSTRIAL HOME FOR YOUTH, PER THE SPECIFICATIONS, AND BID FORM.</p> <p>EXHIBIT 3</p> <p>LIFE OF CONTRACT: THIS CONTRACT BECOMES EFFECTIVE ON AND EXTENDS FOR A PERIOD OF ONE (1) YEAR OR UNTIL SUCH "REASONABLE TIME" THEREAFTER AS IS NECESSARY TO OBTAIN A NEW CONTRACT OR RENEW THE ORIGINAL CONTRACT. THE "REASONABLE TIME" PERIOD SHALL NOT EXCEED TWELVE (12) MONTHS. DURING THIS "REASONABLE TIME" THE VENDOR MAY TERMINATE THIS CONTRACT FOR ANY REASON UPON GIVING THE DIRECTOR OF PURCHASING 30 DAYS WRITTEN NOTICE.</p> <p>UNLESS SPECIFIC PROVISIONS ARE STIPULATED ELSEWHERE IN THIS CONTRACT DOCUMENT, THE TERMS, CONDITIONS AND PRICING SET HEREIN ARE FIRM FOR THE LIFE OF THE CONTRACT.</p> <p>RENEWAL: THIS CONTRACT MAY BE RENEWED UPON THE MUTUAL WRITTEN CONSENT OF THE SPENDING UNIT AND VENDOR, SUBMITTED TO THE DIRECTOR OF PURCHASING THIRTY (30) DAYS PRIOR TO THE EXPIRATION DATE. SUCH RENEWAL SHALL BE IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF THE ORIGINAL CONTRACT AND SHALL BE LIMITED TO TWO (2) ONE</p> | | | | | | |

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE: Traci B. Ray
 TITLE: Regional Account Manager
 FEIN: 550539186
 TELEPHONE: 304-346-0549
 DATE: March 2, 2010

ADDRESS CHANGES TO BE NOTED ABOVE

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14. **CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf>
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I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

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| | | | | | | |
| <p>(1) YEAR PERIODS.</p> <p>CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICES SUPPLIED ARE OF AN INFERIOR QUALITY OR DO NOT CONFORM TO THE SPECIFICATIONS OF THE BID AND CONTRACT HEREIN.</p> <p>OPEN MARKET CLAUSE: THE DIRECTOR OF PURCHASING MAY AUTHORIZE A SPENDING UNIT TO PURCHASE ON THE OPEN MARKET, WITHOUT THE FILING OF A REQUISITION OR COST ESTIMATE, ITEMS SPECIFIED ON THIS CONTRACT FOR IMMEDIATE DELIVERY IN EMERGENCIES DUE TO UNFORESEEN CAUSES (INCLUDING BUT NOT LIMITED TO DELAYS IN TRANSPORTATION OR AN UNANTICIPATED INCREASE IN THE VOLUME OF WORK.)</p> <p>QUANTITIES: QUANTITIES LISTED IN THE REQUISITION ARE APPROXIMATIONS ONLY, BASED ON ESTIMATES SUPPLIED BY THE STATE SPENDING UNIT. IT IS UNDERSTOOD AND AGREED THAT THE CONTRACT SHALL COVER THE QUANTITIES ACTUALLY ORDERED FOR DELIVERY DURING THE TERM OF THE CONTRACT, WHETHER MORE OR LESS THAN THE QUANTITIES SHOWN.</p> <p>ORDERING PROCEDURE: SPENDING UNIT(S) SHALL ISSUE A WRITTEN STATE CONTRACT ORDER (FORM NUMBER WV-39) TO THE VENDOR FOR COMMODITIES COVERED BY THIS CONTRACT. THE ORIGINAL COPY OF THE WV-39 SHALL BE MAILED TO THE VENDOR AS AUTHORIZATION FOR SHIPMENT, A SECOND COPY MAILED TO THE PURCHASING DIVISION, AND A THIRD COPY RETAINED BY THE SPENDING UNIT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</p> | | | | | | |

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE **Traci B. Ray** *Traci B. Ray* TELEPHONE **304-346-0549** DATE **March 2, 2010**

TITLE **Regional Account Manager** IN **550539186** ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



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| <p>THE TERMS AND CONDITIONS CONTAINED IN THIS CONTRACT SHALL SUPERSEDE ANY AND ALL SUBSEQUENT TERMS AND CONDITIONS WHICH MAY APPEAR ON ANY ATTACHED PRINTED DOCUMENTS SUCH AS PRICE LISTS, ORDER FORMS, SALES AGREEMENTS OR MAINTENANCE AGREEMENTS, INCLUDING ANY ELECTRONIC MEDIUM SUCH AS CD-ROM.</p> <p>REV. 05/26/2009</p> <p>MANDATORY PRE-BID</p> <p>A MANDATORY PRE-BID WILL BE HELD ON 2/17/2010; 10:30 A AT THE INDUSTRIAL HOME FOR YOUTH, INDUSTRIAL, WV. ALL INTERESTED PARTIES ARE REQUIRED TO ATTEND THIS MEETING. FAILURE TO ATTEND THE MANDATORY PRE-BID SHALL RESULT IN DISQUALIFICATION OF THE BID. NO ONE PERSON MAY REPRESENT MORE THAN ONE BIDDER.</p> <p>AN ATTENDANCE SHEET WILL BE MADE AVAILABLE FOR ALL POTENTIAL BIDDERS TO COMPLETE. THIS WILL SERVE AS THE OFFICIAL DOCUMENT VERIFYING ATTENDANCE AT THE MANDATORY PRE-BID. FAILURE TO PROVIDE YOUR COMPANY AND REPRESENTATIVE NAME ON THE ATTENDANCE SHEET WILL RESULT IN DISQUALIFICATION OF THE BID. THE STATE WILL NOT ACCEPT ANY OTHER DOCUMENTATION TO VERIFY ATTENDANCE. THE BIDDER IS RESPONSIBLE FOR ENSURING THEY HAVE COMPLETED THE INFORMATION REQUIRED ON THE ATTENDANCE SHEET. THE PURCHASING DIVISION AND THE STATE AGENCY WILL NOT ASSUME ANY RESPONSIBILITY FOR A BIDDER-S FAILURE TO COMPLETE THE PRE-BID ATTENDANCE SHEET. IN ADDITION, WE REQUEST THAT ALL POTENTIAL BIDDERS INCLUDE THEIR E-MAIL ADDRESS AND FAX NUMBER.</p> <p>ALL POTENTIAL BIDDERS ARE REQUESTED TO ARRIVE PRIOR TO THE STARTING TIME FOR THE PRE-BID. BIDDERS WHO ARRIVE LATE, BUT PRIOR TO THE DISMISSAL OF THE TECHNICAL</p> | | | | | | |

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

| | | |
|--|----------------------------------|-----------------------------------|
| SIGNATURE Traci B. Ray | TELEPHONE 304-346-0549 | DATE March 2, 2010 |
| TITLE Regional Account Manager | FEIN 550539186 | ADDRESS CHANGES TO BE NOTED ABOVE |

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| <p>PORTION OF THE PRE-BID WILL BE PERMITTED TO SIGN IN. BIDDERS WHO ARRIVE AFTER CONCLUSION OF THE TECHNICAL PORTION OF THE PRE-BID, BUT DURING ANY SUBSEQUENT PART OF THE PRE-BID WILL NOT BE PERMITTED TO SIGN THE ATTENDANCE SHEET.</p> <p>WAGE RATES: THE CONTRACTOR OR SUBCONTRACTOR SHALL PAY THE HIGHER OF THE U.S. DEPARTMENT OF LABOR MINIMUM WAGE RATES AS ESTABLISHED FOR APPLICABLE COUNTY, PURSUANT TO WEST VIRGINIA CODE 21-5A, ET, SEQ. (PREVAILING WAGE RATES APPLY TO THIS PROJECT)</p> <p>ARBITRATION: ANY REFERENCES MADE TO ARBITRATION OR INTEREST FOR PAYMENTS DUE (EXCEPT FOR ANY INTEREST REQUIRED BY STATE LAW) CONTAINED IN THIS CONTRACT OR IN ANY AMERICAN INSTITUTE OF ARCHITECTS DOCUMENTS PERTAINING TO THIS CONTRACT ARE HEREBY DELETED.</p> <p>WORKERS' COMPENSATION: VENDOR IS REQUIRED TO PROVIDE A CERTIFICATE FROM WORKERS' COMPENSATION IF SUCCESSFUL.</p> <p>ALL OF THE ITEMS CHECKED BELOW WILL BE A REQUIREMENT OF THIS CONTRACT:</p> <p>(XX) INSURANCE: SUCCESSFUL VENDOR SHALL FURNISH PROOF OF COMMERCIAL GENERAL LIABILITY INSURANCE PRIOR TO ISSUANCE OF CONTRACT. UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS, THE MINIMUM AMOUNT OF INSURANCE COVERAGE REQUIRED IS \$250,000.</p> <p>CONTRACTORS LICENSE</p> <p>WEST VIRGINIA STATE CODE 21-11-2 REQUIRES THAT ALL PERSONS DESIRING TO PERFORM CONTRACTING WORK IN THIS</p> | | | | | | |

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| 02/02/2010 | | | | |

BID OPENING DATE: 03/02/2010 BID OPENING TIME 01:30PM

| LINE | QUANTITY | UQP | CAT NO | ITEM NUMBER | UNIT PRICE | AMOUNT |
|--|----------|-----|--------|-------------|------------|--------|
| <p>STATE MUST BE LICENSED. THE WEST VIRGINIA CONTRACTORS LICENSING BOARD IS EMPOWERED TO ISSUE THE CONTRACTORS LICENSE. APPLICATIONS FOR A CONTRACTORS LICENSE MAY BE MADE BY CONTACTING THE WEST VIRGINIA DIVISION OF LABOR CAPITOL COMPLEX, BUILDING 3, ROOM 319, CHARLESTON, WV 25305. TELEPHONE: (304) 558-7890.</p> <p>WEST VIRGINIA STATE CODE 21-11-11 REQUIRES ANY PROSPECTIVE BIDDER TO INCLUDE THE CONTRACTORS LICENSE NUMBER ON THEIR BID.</p> <p>BIDDER TO COMPLETE:</p> <p>CONTRACTORS NAME: <input type="text" value="Casto Technical Services"/></p> <p>CONTRACTORS LICENSE NO.: <input type="text" value="WV001241"/></p> <p>THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FURNISH A COPY OF THEIR CONTRACTORS LICENSE PRIOR TO ISSUANCE OF A PURCHASE ORDER/CONTRACT</p> <p>APPLICABLE LAW</p> <p>THE WEST VIRGINIA STATE CODE, PURCHASING DIVISION RULE AND REGULATIONS, AND THE INFORMATION PROVIDED IN THE "REQUEST FOR QUOTATION" ISSUED BY THE PURCHASING DIVISION IS THE SOLE AUTHORITY GOVERNING THIS PROCUREMENT.</p> <p>ANY INFORMATION PROVIDED IN SPECIFICATION MANUALS, OR ANY OTHER SOURCE, VERBAL OR WRITTEN, WHICH CONTRADICTS OR ALTERS THE INFORMATION PROVIDED FROM THE SOURCES AS DESCRIBED IN THE ABOVE PARAGRAPH IS VOID AND OF NO EFFECT.</p> <p>BANKRUPTCY: IN THE EVENT THE VENDOR/CONTRACTOR FILES</p> | | | | | | |

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

| | | | | | |
|-----------|---|-----------|---|-----------------------------------|--|
| SIGNATURE | <input type="text" value="Traci B. Ray"/> | TELEPHONE | <input type="text" value="304-346-0549"/> | DATE | <input type="text" value="March 2, 2010"/> |
| TITLE | <input type="text" value="Regional Account Manager"/> | FAX | <input type="text" value="550539186"/> | ADDRESS CHANGES TO BE NOTED ABOVE | |

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
DJS010282

PAGE
6

ADDRESS CORRESPONDENCE TO ATTENTION OF:
JOHN ABBOTT
304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

VENDOR

Casto Technical Services
 540 Leon Sullivan Way
 Charleston WV 25322

SHIP TO

DIVISION OF JUVENILE SERVICES
 WV INDUSTRIAL HOME FOR YOUTH
 7 INDUSTRIAL BOULEVARD
 INDUSTRIAL, WV
 26375 304-558-6029

| DATE PRINTED | TERMS OF SALE | SHIP VIA | F.O.B. | FREIGHT TERMS |
|------------------------------|---------------|--------------------------|--------|---------------|
| 02/02/2010 | | | | |
| BID OPENING DATE: 03/02/2010 | | BID OPENING TIME 01:30PM | | |

| LINE | QUANTITY | UOP | CAT NO. | ITEM NUMBER | UNIT PRICE | AMOUNT |
|--|----------|-----|---------|-------------|------------|--------|
| <p>FOR BANKRUPTCY PROTECTION, THE STATE MAY DEEM THE CONTRACT NULL AND VOID, AND TERMINATE SUCH CONTRACT WITHOUT FURTHER ORDER.</p> <p>REV. 5/2009</p> <p style="text-align: center;">NOTICE</p> <p>A SIGNED BID MUST BE SUBMITTED TO:</p> <p style="text-align: center;">DEPARTMENT OF ADMINISTRATION PURCHASING DIVISION BUILDING 15 2019 WASHINGTON STREET, EAST CHARLESTON, WV 25305-0130</p> <p>THE BID SHOULD CONTAIN THIS INFORMATION ON THE FACE OF THE ENVELOPE OR THE BID MAY NOT BE CONSIDERED:</p> <p>SEALED BID</p> <p>BUYER: JOHN ABBOTT-----</p> <p>REQ. NO.: DJS010282-----</p> <p>BID OPENING DATE: 3/2/2010-----</p> <p>BID OPENING TIME: 1:30 PM-----</p> <p>PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:</p> <p style="text-align: center;">304-346-8920</p> | | | | | | |

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

| | | | | | |
|-----------|--------------------------|-----------|--------------|-----------------------------------|---------------|
| SIGNATURE | Traci B. Ray | TELEPHONE | 304-346-8920 | DATE | March 2, 2010 |
| TITLE | Regional Account Manager | FAX | 550539186 | ADDRESS CHANGES TO BE NOTED ABOVE | |

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'



State of West Virginia
 Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

Request for Quotation

RFQ NUMBER
DJS010282

PAGE
7

ADDRESS CORRESPONDENCE TO ATTENTION OF:
JOHN ABBOTT
304-558-2544

RFQ COPY
 TYPE NAME/ADDRESS HERE

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Casto Technical Services
 540 Leon Sullivan Way
 Charleston WV 25322

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DIVISION OF JUVENILE SERVICES
 WV INDUSTRIAL HOME FOR YOUTH
 7 INDUSTRIAL BOULEVARD
 INDUSTRIAL, WV
 26375 304-558-6029

| | | | | |
|-----------------------------------|---------------|----------|--------|---------------|
| DATE PRINTED 02/02/2010 | TERMS OF SALE | SHIP VIA | F.O.B. | FREIGHT TERMS |
|-----------------------------------|---------------|----------|--------|---------------|

BID OPENING DATE: **03/02/2010** BID OPENING TIME **01:30PM**

| LINE | QUANTITY | UOP | CAT. NO. | ITEM NUMBER | UNIT PRICE | AMOUNT |
|---|----------|-----|----------|-------------|------------|--------------|
| PLEASE PRINT OR TYPE NAME OF PERSON TO CONTACT CONCERNING THIS QUOTE: | | | | | | |
| ----- Traci B. Ray ----- | | | | | | |
| ***** THIS IS THE END OF RFQ DJS010282 ***** TOTAL: | | | | | | \$132 288 00 |

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE **Traci B. Ray** *[Signature]* TELEPHONE **304-346-0549** DATE **March 2, 2010**
 TITLE **Regional Account Manager** FEIN **550539186** ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

**SERVICE AGREEMENT
GENERAL DESCRIPTION**

NAME: WV INDUSTRIAL HOME FOR YOUTH

EQUIPMENT: SEE ATTACHMENT A

COVERAGE: Total Maintenance

INSPECTIONS: Bi-monthly (Six times per year)

OIL ANALYSIS: Not Required

EXCLUSIONS:

1. Air Filters
2. Bearing Lubrication
3. Belt Replacement
4. Access to concealed refrigerant piping to be provided by the owner
5. Cleaning of the evaporator coils

HVAC BID SPECIFICATION – WV INDUSTRIAL HOME FOR YOUTH

The West Virginia Division of Juvenile Services requests quotations to contract services for the below listed scope of work for the West Virginia Industrial Home for Youth (hereinafter referred to as WVIHY) Vendor is to provide an extended warranty on existing equipment.

Contractor must demonstrate at the pre-bid meeting his ability to remotely access the customer's Trane Tracer Summit control system to make changes to schedules, temperature settings, and trouble shoot specific comfort complaints w/recommendations for adjustments or repairs. In addition, the contractor will be asked to back up the database, investigate alarms, and answer other questions from the customer concerning programming and graphic changes.

Contractor must furnish all labor, overtime, travel time, travel expenses, service supplies, tools and repair parts to maintain and repair the equipment as listed. This is to include the Trane Tracer Summit control system. All parts must be manufacturer replacement parts in order to maintain the integrity of the system.

Contractor must be available (on call) twenty-four (24) hours per day seven (7) days per week to respond to requests for emergency service. Contractor must respond to calls for service within four (4) hours of notification. Failure to respond within four (4) hours will result in a charge to the contractor of \$100.00 per hour for each hour over the four (4) hour limit. Emergency phone numbers are to be included in the bid.

Contractor must provide BI-Monthly preventive maintenance inspections as per the attached maintenance schedules. Service reports of each visit must be signed by the customer representative and one (1) copy left on the job site.

Customer must call twenty-four (24) hours in advance to make an appointment prior to coming in on their scheduled maintenance.

Contractor must provide a list of five (5) current total maintenance contracts, valued at a minimum of \$10,000.00 each, on Trane HVAC equipment, including Trane Tracer Summit Systems, with the bid document. Contracts must have been in effect for the last three (3) years and must be within a 125 mile radius of the WVIHY. Vendor must provide contact names and phone numbers for references.

TOTAL MAINTENANCE

This plan provides preventive maintenance inspections, emergency service and all labor and parts, including oil, refrigerant and other materials to diagnose, repair or replace components of the equipment/systems listed as needed to ensure proper operation.

All vendors bidding on the equipment listed in the specifications are required to submit in writing an indication the products meets or exceeds the specifications set forth. If a vendor bids a product which does not meet the specifications as outlined for that item, but they believe exceeds the specifications, then the vendor is required to submit their exceptions in writing, specifically listing the item and line specification(s) which they are taking exception to. **Vendors are also required to submit a product sheet with their bid that shall include each item listed and at a minimum: Manufacturer, Model number and general specifications for each item.**

All Air Conditioning Units will fall under Schedule 14& 45

All Furnaces to fall under Schedule 29 & 46

Laptop Computer for HVAC system will need to be maintained by the Successful bidder.

There will be a Mandatory pre-bid meeting held at the following location:

**West Virginia Industrial Home for Youth
7 Industrial Blvd.
Salem, WV 26426**

NOTE: Emergency service is service provided for equipment other than regular scheduled maintenance visits and is available on a priority basis to contract customers 24 hours a day, 7 days a week.

| <i>Agreement No</i> | <i>Equipment Covered</i> | <i>Attachment</i> |
|---|--------------------------|-------------------|
| <i>WV INDUSTRIAL HOME FOR YOUTH</i> | | <i>A</i> |

This AGREEMENT applies only to the equipment listed below.

QUANTITY MANUFACTURER EQUIPMENT INFORMATION SCHEDULE

Building A

| | | | |
|---|----------------|--|----|
| 2 | Bryan | Hot water Heating Boilers | 20 |
| 2 | Bell & Gossett | Hot Water Circulating Pumps | 23 |
| 1 | Trane | Air Handler 1 Altivar Speed drive Tag AH 1 | 29 |
| 1 | Trane | 30 Ton Condensing Unit Tag CU 8 | 14 |
| 1 | Trane | Air Handler 1 Altivar Speed drive Tag AH 2 | 26 |
| 1 | Trane | 12.5 Ton Condensing Unit Tag CU 9 | 14 |
| 1 | Trane | AHU 3 2 Altivar Speed Drives TAG AH 3 | 29 |
| 1 | Trane | 40 Ton Condensing Unit Tag CU 10 | 14 |
| 1 | Trane | Roof Top Air Handler Tag RTU 1 | 14 |
| 1 | Trane | 2 TON CU Tag CU 1 | 14 |
| 1 | Trane | Roof Top Air Handler Tag TRU 2 | 14 |
| 1 | Trane | 20 Ton CU Tag CU 2 | 14 |
| 1 | Trane | Roof Top Air Handler Tag RTU 3 | 14 |
| 1 | Trane | 20 Ton CU Tag CU 3 | 14 |
| 1 | Trane | Roof Top Air Handler Tag RTU 4 | 14 |
| 1 | Trane | 20 Ton Condensing Unit Tag CU 4 | 14 |

| | | | |
|----|-----------|--|----|
| 1 | Trane | Roof Top Air Handler Tag RTU 5 | 14 |
| 1 | Trane | 20 Ton Condensing Unit Tag CU 5 | 14 |
| 1 | Trane | Roof Top Air Handler 2 ALTIVAR SPEED DRIVES Tag RTU 6 | 14 |
| 1 | Trane | 50 Ton Condensing Unit Tag CU 6 | 14 |
| 1 | Trane | Roof Top Air Handler Tag RTU 7 | 14 |
| 1 | Trane | 30 Ton Condensing Unit Tag CU 7 | 14 |
| 1 | Trane | Air Handler Tag EF 17 | 29 |
| 2 | AMS | Split System Equipment Room Cooling Units | 45 |
| 47 | Trane | Variable Volume Boxes | 53 |
| 1 | Trane | Tracer Summit BCU | 56 |
| 1 | Trane | Tracer Summit Color Graphic Workstation | 56 |
| 3 | Armstrong | Domestic Hot Water Pumps | 60 |
| 1 | Vessel | Air Bladder Tank | |
| 2 | Trane | Air Handler 1 ALTIVAR SPEED DRIVE Tag AH 4 | 29 |
| 2 | Armstrong | Circulating Pump on Domestic Hot Water | |
| 1 | Vessel | Air Bladder Tank | 60 |

Building B

| | | | |
|---|--------|--|----|
| 1 | Trane | Air Handler 1 ALTIVAR SPEED DRIVE Tag AH 4 | 29 |
| 1 | Trane | 25 TON CU | 14 |
| 1 | Reznor | Air Handler TAG MUA 1 | 29 |
| 1 | Trane | 30 TON CU | 14 |
| 1 | Trane | Furnace TAG F 1 | 29 |
| 1 | Trane | 5 TON CU | 14 |

| | | | |
|---|----------------|----------------------------|----|
| 1 | Lochinvar | Heating Boiler Tag B 3 | 20 |
| 1 | Armstrong | Hot Water Circulating Pump | 23 |
| 1 | Bell & Gossett | HW CIRC PUMPS | 23 |
| 1 | Trane | Tracer Summit BCJ | 56 |
| 2 | Wessel | Bladder Tank | 60 |

LAUNDRY

| | | | |
|---|-----------|----------------------------|----|
| 1 | REZNOR | Air Handler TAG MU-2 | 29 |
| 1 | Trane | 15 TON Condensing Unit | 14 |
| 1 | Lochinvar | Hot Water Heater Boiler | 20 |
| 1 | Armstrong | Hot Water Circulating Pump | 23 |

VO TECH BUILDING

| | | | |
|---|---------|---|---------|
| 1 | Carrier | WEATHER MASTER RTU | 14 |
| 1 | Carrier | HVAC | 29 |
| 1 | Carrier | M 48TCEA06A2A5A0A0A0 S - 1709G10296 208/230V Voltage 253max. 187min. | 14 & 29 |

ADMINISTRATION BUILDING

First Floor # 1:

- Model FG6RC 100C 16B Serial FGAO 11009 650 29
- 100,000BTU 115V 60HZ 1PH 14.1 amps
- ½ HP Blower motor model 902815

2:

- Model FG6RC 100c 16B Serial FGAO 108 12212 29
- 100,000BTU 115V 60HZ 1 PH 14.1amps
- ½ HP Blower model 902815

Admin Furnace # 1:

- Model FG6RO 100c 16B Serial FGAO-108 12217 29
- 100,000BTU 115V 60HZ 1PH 14.1amps
- ½ HP Blower motor Model 902815

2:

- Model FG6RC 100c 16B Serial FGAO108 12225 29
- 100,000BTU 115V 60HZ PH1 14 lamps

- ½ HP Blower Model 902815

AMINISTRATION BUILDING CONTINUED

FIRST FLOOR

- Model – FS3BA – 048KA 14
- Four Ton
- SN: FSA010209134
- 60 HZ 1PH 208-230
- AMPS 23 2

- Model – FS3BA – 048KA 14
- Four ton
- SN: FSA010207906
- 60HZ 208-230
- Amps 23 2

SECOND FLOOR

- Model – FS3BA – 048KA 14
- Four ton
- SN: FSA010208117
- Amps 23 2
- 1 phase 60HZ 208-230

- Model – FS3BA – 048KA 14
- Four ton
- SN: FSA010205369
- Amps 28 6 1 phase 60HZ 208-230

Standard Building

First floor HVAC room / These are twin left side:

Schedule

- Model FG6RC 060C 12A SN: FGAO 2060 4111 29
- 115v 60HZ 1PH 7 8amps 80,000BTU
- 1/3 HP Blower Serial 902814

Right Side:

- Model FG6RC 060C 12A SN: FGA010812504 29

- 80,000BTU 115V 60HZ 1PH 12 2amps
- 1/3 HP Blower Serial 902814

3 Boiler Room:

- Model FG6RC 100C 16B Serial FGA00207 10004 29
- 115v 60HZ 1PH 100,000BTU 9 7amps

2 Boiler Room:

- Model FG6RC 100C 16B Serial FGA0207 12526 29
- 115V 60HZ 1PH 100,000BTU 9 7amps
- 1/2HP Blower Serial 902815

1 Boiler Room:

- Model FG6RC 100C 16B Serial FGA020710003 29
- 100,000BTU 9 7amps 115V 1PH 60HZ
- 1/2HP Blower Serial 902815

Third floor furnace room/ these are twin units:

On right:

- Model FG6RC 120C 20C Serial FGA020203320 29
- 115V 60HZ 1PH 12 9amps 120,000
- 3/4HP Blower Serial 902816

On left:

- Model FG6RC 120C 20C Serial FGA020203320 29
- 115V 60HZ 1PH 12.9amps 120,000
- 3/4HP Blower Serial 902816

Second Floor

These are Twin / one on left:

- Model FG6RC 120C 20C Serial FGA020205178 29
- 115V 1PH 60HZ 12 9amps 120,000BTU
- 3/4HP Blower Serial 902816

One on right:

- Model FG6RC 120C 20C Serial FGA020205178 29
- 115V 1PH 60HZ 12 9amps 120,000BTU
- 3/4HP Blower Serial 902816

STANARD BLDG/ All units are Frigidaire High Efficiency
TRAINING LEVEL

1 Model – FSA38A 048KA 14
SN: FSA020400249
Three ton Phase 1
V208-230 15.9amps

1 Model – FS38A 048KA 14
SN: FSA0202 10157
Four ton Phase 1 V208-230
23.2amps

1 Model – F53BA 048KA 14
SN: FSA020509128
Four ton Phase 1 V208-230
Total amps 23 2

THIRD FLOOR

1 Model – FS3BA 048KA 14
SN: FSA020405505
Four ton amps 23.2
60HZ phase 1 V208-230

1 Model – FS3BA 048KA 14
SN: FSA020405519
Four ton 23.2amps 60HZ
Phase 1 V208-230

SECOND FLOOR

1 Model – FS3BA 042KA 14
SN: FSA020706851
3.5 ton 18.1amps
60HZ V208-230

1 Model – FS3BA 042KA 14
SN: FSA020311324
3.5 ton 18.1 amps
60HZ V208-230

Schedule

STANARD I OFFICES

1 Model – FS3BA 024KA 14
SN: FSA020803447
Two ton 10.5amps
V208-230 60HZ

JONES BUILDING / OUTSIDE
FIRST FLOOR
SHORT HALL

| | | |
|-----------------------|--|----|
| 1 | Model - FS3BA -036KA SN - FSA020400274 Three Ton Amps 15 9 Volts 208-230 Phase 1 60HZ | 14 |
| 1 | Model - FS3BA - 036KA SN: FSA020400265 15 9 total amps Three ton Phase 1 Volts 202-230 | 14 |
| BOILER ROOM | | |
| 1 | Model - FS3BA0036KA SN: FSA020707758 Three ton Amps 15 9 Volts 208-230 phase 1 | 14 |
| FIRST FLOOR LONG HALL | | |
| 1 | Model - F53BA 036KA SN: FSA020400255 Three ton Amps 15 9 Phase 1 Volt 208-230 | 14 |
| 1 | Model - FS3BA 036KA 15 9 AMPS Three ton Phase 1 V208-230 | 14 |
| 1 | Model - FS3BA 036KA SN: FSA020400272 15.9 amps Three ton Phase 1 V209-230 | 14 |
| 1 | Model - FS3BA 096KA SN: FSA020400245 15 9 Amps Three ton Phase 1 V208-230 | 14 |
| JONES FIRST FLOOR | | |
| 1 | Model - FS3BA024KA SN:FSA020102953 Two ton 15 5 amps Phase 1 V208-230 | 14 |

| | | |
|---|---|----|
| 1 | Model – FSBA 036KA SN: FSA020607339 Three ton 15.5 amps V208-230 Phase 1 | 14 |
|---|---|----|

LAUNDRY UNIT

| | | |
|---|---|----|
| 1 | Model – TTA180B300CC SN: P404K9LAH 80amps 3 phase 60HZ Breaker amp 100 series | 29 |
|---|---|----|

FIRST FLOOR/PART OF KITCHEN

| | | |
|---|---|----|
| 1 | Model – FS3BA 048KA SN: FSA020509126 Four ton 23.2amps V208-230 phase 1 | 14 |
|---|---|----|

| | | |
|---|---|----|
| 1 | Model – FS3BA 048KA SN: FSA020509125 23.2 amps Four ton phase 1 V208-230 | 14 |
|---|---|----|

| | | |
|---|---|----|
| 1 | Model – FS3BA 048KA SN: FSA020509165 Four ton 23.2 amps Phase 1 V208-230 | 14 |
|---|---|----|

| | | |
|---|---|----|
| 1 | Model – FS3BA 036K SN: FSA020400247 Three ton 15.9 amps Phase 1 V208-230 | 14 |
|---|---|----|

| | | |
|---|---|----|
| 1 | Model – FS3BA 036KA SN: FSA011002605 Three ton 15.0amps Phase 1 V208-230 | 14 |
|---|---|----|

JONES KITCHEN

| | | |
|---|---|----|
| 1 | Model – FS3BA 042KA SN: DSA020803151 Three ton 15.1amps Phase 1 V208-230 | 14 |
|---|---|----|

JONES FIRST FLOOR

| | | |
|---|---|----|
| 1 | Model – FS3BA 042KA SN: FSA020311195 Three ton 19 1amps Phase 1 V208-230 | 14 |
|---|---|----|

JONES BUILDING ALL UNITS ARE FRIGIDAIRE

| | Schedule |
|--|----------|
| First unit behind Jones kitchen / Left side facing: <ul style="list-style-type: none"> • Model FG6RC 100c 16B SN: FGA011105336 • 100,000BTU 14.1 amps ½ HP Blower motor 902815 | 29 |
| Right side facing / These units twin: <ul style="list-style-type: none"> • Model FG6RC 060C – 12A SN: FGA020300994 • 60,000BTU 7 8amps 115V 60HZ 1PH • Motor 1/3 HP Blower motor Model 902814 | 29 |
| Old medical unit: <ul style="list-style-type: none"> • Model FGRC 0800 – 16B SN: FGA02060 1587 • 80,000BTU 115V 60HZ 1PH 9 7amps • ½ HP Blower Motor Model 902815 | 29 |
| First floor Jones / Short Hall: <ul style="list-style-type: none"> • Model FG6RC 080C 16B SN: FGA020601124 • 115V 60HZ 1PH 9.7amps 80,000BTU • Motor blower ½ HP Model 902815 | 29 |
| Boiler room: <ul style="list-style-type: none"> • Model FG6RC 1000 16B SN: FGA0207 12541 • 115V 60HZ 1PH 9.7amps • ½ HP Blower model 902815 100,000BTU | 29 |
| Laundry Office: <ul style="list-style-type: none"> • Model FG6RC 100C 16B SN: FGA0208 12268 • 115V 60HZ 1PH 9 7amps • ½ HP Blower motor Model 902815 100,000BTU | 29 |
| First floor locker room: <ul style="list-style-type: none"> • Model FG6RC 100C 16B SN: FGA011105335 • 100,000BTU 115V 60HZ 1PH 14.1amps • ½ HP Blower motor Model 902815 | 29 |

| | |
|--|----|
| First floor / First Room on left: | |
| <ul style="list-style-type: none"> • Model FG6RC 060C 12A SN: FGA02060-4118 • 60,000BTU 115V 60HZ 1PH 7 8amps • ½ HP Blower Motor Model 902814 | 29 |
| <ul style="list-style-type: none"> • 060C-12A SN: FGA0106 12296 • 115V 60HZ 1PH 12 2amps • 1/3 HP Blower motor model 902814 60,000BTU | 29 |
| Right side: | |
| <ul style="list-style-type: none"> • Model FG6RC 060C 12A SN: FGA02060 1408 • 115V 60HZ 1PH 7 8amps BTU 60,000 • 1/3 HP Blower motor Serial: 902814 | 29 |
| Jones II / End of Long Hall / First on left | |
| <ul style="list-style-type: none"> • Model FG6RC 060C-12A SN: FGA011102720 • 60,000BTU 12 2amps 60HZ 1PH 115V • 1/3 HP Blower motor 902814 | 29 |
| One on Right / These are twined: | |
| <ul style="list-style-type: none"> • Model FG6RC 060C 12A SN: FGA010812505 • 80,000BTU 115V 60HZ 1PH 12 2amps • 1/3 HP Blower motor Serial 902814 | 29 |
| Jones II / Short Hall | |
| <ul style="list-style-type: none"> • Model FG6RC 080C 16BSN: FGA011001036 • 80,000BTU 115V 60HZ 1PH 14 lamps • ½ HP Blower motor Model 902815 | 29 |
| Jones II / Second floor locker room: | |
| <ul style="list-style-type: none"> • Model FG6RC 100C 16B SN: FGA020504862 • 100,000BTU 115V 60HZ 1PH 9 7amps • ½ HP Blower motor Serial: 902815 | 29 |
| Entering 2 nd floor Long Hall First door on left: | |
| <ul style="list-style-type: none"> • Model FG6RC 080C 16B SN: FGA020505073 • 80,000BTU 115V 60HZ 1PH 9.7amps • ½ HP Blower motor Model 902815 | 29 |
| Unit on right: | |
| <ul style="list-style-type: none"> • Model FG6RC 100C-16B SN: FGA020504836 • 100,000BTU 115V 60HZ 1PH 9.7amps • ½ HP Blower motor Model 902815 | 29 |

VO TECH ROOF TOP UNIT

- New Carrier
 - M – 48TCEA06A2A5A0A0A0
 - S – 1709G10296
 - 208/230V
 - Voltage 253 max 187min
- 14 & 29

JOHNSTON SCHOOL TRANE HEAT PUMPS

Schedule

RM 103

- Model: GETB03611A02A051C01000010480L0000000
 - SN: W06F36645 VOLTS 208 60 HZ 1PH
 - MIN CKT AMPACITY 23 3
 - MAX WATER WORKING PRESSURE 400PSI HP 6
- 14 & 29

RM 102

- Model: GETB03611A024051C01000010480L0000000
 - SN: W06F36652 AMPACITY 23 3 VOLTS 208
 - 60HZ 1PH MAX WATER WORKING PRESSURE 400PSI HP 6
- 14 & 29

RM 109

- Model: GETB03611A024051C01000010480B0000000
 - SN: W06F36650 VOLTS 208 60HZ 1PH
 - AMPACITY 23 3 MAX WATER WORKING PRESSURE 400PSI HP6
- 14 & 29

RM 110

- Model: GEVB04831N0200TLC0100001000000000000
 - SN: W06643106 COMPRESSOR & BLOWER 208
 - COMPRESSOR 60HZ 3PH BLOWER 60HZ 1PH 1HP
 - TAGGING 7HP WATER WORKING PRESSURE 400PSI VOLT 208
- 14 & 29

RM:111

- Model: GETB02411A024051C01000010480B0000000
 - SN: W06F36644 V-208 60HZ 1PH AMPS 15 8
 - WATER WORKING PRESSURE 400PSI HP 4
- 14 & 29

RM 213

- Model: GETB03611A024051C01000010480B0000000 14 & 29
- SN: W06F36649 V 208 HZ 60 PH1 AMPACITY 23 3
- WATER WORKING PRESSURE 400 6HP

RM 214

- Model: GEVB04831N0200TLC010000100000000000 14 & 29
- SN: W065U3105 V-208 60HZ 3HP AMPACITY 22.9
- HP 7 WATER WORKING PRESSURE 400PSI

RM 215

- Model: GETB036611A024051C01000010480L0000000 14 & 29
- SN: W06F36646 V 208 PH1 AMPS 23 3
- WATER WORKING PRESSURE 400PSI

RM 210

- Model: GETB03611A02A051C01000010480L0000000 14 & 29
- SN: W06F36647 V208 60HZ 1PH AMPS 23 3
- MAX WATER PRESSURE 400PSI MOTOR 5HP

RM 209

- Model: GETB03611A020451C01000010480B0000000 14 & 29
- SN: W06F36651 VOLT 208 60HZ 1PH AMPS 23 3
- MOTOR HP6 WORKING WATER PRESSURE 400PSI

RM 208

- Model: GETB03611A024051C0100010480B0000000 14 & 29
- SN: W06F36648 V208 60HZ 1PH AMPS 23.3
- MOTOR HP6 WORKING WATER PRESSURE 400PSI

RM 207

- ERV ROOM TRACER LOOP CONTROLLER 56
- TRANE TOUCH SCREEN
- BRYANT GAS BOILER UNIT #12 630 G20A 642787

- AUTOMATIC STORAGE WATER HEATER 21DF 20
- MODEL BTH 199A-970
- SN: E06M01065 GAS CAPACITY 100 0

- ERV II FLOOR INDECCO 29
- 280 VOLT 3PH 24 CONTROL VOLTS
- PO NUMBER S-172723 TAG # 793782
- NO MODEL # SPECIAL FEATURE CODE-CL4M603T204Z2
- TRANE VOYAGER HVAC-2 GYM 47 TON

JOHNSTON SCHOOL HEAT PUMPS - TRANE UNITS

RM 102

Schedule

- Model: GETB03611A024051C01000010480L0000000 14 & 29
- SN: W06F36652 VOLTS208 60HZ 1PH AMPS 23 3
- 6HP MAX WATER WORKING PRESSURE 400PSI ON ALL UNITS

RM 103

- Model: GETB03611A02A051C01000010480L0000000 14 & 29
- SN: W06F36645 VOLTS 208 60HZ 1PH AMPS 23 3
- HP-6 WATER WORKING PRESSURE 400PSI

RM 109

- Model: GETB03611A024051C01000010480B0000000 14 & 29
- SN: W06F36650 VOLTS 208 60HZ 1PH AMPPCITY 23 3
- HP-6

RM 110

- Model: GEVB04831N0200TLC010000100000000000 14 & 29
- SN: W06G43106 VOLTS 208 COMPRESSOR 60HZ
- 3HP 7HP 23 3AMPS

RM 111

- Model: GETB0241A024051C01000010480B0000000 14 & 29
- SN: W06F36644 V208 1PH 60HZ AMPS 15 8 HP4

RM 208

- Model: GETB03611A024051C0100001048B0000000 14 & 29

- SN: W06F36648 V208 60HZ 1PH AMPS 23 3 MOTOR 6HP

RM 209

- Model: GETB03611A020451C01000010480B0000000 14 & 29
- SN: W06F36651 VOLTS 208 60HZ 1PH AMPS 23 3
- MOTOR 6HP

RM 210

- Model: GETB03611A02A051C01000010480L0000000 14 & 29
- SN: W06F36647 VOLTS 208 1PH AMPS 23.3
- MOTOR 5HP

RM 213

- Model: GETB03611A024051C01000010480B0000000 14 & 29
- SN: W06F36649 VOLT 208 60HZ PH1 AMPS 23.3
- MOTOR 6HP

RM 214

- Model: GEVB04831N0200TLC010000000000000000 14 & 29
- SN: W06G43105 VOLTS 208 60HZ 3PH AMPS 22 9
- HP-7

RM 215

- Model: GETB03611A024051C01000010480L0000000 14 & 29
- SN: W06F36646 VOLTS 208 PH1 AMPS 23 3
- 6HP
- BRYANT GAS BOILER 20
- UNIT # 12 630 C20A 642787
- AUTOMATIC STORAGE WATER HEATER 21DF 20
- Model: bth199a-970
- SN: E06M01065 GAS CAPACITY 100 0
- ERV II FLOOR INDEECO 29
- 280 VOLT 3PH 24 CONTROL VOLTS
- PO # S-172723 NO MODEL #
- SPECIAL FEATURE CODE CL4M603T204Z2
- ERVI FLOOR INDEECO

Johnston School Cooling Tower/ Stand Alone Unit
Contractor will Clean and Dispense of necessary Chemicals

- EVAPCO Chiller
- Model # ATW-36-4F-Z
- Serial # 8-343985

JOHNSTON GYM HVAC II

- Model – YCH181C3LFCA 14
- SN: 626100690D
- V208-230 60HZ 3 phase 38 1 amps

JOHNSTON AUDITORIUM

- Model – YHC092A39HA2HG001A1B10201-D 14
- SN: 625101521L
- V208-230 3phase 38 1amps

STATE HOUSE

- Model – FSA010506312 14
- SN: FSA010506312
- Two ton 10 5amps 60HZ 1 phase

| | | |
|---|---|-----------------|
| <i>Agreement No</i> | PREVENTIVE MAINTENANCE | SCHEDULE |
| <i>WV INDUSTRIAL HOME FOR YOUTH</i> | <i>AIR COLLED RECIPROCATING PACKAGE/ROOFTOP UNITS AND OTHER DESIGNAIED CONDENSING UNITS</i> | 14 |

Contractor will furnish maintenance and service for the equipment designated "Condensing Unit" or "CU" as follows:

1. **ANNUAL WINTER INSPECTION** - Once a year, a thorough preventive maintenance schedule will be performed including the following:
 - a) Check unit thoroughly for refrigerant leaks
 - b) Check & calibrate safety controls and overloads
 - c) Meg compressor motor and readings
 - d) Check main starter, tighten all starter terminals and check contacts for wear.
 - e) Check oil level in compressor (where applicable)
 - f) Tighten motor terminals and control panel terminals
 - g) Check crankcase heater
 - h) Check external interlocks
 - i) Check oil sample for acid (where applicable)
 - j) Lubricate fan bearings
 - k) Inspect and adjust belt alignment and tension (replace if required)
 - l) Check damper operation Lubricate and adjust as required
 - m) Inspect filters.
 - n) Gas heat option.
 - 1) Check operation and calibration of gas train components
 - 2) Check burner sequence of operation
 - 3) Check combustion blower and clean if required
 - 4) Check combustion efficiency
 - 5) Inspect heat exchanger
 - 6) Check and calibrate operating controls.
 - o) Electric Heat Option
 - 1) Inspect electrical connections and contactors
 - 2) Check and calibrate all operating and safety controls
 - p) Hot Water/Steam Option
 - 1) Inspect control valves and traps
 - 2) Check and calibrate all operating and safety controls.
2. **WRITTEN REPORTS** – Provided to customer representative following each regular inspection or emergency call.

3. SEASONAL START-UP

- a) Meg test compressor motor.
- b) Start unit; check controls and calibrate.
- c) Check compressor oil levels (where applicable).
- d) Make operating log including refrigerant pressures, temperatures, super heat and sub cooling
- e) Check burner or heating element operation (where applicable)
- f) Check starter operation, voltage and current
- g) Set up operating log with operating, instruct and advice troubleshooting techniques

4. SCHEDULED PREVENTIVE MAINTENANCE – Six (6) (Bi-monthly) inspections will be made during operation

- a) Make operating log of temperatures, pressures, voltages and amperages, etc
- b) Check and adjust operating and safety controls
- c) Check operation of crankcase heater
- d) Check oil levels and add as required.
- e) Check operation of control circuit.
- f) Check operating log with operator, discuss operation of the unit(s) generally.
- g) Inspect filters. **(Filter service provided by owner).**
- h) Check operation of burner and heating elements (winter)
- i) Check operation of motor and starter
- j) Check heating controls (in season)
- k) Check gas burner or heating element operation (in season)
- l) Check and adjust fan belt tension **(Replacement of worn or damaged belts provided by owner).**

5. CLEAN CONDENSER COILS – Once a year, furnish cleaning of condenser coil.

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|---|-----------------------------------|-----------------|
| <i>Agreement No</i> | PREVENTIVE MAINTENANCE | SCHEDULE |
| <i>WV INDUSTRIAL HOME FOR YOUTH</i> | GAS FIRED BOILER | 20 |

Contractor will furnish maintenance and service for the listed boilers as follows:

1. ANNUAL PRE-SEASON MAJOR MAINTENANCE

- a) Secure and drain boiler.
- b) Open fireside and waterside for cleaning and inspection.
- c) Check heating surfaces and waterside for corrosion, pitting, scale, blisters, bulges and soot
- d) Inspect refractory.
- e) Clean or replace water column sight glass
- f) Clean fire inspection glass.
- g) Disassemble, clean and inspect low water cutoff control(s)
- h) Reassemble boiler and low water cutoff control(s) w/new gaskets
- i) Check blow down valve packing and lubricate
- j) Refill boiler
- k) Perform hydrostatic test if required
- l) Test safety/relief valve(s) after start-up (full pressure test)
- m) Clean or replace fuel filters
- n) Clean fuel nozzles
- o) Clean burner fan wheel and air dampers
- p) Clean flame safeguard scanner
- q) Clean and adjust ignition electrodes
- r) Check all burner linkage for excessive wear
- s) Tighten all linkage set screws
- t) Lubricate motor and shaft bearings
- u) Check gas valves against leakage (where test cocks are provided)
- v) Replace vacuum tubes (if used) in flame safeguard control
- w) Clean contacts in program timer
- x) Check operation of flame safeguard control
- y) Check operation of modulating motor
- z) Perform pilot turndown test
- aa) Check operation of low water cutoff and feed control(s)
- bb) Check settings and test all operating and limit controls
- cc) *Check outside fresh air shutters, switches and controls.*

2. SEASON START-UP

Check for leaks in the systems.

- a) Review manufacturer's recommendations for boiler and burner start-up

- b) Check fuel supply
- c) Check auxiliary equipment operation
- d) Inspect burner and controls prior to start-up
- e) Start burner and check operating controls. Test safety controls and pressure relief valve
- f) Perform combustion tests and adjust burner for maximum efficiency
- g) Log all operating conditions
- h) Review operating procedures and owner's log w/boiler operator

3. SCHEDULED PREVENTIVE MAINTENANCE – Six (6) inspections will be made during the operating season:

- a) Review owner's log Log all operating conditions
- b) Test low water cutoff and pressure relief valve
- c) Blow down and test low water cutoff and feed control(s).
- d) Check for water, steam and fuel leaks.
- e) Check sequence and operation of flame safeguard control.
- f) Check setting and test operating and limit controls
- g) Check operation of modulating motor
- h) Life safety/relief valves w/at least 70% rated pressure
- i) Blow down gauge cocks and try cocks to confirm glass water level
- j) Check and test boiler blow down valve
- k) Lubricate motor and shaft bearing (as required)

4 Check customer's log w/operator and discuss operation of boiler

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|---|---|------------------------|
| <i>Agreement No</i> | PREVENTIVE MAINTENANCE PUMPS | SCHEDULE 23 |
| <i>WV INDUSTRIAL HOME FOR YOUTH</i> | | |

Contractor will furnish maintenance and service for the listed pumps as follows:

1. **SEASONAL START-UP**
 - a) Inspect motor bearings per manufacturer's recommendations (**Lubrication of bearings provided by owner**).
 - b) Tighten all nuts and bolts Check motor mounts and vibration pans, adjust or replace if necessary
 - c) Visually check pump alignment and coupling
 - d) Check motor operating conditions.
 - e) Inspect electrical connections and contractors
 - f) Check and clean strainers if necessary.
 - g) Inspect pump packing and mechanical seal. Replace as needed.
 - h) Operator pumps and checks efficiency

2. **WRITTEN REPORTS** – To be provided to owner's representative following each regular inspection or emergency call

3. **SCHEDULED PREVENTIVE MAINTENANCE** – Six (6) times (Bi-monthly)
 - a) Check for proper lubrication of motor and pump bearings
 - b) Check suction and discharge pressures
 - c) Check packing and mechanical seal Adjust as necessary
 - d) Check motor voltage and amperage

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| <i>Agreement No</i> | PREVENTIVE MAINTENANCE | SCHEDULE |
| <i>WV INDUSTRIAL HOME FOR YOUTH</i> | <i>CENTRAL STATION AIR HANDLING UNIT AND OTHER FURNACE'S</i> | 29 |

Contractor will furnish maintenance and service for the listed air handling equipment as follows:

1. **ANNUAL WINTER MAINTENANCE** – Once a year, a thorough preventive maintenance schedule will be performed including the following:
 - a) Inspect and clean coil.
 - b) Inspect drain pan and drain line
 - c) Inspect fan wheels.
 - d) Inspect drive sheaves.
 - e) Check belt alignment and tension
 - f) Check for proper lubrication (Lubrication of bearings provided by owner)
 - g) Check bearing and motor mountings
 - h) Check motor operating voltage and amperage
 - i) Check inlet valves (where applicable) and damper operation

2. **WRITTEN REPORTS** – To be provided to the owner's representative following each regular inspection or emergency call

3. **SCHEDULED PREVENTIVE MAINTENANCE** – Six (6) (Bi-monthly) inspections will be made during operation.
 - a) Check belt tightness and alignment (**Replacement of any worn or faulty belts responsibility of the owner**).
 - b) Check for proper lubrication and inform owner if necessary.
 - c) Check bearing and motor mountings
 - d) Check for excessive vibration or noise Correct as required.
 - e) Inspect filters (**Filter service provided by owner**).
 - f) Vacuum cabinet interior and fan wheel
 - g) Ignitors
 - h) Check circuit boards.
 - i) Check switches.

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| <i>Agreement No</i> | PREVENTIVE MAINTENANCE | SCHEDULE |
| <i>WV INDUSTRIAL HOME FOR YOUTH</i> | <i>SPLIT SYSTEM A/C UNITS AND HEAT PUMP AND OTHER CONDENSING UNITS</i> | 45 |

Contractor will furnish maintenance and service for the equipment designated "split system air conditioner" and "heat pump" as follows:

1. **ANNUAL WINTER INSPECTION** – Once a year, a thorough preventive maintenance schedule will be performed including the following:
 - a) Check unit thoroughly for refrigerant leaks
 - b) Check and calibrate safety controls and overloads
 - c) Meg compressor motor and record readings
 - d) Check main starter, tighten all starter terminals and check contacts for wear
 - e) Check oil level in compressor (where applicable)
 - f) Tighten motor terminals and control panel terminals
 - g) Check crankcase interlocks
 - h) Check oil sample for acid (where applicable)
 - i) Inspect fan bearings. (Lubrication provided by owner) .
 - j) Inspect and adjust belt alignment and tension (Replacement, if required, to be provided by owner).
 - k) Check damper operation Lubricate and adjust as required.
 - l) Inspect filters

2. **WRITTEN REPORTS** – Provided to customer representative following each regular inspection or emergency call

3. **SEASONAL START-UP**
 - a) Meg test compressor motor
 - b) Start unit, check controls and calibrate
 - c) Check compressor oil levels (where applicable)
 - d) Make operating log including refrigerant pressures, temperatures, super heat and sub cooling
 - e) Check burner or heating element operation (where applicable)
 - f) Check starter operation, voltage and current
 - g) Set up operating log w/operator, instruct and advise troubleshooting techniques

4. **SCHEDULED PREVENTIVE MAINTENANCE** – Six (6) (Bi-monthly) inspections will be made during operation:
 - a) Make operations log of temperatures, pressures, voltages, and amperages, etc.
 - b) Check and adjust operating and safety controls
 - c) Check operation of crankcase heater

- d) Check oil levels and add as required
- e) Check operation of control circuit.
- f) Check operating log w/operator, discuss operation of the unit(s) generally.
- g) Inspect filters. **(Filter service provided by owner).**
- h) Check operation of motor and starter
- i) Check heating controls (in season).
- j) Check and adjust fan belt tension. **(Replacement of worn or damaged belts provided by owner).**

HEAT PUMP (ONLY)

- a) Check operation of reversing valve
- b) Verify operation of supplemental heating
- c) Verify heating/cooling switchover controls

CLEAN CONDENSER COILS – Once a year, furnish clean.

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| <i>Agreement No</i> | <i>PREVENTIVE MAINTENANCE</i> | <i>SCHEDULE</i> |
| <i>WV INDUSTRIAL HOME FOR YOUTH</i> | <i>ELECTRONIC MOTOR SPEED DRIVE</i> | <i>49</i> |

Contractor will furnish maintenance and service for the "Speed Drives" as follows:

1. **ANNUAL SERVICE** – Once a year inspection will be performed to include the following:
 - a) Check and record all voltage and current readings
 - b) Check all electrical connections and contacts
 - c) Check operation of by-pass disconnect
 - d) Check all control operations and record settings
 - e) Check condition of all fuse holders for tightness
 - f) Check and repair any damage to unit
 - g) Check potentiometer switch in manual position

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| <i>Agreement No.</i> | <i>PREVENTIVE MAINTENANCE</i> | <i>SCHEDULE</i> |
| <i>WV INDUSTRIAL HOME FOR YOUTH</i> | <i>PREVENTIVE MAINTENANCE VARIABLE AIR VOLUME BOXES</i> | 53 |

Contractor will furnish maintenance and service for the "Speed Drives" as follows:

**VARIABLE AIR VOLUME UNITS
VARITRANE INSEPCION**

1. Report in with the Customer Representative.
2. Record and report abnormal conditions, measurements taken, etc
3. Review logs with the customer for operational problems and trends
4. Verify proper air damper operation.
5. Check and adjust velocity control, if applicable
6. Verify VAV box sequence of operation
7. Check and adjust all related controls

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|---|---|------------------------|
| <i>Agreement No</i> | PREVENTIVE MAINTENANCE DIRECT DIGITAL CONTROLS TRANE TRACER SUMMIT | SCHEDULE 56 |
| <i>WV INDUSTRIAL HOME FOR YOUTH</i> | | |

Contractor will furnish maintenance and service for the "Trane Tracer Summit" as follows:

ICS CONTROLLER RUN MAINTENANCE INSPECTION

- 1 Report in with the Customer Representative
- 2 Review customer logs with customer for operational problems and trends.
- 3 Make a back-up copy of the program, if applicable.
- 4 Check for loose or damaged parts or wiring.
- 5 Check for any accumulation of dirt or moisture. Clean if required.
- 6 Verify proper grounding.
- 7 Inspect interconnecting cables and electrical connections (TUC connections checked on annual inspections only).
- 8 Verify power supply for proper voltage (TUC power supplies checked on annual inspection only).
- 9 Via terminal or PC workstation, view binary and analog data.
- 10 Verify proper communication link operation between the control panel and the external ICS devices, if applicable.
- 11 Verify the correct time and date, if applicable.
- 12 Check modem operation, if applicable.
- 13 Clean the external surfaces of the panel enclosure.
- 14 Review operating procedures with operation personnel.
- 15 Provide a written report of completed work, and indicate any uncorrected deficiencies detected.

VAV BOX UCM MAINTENANCE INSPECTION

- 1 Verify that the UCM is in stable control of the desired value(s).
- 2 Where controller performance is in question.
- 3 Change set point values. Verify smooth stable control at the new value.
- 4 Return set point to original value.
- 5 Verify the proper operation of critical control processes and points associated with this unit. Make adjustments as necessary.

SUMMIT BCU MAINTENANCE INSPECTION

1. Report in with the Customer Representative
2. Review customer reports with the customer for operational problems and trends.

Control Panel

- a) Verify secure connections on all internal wiring, LAN and communication links
- b) Check for loose or damaged parts or wiring
- c) Check for any accumulation of dirt or moisture. Clean if required
- d) Remove excessive dust from heat sink surfaces
- e) Verify proper system electrical grounding
- f) Verify proper output voltages on control panel power supplies
- g) Check LED Indications to verify proper operation of BCU transmit/receive activity on the ARCNET LAN.
- h) Verify that cards are seated and secured
- i) Check UCM wiring trunks and check for possible Error Code Indications.
- j) Check voltage level of BCU Super cap
- k) Verify the proper operation of critical control processes and points associated with this unit and make adjustments if necessary
- l) Check Volatile memory available
- m) Check Non volatile memory available
- n) Check Processor idle time
- o) Dump the BCU System Diagnostic Array and Analyze
- p) Run the BCU Mini-monitor for each BCU to check for any error statements and/or codes
- q) Clean external surfaces of the panel enclosure
- r) Check modem operation, if applicable
- s) Via PC work station, view the event log and input/output points for any unusual status or override conditions
- t) Verify correct time and date
- u) Check and update holiday schedules, if applicable, and daylight savings time
- v) Review operating procedures with operating personnel
- w) Provide a written report of completed work, and indicate any uncorrected deficiencies detected

SUMMIT WORKSTATIONS MAINTENANCE INSPECTION

1. Contact appropriate customer personnel
2. Review Tracer for critical follow-up and off-line status indications, i e., system error encountered items

3. Review System Event Log with customer, discuss Tracer operational concerns
4. Perform or schedule Corrective Maintenance procedures as appropriate to resolve situations noted in the preceding reviews
5. Install appropriate Tracer Software refinement and problem correction revisions as per this agreement

Summit Workstation:

1. Check monitor for clarity, focus and color
2. Clean Read/Write heads of removable disk drives
3. Cycle power, listen for unusual motor bearing noises
4. Verify proper system restart, check system date, time and hardware status
5. Clean exterior surfaces.
6. Save/Copy/Backup Tracer Workstation Database, including custom graphics, expanded messages and CPL routines

**SOFTWARE VERSION UPGRADES
MAINTENANCE INSPECTOIN**

1. Trane is continually updating and enhancing BAS software packages
2. This agreement will include maintaining your Trane Tracer Operating system software at the current version
3. Database files will be maintained on electronic media at a secure location
4. Database files will be archived by the Contractor personnel once per quarter. Customer provided copies of database files upon request at no additional charge.

| | | |
|---|---|------------------------|
| <i>Agreement No</i> | PREVENTIVE MAINTENANCE AIR BLADDER TANKS | SCHEDULE 60 |
| <i>WV INDUSTRIAL HOME FOR YOUTH</i> | | |

Contractors will furnish maintenance and service for the listed air bladders:

1. *Check proper air pressure in bladder.*
2. *Make adjustments as needed.*
3. *Check for leaks in the air bladder.*

REMOTE TECHNICAL SUPPORT

In order to support efficient system operation, the contractor must provide technical assistance by telephone. The purpose of this support is to help in identifying operational requirements and in determining optimal performance of the Building Automation System. This support will include, during regular working hours:

1. Identification of the problem source
2. Initial instruction and support to:
 - Establish trend data.
 - Make temperature adjustments
 - Make schedule changes
3. Written service reports recording the date and time of support requests will be maintained at the contractor's facility.
4. The job site telephone line is to be furnished and maintained by the owner

TRAINING SERVICES

1. **ON-SITE** -- Contractor will perform on-site training for the Trane Tracer Summit System as requested by the owner.
2. **OFF-SITE** -- Contractor will provide one annual off-site Trane Tracer Summit three (3) day seminar for the customer at a Trane training facility.

DJS010282 - WV IHV HVAC MAINTENANCE CONTRACT BID FORM

| Item # | Description | Estimated Annual Usage | * Unit Price | Extended Price |
|--------------|------------------------------------|------------------------|--------------|---------------------|
| 1 | ANNUAL MAINTENANCE CONTRACT | 12 Months | \$9458.25 | \$113,498.00 |
| 2 | REGULAR WORK HOURS | 80 Hrs. | \$86.00 | \$6880.00 |
| 3 | NON REGULAR WORK HOURS | 40 Hrs. | \$129.00 | \$5160.00 |
| 4 | EST. ANNL. PARTS USAGE x % MARK-UP | \$5,000.00 | % M/U: 35% | \$6750.00 |
| Total | | | | \$132,288.00 |

Failure to use this form may result in disqualification

Bidder / Vendor Information:

Name: Casto Technical Services
 Address: 540 Leon Sullivan Way
 Charleston, WV 25322
 Phone#: 304-346-0549
 Email Address: tray@castotech.com

Contract Coordinator Information:

Name: Casto Technical Services - Traci B. Ray
 Address: 540 Leon Sullivan Way
 Charleston, WV 25322
 Phone#: 304-346-0549
 Email Address: tray@castotech.com

This form is for bidding evaluation purposes only.

* Item #1 = Monthly Charge

* Item 2 Regular Scheduled Hours (Mon - Fri 8-5)

* Item 3 NON REGULAR HOURS include emergency evening, night, weekend and Holiday Service Calls

* Item 4= \$5,000 X % Mark-up over cost + \$5,000 = Extended Total

RFQ No. _____

STATE OF WEST VIRGINIA
Purchasing Division

PURCHASING AFFIDAVIT

West Virginia Code §5A-3-10a states: No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate

DEFINITIONS:

"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount

EXCEPTION: The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement

Under penalty of law for false swearing (*West Virginia Code §61-5-3*), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated

WITNESS THE FOLLOWING SIGNATURE

Vendor's Name: Casta Technical Services

Authorized Signature: Thomas B. Em Date: March 2, 2010

State of WV

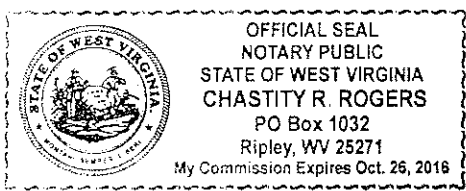
County of Kanawha, to-wit:

Taken, subscribed, and sworn to before me this 2 day of March, 2010

My Commission expires October 26, 2016

AFFIX SEAL HERE

NOTARY PUBLIC Chastity R. Rogers





State of West Virginia
DRUG FREE WORKPLACE CONFORMANCE AFFIDAVIT
West Virginia Code §21-1D-5

STATE OF West Virginia

COUNTY OF Kanawha, TO-WIT:

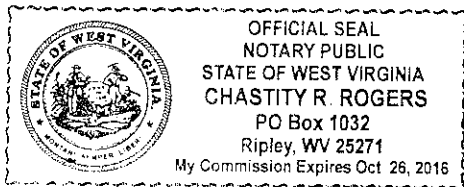
I, THOMAS B. EPPS, after being first duly sworn, depose and state as follows:

- 1. I am an employee of Casto Technical; and,
(Company Name)
- 2. I do hereby attest that Casto Technical
(Company Name)

maintains a valid written drug free workplace policy and that such policy is in compliance with **West Virginia Code §21-1D-5**.

The above statements are sworn to under the penalty of perjury

Casto Technical
(Company Name)



By: Thomas B Epps

Title: Vice President / CFO

Date: 2/MARCH/10

Taken, subscribed and sworn to before me this 2 day of March, 2010

By Commission expires October 26, 2016

(Seal)

Chastity R Rogers
(Notary Public)

THIS AFFIDAVIT MUST BE SUBMITTED WITH THE BID IN ORDER TO COMPLY WITH WV CODE PROVISIONS. FAILURE TO INCLUDE THE AFFIDAVIT WITH THE BID SHALL RESULT IN DISQUALIFICATION OF THE BID.



CASTO Technical Services

540 Leon Sullivan Way
Post Office Box 627
Charleston, West Virginia 25322

304.346.0549
www.castotech.com

REFERENCE LIST FOR: WV Industrial Home for the Youth

The customers listed below are currently under a full coverage maintenance agreement for their Trane HVAC equipment and Trane Tracer Summit Systems with Casto Technical Services:

| <u>CUSTOMER</u> | <u>CONTACT</u> | <u>PHONE NUMBER</u> |
|--------------------------------|----------------|---------------------|
| Charleston Area Medical Center | Ken Wilson | 304-388-6030 |
| Camden Clark Memorial Hospital | Martin Best | 304-424-2287 |
| Charton Management | Jeff Harper | 304-865-2222 |
| Southern Local Schools | Tony Deem | 740-949-2213 |
| Marina Tower | Brian Strakal | 304-276-7747 |

CONTRACTOR LICENSE

Authorized by the

West Virginia Contractor Licensing Board

Number: WV001241

Classification:

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HEATING, VENTILATING & COOLING
PIPING

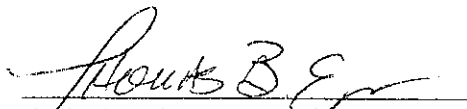
CASIO TECHNICAL SERVICES INC
DBA CASIO TECHNICAL SERVICES INC
PO BOX 627
CHARLESTON, WV 25322-0627

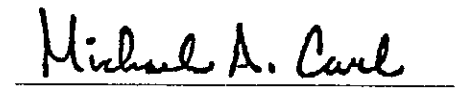
Date Issued

AUGUST 13, 2009

Expiration Date

AUGUST 13, 2010


Authorized Company Signature


Chair, West Virginia Contractor
Licensing Board



**WEST VIRGINIA
CONTRACTOR
LICENSING
BOARD**

This license, or a copy thereof, must be posted in a conspicuous place at every construction site where work is being performed. This license number must appear in all advertisements, on all bid submissions and on all fully executed and binding contracts. This license cannot be assigned or transferred by licensee. Issued under provisions of West Virginia Code, Chapter 21, Article 11.

CASTO TECHNICAL SERVICES PROCEDURES

AIR HANDLING UNITS

AHU-100.pkg

COMPREHENSIVE ANNUAL INSPECTION

AHU-110.cts

1. General Assembly

- a) Inspect the unit for cleanliness.
- b) Inspect the fan wheel and shaft for wear and clearance.
- c) Check the sheaves and pulleys for wear and alignment.
- d) Check the belts for tension, wear, cracks, and glazing. Replace as required.
- e) Verify tight bolts, set screws, and locking collars.
- f) Check dampers for wear, security and linkage adjustment.
- g) Clean condensate pan. Add condensate treatment if applicable.
- h) Verify proper operation of the condensate drain.
- i) Verify clean air filters.
- j) Verify clean coils.
- k) Verify smooth fan operation.

2. Lubrication

- a) Lubricate the fan shaft bearings, if applicable.
- b) Lubricate the motor bearings, if applicable.

3. Controls and Safeties

- a) Test the operation of the low temperature safety device, if applicable.
- b) Test the operation of the high static pressure safety device, if applicable.
- c) Test the operation of the low static pressure safety device, if applicable.
- d) Check the thermal cutout on electric heaters, if applicable.
- e) Check the step controller, if applicable.
- f) Check and record supply air and control air pressure, if applicable.
- g) Verify the operation of the control system and dampers while the fan is operating.

4. Motor and Starter

- a) Clean the starter and cabinet.
- b) Inspect the wiring and connections for tightness and signs of overheating and discoloration. This includes wiring to the electric heat, if applicable.
- c) Check the condition of the contacts for wear and pitting.
- d) Check the contactors for free and smooth operation.

OPERATIONAL INSPECTION
AHU-130.cts

1. Check the general condition of the fan.
2. Check the belts for tension, wear, cracks, and glazing.
3. Verify tight bolts, set-screws, and locking collars.
4. Verify operation of outside air dampers if applicable.
5. Inspect condensate pan.
6. Verify proper operation of the condensate drain.
7. Inspect air filters.
8. Inspect coils.
9. Verify smooth fan operation.

CASTO TECHNICAL SERVICES PROCEDURES
GAS-FIRED BOILERS
BLR-100.pkg

COMPREHENSIVE ANNUAL INSPECTION
BLR-110.cts

1. General Assembly

- a) Secure all circuits: electrical, gas, steam, water, and blowdown. Drain the boiler.
- b) Open the fire and water side for inspection.
- c) Clean as required, including scale through the handholes.
- d) Check the heating surfaces and water side for corrosion, pitting, scale, blisters, bulges and soot.
- e) Inspect the refractory.
- f) Check the expansion tank and air vents. Drain if needed.
- g) Clean the fire inspection glass.
- h) Check the blow-down valve packing and lubricate.
- i) Check and test boiler blow-down valve.
- j) Perform hydrostatic test, if required.
- k) Reassemble and pressure test at operating pressure.

2. Gas Train Burner Assembly

- a) Check the gas train isolation valves for leaks.
- b) Check the gas supply piping for leaks.
- c) Check the gas pilot solenoid valve for wear and leaks.
- d) Check the main gas and the pilot gas regulators for wear and leaks. Note any oil leakage from actuator.
- e) Test the low gas pressure switch. Calibrate and record setting.
- f) Test the high gas pressure switch. Calibrate and record setting.
- g) Verify the operation of the burner fan air flow switch.
- h) Inspect and clean the burner assembly.
- i) Inspect and clean the pilot igniter assembly. Calibrate the electrode.
- j) Inspect and clean the burner fan and air intakes.
- k) Inspect the flue and flue damper. Verify free damper operation.

3. Burner Control Panel

- a) Inspect the panel for cleanliness.
- b) Inspect wiring and connections for tightness and for signs of overheating and discoloration.
- c) Clean burner fan wheel and air dampers. Check the fan for vibration.
- d) Verify tightness of the linkage set screws.
- e) Check the gas valves against leakage (where test cocks are provided)

4. Controls and Safeties

- a) Disassemble, inspect, and clean the low water cutoff safety device. Verify free movement of components.
- b) Reassemble the boiler low water cutoff safety device with new gaskets and specialty bolts.
- c) Remove plugs in piping above and below low water cutoff and inspect piping.

- d) Clean the contacts in the program timer, if applicable.
- e) Check the operation of the low water cutoff safety device and feed controls.
- f) Verify the setting and test the operation of the operating and limit controls.

SEASONAL CHECKOUT PROCEDURE
BLR-120.cts

1. Verify full boiler.
2. Test the safety/relief valve after startup (full pressure test).
3. Clean or replace the fuel filters
4. Clean the fuel nozzles
5. Inspect, clean and functionally test the flame scanner and flame safeguard relay.
6. Clean and adjust the ignition electrode.
7. Replace the vacuum tube in flame safeguard control, if applicable. Recommend upgrade.
8. Perform pilot turn down test
9. Verify proper water flow through the boiler.
10. Perform combustion test and adjust the burner for maximum efficiency.
11. Test the following items throughout firing rates:
 - a) Firing rate
 - b) Fuel/air ratio
 - c) CO₂
 - d) CO
 - e) NO_x
 - f) Perform smoke test.
12. Test all safeties to verify burner shutdown.

OPERATIONAL INSPECTION
BLR-130.cts

1. Check the general condition of the unit: steam or water leaks, hot spots, etc.
2. Inspect the burner.
3. Adjust the burner controls to obtain proper combustion.
4. Check the operation of the pressure relief valve
5. Check the operation of the low water cutoff and feed controls.
6. Check the setting and test the operation of the operating and limit controls.
7. Check the operation of the modulating motor.
8. Lift the safety/relief valves with at least 70% of rated pressure.
9. Blow down and try gauge cocks to confirm glass water level.
10. Check and test boiler blow down valve.

SEASONAL SHUT-DOWN PROCEDURE
BLR-150.cts

1. Shut down boiler at boiler controls.
2. Shut off fuel lines at main valves.
3. Drain down boiler and associated piping as necessary.

CASTO TECHNICAL SERVICES PROCEDURES
WATER PUMPS
PMP-100.pkg

COMPREHENSIVE ANNUAL INSPECTION
PMP-110.cts

1. General Assembly, Belt Drive

- a) Check sheaves and pulleys for wear and alignment.
- b) Inspect belts for tension, wear, cracks, and glazing.
- c) Verify that the belt guard is in place and tight.
- d) Verify water flow through the pump.
- e) Check for leaks on the mechanical pump seals, if applicable.
- f) Verify proper drip rate on the pump seal packing, if applicable.
- g) Verify smooth operation of the pump.

2. General Assembly, Direct Drive

- a) Check motor shaft and pump shaft for alignment, if applicable.
- b) Inspect the coupling for wear.
- c) Verify that the shaft guard is in place and tight.
- d) Verify water flow through the pump.
- e) Check for leaks on the mechanical pump seals, if applicable.
- f) Verify proper drip rate on the pump seal packing, if applicable.
- g) Verify smooth operation of the pump.

3. Lubrication

- a) Lubricate the motor bearings as necessary.
- b) Lubricate the pump bearings as necessary.

4. Motor and Starter

- a) Clean the starter and cabinet.
- b) Inspect wiring and connections for tightness and signs of overheating and discoloration.
- c) Check the condition of the contacts for wear and pitting, if applicable.
- d) Verify tight connections on the motor terminals.
- e) Check the contactors for free and smooth operation.
- f) Verify proper voltage and amperage.

OPERATIONAL INSPECTION
PMP-111.cts

1. Verify smooth operation of the pump.
2. Check for leaks on the mechanical pump seals, if applicable.
3. Verify proper drip rate on the pump seal packing, if applicable.

CASTO TECHNICAL SERVICES PROCEDURES

Condensing Units

COMPREHENSIVE ANNUAL INSPECTION

RCP/DX-210.cts

SCR/DX-210.cts

- 1. General Assembly**
 - a) Check refrigerant cycle(s) for leaks and report results.
 - b) Repair minor leaks as required (e.g. valve packing, flare nuts).
 - c) Inspect fan blades and belts, if applicable.
- 2. Controls and Safeties**
 - a) Inspect the control panel for cleanliness.
 - b) Inspect wiring and connections for tightness and signs of overheating and discoloration.
 - c) Verify the working condition of all indicator/alarm lights, if applicable.
 - d) Verify the operation of the high condenser pressure safety device.
 - e) Verify the operation of the low evaporator pressure safety device.
 - f) Verify the operation of the oil pressure safety device, if applicable.
- 3. Lubrication**
 - a) Check oil level in the compressor(s), if applicable.
 - b) Check oil for acid content and discoloration.
 - c) Lubricate fan bearings, if applicable.
 - d) Lubricate condenser fan motors, if applicable.
- 4. Motor and Starter**
 - a) Clean the starter(s) and cabinet.
 - b) Inspect wiring and connections for tightness and signs of overheating and discoloration.
 - c) Check the contactors for free and smooth operation.
 - d) Check the condition of the contacts for wear and pitting, if applicable.
 - e) Verify the operation of the electrical interlocks.
- 5. Startup / Checkout Procedure**
 - a) Verify the operation of the oil heater(s).
 - b) Start the unit.
 - c) Verify the starter operation.
 - d) Verify smooth operation of the compressors and fans.
 - e) Verify the operation of the condenser fan control device(s).
 - f) Verify the operation of the low ambient control dampers, if applicable.
 - g) Check superheat and subcooling on the refrigerant circuit(s).
 - h) Verify the operation of the unloaders, if applicable.
 - i) Verify full refrigerant circuit(s). Check sight glass(es), if applicable.

SEASONAL INSPECTION
RCP/DX-220.cts
SCR/DX-220.cts

1. Verify the operation of the oil heater(s).
2. Start the unit.
3. Verify the starter operation.
4. Verify smooth operation of the compressors and fans.
5. Verify the operation of the condenser fan control device(s).
6. Verify the operation of the low ambient control dampers, if applicable.
7. Check superheat and subcooling on the refrigerant circuit(s).
8. Verify the operation of the unloaders, if applicable.
9. Verify full refrigerant circuit(s). Check sight glass(es), if applicable.

OPERATIONAL INSPECTION
RCP/DX-230.cts
SCR/DX-230.cts

1. Check the general condition of the unit.
2. Log the operating conditions after the system has stabilized.
3. Verify the operation of the control circuits.
4. Check the operation of the lubrication circuit, if applicable.
5. Analyze the recorded data. Compare the data to the original design conditions.

CASTO TECHNICAL SERVICES PROCEDURES
VARIABLE AIR VOLUME BOX
COMPREHENSIVE ANNUAL INSPECTION
VAV-110.cts

1. Verify proper air valve operation.
2. Check and adjust velocity control, if applicable.
3. Verify proper operation of the VAV dampers, if applicable.
4. Verify VAV box sequence of operation.
5. Check and adjust all related controls.
6. Replaced clogged or dirty air filters, if applicable.

**CASTO TECHNICAL SERVICES PROCEDURES
BUILDING AUTOMATION SYTEM
CNT-BAS.pkg**

**WORKSTATION/SOFTWARE
COMPREHENSIVE ANNUAL INSPECTION
CNT-165.cts**

1. Workstation

- a) Check monitor for clarity, focus, and color.
- b) Clean Read/Write heads of removable disk drives.
- c) Cycle power. Listen for unusual motor bearing noise.
- d) Verify proper system restart and hardware status.
- e) Clean exterior surfaces.

2. Software

- a) Review Tracer Summit for critical follow-up and off-line status indications, i.e. system error encountered items.
- b) Review System Event Log with customer, discuss Tracer operational concerns.
- c) Perform or schedule Corrective Maintenance procedures as appropriate to resolve situations noted in the preceding reviews.
- d) Verify correct time and date.
- e) Save/Copy/Backup: workstation database, including custom graphics, expanded messages, and CPL routines.

**BUILDING LEVEL CONTROLLERS (BCU)
COMPREHENSIVE ANNUAL INSPECTION
CNT-145.cts**

1. Control Panel

- a) Verify secure connections on all internal wiring, LAN, and communication links.
- b) Check for loose or damaged parts or wiring.
- c) Clean external surfaces of the panel enclosure.
- d) Check for any accumulation of dirt or moisture. Clean as required.
- e) Remove excessive dust from heat sink surfaces.
- f) Verify proper system electrical grounding.
- g) Verify proper output voltages on control panel power supplies.
- h) Check LED indications to verify proper operation of BCU transmit/receive activity on the ARCNET LAN.
- i) Verify LAN communications, if applicable, between work stations and BCU(s).
- j) Verify that cards are seated and secured.
- k) Check UCM wiring trunks and check for possible Error Code Indications.
- l) Verify the proper operation of critical control processes and points associated with this unit and make adjustments as required.
- m) Check volatile memory available.
- n) Check processor idle time.
- o) Dump the BCU system diagnostic array and analyze.

- p) Run the BCU mini-monitor for each BCU to check for any error statements and/or codes.
- q) Check modem operation, if applicable.
- r) View the event log and input/output points for any unusual status or override conditions.
- s) Verify correct time and date.
- t) Check and update holiday schedules, if applicable, and daylight savings time.

**UNIT LEVEL CONTROLLERS (UCM, UPCM, PCM, TUC)
OPERATIONAL INSPECTION
CNT-110.cts**

1. General

- a) Verify that UCM is in stable control of the desired value(s).
- b) Change one set point value; verify smooth transition and stable control at the new set point.
- c) Return setpoint to original value.
- d) Repeat for each additional control loop.
- e) Verify proper operation of heat, cool, fan, and reversing valve outputs where applicable.
- f) Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.

**FIELD DEVICES (Sensors, etc.)
OPERATIONAL INSPECTION
CNT-105.cts**

1. Field Devices

- a) Verify that equipment is being controlled at the appropriate value/control setpoint.
- b) Verify that control valves and dampers will stroke fully in both directions.
- c) Inspect damper and valve linkages.
- d) Verify operation of IGV/VFD (Inlet Guide Vanes/Variable Frequency Drives).
- e) Verify proper communications link operation between the control panel and external ICS devices.
- f) Verify proper communications link operation between the control panel and other external end devices.
- g) Verify that temperature-sensing devices are operating within acceptable limits.

**PERIODIC SERVICES
CNT-173.cts**

1. Remote Technical Support

- a) Provide initial instructions and support to:
 - Make temperature adjustments
 - Make schedule changes.
- b) Assist in identification of trouble sources.

2. **Software Version Upgrades**

- a) The Trane Tracer Summit operating system software will be maintained at the current version.
(Note: Revisions to other software programs not produced by Trane are not included. Major revisions to the Tracer Summit software, which add new features and capabilities, are not included.)

3. **System Backup**

- a) Database files will be archived on a regularly scheduled basis.
- b) Database files will be maintained on electronic media at a secure location and provided to owner at no charge upon request.
(Note: Job site telephone line is to be furnished and maintained by the owner.)

CASTO TECHNICAL SERVICES PROCEDURES
ROOFTOP UNIT
COMPREHENSIVE ANNUAL MAINTENANCE-Cooling Cycle
RTU-110.cts

1. General Assembly

- a) Inspect for leaks and record leak check results.
- b) Repair minor leaks as required (e.g. valve packing, flare nuts).
- c) Check the sheaves and pulleys for wear and alignment.
- d) Change fan belts as required.
- e) Clean condenser coils.
- f) Verify clean evaporator fan and coils.
- g) Verify clean air filters.
- h) Verify proper damper operation (Intellipak units)
- i) Check mechanical linkages for wear, tightness, and clearances.
- j) Check the operation and setup of the RTM module (Intellipak units)
- k) Check the operation and condition of the VFD, if applicable.
- l) Verify the starter operation
- m) Verify the operation of the compressor oil heater(s), if applicable.
- n) Verify smooth operation of the compressors and fans.

2. Controls and Safeties

- a) Verify the operation of the discharge air temperature control device.
- b) Verify the operation of the outside air temperature control device.
- c) Verify the operation of the mixed air temperature control device.
- d) Test the operation of the high condenser pressure safety device. Calibrate, if applicable, and record setting.
- e) Test the operation of the low evaporator pressure safety device. Calibrate, if applicable, and record setting.
- f) Test the operation of the low temperature safety device. Calibrate, if applicable, and record setting.
- g) Test the operation of the low oil pressure safety device(s), if applicable. Calibrate and record setting.
- h) Verify the operation of the static pressure control (Intellipak units)

3. Lubrication

- a) Lubricate damper bearings, if applicable.
- b) Lubricate motor bearing, if applicable.
- c) Lubricate fan bearings.
- d) Check oil level in the compressor(s), if applicable.
- e) Check oil for acid content and discoloration.

4. Motor and Starter

- a) Clean the starter and cabinet.
- b) Inspect wiring and connections for tightness and signs of overheating and discoloration.
- c) Check the contactors for free and smooth operation.
- d) Verify the tightness of the compressor motor terminal connections.

COMPREHENSIVE ANNUAL INSPECTION- Heating Cycle
RTU-115.cts

1. General Assembly

- a) Verify smooth operation of the fans.
- b) Check belts for tension, wear, cracks, and glazing.
- c) Verify clean air filters.
- d) Verify proper operation of the heating section.
- e) Verify the operation of the temperature controls.

2. Gas Heat Option

- a) Visually inspect the heat exchanger.
- b) Inspect the combustion air blower fan, and clean, if required.
- c) Lubricate the combustion air blower fan motor, if applicable.
- d) Verify the operation of the combustion air flow-proving device, if applicable.
- e) Verify the operation of the flame detection device.
- f) Test the operation of the high temperature limit switch.
- g) Verify the integrity of the flue system.
- h) Verify the operation of the operating controls.
- i) Verify the burner sequence of operation.
- j) Verify proper gas pressure to the unit and/or at the manifold, if applicable.
- k) Perform combustion test. Make adjustments as necessary.

3. Electric Heat Option

- a) Inspect wiring and connections for tightness and signs of overheating and discoloration.
- b) Check and calibrate operating and safety controls, if applicable.
- c) Verify the operation of the heating elements.
- d) Check voltage and amperage and compare readings with the watt rating on the heater.

4. Hot Water / Steam Heat Option

- a) Inspect control valves and traps.
- b) Check and calibrate all operating and safety controls.
- c) Verify the operation of the heating coils.
- d) Verify the operation of the unit low temperature safety device.

5. Reverse Cycle Heating Option

- a) Verify proper operation of the reversing valve.
- b) Verify proper operation of the defrost module.
- c) Verify proper operation of the defrost cycle.
- d) Verify proper operation of the auxiliary heat, if applicable.
- e) Verify that operating refrigerant temperatures and pressures are within design parameters.

6. Startup/Checkout Procedure

- a) Verify smooth operation of the fans.
- b) Check the belts for tension, wear, cracks, and glazing.
- c) Verify clean air filters.

OPERATIONAL INSPECTION – Cooling Cycle
RTU-130.cts

1. Check the general condition of the unit.
2. Log the operating condition after system has stabilized.
3. Verify the operation of the control circuits.
4. Analyze the recorded data. Compare the data to the original design conditions.

OPERATIONAL INSPECTION – Heating Cycle
RTU-135.cts

1. Verify smooth operation of the fans.
 2. Check the belts for tension, wear, cracks, and glazing.
 3. Verify clean air filters.
 4. Verify proper operation of the heating section.
 5. Verify the operation of the temperature controls.
1. Inspect evaporator coils. Clean as required, if accessible.
 2. Lubricate fan shaft and motor bearings as required.
 3. Verify smooth fan operation.

CASTO TECHNICAL SERVICES PROCEDURES
WATER SOURCE HEAT PUMP
COMPREHENSIVE ANNUAL INSPECTION
WSHP-110.cts

1. General Assembly

- a) Inspect for leaks and report results.
- b) Repair minor leaks as required (e.g. valve packing, flare nuts).
- c) Verify clean indoor coil and fan.
- d) Verify clean water coil heat exchanger.
- e) Verify proper operation of the circulating water pump.
- f) Verify clean water strainer.
- g) Check pulleys and sheaves for tightness, wear and alignment, if applicable.
- h) Check belts for tension, wear, cracks, and glazing, if applicable.
- i) Verify smooth operation of the unit.
- j) Verify clean condensate pan.
- k) Verify proper operation of the condensate drain.
- l) Verify proper operation of the auxiliary heat strips, if applicable.
- m) Verify proper operation of the switchover valve, if applicable.

2. Controls and Safeties

- a) Inspect control panel for cleanliness.
- b) Inspect wiring and connections for tightness and signs of overheating and discoloration.
- c) Test the low evaporator pressure safety device, if applicable. Calibrate and record setting.
- d) Test the high condenser pressure safety device. Calibrate and record setting.
- e) Test the operation of the low temperature safety device.
- f) Verify the operation of the unit temperature control device.
- g) Verify the operation of the strip heat thermostat, if applicable.

3. Lubrication

- a) Lubricate the fan bearings as required, if applicable.
- b) Lubricate the fan motor bearings as required, if applicable.
- c) Verify the operation of the oil heater(s), if applicable.

4. Motor and Starter

- a) Clean the starter and cabinet.
- b) Inspect wiring and connections for tightness and signs of overheating and discoloration.
- c) Check the condition of the contacts for wear and pitting.
- d) Check the contactors for free and smooth operation.
- e) Check the tightness of the motor terminal connections.
- f) Verify the operation of the electrical interlocks.

OPERATIONAL INSPECTION
WSHP-130.cts

1. Check the general condition of the unit.
2. Verify the operation of the control circuit.
3. Verify clean air filters and coils.
4. Verify smooth operation of the unit.
5. Verify proper operation of the circulating water pump.

CASTO TECHNICAL SERVICES, INC. PROCEDURES
COOLING TOWERS
COMPREHENSIVE ANNUAL INSPECTION
CLT-110.cts

1. General Assembly

a) STRUCTURE

1. Disassemble all screens and access panels for inspection.
2. Inspect the conditions of the slats, if applicable.
3. Inspect the condition of the tower fill.
4. Inspect the condition of the support structure.
5. Inspect the condition of the basins (upper and lower) and/or spray nozzles.
6. Verify clean basins and strainer(s).
7. Verify the condition and operation of the basin fill valve system.

b) MECHANICAL (*gear drive*)

1. Inspect gear box for leaks.
2. Inspect drive and coupling for condition and security
3. Inspect fan assembly for condition, security, and clearances (e.g. blade tip clearance).

c) MECHANICAL (*belt drive*)

1. Inspect belts for wear, cracks, and glazing. Replace belts as required.
2. Verify correct belt tension. Adjust the tension as necessary.
3. Inspect sheaves and pulleys for wear, condition, and alignment.
4. Inspect fan shaft and bearings for condition.
5. Inspect fan assembly for condition, security, and clearances. (e.g. blade tip clearance).

2. Lubrication System

- a) Lubricate motor bearings.
- b) Lubricate fan shaft bearings.

3. Motor And Starter

- a) Clean the starter and cabinet.
- b) Inspect wiring and connections for tightness and signs of overheating and discoloration.
- c) Check the condition of the contacts for wear and pitting.
- d) Check the contactor(s) for free and smooth operation.
- e) Check disconnect terminal block for wear, tightness and signs of overheating and discoloration.
- f) Check the condition and operation of the basin heater contactor(s).

TOWER CLEANING SERVICE
CLT-115.cts

1. Clean tower basins and strainer.
2. Clean spray nozzles.

OPERATIONAL INSPECTION
CLT-130.cts

1. Check the general operation of the tower.
2. Verify clean basins and strainers.
3. Verify proper water level in the basin.
4. Verify proper operation of the water level control device.
5. Verify smooth operation of the fan(s).
6. Verify proper operation of the bypass valve(s), if applicable.
7. Log the operating temperatures, pressures, voltages, and amperages.