

**CONTRACT AND SPECIFICATIONS  
FOR  
WEC UNIT 1 AIR PREHEATER BASKET  
INSTALLATION  
CITY OF HASTINGS  
HASTINGS, NEBRASKA  
Contract No. HU 2024-02**

**Sealed Proposals Will Be Opened Promptly At  
1:30 PM, Wednesday, February 7, 2024**

**Bid Submitted By:** \_\_\_\_\_



***THIS BID DOCUMENT MUST BE SUBMITTED WITH BID***

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FOR  
WEC UNIT 1 AIR PREHEATER BASKET INSTALLATION  
FOR  
CITY OF HASTINGS  
HASTINGS, NEBRASKA**

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## ADVERTISEMENT FOR BIDS

The City of Hastings, Nebraska, will receive bids for: **WEC Unit 1 Air Preheater Basket Installation HU 2024-02** until 1:30 p.m. at the City of Hastings, 1228 N Denver Ave., Hastings, Nebraska, on **Wednesday, February 7h, 2024** at which time and place all bids will be publicly opened and read aloud.

**Brief description of project:** Contractor to remove existing and install new all element baskets for the hot end, hot intermediate, and cold end layer for the WEC Unit 1 air preheater in accordance with the project specifications. If you plan on bidding and are not already on our approved bidders list for this project, you are REQUIRED to fill out the Plan Holders Submittal Form that is located on the City website: <https://www.cityofhastings.org/bids/>.

The Contract Documents, including plans and specifications, are on file at the City of Hastings, 1228 N Denver Ave., Hastings, Nebraska 68901. Copies of the plans and specifications in electronic (PDF) format may be obtained by visiting the City of Hastings Website: [www.cityofhastings.org/bids](http://www.cityofhastings.org/bids). A paper copy is available for \$75.00, plus sales tax (\$5.25), plus shipping.

Each bid shall be accompanied by a certified check, drawn on a solvent bank in the State of Nebraska, or a bid bond in an amount of not less than five percent (5%) of the total bid of all contract construction costs, made payable to the City Treasurer of the City of Hastings, Nebraska, as security that the bidder to whom the contract may be awarded will enter into a contract to build all the improvements in accordance with this notice and give bond in the sum hereinafter provided for the construction of improvements.

No bid shall be withdrawn after opening of bids without the consent of the City of Hastings, Nebraska, for a period of sixty (60) days after scheduled time of closing bids.

Time is of the essence in this contract. In evaluating bid(s) received, the City will consider the timelines of completion of prior construction contracts, existing workload of bidders and available manpower that bidder commits to the project.

The successful bidder will be required to furnish a Performance and Payment Bond in the sum of the full amount of the Contract within ten (10) days of the date of award. No additional time will be allowed the Contractor for providing the Performance and Payment Bond.

DATED AT HASTINGS, NEBRASKA, this 11th day of January, 2024.

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Kimberly S Jacobitz, City Clerk

For City Clerk: Publish and Attach two (2) Proofs of Publication:  
January 18, 2024  
January 25, 2024

## **INSTRUCTIONS TO BIDDERS**

All proposal information, including any unit price fill in sheets or other required information, shall be submitted on the proposal forms hereto attached. Copies of addenda, if any, shall be signed and attached. City of Hastings does NOT accept faxed or emailed bid returns.

Bidders shall inform themselves of all relevant matters, and, if awarded the contract, shall not be allowed any extra compensation by reason of any matter or thing concerning which such Bidder might not have fully informed themselves, prior to the bidding.

The Bidder bidding on the Specifications herein, who has exceptions to those called for in the Specifications, must so state in the space provided below and/or attach a letter explaining in detail the exceptions taken to those required in the Specifications. This letter of explanation shall become a part of the bid and shall be attached hereto. Failure by the Bidder to outline his exceptions will require the successful Bidder to comply with these Specifications.

**EXCEPTIONS TO SPECIFICATIONS:**

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The Purchaser will not assume obligations resulting from losses or damages until acceptance of the equipment.

Checks of unsuccessful Bidders will be returned when their bids have been rejected and they will not be retained in excess of sixty (60) days from the date bids are opened. The check of the successful Bidder will be retained until the contract is awarded. Should the successful Bidder fail to perform as the Proposal and Specifications indicate, the City may use the check as liquidated damages within fifteen (15) days after written notice is given to the party who submitted the successful bid.

If any person contemplating submitting a bid for this contract is in doubt as to the true meaning of any part of the Specifications or other proposed contract documents, he may submit to Purchaser a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation of the proposed documents will be made only by addendum duly issued or delivered to each person receiving a set of such documents. The Purchaser will not be responsible for any other explanation or interpretation of the proposed documents.

All addendums must be signed and attached to bid documents.

# IF YOU HAVE QUESTIONS OR NEED HELP ON THESE SPECIFICATIONS

CONTRACT NO: HU 2024-02

WEC UNIT 1 AIR PREHEATER BASKET INSTALLATION

PLEASE CONTACT ANY OF THE FOLLOWING:

## PROJECT QUESTIONS

Derek Pfeifer  
Production Engineer  
Direct Line: 402-462-3673  
Email: [dpfeifer@cityofhastings.org](mailto:dpfeifer@cityofhastings.org)

Bruce Perry  
Maintenance Supervisor  
Direct Line: 402-462-3573  
Email: [bperry@cityofhastings.org](mailto:bperry@cityofhastings.org)

## GENERAL QUESTIONS OR REQUESTS

Rena Griess  
Administrative Assistant – Engineering Dept, City of Hastings  
Ph# 402-462-3665  
Fax# 402-462-3666  
Email: [bidquestions@cityofhastings.org](mailto:bidquestions@cityofhastings.org)



**IMPORTANT SUBMITTAL INSTRUCTIONS**  
**ON HOW TO SUBMIT YOUR BID**  
**FOR**  
**CITY OF HASTINGS**  
**WEC UNIT 1 AIR PREHEATER BASKET INSTALLATION**

**Contract No. HU 2024-02**

Your bid **MUST** be returned by means of hand delivery, USPS, Fed-X, UPS, or other carrier. City of Hastings **DOES NOT ACCEPT** bids that are faxed or emailed.

ALL the following documents are **TO BE SUBMITTED** in your bid packet, whether you received your bid invitation electronically, on a CD, DVD, or a **HARD COPY** by means of hand delivery or the mail carrier service.

1. **Cover sheet with your company's name filled in**
2. **ALL addendums received – must be acknowledged and signed**
3. **Bid Bond**
4. **If Exceptions, Instructions to Bidders with any exceptions listed**
5. **Proposal Page(s)**
6. **2024 T&M Rates**
7. **Proposed Payment Schedule**

**FAILURE TO RETURN REQUIRED BID DOCUMENTS**

**COULD SUBJECT YOUR BID PROPOSAL TO BE REJECTED**

# IMPORTANT MAILING (OR HAND DELIVERY) INSTRUCTIONS

Please address your return envelope as shown in the example below. All bids must be sealed in a properly marked envelope.

To hand deliver please drop off between the hours of 8am – noon and 1pm – 5pm Monday-Friday.

Your Return Address

City of Hastings  
Attn: Renae Griess  
1228 N Denver Avenue  
Hastings, NE 68901

**This Information MUST BE typed or written in the lower left hand corner of return envelope OR SIMPLY CUT OUT AND TAPE ON YOUR RETURN ENVELOPE**



**BID DOCUMENTS ENCLOSED**  
**ATTN: Renae Griess, Administrative Assistant**  
**Contract No: HU 2024-02**  
**WEC Unit 1 Air Preheater Basket Installation**  
**For City of Hastings**  
**Bid Opens: Wednesday, February 7, 2024 @ 1:30 PM**

**If returning Fed-X or similar carrier, please enclose the bid in an “inner” envelope which is sealed. Please make sure BOTH envelopes are properly marked on the OUTSIDE OF THE ENVELOPE as shown in the example above.**

One bid per envelope. Bid submittal via email is not allowed. Bids must be checked in to the City of Hastings prior to 1:30 pm deadline.

**FORMAL PROPOSAL FOR  
WEC UNIT 1 AIR PREHEATER BASKET INSTALLATION**

**Formal Contract No. HU 2024-02**

TO: City of Hastings  
1228 N. Denver Ave  
Hastings, NE 68901

**Bid Opening: February 7, 2024 (Wednesday)**  
**SEALED BIDS MUST BE RECEIVED BY 1:30 P.M. AND**  
**WILL BE OPENED PROMPTLY AT THAT TIME**

We, the undersigned, being familiar with all parts of these documents, being Notice to Bidders, Bid Proposal Price Sheets, Contract Document Forms, Plans and Specifications, Affidavit, and all other parts of this document, do herein submit our proposal to remove and replace all element baskets for the hot end, hot intermediate, and cold end layer for the WEC Unit 1 air preheater in accordance with the project specifications, **including Nebraska Sales Tax.**

**BID SECTION I: Spring Outage Ending April 29, 2024**

| Item#                  | Description  | Unit Price      | Total |
|------------------------|--|-----------------|-------|
| 1                      | Labor and supervision for removal of old cold end layer air heater baskets, disposal of old baskets, and installation of new baskets including repairing or replacing framing per the specification.     | <u>LUMP SUM</u> | \$    |
| 2                      | Labor and supervision for removal of old intermediate layer air heater baskets, disposal of old baskets, and installation of new baskets including repairing or replacing framing per the specification. | <u>LUMP SUM</u> | \$    |
| 3                      | Labor and supervision for removal of old hot end layer air heater baskets, disposal of old baskets, and installation of new baskets including repairing or replacing framing per the specification.      | <u>LUMP SUM</u> | \$    |
| <b>TOTAL SECTION I</b> |  |                 |       |
|                        |  |                 | \$    |
| In Words               |  |                 |       |



**FORMAL PROPOSAL FOR  
WEC UNIT 1 AIR PREHEATER BASKET INSTALLATION  
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**BID SECTION II: Alternate - Fall Outage Ending September 27, 2024**

| Item#                   | Description  | Unit Price      | Total |
|-------------------------|--|-----------------|-------|
| 1                       | Labor and supervision for removal of old cold end layer air heater baskets, disposal of old baskets, and installation of new baskets including repairing or replacing framing per the specification.     | <u>LUMP SUM</u> | \$    |
| 2                       | Labor and supervision for removal of old intermediate layer air heater baskets, disposal of old baskets, and installation of new baskets including repairing or replacing framing per the specification. | <u>LUMP SUM</u> |       |
| 3                       | Labor and supervision for removal of old hot end layer air heater baskets, disposal of old baskets, and installation of new baskets including repairing or replacing framing per the specification.      | <u>LUMP SUM</u> |       |
| <b>TOTAL SECTION II</b> |  |                 |       |
|                         |  |                 | \$    |
| In Words                |  |                 |       |

Potential Bidders can bid on **any or all of** the above options, depending on their availability or interest. City of Hastings reserves the right to select the option(s) that it deems best.

Award date: 2/14/24

Completion date: 4/29/24 or 9/27/24, depending on which option(s) are available. See Section 3 of Bid Specifications.

Liquidated Damages: The Contractor shall pay a fee of \$1,000.00 per working day for failure to perform work within either the specified project period or the contract completion date in accordance with Paragraph GC.36 of the general conditions.

\*The labor portion is not subject to sales tax; however, the material portion is taxed accordingly. The project is outside of city limits and is subject to **5.5% sales tax**. See following tax rules and regulation language.

For purposes of sales/use tax, this project falls under Nebraska Sales and Use Tax Regulation 1-017 for Contractors. By definition, a contractor is "any person who repairs property annexed to, or who annexes property to, real estate, including leased property, by attaching building materials to the annexed property or

**FORMAL PROPOSAL FOR  
WEC UNIT 1 AIR PREHEATER BASKET INSTALLATION  
Formal Contract No. HU 2024-02**

improvement being built or repaired, or who arranges for annexation of property.” Please refer to [www.revenue.nebraska.gov/salestax.html](http://www.revenue.nebraska.gov/salestax.html) for additional information.

For calculating this proposal:

- All contractors are to include sales/use tax on materials in the bidder's prices, if applicable.
- **Option 1 contractors must separately state materials, sales tax, labor, and other charges on all invoices for the project. Any invoices submitted that do not include this required breakdown of the charges will not be accepted for payment. (This requirement does not apply to Option 2 or 3 contractors.)**
- The sales/use tax rate on building materials is 7.0% for projects within Hastings' city limits and 5.5% for projects outside of city limits.
- Contractor labor charges for this proposal are not subject to sales/use tax per the Nebraska Department of Revenue Notice to Contractors effective October 1, 2007.
- In submitting this bid, the bidder certifies that he will comply with all applicable laws, ordinances, and codes of the City of Hastings and the State of Nebraska.

What contractor option have you registered with the Nebraska Department of Labor (must select one)? Please refer to <https://dol.nebraska.gov> for additional information.

Option 1 \_\_\_\_\_

Option 2 \_\_\_\_\_

Option 3 \_\_\_\_\_

Is Nebraska Sales/Use Tax included in the above prices.

Yes \_\_\_\_\_ No \_\_\_\_\_

**(ALL COSTS TO INCLUDE STATE SALES TAX)**

As noted in the proposal sheet one contract will be awarded for the sum total of all Bid Sections.

Exceptions:            No             Yes  (If yes, list on “*Instructions to Bidders*” page)

**Any modification of bid proposal will be considered non-conformance of the bid. All exceptions to the proposal shall be noted as an exception to the bid.**

City of Hastings may at its own discretion delete any project area and / or component prior to award of contract.

In submitting this proposal, it is further understood that the City of Hastings reserves the right to reject any or all proposals and may waive any informalities and may accept the proposal which best suits its needs. It is further understood that this proposal may not be withdrawn for a period of sixty days (60) days after bids are opened.

**FORMAL PROPOSAL FOR  
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All proposals shall have original signatures. Electronic time-stamped signatures will be acceptable. Photocopied or printed versions of bid bonds will be accepted without original signatures, however a hardcopy with original signatures must be received by City of Hastings within 5 business days.

***OFFICIAL NAME & ADDRESS***

|                  |                       |
|------------------|-----------------------|
| Firm Name        | Signature             |
| Address          | Typed or Printed Name |
| City, State, Zip | Title                 |
| Phone No.        | Date                  |
| Fax No.          | Email Address         |

**ALL BIDS MUST BE CHECKED IN TO THE CITY OF HASTINGS**  
**PRIOR TO 1:30 PM DEADLINE**

# AGREEMENT

**THIS AGREEMENT**, made and entered into this     day of 2024, by and between the City of Hastings, Party of the First Part, hereinafter called the "Purchaser" or "City", and     a of (town)     in the State of     , Party of the Second Part, hereinafter called the "Contractor".

**WITNESSETH: THAT,**

**WHEREAS:** The Purchaser has caused the necessary contract documents to be prepared for defining material, equipment, and/or labor to be supplied to the City of Hastings, and delivered complete as specified in the accompanying contract documents.

**WHEREAS:** The Purchaser has advertised for bids from Contractors, has received said bids, analyzed same and duly awarded a contract to the "Contractor", "Party of the Second Part", for material, equipment, and/or labor as hereinafter set forth and as stated more in detail in the Proposal and related contract documents to wit; Notice to Bidders, Instructions to Bidders, Specifications; all of which documents are attached hereto and made a part of this Contract.

**NOW, THEREFORE:** It is hereby agreed that for the sum of     . (\$     )

to be paid by the Purchaser, within Thirty (30) days after the acceptance of material, equipment, and/or labor by the Purchaser, to the Contractor, the Contractor agrees to furnish all materials, equipment, and/or labor as required by the accompanying specifications, and the aforesaid contract documents, for **WEC Unit 1 Air Preheater Basket Installation HU2024-02.**

All materials, equipment, and/or labor shall be in accordance with the accompanying contract documents and specifications which are as much a part of this Agreement as if repeated verbatim herein.

It is further agreed that the Contractor will start work promptly, furnish the necessary drawings promptly and complete the work in the number of days set forth in the Proposal.

# AGREEMENT

**IN WITNESS WHEREOF:** The Parties of the First and Second Parts have hereto set their hands and seals on the day and year above written.

CITY OF HASTINGS  
Party of the First Part

By: \_\_\_\_\_

Date: \_\_\_\_\_

ATTEST:

\_\_\_\_\_  
City Clerk

CONTRACTOR  
Party of the Second Part

SEAL

\_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

APPROVED TO FORM:

\_\_\_\_\_  
City Attorney

Note: If executed by one other than President, Partner or the individual Owner, a Power-of-Attorney authorizing execution should accompany this Contract.



**PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS:

That we, the undersigned, \_\_\_\_\_,  
as principal, and \_\_\_\_\_,  
a corporation organized and existing under the laws of the State of \_\_\_\_\_,  
and duly authorized to transact business in the State of Nebraska, as surety are held and firmly  
bound unto the CITY OF HASTINGS, NEBRASKA, a municipal corporation organized and  
existing under the laws of the State of Nebraska, hereinafter referred to as CITY, in the penal sum  
of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_),  
lawful money of the United States, for the payment of which will and truly be made, we the said  
principal and the said surety do hereby bind ourselves, our heirs, executors, administrators and  
assigns, jointly and severally, by these presents as follows:

The condition of this obligation is such that, whereas the principal, by an instrument in writing  
attached hereto and bearing the date of \_\_\_\_\_, 20\_\_\_\_, has agreed with the  
CITY to do all work necessary and to furnish all labor, materials, supplies, tools and equipment to  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

as specified thereby and in the specifications, proposals and contract forming the Contract  
Documents attached thereto and made a part hereof:

NOW THEREFORE, if the principal shall well and truly in good, sufficient and in a  
workmanlike manner, and to the satisfaction of the CITY perform and complete the work required,  
and shall defend, indemnify and save harmless the CITY against all damages, claims, demands,  
expenses and charges of every kind (including claims of patent infringement) arising from any act,  
omission or neglect of said principal, his agents, servants or employees, with relation to said work,  
and shall pay all costs, charges, rentals and expenses for labor, materials, supplies and equipment  
and deliver the said improvement to the CITY completed and ready for operation and free from all  
encumbrances or claims for labor, materials or otherwise, and shall pay all other expenses lawfully  
chargeable to the CITY, and this bond shall also be for the use and benefit of all persons who may  
perform any work or labor or furnish any material in the execution of said Contract and may be

sued on thereby in the name of any such party claiming the benefit hereof, then this obligation shall be void, otherwise the same shall remain in full force and effect. This obligation shall be in full force and effect for the full guarantee period provided in the specifications contained herein.

PROVIDED FURTHER, that said surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any change, extension of time, alteration or addition to terms of the Contract, to the work or to the specifications.

PROVIDED FURTHER, that if the principal of his, their or its subcontractor or subcontractors fail to duly pay for any labor, materials team, hire sustenance, provisions, provender or any other supplies or materials used or consumed by such contractor of his, their or its subcontractors in performance of the work contracted to be done, the surety will pay the same in any amount not exceeding the sum specified in the bond together with interest as provided by law.

IT WITNESS WHEREOF, said principal and surety have hereunto set their hands and seals at \_\_\_\_\_ this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_,

This Bond is executed in triplicate counterparts.

|         |       |                          |
|---------|-------|--------------------------|
|         | _____ | Principal                |
| (SEAL)  | _____ | Street Address           |
| _____   | _____ | City, State, Zip         |
| Witness | _____ | Name of Person Executing |
|         | _____ | Surety                   |
| ATTEST: | _____ | By: _____                |
| _____   | _____ | Title: _____             |
| _____   |       |                          |



## INSURANCE COVERAGE

The undersigned hereby certifies that Workmen's Compensation, Public Liability and Property Damage, and Automobile Liability and Property Damage Insurance is in force and effect in accordance with the requirements contained in "Instruction To Bidders" which is a part of this document "Bid Proposal And Specifications". We further agree to give ten (10) days notice to the City of Hastings before effective date of cancellation or reduction of any of the above coverage.

This Insurance Coverage applies only to \_\_\_\_\_  
\_\_\_\_\_

Dated \_\_\_\_\_

\_\_\_\_\_  
SUPPLIER

By \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_  
INSURANCE COMPANY

By \_\_\_\_\_

Title \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Date \_\_\_\_\_

## SECTION 1 - GENERAL CONDITIONS

### GENERAL CONDITIONS

#### **GC.1 Contract Documents**

It is understood and agreed that the Notice to Bidders, Instructions to Bidders, Proposal, Proposal Data, Contract Agreement, Performance Bond, Payment Bond, General Conditions, Special Conditions, Specifications, Drawings, Addenda, and Change Orders issued by the Purchaser or the Engineer, and specifications and engineering data furnished by the Contractor and accepted by the Purchaser, are each included in this Contract and the work shall be done in accordance therewith.

#### **GC.2 Definitions**

Words, phrases, or other expressions used in these contract documents shall have meanings as follows.

1. "Contract" or "contract documents" shall include the items enumerated above under CONTRACT DOCUMENTS.
2. "Purchaser" shall mean the City of Hastings named and designated in the Contract Agreement as "Party of the First Part," and their duly authorized agents. All notices, letters, and other communication directed to the Purchaser shall be addressed and delivered to:  
  
City of Hastings – Whelan Energy Center  
Attention: Derek Pfeifer, Production Engineer  
4520 E South Street  
Hastings, Nebraska 68901  
  
Or, by email to [dpfeifer@cityofhastings.org](mailto:dpfeifer@cityofhastings.org)
3. "Contractor" shall mean the corporation, company, partnership, firm or individual named and designated in the Contract Agreement as the "Party of the Second Part," who has entered into this Contract for the performance of the work covered thereby, and its, his, or their duly authorized representatives.
4. "Subcontractor" shall mean and refer only to a corporation, partnership, or individual having a direct contract with the Contractor for performing work covered by these contract documents.
5. "Engineer" shall also refer to City of Hastings as the purchaser.
6. "Date of contract," or equivalent words, shall mean the date written in the first paragraph of the Contract Agreement.
7. "Day" or "days," unless herein otherwise expressly defined, shall mean a calendar day or days of 24 hours each.
8. "The work" shall mean the equipment, supplies, materials, labor, and services to be furnished under the contract and the carrying out of all obligations imposed by the contract documents.
9. "Drawings" or "plans" shall mean all (a) drawings furnished by the Purchaser as a basis for proposals, (b) supplementary drawings furnished

## SECTION 1 - GENERAL CONDITIONS

by the Purchaser to clarify and to define in greater detail the intent of the contract drawings and specifications, (c) drawings submitted by the successful bidder with his proposal, provided such drawings are acceptable to the Purchaser, (d) drawings furnished by the Purchaser to the Contractor during the progress of the work, and (e) engineering data and drawings submitted by the Contractor during the progress of the work, provided such drawings are acceptable to the Engineer.

10. Whenever in these contract documents the words "as ordered," "as directed," "as required," "as permitted," "as allowed," or words or phrases of like import are used, it shall be understood that the order, direction, requirement, permission, or allowance of the Purchaser or Engineer is intended only to the extent of judging compliance with the terms of the contract; none of these terms shall imply that the Purchaser or the Engineer has any authority or responsibility for supervision of the Contractor's forces or construction operations, such supervision and the sole responsibility therefor being strictly reserved for the Contractor.
11. Similarly, the words "approved," "reasonable," "suitable," "acceptable," "proper," "satisfactory," or words of like effect and import, unless otherwise particularly specified herein, shall mean approved, reasonable, suitable, acceptable, proper, or satisfactory in the judgment of the Purchaser or Engineer, to the extent provided in (10) above.
12. Whenever in these contract documents the expression "it is understood and agreed" or an expression of like import is used, such expression means the mutual understanding and agreement of the parties executing the Contract Agreement.
13. "Official acceptance" shall mean the Purchaser's written acceptance of all work performed under this Contract, based on the Engineer's final inspection and issuance of a final payment certificate.
14. "Project completion" shall mean that the Air Heater is ready for operation and all old material has been disposed of per the specification.
15. "Final Acceptance" shall mean that all work has been completed in accordance with these specifications, the project has been walked down, punch list items have been completed, and Purchaser is ready to accept the Work as complete.
16. "Stop Work Order" shall mean that the Purchaser will provide a written order to the Contractor requiring the Contractor to stop all, or any part of, the work called for by this Contract, for a time defined by the order. The order shall specify the reasoning for the suspended work, which may include, but are not limited to, engineering considerations, changes to the project scope, safety or environmental concerns, or other issues detrimental to the project. Upon receipt of the order, the Contractor shall immediately comply with its terms and take all reasonable steps to minimize the incurrence of costs allocable to the work covered by the

## **SECTION 1 - GENERAL CONDITIONS**

order. As soon as practical, the Purchaser and Contractor shall discuss the impacted activities, schedule, materials, labor, and equipment. If applicable, Purchaser and Contractor will seek to negotiate an equitable adjustment in the schedule, Contract price, or both, and the contract shall be modified, or a change order issued, as necessary. Upon any agreement and finalization of commercial conditions, Purchaser to provide written order to cancel the stop work order.

### **GC.3 Execution of the Contract**

Once the bids have been evaluated, the Purchaser will electronically submit the Contract Agreement to the Contractor. The Contractor shall sign the Contract Agreement and return to Purchaser for the final approval process. Upon final approvals, the Contract Agreement will be signed by the Purchaser and electronically returned to the Contractor. Contractor shall then mail one hardcopy of required bonds, one electronic or hardcopy of insurance documents, and one electronic or hardcopy of power of attorney forms to the Purchaser. The date of contract on the bond forms and power of attorney forms shall match the date provided on the Contract Agreement by the Purchaser.

The Purchaser will review the final documents and electronically send a final conformed contract to the Contractor.

### **GC.4 Legal Addresses**

The business address of the Contractor listed in the Proposal is hereby designated as the place to which all notices, letters, and other communication to the Contractor will be mailed or delivered. The address of the Purchaser appearing in section GC.2 is hereby designated as the place to which all notices, letters, and other communication to the Purchaser shall be mailed or delivered. Either party may change his address at any time by an instrument in writing delivered to the Engineer and to the other party.

### **GC.5 Scope and Intent of Contract Documents**

The various parts of the contract documents are intended to supplement but not necessarily duplicate each other. Any work exhibited in one part and not in another shall be executed as if it had been set forth in all parts, so that the work will be performed according to the complete design as determined by the Engineer.

Should anything necessary for a clear understanding of the work be omitted from the contract documents, or should the requirements appear to be in conflict, the Contractor shall secure written instructions from the Engineer before proceeding with the work affected thereby. It is understood and agreed that the work shall be performed according to the true intent of the contract documents.

### **GC.6 Independent Contractor**

The relationship of the Contractor to the Purchaser shall be that of an independent contractor.

### **GC.7 Assignment**

The Contractor shall not assign the work, or any part thereof, without the previous written consent of the Purchaser, nor shall he assign, by power of attorney or otherwise, any of the

## **SECTION 1 - GENERAL CONDITIONS**

money payable under this Contract unless written consent of the Purchaser has been obtained. No right under this Contract, nor claim for any money due or to become due hereunder shall be asserted against the Purchaser, or persons acting for the Purchaser, by reason of any so-called assignment of this Contract or any part thereof, unless such assignment has been authorized by the written consent of the Purchaser. In case the Contractor is permitted to assign moneys due or to become due under this Contract, the instrument of assignment shall contain a clause subordinating the claim of the assignee to all prior liens for services rendered or materials supplied for the performance of the work.

### **GC.8 Oral Statements**

It is understood and agreed that the written terms and provisions of this agreement shall supersede all oral statements of representatives of the Purchaser, and oral statements shall not be effective or be construed as being a part of this Contract.

### **GC.9 Reference Standards**

Reference to the standards of any technical society, organization, or association, or to codes of local or state authorities, shall mean the latest standard, code, specification, or tentative standard adopted and published at the date of taking bids, unless specifically stated otherwise.

### **GC.10 Source of Materials**

To the extent possible, materials, and equipment (including components thereof) furnished under these specifications shall be produced, processed, manufactured, and assembled within the United States of America. Substitution of foreign materials for domestic materials will not be permitted unless such substitution is clearly stated in the Proposal and accepted by the Purchaser.

### **GC.11 Contractor to Check Drawings and Lists**

The Contractor shall check all dimensions, elevations, and quantities indicated on the drawings and lists furnished to him by the Engineer. The Contractor shall notify the Engineer of any discrepancy between the drawings and the conditions at the site, or any error or omission in the drawings, or in the layout as given by stakes, points, or instructions, which he may discover in the course of the work. The Contractor will not be allowed to take advantage of any error or omission in the drawings or other contract documents that a reasonable inspection of them by Contractor would reveal. Full instructions will be furnished by the Engineer should such error or omission be discovered, and the Contractor shall carry out such instructions as if originally specified.

### **GC.12 Figured Dimensions to Govern**

Dimensions and elevations indicated on the drawings shall be accurately followed even though different from scaled measurements. No work indicated on the drawings, the dimensions of which are not indicated, shall be executed until necessary dimensions have been obtained from the Engineer.

## **SECTION 1 - GENERAL CONDITIONS**

### **GC.13 No Waiver of Rights**

Neither the inspection by the Purchaser or Engineer or any of their officials, employees, or agents, nor any order by the Purchaser or Engineer for payment of money, or any payment for, or acceptance of, the whole or any part of the work by the Purchaser or Engineer, nor any extension of time, nor any possession taken by the Purchaser or its employees, shall operate as a waiver of any provision of this Contract, or of any power herein reserved to the Purchaser, or any right to damages herein provided, nor shall any waiver of any breach in this Contract be held to be a waiver of any other or subsequent breach.

### **GC.14 Authority of the Engineer**

To prevent delays and disputes, and to discourage litigation, it is agreed by the parties to this Contract that the Engineer shall determine the quantities of work which are to be paid for under the contract and shall resolve all questions in relation to the work.

If, in the opinion of the Contractor or the Purchaser, a decision made by the Engineer is not in accordance with the meaning and intent of the contract, either party may file with the Engineer and the other party to the contract, within 30 days after receipt of the decision, a written objection to the decision. Failure to file an objection within the allotted time will be considered acceptance of the Engineer's decision and the decision shall become final and conclusive.

The Engineer's decision and the filing of the written objection thereto shall be a condition precedent to the right to request arbitration or to start action in court.

It is the intent of this agreement that there shall be no delay in the execution of the work and the decision of the Engineer as rendered shall be promptly observed.

### **GC.15 Engineering Inspection**

The Purchaser may appoint (either directly or through the Engineer) such inspectors as the Purchaser deems proper to inspect the work for compliance with the contract documents. The Contractor shall furnish all reasonable assistance required by the Engineer, or inspectors, for the proper inspection of the work. Should the Contractor object to any interpretation of the contract by an inspector, the Contractor may make written appeal to the Engineer for a decision.

Inspectors shall have the authority to reject work which is unsatisfactory, faulty, or defective or does not conform to the requirements of the contract documents. Inspection shall not relieve the Contractor from any obligation to construct the work strictly in accordance with the contract documents.

Upon the failure of the Contractor or its Subcontractors to comply with any of the requirements of this Contract (but not limited to quality or safety), the Purchaser shall have the authority to stop any portion of the work affected by such failure until such failure is remedied. If the Purchaser issues a Stop Work Order, the Purchaser shall not be liable for any costs or expenses claimed by Contractor arising out of such issuance. The construction

## **SECTION 1 - GENERAL CONDITIONS**

schedule shall not be delayed or extended as a result of the Purchaser's issuance of a Stop Work Order.

### **GC.16 Contractor Default**

If the work to be done under this Contract is abandoned by the Contractor; or if this Contract is assigned by him without the written consent of the Purchaser; or if the Contractor is adjudged bankrupt; or if a general assignment of his assets is made for the benefit of his creditors; or if a receiver is appointed for the Contractor or any of his property; or if at any time the Engineer certifies in writing to the Purchaser that the performance of the work under this Contract is being unnecessarily delayed, that the Contractor is violating any of the conditions of this Contract, or that he is executing the same in bad faith or otherwise not in accordance with the terms of said contract; or if the work is not substantially completed within the time named for its completion or within the time to which such completion date may be extended; then the Purchaser may serve written notice upon the Contractor and his surety of the Purchaser's intention to terminate this Contract. Unless within 5 days after the serving of such notice, a satisfactory arrangement is made for continuance, this Contract shall terminate. In the event of such termination, the surety shall have the right to take over and complete the work, provided that if the surety does not commence performance within 30 days, the Purchaser may take over and prosecute the work to completion, by contract or otherwise. The Contractor and his surety shall be liable to the Purchaser for all excess cost sustained by the Purchaser by reason of such prosecution and completion. The Purchaser may take possession of, and utilize in completing the work, all materials, equipment, tools, and plant on the site of the work.

### **GC.17 Beginning, Progress, and Completion of the Work**

The time of completion is a basic consideration of this Contract. Unless otherwise specified in these contract documents or advised by written order of the Purchaser, the Contractor shall begin work within 10 days after the date of contract. The work shall be prosecuted to completion in accordance with the specified schedule, subject to adjustment as provided in these contract documents.

A detailed construction schedule shall be prepared by the Contractor and submitted to the Purchaser for review. The schedule shall contain the various activities required to perform the work and the dates the activities will be started and completed in order to complete the work in accordance with the specified schedule requirements. The Contractor is responsible for determining the sequence and time estimates of the detailed construction activities. However, the Purchaser reserves the right to require the Contractor to modify any portion of the schedule the Purchaser determines to be impracticable or unreasonable; as required to coordinate the Contractor's activities with those of other contractors, if any, engaged in work for the Purchaser on the site; to avoid undue interference with the Purchaser's operations; and to assure completion of the work by the date or dates stipulated. Upon acceptance by the Purchaser of the Contractor's detailed construction schedule, the Contractor will be responsible for maintaining such schedule.

## **SECTION 1 - GENERAL CONDITIONS**

If at any time the Contractor's work is behind schedule, he shall immediately put into effect definite procedures for getting the work back on schedule. The procedures shall be subject to review and modification by the Purchaser.

### **GC.18 Hindrances and Delays**

The Contractor expressly agrees that in undertaking to complete the work within the time specified, he has made allowances for all hindrances and delays which might usually be expected to occur in performing the work. No claims shall be made by the Contractor for such hindrances and delays.

If the Contractor experiences hindrances and delays which, in his opinion, are not usually to be expected in the performance of the work and which affect the performance of the work, he may request a change in the contract. Such hindrances and delays may include, but not be limited to, acts or failure to act by the Purchaser or other contractors employed by the Purchaser, fires, floods, labor disputes, epidemics, or acts of God. Such hindrances and delays shall not include rain, snow, or other non-severe inclement weather. Claims by the Contractor for any change in the contract due to such hindrances and delays shall be made in accordance with the requirements of Article GC.22, CHANGES TO THE CONTRACT. The Contractor shall use all reasonable means to minimize the extent of the delay.

### **GC.19 Suspension of Work**

The Purchaser reserves the right to suspend and reinstate execution of the whole or any part of the work without invalidating the provisions of the contract. Suspension or reinstatement of the work will be by written notice to the Contractor from the Purchaser.

Suspension of work shall not automatically entitle the Contractor to additional compensation or a change in the contract time; however, the Contractor will be reimbursed for real and unavoidable direct costs incurred by him as a result of such suspension and/or the contract will be extended as required to compensate for any delay due to such suspension. Claims by the Contractor for change of contract time or an adjustment of the contract price, due to work suspensions ordered by the Purchaser shall be made in accordance with the requirements of Article GC.22, CHANGES TO THE CONTRACT. The Contractor shall use all reasonable means to minimize the consequences of such suspension.

### **GC.20 Cancellation of Work**

The Purchaser reserves the right to cancel the unshipped portion of the work by giving written notice to the Contractor. In the event of cancellation, the Purchaser will pay the Contractor reasonable and proper cancellation costs.

Cancellation of the work shall not constitute the basis for a claim for damages or loss of anticipated profits.

The Contractor shall, after consultation with the Purchaser, take all reasonable steps to minimize the costs related to cancellation. The Contractor shall provide the Purchaser with an accounting of costs claimed, including adequate supporting information, and the Purchaser may, at its expense, audit the claimed costs and supporting information.



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### **GC.21 Modifications**

The Contractor shall modify the work whenever so ordered by the Purchaser and such modifications shall not affect the validity of the contract. Modifications may involve changes in the amount of the work to be performed or changes in the contract time for which appropriate changes to the contract will be made.

Contract changes due to modifications shall be made in accordance with the requirements of Article GC.22, CHANGES TO THE CONTRACT.

### **GC.22 Changes to the Contract**

The contract may be changed only by duly executed change orders issued by the Purchaser.

If, in the opinion of the Purchaser or the Contractor, any event or action by the other party justifies a change in the contract, either party shall initiate with the other party, within 5 days after such event or action, a request for a change to the contract. All documentation required to substantiate the proposed change shall be submitted within a minimum reasonable time after initiating the request for change. Upon the parties reaching agreement regarding the proposed change, the Purchaser will issue a written change order therefor.

Notwithstanding the foregoing provisions requiring duly authorized change orders, in the event agreement has been reached between authorized representatives of the parties regarding the change in the contract pending processing of such change order, the Contractor shall proceed with the work on the basis of written interim authorization from the Purchaser.

If the Contractor claims that any instruction, request, drawing, specifications, or other directive or action of the Purchaser or the Engineer constitutes a change in the contract, but has not been authorized as such by a change order in writing by the Purchaser, the Contractor shall immediately request a written interim authorization and proceed without delay to perform the work in accordance with such authorization. The Contractor shall provide written notice of the claim or dispute to the Engineer and the Purchaser within 5 days of the request for interim authorization. The Contractor's failure to give said written notice within the 5 day period shall constitute a waiver and relinquishment of any such claim or dispute. The Purchaser's written interim authorization shall not constitute approval of the claim for increased or decreased work, but shall be a condition precedent to the Contractor's right to receive payment for such work and to the Contractor's right to prosecute or maintain any proceeding to recover for such work.

#### **GC.22.1 Contract Price Changes**

The contract price may be changed due to modifications which involve extra work or decreased work; or due to work suspensions, hindrances, and delays over which the Contractor has no control. Claims for changes in the contract price shall conform to the requirements specified herein.

##### **GC.22.1.1 Increased Price**

If a change in the contract is required due to work suspensions or hindrances and delays, the contract price will be increased according to agreed lump sums, agreed acceleration costs, or

## SECTION 1 - GENERAL CONDITIONS

other demonstrable costs submitted by the Contractor and substantiated to the satisfaction of the Purchaser.

If a change in the contract price is required due to a modification which increases the amount of the work, and the added work or any part thereof is of a type and character which can properly and fairly be classified under one or more unit price items of the contract, then the contract price will be increased according to the amount actually done and at the applicable unit price. Otherwise, such work shall be paid for as herein-after provided.

Contract price changes for modifications involving extra work will be based on agreed lump sums or on agreed unit prices whenever the Purchaser and the Contractor agree upon such prices before the extra work is started; otherwise, payments for extra work will be based on actual direct cost plus the specified percentage allowance.

For the purpose of determining whether proposed extra work will be authorized, or for determining the payment method for extra work, the Contractor shall submit to the Engineer, upon request, a detailed cost estimate for proposed extra work. The estimate shall indicate itemized quantities and charges for all elements of direct cost. Charges for the Contractor's and subcontractor's extra profit, extra general superintendence, extra field office expense, and extra overheads shall be indicated as a percentage addition to the total estimated direct cost. Unless otherwise agreed upon by the Contractor and the Purchaser, such percentage additions shall be 15 percent for the extra work performed by the Contractor's own forces or 20 percent for extra work performed by a subcontractor.

When payment for extra work is based on actual direct cost, the Contractor will be paid the actual direct cost plus an allowance of 15 percent if the extra work is performed by the Contractor's own forces or 20 percent if the extra work is performed by a subcontractor. The allowance will be paid as full compensation for the Contractor's and sub-contractor's extra profit, extra general superintendence, extra field office expense, extra overheads, and all other elements of extra cost not defined herein as actual direct cost.

The actual direct cost shall include only those extra costs for labor and material expended in direct performance of the extra work and may include the following.

- a. The actual payroll cost of all workmen such as laborers, mechanics, craftsmen, and foremen.
- b. The Contractor's or subcontractor's net cost for materials and supplies.
- c. The rental charge for vehicles and construction equipment.
- d. The transportation charges for equipment.
- e. The charges for extra power, fuel, lubricants, water, and special services.
- f. The charges for extra payroll taxes, bond premiums, and insurance premiums.

The form in which actual direct cost records are kept, the construction methods, and the type and quantity of equipment used shall be acceptable to the Engineer.

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Construction equipment which the Contractor has on the jobsite and which is of a type and size suitable for use in performing the extra work shall be used. The hourly rental charges for equipment shall not exceed 1/2 percent of the latest applicable monthly rental rates as published by Dataquest Incorporated in its "Rental Rate Blue Book" and shall apply to only the actual time the equipment is used in performing the extra work.

When extra work requires the use of equipment which the Contractor does not have on the jobsite, the Contractor shall obtain the concurrence of the Engineer before renting or otherwise acquiring additional equipment. The rental charges for the additional equipment shall not exceed the latest applicable "Rental Rate Blue Book" published rental rates.

### **GC.22.1.2 Decreased Price**

If a change in the contract price is required due to a modification which decreases the amount of work, such decrease shall not constitute the basis for a claim for damages or anticipated profits on work affected by such decrease. Where the value of omitted work is not covered by applicable unit prices, the Engineer shall determine, on an equitable basis, the amount of:

- a. Credit due the Purchaser for contract work deleted as a result of an authorized change,
- b. Allowance to the Contractor for any actual loss incurred in connection with the purchase, delivery, and subsequent disposal of materials or equipment required for use on the work as planned and which could not be used in any part of the work as actually built, and
- c. Any other adjustment of the contract amount where the method to be used in making such adjustment is not clearly defined in the contract documents.

Unless otherwise agreed upon by the Purchaser and the Contractor, the credit due the Purchaser for reductions in the amount of work to be done shall be the estimated direct cost of the deleted work plus an overhead allowance of the following.

- 10 percent of the estimated direct cost if the work was to have been done by the Contractor's own forces, or
- 15 percent of the estimated direct cost if the work was to have been done by a subcontractor.

Direct cost referred to above shall include the category of costs listed as actual direct costs, Items (a) to (f) inclusive of the article entitled Increased Price.

### **GC.22.2 Contract Time Changes**

The contract time may be changed due to work modifications, hindrances and delays, and work suspensions over which the Contractor has no control.

Contract time will not be changed for delays caused by unfavorable weather or unsuitable ground conditions normally incident to the work, inadequate construction force, failure to place timely orders for equipment and materials, or other causes within the control of the Contractor.

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### **GC.23 Step Dispute Resolution**

In the event of any controversy, claim or dispute between the Parties arising out of or relating to this Agreement, including its enforcement, such controversy, claim or dispute, including disputes regarded as such by only one of the Parties, the Parties shall negotiate in good faith to resolve such dispute, including third party mediation, if the Parties so agree.

If no settlement is achieved, either Party may pursue a claim in a federal or state court with competent jurisdiction.

### **GC.24 Laws and Regulations**

The Contractor shall observe and comply with all ordinances, laws, and regulations, and shall protect and indemnify the Purchaser and the Purchaser's officers and agents, including the Engineer, against any claim or liability arising from or based on any violation of the same.

### **GC.25 Taxes, Permits, and Licenses**

The Contractor shall pay all sales, use, and other taxes that are lawfully assessed against the Purchaser or Contractor in connection with the work and shall obtain and pay for all required licenses, permits, and inspections.

The Contractor will be compensated for any increase in tax rates, license fees, and permit fees or any new taxes, licenses, or permits imposed after the date of the Proposal; provided, however, that this provision shall be limited to sales, use, and excise taxes assessed against the completed work and to licenses and permits required specifically for the proposed work.

### **GC.26 Patents**

Royalties and fees for patents covering materials, articles, apparatus, devices, equipment, or processes used in the work shall be included in the contract amount. The Contractor shall satisfy all demands that may be made at any time for such royalties or fees and he shall be liable for any damages or claims for patent infringements. The Contractor shall, at his own cost and expense, defend all suits or proceedings that may be instituted against the Purchaser for alleged infringement of any patents involved in the work and, in case of an award of damages, the Contractor shall pay such award. Final payment to the Contractor by the Purchaser will not be made while any such suit or claim remains unsettled.

### **GC.27 Materials and Equipment**

Unless specifically provided otherwise in each case, all materials and equipment furnished for permanent installation in the work shall conform to applicable standard specifications and shall be new, unused, and undamaged when installed or otherwise incorporated in the work. No such material or equipment shall be used by the Contractor for any purpose other than that intended or specified, unless such use is specifically authorized by the Purchaser in each case.

All required tests in connection with acceptance of source of materials shall be made at the Contractor's expense by a properly equipped laboratory of established reputation whose work and testing facilities are acceptable to the Purchaser. Any change in origin or method of

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preparation or manufacture of a material being routinely tested will require new tests. Reports of all tests shall be furnished to the Engineer or Purchaser in as many copies as required.

### **GC.28 Guarantee**

The Contractor guarantees that the work herein contracted will be as specified and will be free from defects in design, workmanship, and materials. Contractor does not guarantee or warrant parts subject to normal wear and tear during operation. If within the guarantee period the work fails to meet the provisions of this guarantee, the Contractor shall promptly correct any defects, including nonconformance with the contract documents by adjustment, repair, or replacement of all defective parts or materials at the Contractor's option and expense, after consulting with the Purchaser on the proposed remedy plans.

Except as otherwise prescribed by the terms of any special guarantees required by the contract documents, the guarantee period shall begin on the date of final payment and shall end 12 months later.

The cost of all materials, parts, labor, transportation, supervision, special tools, and supplies required for replacement or repair of parts and for correction of defects shall be paid by the Contractor or by the surety.

This guarantee shall be extended to cover all repairs and replacements furnished under the guarantee and the period of the guarantee for each such repair or replacement shall be 1 year after correction of the defect except as otherwise prescribed by the terms of any special guarantees required by the contract documents.

The Contractor will be given an opportunity to confirm the existence of the defect, but he shall not delay the correction while making such determination.

If within 10 days after the Purchaser has notified the Contractor of a defect, failure, or abnormality in the work, the Contractor has not started to make the necessary repairs or adjustments, the Purchaser is hereby authorized to make the repairs or adjustments or to order the work to be done by a third party; the cost of the work to be paid by the Contractor.

In the event of an emergency where, in the judgment of the Purchaser, delay would cause serious loss or damage, repairs or adjustments may be made by the Purchaser or a third party chosen by the Purchaser without advance notice to the Contractor and the cost of the work shall be paid by the Contractor or by the surety.

### **GC.29 Contractor's Insurance Coverage**

The Contractor shall not commence work under this Contract until Contractor has obtained all the insurance required under this article. Furthermore, the Contractor shall not allow any sub-contractor to commence work under this Contract until the sub-contractor has obtained the same insurance as is required of the Contractor. The sub-contractor alone shall be responsible for the sufficiency of its own insurance program.

#### **GC.29.1 Certificates of Insurance**

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Certificates of Insurance acceptable to the Purchaser shall be filed with the Purchaser prior to commencement of the work. All insurance carried shall conform to the relevant provisions of the respective Project Documents and be with insurance companies which are rated "A, X" or better by Best's Insurance Guide, or other insurance companies of recognized responsibility satisfactory to the Purchaser.

GC.29.2 Proof of Carriage of Insurance. Satisfactory certificates of insurance shall be filed with the Purchaser prior to starting any construction work on this contract. The parties agree that the requirements with respect to requirements to procure and maintain insurance under this Section is a material part of this Agreement.

### GC.29.3 Additional Insureds

Insurance coverages furnished under this Contract, with the exception of Workers' Compensation and Employer's Liability, shall include the City of Hastings and their members, directors, officers, agents, and employees as named Additional Insureds on a primary and noncontributory basis, and shall include Products and completed operations with respect to the activities of the Contractor and shall be maintained for the full duration of the project including for a period after completion to include the statute of repose.

Notwithstanding any other provision of these policies, the insurance afforded shall apply separately to each insured, with respect to any claim, suit, or judgment made or brought by or for any other insured, as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount or amounts for which the insurer would have been liable had only one insured been named.

The Purchaser shall not by reason of their inclusion under these policies incur liability to the insurance carrier for payment of premium for these policies.

### GC.29.4 Waiver of Subrogation

To the extent permitted by applicable law, the Contractor and their sub-contractor shall require their insurance carriers, with respect to all insurance policies, to waive all rights of subrogation against the Purchaser their partners, directors, officers, agents, and employees.

### GC.29.5 Workers' Compensation and Employer's Liability Insurance

The Contractor shall procure, and shall maintain during the life of this Contract, Workers' Compensation Insurance as required by workers' compensation laws of the State of Nebraska and also of the state in which the sub-contractor is domiciled.

The Contractor shall also be protected against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a workers' compensation law. The Employer's Liability Insurance shall contain the following limits of liability:

|                           |                         |
|---------------------------|-------------------------|
| Bodily Injury by Accident | \$500,000 each accident |
| Bodily Injury by Disease  | \$500,000 each employee |
| Bodily Injury by Disease  | \$500,000 policy limit  |

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### GC.29.6 General Liability Insurance

This insurance shall be written per project on an “occurrence” policy form, including coverage for premises/operations, products/completed operations, blanket contractual liability, independent contractors and personal injury, with no exclusions for explosion, sudden and accidental pollution or an absolute or total pollution exclusion, collapse and underground perils. The commercial general liability policy shall also include a severability of interest clause and a cross liability clause in the event more than one entity is “named insured” or “named additional insured” under the liability policy.

Limits of Insurance shall be as follows:

|                                 |             |
|---------------------------------|-------------|
| Each Occurrence Limit           | \$1,000,000 |
| Products/Completed Operations   | \$2,000,000 |
| General Aggregate Limit         | \$2,000,000 |
| Personal and Advertising Injury | \$1,000,000 |

### GC.29.7 Automobile Liability Insurance

This insurance shall be written under a Business Auto Policy and shall protect the Contractor and Additional Insureds against claims arising from injuries to members of the public or damage to property of others arising from the use of automobiles whether such automobiles are owned, non-owned, or hired. Automobile insurance shall include Motor Carrier Endorsement Act MCS 90 and transportation pollution coverage if applicable. If work is being done near a railroad track, the 50’ railroad right of way exclusion must be deleted.

|                    |                           |
|--------------------|---------------------------|
| Limit of Liability | \$1,000,000 each accident |
|--------------------|---------------------------|

### GC.29.8 Umbrella Liability Policy

This insurance shall protect the Contractor and the Additional Insureds against all claims in excess of the limits provided under the employer's liability, automobile liability, and general liability policies. The liability limits of the umbrella liability policy shall be not less than \$5,000,000 per occurrence. This policy shall be an "occurrence" type policy. However, Purchaser reserves the right to require higher limits with respect to each project.

### GC.29.9 Pollution Liability – Not Applicable

### GC.29.10 Riggers Liability – Applicable

Should work involve the moving, lifting, lowering, rigging or hoisting of property or equipment Contractor shall carry Rigger’s Liability Insurance to insure against physical loss or damage to the property or equipment on a Replacement Cost Basis.

### GC.29.11 Railroad Protective Liability – Not Applicable

### GC.29.12 Professional Liability – Not Applicable

### GC.29.13 Transportation Insurance – Not Applicable

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GC.29.14 Property Insurance A.K.A. Builder's Risk - Not Applicable

### **GC.30 Indemnification**

To the fullest extent permitted by laws and regulations, the Contractor shall defend, indemnify, and hold harmless the Purchaser, their officers, directors, members, consultants, agents, and employees from and against all claims, damages, losses, and expenses, direct, indirect, or consequential (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and court and arbitration costs) arising out of or resulting from the negligent, wrongful, or defective performance of the work by the Contractor, any sub-contractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work, or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder or arises by or is imposed by law and regulations regardless of the negligence of any such party.

In any and all claims against the Purchaser, or of any of their officers, directors, members, consultants, agents, or employees by any employee of the Contractor, any sub-contractor, any person or organization directly or indirectly employed by any of them to perform or furnish any of the work or anyone for whose acts any of them may be liable, this indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any such sub-contractor or other person or organization under workers' or workmen's compensation acts, disability benefit acts, or other employee benefit acts, nor shall this indemnification obligation be limited in any way by any limitation on the amount or type of insurance coverage provided by the Purchaser, the Contractor, or any of their sub-contractors.

### **GC.31 Release of Liability**

Acceptance by the Contractor of the last payment shall be a release to the Purchaser and every officer and agent thereof, from all claims and liability hereunder for anything done or furnished for, or relating to the work, or for any act or neglect of the Purchaser or of any person relating to or affecting the work.

### **GC.32 Claims for Labor and Materials**

The Contractor shall indemnify and save harmless the Purchaser from all claims for labor and materials furnished under this Contract. When requested by the Purchaser, the Contractor shall submit satisfactory evidence that all persons, firms, or corporations who have done work or furnished materials under this Contract, for which the Purchaser may become legally liable, have been fully paid or satisfactorily secured. In case such evidence is not furnished or is not satisfactory, an amount will be retained from money due the Contractor which, in addition to any other sums that may be retained, will be sufficient, in the opinion of the Purchaser, to liquidate all such claims. Such sum will be retained until the claims as aforesaid are fully settled or satisfactorily secured.

Before final acceptance of the work by the Purchaser, the Contractor shall submit to the Engineer in duplicate a notarized affidavit stating that all subcontractors, vendors, persons, or firms who have furnished labor or materials for the work have been fully paid and that all taxes have been paid. If a performance bond has been executed, a statement from the surety shall also be submitted consenting to the making of the final payment.



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### **GC.33 Final Inspection**

When the work has been substantially completed and at a time mutually agreeable to the Purchaser and Contractor, the Purchaser will make a final inspection of the work as to the acceptability and completeness of the work.

### **GC.34 Payments**

Payment will be based on the Contractor's progress payment which he will submit to the Purchaser for approval. The Purchaser will retain 10% of the total contract amount for all work. The Purchaser will reduce the retainage to 5% after the project is 50% complete.

### **GC.35 Hazardous Materials**

As required under Federal Hazardous Communications Standards and certain state and local laws, the Contractor shall provide Material Safety Data Sheets covering all hazardous materials furnished under or otherwise associated with the work under this Contract. The Contractor shall provide the Purchaser with either copies of the applicable Material Safety Data Sheets or copies of a document certifying that no Material Safety Data Sheets are required under any federal, state, or local law, regulation, statute, or ordinance in effect at the jobsite.

Hazardous materials are defined in the applicable statute which may use the terminology "toxic substances" instead of "hazardous materials." The Contractor is responsible for determining if any substance or material furnished, used, applied, or stored under this Contract is within the provisions of any applicable statute.

If the work under this Contract includes onsite construction or erection, the Contractor shall provide written notice of the presence of hazardous materials to local fire, medical, and law enforcement agencies as required with a copy of such notice to the Purchaser.

The Contractor shall provide labeling of hazardous materials and training of employees in the safe usage of such materials as required under any applicable federal, state, or local law, regulation, statute, or ordinance.

### **GC.36 Liquidated Damages**

Time is a material provision of this Agreement. If the Contractor is unable to meet the agreed upon completion dates, the Contractor shall immediately notify the Purchaser and confirm the notice in writing within ten (10) business days of the delaying event. The notice shall contain detailed information of the delay including Contractor's estimate of the duration of the delay, Contractor's estimate of the delay's impact to Contractor's schedule and Contractor's plan to mitigate the effects of the delay.

Contractor shall be excused for delays in completion of the work only in accordance with GC.18. In the event of any such delay, Contractor shall only be allowed an extension of the date of completion for a period of time reasonably necessary to overcome the effect of the delay. Contractor shall not be entitled to any extra compensation for such delay. Contractor shall promptly notify the Purchaser in writing, with confirmation receipt of notification,

## **SECTION 1 - GENERAL CONDITIONS**

The liquidated damages amount per calendar day specified in the proposal form will be assessed, not as a penalty but as predetermined and agreed liquidated damages. The Purchaser and Contractor specifically agree the per calendar day amount to be assessed as liquidated damages is fair and reasonable and not excessive. The parties further agree that said per calendar day amount accurately reflect the anticipated loss and inconvenience to the public and lost revenue to or use by the Purchaser due to the project not being completed by the end of the project period or the end of the contract completion date.

The Purchaser shall have the right to deduct liquidated damages from any money in its hands, otherwise due, or to become due, to the Contractor; to submit invoice for payment; or to sue for and recover compensation for damages for nonperformance of this Contract within the time stipulated.

The Liquidated Damages for this project will be \$1,000.00 per calendar day past the project completion date.

### **GC.37 Consequential Damages**

Except for Supplier's third party obligations arising out of or liability for breach of Articles GC.26 and/or GC.30, Purchaser and Supplier will not be liable to each other for loss of profits, loss of use, loss of contracts, or consequential damages arising out of this Contract. This Section will not relieve Supplier of any obligation under GC.36.

### **GC.38 Limitation of Liability**

With the exception of (a) indemnification stated in Article GC.30 and (b) the insurance coverages and limits set forth in Article GC.29, Supplier's total limit of liability on any claim, whether for breach of Contract, breach of warranty, tort, negligence, strict liability, or any other legal theory, for any loss or damage arising out of or connected to, or resulting from this Contract, shall be limited to the purchase price to be paid by Purchaser.

### **GC.39 Confidentiality**

"Confidential Information" means the confidential or proprietary designs, know-how, processes, trade secrets, and other information owned or controlled by Purchaser, Engineer, or Supplier respectively. Supplier agrees to hold any Confidential Information received in the strictest confidence, shall only use the Confidential Information as necessary to perform the work. Purchaser agrees to hold any Confidential Information received in the strictest confidence and shall only use the confidential information as necessary for engineering, construction, start-up, commissioning, maintenance, or other purposes related to the project. Each party shall use the same degree of care as is used for its own information of similar importance, but no less than reasonable care.

### **GC.40 Work Eligibility Status**

The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as

## SECTION 1 - GENERAL CONDITIONS

the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee.

### **GC.41 Fair Labor Standards**

The Contractor agrees to comply with all current applicable State, Federal, and City fair labor standards in the execution of the contract. Pursuant to the Title VI Non-Discrimination Program of the City of Hastings, Contractor agrees to comply with the provisions set forth by CITY's Title VI Non-discrimination Program, if applicable. A copy of said provisions are as follows:

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

- (1) **Compliance with Regulations:** The contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter "FHWA") Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- (2) **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin, sex, age, and disability/handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- (3) **Solicitations for Subcontractors, Including Procurements of Materials and Equipment:** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.
- (4) **Information and Reports:** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the (Recipient) or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the (Recipient), or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

## SECTION 1 - GENERAL CONDITIONS

- (5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the (Recipient) shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:
- (a.) Withholding of payments to the contractor under the contract until the contractor complies, and/or
  - (b.) Cancellation, termination or suspension of the contract, in whole or in part.
- (6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontract or procurement as the (Recipient) or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the (Recipient) to enter into such litigation to protect the interests of the (Recipient), and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

## SECTION 2 - SPECIAL CONDITIONS

### SPECIAL CONDITIONS

SC.1 GENERAL. These Special Conditions are nontechnical in nature and shall supplement the General Conditions in the administration and regulation of field construction work performed under these specifications.

SC.2 ENGINEER'S DRAWINGS AND SPECIFICATIONS. After contract award, the Contractor will be furnished two sets of all drawings including revisions thereto and two working copies of the specifications without charge. Additional sets of drawings and revisions thereto and additional copies of specifications may be obtained by payment of printing, handling, and mailing costs. All drawings and specifications shall be returned to the Purchaser upon completion of the work.

SC.3 PROJECT MANAGEMENT. The coordination of all field construction will be under the direction of the Purchaser, who will be responsible for coordinating work between various contractors and for resolving any conflicts between contractors regarding scheduling or coordination.

The time of completion is a basic consideration of this Contract and the Contractor shall be responsible for performing his work in accordance with the specified construction schedule. If at any time the Contractor's work is behind schedule, the Contractor shall increase his forces, work overtime, or otherwise accelerate his operations to comply with the schedule, and shall put into effect definite procedures for getting the work back on schedule. The proposed procedures shall be subject to the Purchaser's acceptance or modification. The procedures adopted shall be put into effect immediately.

The Purchaser will not be responsible for the assignment of personnel, or for obtaining materials or supplies, or for any other services to the Contractor except the coordination of work between contractors and as specifically set forth in the contract documents.

SC.4 CONTRACTOR'S OFFICE AT SITE OF WORK. Not used.

SC.5 FIELD RECORDS. The Contractor shall maintain at the project site an orderly and adequate file of up-to-date copies of all Engineer's drawings and specifications, manufacturer's prints and specifications, and other contract documents and supplementary data.

In addition, the Contractor shall maintain a continuous record of all field changes by means of a set of drawings marked to indicate current "as-built" conditions. This "as-built" set of drawings shall be available for check by the Purchaser in order for him to ascertain that it is being kept current. At the conclusion of the work, the "as-built" drawings and other engineering data, accurately and neatly marked with field changes, shall be submitted to the Purchaser in the required number of copies. The "as-built" drawings and data shall include all revisions to the work made under this Contract, including those made by subcontractors.

## **SECTION 2 - SPECIAL CONDITIONS**

SC.6 CONTRACTOR'S SUPERVISION AT THE SITE. The Contractor shall furnish adequate management, supervisory, and technical personnel on the site to ensure expeditious and competent handling of the work.

A superintendent experienced in construction of the type specified, knowledgeable in the pertinent industry codes and standards, and who is a permanent member of the Contractor's organization, shall be a resident at the project throughout the construction. The superintendent shall be fully authorized to act for the Contractor and to receive whatever orders or notices may be given for the proper prosecution of the work. Contractor shall provide superintendents resume for approval by Owner.

The Contractor's field organization shall include an experienced staff of qualified technical personnel to handle onsite engineering, planning, and direction of all field work.

The Contractor shall be responsible for complete supervision and control of his subcontractors as though they were his own forces. Notice to the Contractor shall be considered notice to any affected subcontractor.

SC.7 SUBCONTRACTS. The Contractor shall perform the majority of the work with his own forces and under the management of his own organization. Specific portions of the work may be subcontracted only by subcontractors who have been listed in the Proposal and who are accepted by the Purchaser as provided in the General Conditions. All subcontractors shall be directly responsible to the Contractor and shall be under his general supervision. All work performed under subcontracts shall be subject to the same contract provisions as the work performed by the Contractor's own forces.

SC.8 RELATIONS WITH OTHER CONTRACTORS. The Contractor shall cooperate with all other contractors who may be performing work in behalf of the Purchaser, and with workmen who may be employed by the Purchaser in the vicinity of the work under this Contract, and he shall conduct his operations to minimize interference with the work of such contractors or workmen. The Contractor shall promptly make good, at his own expense, any injury or damage that may be sustained by other contractors or employees of the Purchaser due to activities associated with this Contract. Any difference or conflict which may arise between the Contractor and other contractor's, or between the Contractor and workmen of the Purchaser, in regard to their work shall be resolved as determined by the Purchaser.

SC.9 ACCEPTANCE OF WORK BY OTHERS. If any part of the Contractor's work is dependent upon the quality and completeness of work performed under another contract, the Contractor shall inspect the other contractor's work and promptly report defects therein which render such work unsuitable for the proper execution of the work under this Contract. Failure to report such defects to the Purchaser shall constitute the Contractor's acceptance of such work as suitable to receive the Contractor's work; provided, however, that the Contractor shall not be responsible for defects which develop after his inspection and which could not have been reasonably detected or foreseen.

## **SECTION 2 - SPECIAL CONDITIONS**

**SC.10 METHODS OF FIELD OPERATION.** The Contractor shall inform the Purchaser in advance concerning his plans for carrying out each part of the field work. Review by the Purchaser of any plan or method of work proposed by the Contractor shall not relieve the Contractor of any responsibility therefor, and such review shall not be considered as an assumption of any risk or liability by the Purchaser or any officer, agent, or employee thereof. The Contractor shall have no claim because of the failure or inefficiency of any plan or method so reviewed.

Any method of work suggested by the Purchaser, but not specified, shall be used at the risk and responsibility of the Contractor, and the Purchaser will assume no responsibility therefor. The Contractor alone shall be responsible for the safety, adequacy, and efficiency of his construction plant, equipment, and methods.

The Contractor shall be solely and completely responsible for conditions of the jobsite, including safety of all persons and property during performance of the work. This requirement will apply continuously and not be limited to normal working hours. The Purchaser's construction review of the Contractor's performance is intended to include review of the adequacy of the Contractor's safety measures in, on, or near the construction site.

Shutdown of valves or equipment will be made only by Owner's personnel. In the event that an emergency condition warrants, the Contractor shall take direct action to make shutdown, but must notify Owner immediately and remain on worksite to demonstrate what has taken place to Owner's personnel.

**SC.11 SAFETY, HEALTH, AND ACCIDENT PREVENTION.** The Contractor shall conduct all operations under this Contract in a manner to prevent bodily harm and damage to property. The Contractor shall continuously inspect all operations, work, materials, and equipment; shall conduct health surveys of all work areas; and shall be solely responsible for the discovery, determination, and correction of conditions which constitute a risk of bodily harm or property damage.

The Purchaser will resolve conflicts regarding safety and health measures and practices. The Purchaser will monitor the Contractor's safety and health measures, and may require changes in the Contractor's Safety, Health, and Accident Prevention Program during the performance of the work.

The Contractor shall implement and maintain a written Safety, Health, and Accident Prevention Program specifically applicable to the work. The Contractor's program shall meet the requirements of the codes and regulations of federal, state, local, and other authorities having jurisdiction over this work. The Contractor's Safety, Health, and Accident Prevention Program shall include disciplinary procedures and safety orientation training procedures applicable to Contractor and subcontractor personnel.

The Contractor's Safety, Health, and Accident Prevention Program shall include equipment to be used, sampling strategy and calculations, methods of compliance, and personnel protective

## SECTION 2 - SPECIAL CONDITIONS

equipment. The calibration, sampling, and analytical laboratory procedures used shall be in conformance with OSHA's Industrial Hygiene Field Operations Manual.

The Contractor's Safety, Health, and Accident Prevention Program shall be submitted for review by the Purchaser 30 days prior to the start of the work at the project site. This review will not relieve the Contractor of his responsibility for safety and health, nor shall such review be construed as limiting in any manner the Contractor's obligation to undertake any action which may be necessary or required to establish and maintain safe working conditions respecting his work at the project site. The Purchaser reserves the right to require the Contractor to modify any portion of his Safety, Health, and Accident Prevention Program.

The Contractor shall immediately correct any unsafe conditions identified by the Purchaser. In the event the Contractor fails to immediately correct such unsafe conditions, the Purchaser may either have the unsafe conditions corrected by others at the Contractor's expense, or direct that the work be stopped in the area of the unsafe condition; however, this right to stop the work shall not give rise to any duty on the part of the Purchaser to exercise this right.

The Contractor shall appoint a qualified Safety and Health Representative. The Safety and Health Representative shall attend all project safety and health meetings. The Contractor's Safety and Health Representative shall have the authority to have unsafe conditions corrected and direct that the work be stopped in the area of the unsafe condition, if deemed necessary.

The Contractor shall maintain accurate accident and injury reports.

The Contractor shall hold regular scheduled meetings to instruct his personnel and his subcontractors' personnel in safety and health practices. The Contractor shall furnish safety and health equipment and enforce the use of such equipment by his employees and the employees of his subcontractors.

The Contractor waives the right to bring claim for damages against the Purchaser or Engineer for any cause whatsoever because of any action taken or not taken including but not limited to the correction of unsafe conditions or work stoppages in connection with the Contractor's Safety, Health, and Accident Prevention Program or such program of another contractor. If such a claim against the Purchaser or Engineer is brought by a third party, the Contractor shall indemnify and defend the Purchaser or Engineer against such claim in accordance with the General Conditions article entitled INDEMNIFICATION.

**SC.12 FALL PROTECTION.** The OSHA Fall Protection Standard 29 CFR 1926 Subpart M shall be strictly adhered to by the Contractor. Fall protection is required for all of Contractor's Work operations one hundred percent of the time, whether climbing, traveling, or working. **No Work operation is exempt from the six (6) foot fall protection requirement.**

Fall protection body harnesses, lanyards, and lifelines shall be used in accordance with OSHA Standard 1926 Subpart 502D, with the following exceptions:



## **SECTION 2 - SPECIAL CONDITIONS**

Full body harnesses shall be used in lieu of safety belts.

Only lanyards with shock absorbers and locking type snap hooks shall be used.

At least two lanyards shall be used to provide one hundred percent fall protection when moving around obstructions, connection points, or other similar items.

Fall protection guardrail systems shall comply with OSHA Standard 1926 Subpart 502(b) except manila, plastic, or synthetic rope shall not be used as guardrails.

Contractor shall provide his own confined space equipment, monitors, and personnel for hole watches.

### **SC.13 LINES AND GRADES.**

Not used

### **SC.14 PRESERVATION OF MONUMENTS AND STAKES.**

Not used

**SC.15 PROTECTION OF PROPERTY AND PUBLIC LIABILITY.** The Contractor shall be accountable for any damages resulting from his operations. He shall be fully responsible for the protection of all persons including members of the public, employees of the Purchaser, employees of the Engineer, and employees of other contractors or subcontractors, and all public and private property including structures, sewers, and utilities above and below ground.

The Contractor shall furnish and maintain all necessary safety equipment, such as barriers, signs, warning lights, and guards, to provide adequate protection of persons and property.

The Contractor shall give reasonable notice to the owners of public or private property and utilities when such property and utilities are liable to injury or damage through the performance of the work and shall make all necessary arrangements with such owners relative to the removal and replacement or protection of such property or utilities.

**SC.16 EMERGENCY PROTECTION.** Whenever, in the opinion of the Purchaser, the Contractor has not taken sufficient precaution for the safety of the public or the protection of the work to be constructed under this Contract or of adjacent structures or property, and whenever, in the opinion of the Purchaser, an emergency has arisen and immediate action is considered necessary, then the Purchaser, with or without notice to the Contractor, may provide suitable protection by causing work to be done and material to be furnished and placed. The cost of such work and material shall be borne by the Contractor, and if the same is not paid on presentation of the bills therefor, such costs may be deducted from any amounts due or to

## **SECTION 2 - SPECIAL CONDITIONS**

become due the Contractor. The performance of such emergency work shall not relieve the Contractor of responsibility for any damage which may occur.

SC.17 LOSSES FROM NATURAL CAUSES. All loss or damage arising out of the nature of the work, or from the action of the elements, or from floods or overflows, or from ground water, or from any unusual obstruction or difficulty, or any other natural or existing circumstance either known or unforeseen which may be encountered in the prosecution of the work, shall be sustained and borne by the Contractor at his own cost and expense.

SC.18 QUALIFICATIONS OF WORKMEN. The Contractor shall employ only workmen who are competent to perform the work assigned to them and, in the case of skilled labor, who are adequately trained and experienced in their respective trades and who do satisfactory work.

SC.19 SUNDAY, HOLIDAY, AND NIGHT WORK. Working hours will be determined by the contractor to meet the time requirements of the contract. Working hours must be approved by City of Hastings.

SC.20 UNFAVORABLE CONSTRUCTION CONDITIONS.

Not used.

SC.21 REJECTED WORK AND MATERIALS. The Contractor, upon written notice from the Purchaser, shall remove from the premises all work and materials rejected as defective, unsound, improper, or in any way failing to conform to the requirements of the contract documents. The Contractor shall at his sole expense make good all work damaged by such removal and shall promptly replace materials damaged or improperly worked by him and re-execute his own work in accordance with the contract. This includes re-executing or replacing the work of any other contractor that is in any way affected by the removal of the defective work. The obligations of the Contractor under this article shall not extend to defective materials or equipment supplied by the Purchaser, if any.

If the Contractor does not remove his rejected work and materials within 10 days after written notice, the Purchaser may remove and replace such work and materials at the expense of the Contractor.

SC.22 PLACING WORK IN SERVICE. If desired by the Purchaser, portions of the work may be placed in service when completed and the Contractor shall provide proper access for this purpose. Such use and operation shall not constitute an acceptance of the work, and the Contractor shall be liable for defects due to faulty construction throughout the duration of this Contract and thereafter as provided under the "Guarantee" provisions of the General Conditions.

SC.23 CLEANLINESS. The Contractor shall give special attention to keeping the worksite clean and free from trash and debris.

## **SECTION 2 - SPECIAL CONDITIONS**

Trash, debris, and waste materials shall not be allowed to accumulate, but shall be removed from the site and disposed of by and at the Contractor's expense. No on site burning shall be allowed.

Promptly upon completion of the construction work, all Contractor-owned facilities, materials, and construction plant shall be removed from the site. All surfaces damaged by deposits of foreign materials such as oil, grease, weld spatter, and paint shall be restored to their original conditions.

SC.24 PURCHASE ORDERS. Submittal of purchase orders shall not be required.

SC.25 FIRE PROTECTION. Only work procedures which minimize fire hazards to the extent practicable shall be used. Combustible debris and waste materials shall be collected and removed from the site each day, as provided under CLEANLINESS. Fuels, solvents, and other volatile or flammable materials shall be stored away from the construction and storage areas in well marked, safe containers. Good housekeeping is essential to fire prevention and shall be practiced by the Contractor throughout the construction period. The Contractor shall follow the recommendations of the AGC "Manual of Accident Prevention in Construction" regarding fire hazards and prevention.

The Contractor alone shall be responsible for providing adequate fire protection. Failure of the Contractor to comply with or the Purchaser to enforce, the above requirements shall not relieve the Contractor from any responsibility or obligation under this Contract.

The Contractor shall use and abide by Purchaser's hot work permit procedures.

SC.26 SECURITY. The Contractor shall be responsible for all materials and equipment in his custody or placed in construction by him. Security methods shall be employed as required to ensure the protection of all materials, equipment, and construction work from theft, vandalism, fire, and all other damage and loss.

The Contractor shall cooperate with the Purchaser regarding all security measures instituted at the jobsite.

SC.27 PROTECTION OF WORK. The Contractor shall be solely responsible for the protection of his work until its final acceptance by the Purchaser.

The Contractor shall have no claim against the Purchaser or the Engineer because of any damage or loss to the Contractor's work and shall be responsible for the complete restoration of damaged work to its original condition complying with the contract documents.

In the event the Contractor's work is damaged by another party not under his supervision or control, the Contractor shall make his claim directly with the party involved. If a conflict or disagreement develops between the Contractor and one of the other contractors concerning the responsibility for damage or loss to the Contractor's work, the conflict shall be resolved as provided under RELATIONS WITH OTHER CONTRACTORS. Such conflict shall not be

## SECTION 2 - SPECIAL CONDITIONS

cause for delay in the restoration of the damaged work. The Contractor shall restore the work immediately and the cost thereof will be assigned pending the resolution of the conflict.

SC.28 PROTECTION OF CONCRETE SURFACES. Concrete floors and other concrete surfaces shall be protected from chipping, gouging, scratching, staining, and other damage. Damaged sections shall be repaired or removed and replaced subject to the Purchaser's discretion and acceptance.

Heavy planks and mats shall be placed under equipment and materials being stored, moved, assembled, or installed on or above concrete floor surfaces. Nonflammable, oil-resistant coverings shall be used to protect concrete surfaces from staining.

SC.29 PROTECTION OF ELECTRICAL RACEWAY, CABLE, AND LIGHTING FIXTURES. The Contractor shall protect electrical raceway, cable, lighting fixtures, and associated support systems against damage from movement of equipment and materials, welding, flame cutting, and other construction damage. Raceway and supporting structures for raceway and lighting fixtures shall not be used as access scaffolding at any time. Whenever welding or flame cutting operations occur above or near raceways, cables, or lighting fixtures not shielded from such operations by protective covers, the Contractor shall protect the raceways, cables, and lighting fixtures from damage by means of fire-resistant boards or blankets. Damaged materials shall be repaired or replaced subject to the Purchaser's discretion and acceptance.

Where concrete is removed, or holes are filled, the surrounding equipment shall be protected from concrete, water and dust. Where concrete is removed, dust shall be collected.

SC.30 REPAIR OF DAMAGES. The Contractor shall immediately repair any damage which results from this construction or abnormal use, including damage done to the existing facilities. All such repair work shall be acceptable to the Purchaser.

SC.31 INDEPENDENT TESTING LABORATORY. Not Used

SC.32 COOPERATION WITH THE PURCHASER. The performance of construction work which affects the operation of the Purchaser's system facilities shall be scheduled to be performed only at times acceptable to the Purchaser.

In the event that it is necessary to interrupt the Purchaser's operations or the power supply or to impose abnormal operating conditions on the Purchaser's utility system, such procedure must be acceptable to the Purchaser and a complete understanding and agreement must be reached by all parties concerned well in advance of the time scheduled for such operation, and such understanding shall be definite as to date, time of day, and length of time required. All work shall be scheduled to suit the Purchaser's convenience, taking into consideration the facilities and requirements at all times during construction. The Contractor shall perform work which affects the Purchaser's system facilities at times other than regular working hours if required.

## **SECTION 2 - SPECIAL CONDITIONS**

SC.33 MINOR DEFECTS. The Contractor shall readjust, straighten, and repair minor defects and fabrication errors which are normally encountered in the Purchaser-furnished equipment and materials. No claims for extra compensation in connection with such work will be considered unless the claim is made in accordance with the applicable provisions in the General Conditions.

When field labor is needed to correct significant errors in the Purchaser-furnished equipment and materials, the Contractor shall furnish such labor when so requested by the manufacturer or by the Purchaser with the consent of the manufacturer. Such labor shall not be included in this Contract, and the Contractor shall obtain payment for the labor from the manufacturer.

SC.34 CHECKOUT AND INITIAL OPERATION. The Contractor shall render all services and do all work required to place each item of equipment installed by him, including all auxiliaries, piping, and wiring, in operating condition to the satisfaction of the Purchaser. Individual systems and items of equipment shall be completed in a sequence that will permit systematic checkout and trial operation of each such component before it is incorporated in the initial operation.

The Purchaser will furnish operating personnel during checkout and initial operation.

It is anticipated that the startup testing and initial operation will be in progress over extended periods of time.

All regular and overtime payrolls and all other contingencies in connection with the checkout and initial operation of equipment shall be included as a part of the lump sum contract price.

SC.35 CONSTRUCTION PLANT AND TEMPORARY FACILITIES. Temporary facilities are defined in Section 3 General Description and Scope of Work

SC.36 RECEIVING, HANDLING, AND STORAGE. Responsibilities for receiving, handling, and storage are defined in Section 3 General Description and Scope of Work.

SC.37 EQUIVALENT MATERIALS AND EQUIPMENT. Whenever a material or article is specified or described by using the name of a proprietary product or the name of a particular manufacturer or vendor, the specific item mentioned shall be understood as establishing the type, function, and quality desired. Other manufacturers' products will be accepted provided sufficient information is submitted to allow the Engineer to determine that the products proposed are equivalent to those named.

Requests for review of equivalency will not be accepted from anyone except the Contractor and such requests will not be considered until after the contract has been awarded.

SC.38 RIGHTS-OF-WAY.

Not used.

## **SECTION 2 - SPECIAL CONDITIONS**

### SC.38.1 ON PRIVATE PROPERTY.

Not used.

### SC.39 FENCES.

Not used.

### SC.40 PROTECTION OF PUBLIC AND PRIVATE PROPERTY.

Not used.

### SC.41 MAINTENANCE OF TRAFFIC.

Not used.

### SC.42 BARRICADES AND LIGHTS.

Not used.

### SC.43 UNDERGROUND INSTALLATIONS

Not used.

### SC.44 LAND FOR CONSTRUCTION PURPOSES.

Not used.

SC.45 ENERGIZED FACILITIES. Existing transmission lines, substations, distribution lines, utility lines, telephone lines and other power and signal service lines will be encountered on the site of the work. These service systems will remain energized and functional during construction.

Temporary outages required by the Contactor to perform certain construction activities will be provided by the Purchaser. The Contractor shall give written notice to the Purchaser a minimum of seven days in advance of any requested outages. The Contractor shall recognize that certain outage restrictions may apply that will not allow for an outage, as requested. The Contractor's proposed schedule shall account for these outage restrictions. No extension of time or any additional compensation will be given for these outage restrictions.

The Contractor shall be completely responsible for the safety and protection of his personnel and the public on the site of the work and shall employ all methods necessary to achieve such safety and also assure continuity of all service systems encountered. These methods shall include, but not be limited to, providing barriers, guard structures, insulating guards and sleeves, warning signs, and prevention of unauthorized access to substations.

## **SECTION 2 - SPECIAL CONDITIONS**

SC.46 ARTIFACTS.

Not used.

SC.47 FINAL CLEANUP AND GRADING.

Not used.

SC.48 DUST CONTROL.

Not used.

## **SECTION 3. GENERAL DESCRIPTION AND SCOPE OF WORK**

### **SECTION 3-0 GENERAL DESCRIPTION AND SCOPE OF WORK**

**3.001 General.** Hastings Utilities is accepting bids for the installation of the Unit 1 Air Heater Baskets at Whelan Energy Center, 4520 East South Street in Hastings, Nebraska.

The bidder is strongly encouraged to visit the site prior to submitting a bid. The Bidder shall inform himself of all conditions and factors which would affect the execution of the work. No claims for financial compensation or time extension, based on the lack of such prior information (or its effect on the cost of the work) will be permitted by the Owner. Please contact Derek Pfeifer, Production Engineer, at 402-462-3673 if you have any questions about this project or would like to set up a site visit.

**3.002 Schedule.** The City of Hastings is considering 2 different time tables based on Contractor availability, material availability, and contract cost.

Option 1 would be a spring 2024 installation. Removal of baskets could begin as early as March 18<sup>th</sup>. Replacement baskets would not be available for installation until sometime before April 22<sup>nd</sup>. A solid delivery date will be known by January 24<sup>th</sup>, and this date will be sent to the prospective bidders. The unit needs to be ready to begin startup by 7am on April 29<sup>th</sup>.

Option 2 would be a fall 2024 installation. The unit will be taken offline at on September 20<sup>th</sup>, am will require some time to cool down before removal can begin. Contractor should be able to begin basket removal on September 21<sup>st</sup> or 22<sup>nd</sup>. The unit needs to be ready to begin startup by 7am on September 27<sup>th</sup>.

City of Hastings will award the installation contract by 2/14/24.

**3.003 Scope.** The project shall include labor and labor supervision for the removal and disposal of the old baskets, inspection of the air heater, the installation of the new baskets, replacement of all damaged basket framing, and repair/replacement/resetting of the seals. Additional items discovered during inspection will be handled on a T&M basis.

The contractor will be responsible for ensuring the safety of the baskets and existing plant equipment during the removal, inspection, and installation process. It will be the contractor's responsibility to make sure all air heater baskets and related equipment are installed properly. The contractor shall provide all necessary tools, consumables, and equipment needed to complete the project. All work shall be coordinated with the City of Hastings as to not interfere with other activities on site.

**3.004 Work included under these specifications.** The following work will be completed by the Contractor:

1. Attend mandatory onsite safety orientation for all Contractor employees
2. Remove door and install Contractor supplied overhead trolley/hoist to Owner supplied I-beam to transport baskets from inside air heater to 4<sup>th</sup> floor deck.



## **SECTION 3. GENERAL DESCRIPTION AND SCOPE OF WORK**

3. Install Contractor supplied overhead trolley/hoist to transport baskets between 3<sup>rd</sup> and 4<sup>th</sup> floor. Contractor shall provide the necessary equipment to remove old baskets and install new baskets. Contractor to provide fully trained hoist operator.
4. Remove radial and axial seals and begin old cold end basket removal. Place old baskets on a pallet and stage for disposal as directed by site. Offsite disposal by contractor.
5. Inspect intermediate baskets, hot end baskets, rotor post-split, and housing.
6. If inspection determines the baskets need replaced, remove the intermediate and hot end baskets.
7. Place old baskets on a pallet, transport out of the building, and stage for disposal as directed by site. (Disposal by contractor). During previous outages, a metal recycle trailer was backed into the building and the baskets lower directly onto it. Contractor to decide best method for them.
8. Repair or replace all damaged basket framing and install new cold end, intermediate, and hot end baskets.
9. Reinstall seals.
10. Disassemble overhead trolley/hoists.
11. Clean the work area.

### **3.005 City of Hastings Scope.** The following work will be completed by City of Hastings:

1. Removal and installation of air heater lagging and insulation.
2. All LOTO and hotwork permits
3. All electrical and I&C removals and installations
4. Removal of ash and slag prior to work start
5. Supply common trash dumpster (not used for disposal of old baskets).
6. Supply sanitary services in the form of portable toilets and hand wash stations.
7. Supply water, air, and electricity for construction activities
8. Inspection of WEC cable hoist before start of work.
9. Providing all materials including air preheater baskets, new seals, and necessary hardware
10. Stage basket material on 3<sup>rd</sup> floor turbine deck
11. Provide a forklift on the 3<sup>rd</sup> floor turbine deck to transport old/new baskets between the work and staging area.
12. Assistance with seal setting.

### **3.006 Current Air Heater Basket and Air Preheater Data.**

- Regenerative Type Air Heater
  - Manufacturer: The Air Preheater Co
  - Model/Type: 25-1/2-VI-80in
  - LAP: 3845
  - Shaft Orientation: Vertical

### SECTION 3. GENERAL DESCRIPTION AND SCOPE OF WORK

- Hot End Baskets
  - Brand: Arvos Ljungstrom
  - Depth: 44 inches
  - Material: 24-gauge Carbon Steel
  - Weight Each: 1200lbs
  
- Intermediate Baskets
  - Brand: Arvos Ljungstrom
  - Depth: 26 inches
  - Material: 22-gauge Carbon Steel
  - Weight Each: 1000lbs
  
- Cold End Baskets
  - Brand: Arvos Ljungstrom
  - Depth: 12 inches
  - Material: 22-gauge Low Carbon Steel Enameled
  - Weight Each: 500lbs

Total number of each basket type, dimensions, and their individual weights will be confirmed and provided to prospective bidders on January 24<sup>th</sup>.

**3.007 Attachments.** The following attachments are included:

- Drawing 5-20027
- Basket Procedure
- Seal Procedure
- 2019 Inspection Report
- Site Pictures

# **APPENDIX A**

## **ATTACHMENTS**

**FOR**

**FORMAL CONTRACT NO. HU2024-02**

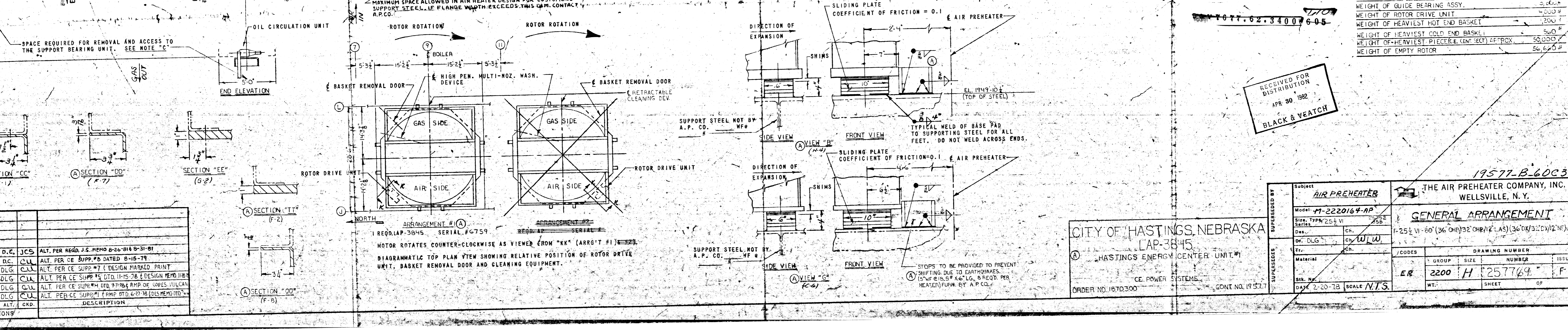
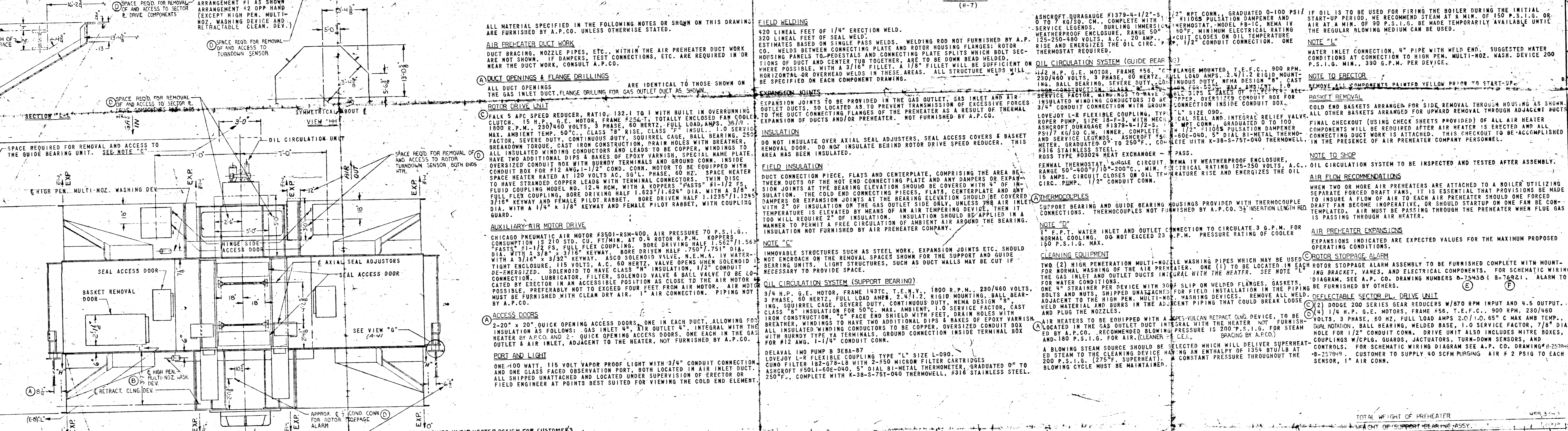
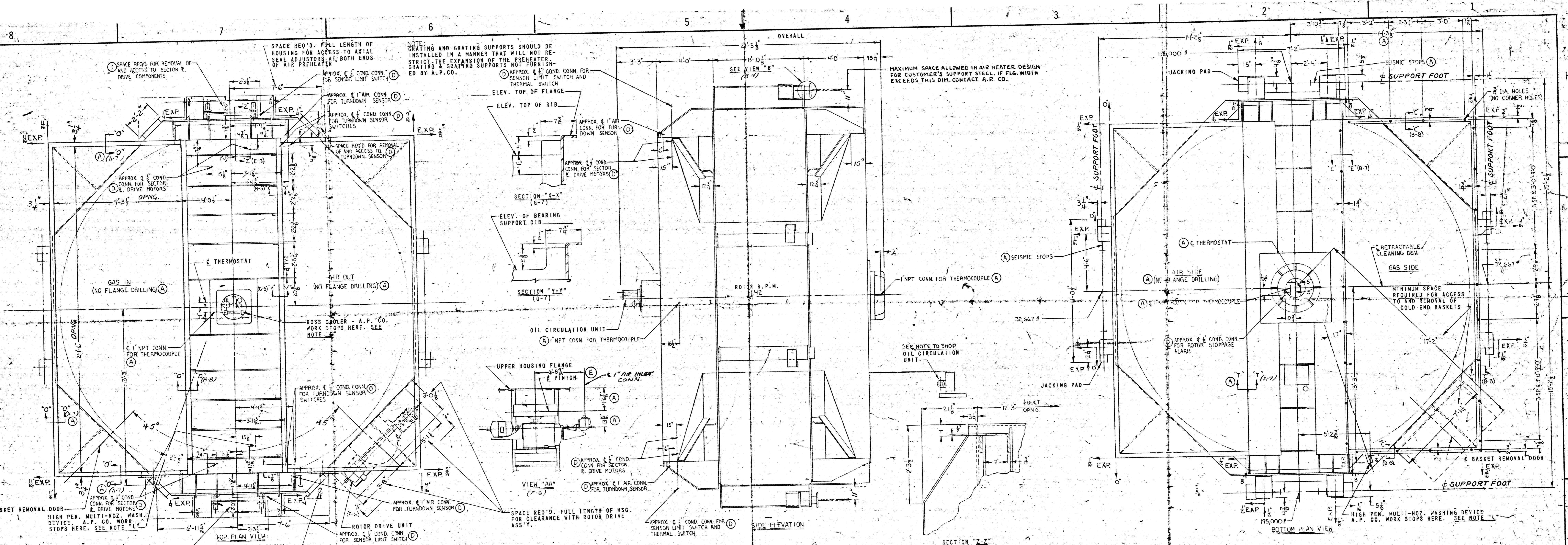
**AIR HEATER**

**BASKETS REPLACEMENT**

**FOR**

**WHELAN ENERGY CENTER, UNIT I**

**CITY OF HASTINGS**



| NO. | DATE    | BY       | CHKD. | DESCRIPTION  |
|-----|---------|----------|-------|--|
| 1   | 9-30-81 | D.C. JCS |       | ALT. PER REQ. J.S. MEMO 8-26-81 8-31-81                      |
| 2   | 10-1-79 | DC       |       | ALT. PER CE SUPP. # DATED 8-15-79                            |
| 3   | 6-4-79  | DLG      |       | ALT. PER CE SUPP. # 7 (DESIGN MARKED PRINT)                  |
| 4   | 1-12-79 | DLG      |       | ALT. PER CE SUPP. # 15 (D.D. 11-15-78 & DESIGN MEMO 11-8-78) |
| 5   | 9-26-78 | DLG      |       | ALT. PER CE SUPP. # 4 (D.D. 9-7-78 & AMP OF JONES JULIAN)    |
| 6   | 8-14-78 | DLG      |       | ALT. PER CE SUPP. # 1 (PMP 8-7-78 & 6-77 M.D.S. MEMO 8-7-78) |

RECEIVED FOR DISTRIBUTION  
APR 30 1982  
BLACK & VEATCH

19577-B.60C3

**THE AIR PREHEATER COMPANY, INC.**  
WELLSVILLE, N. Y.

**GENERAL ARRANGEMENT**

CITY OF HASTINGS, NEBRASKA  
LAP-3845

HASTINGS ENERGY CENTER UNIT #1

CE POWER SYSTEMS, INC. (CONT. NO. 19577)

| GROUP | SIZE | NUMBER | ISSUE  |
|-------|------|--------|--------|
| ER    | 2200 | H      | 257769 |

ORDER NO. 1970300

# City Utilities of Hastings, Nebraska

## Gerald Whelan Energy Center

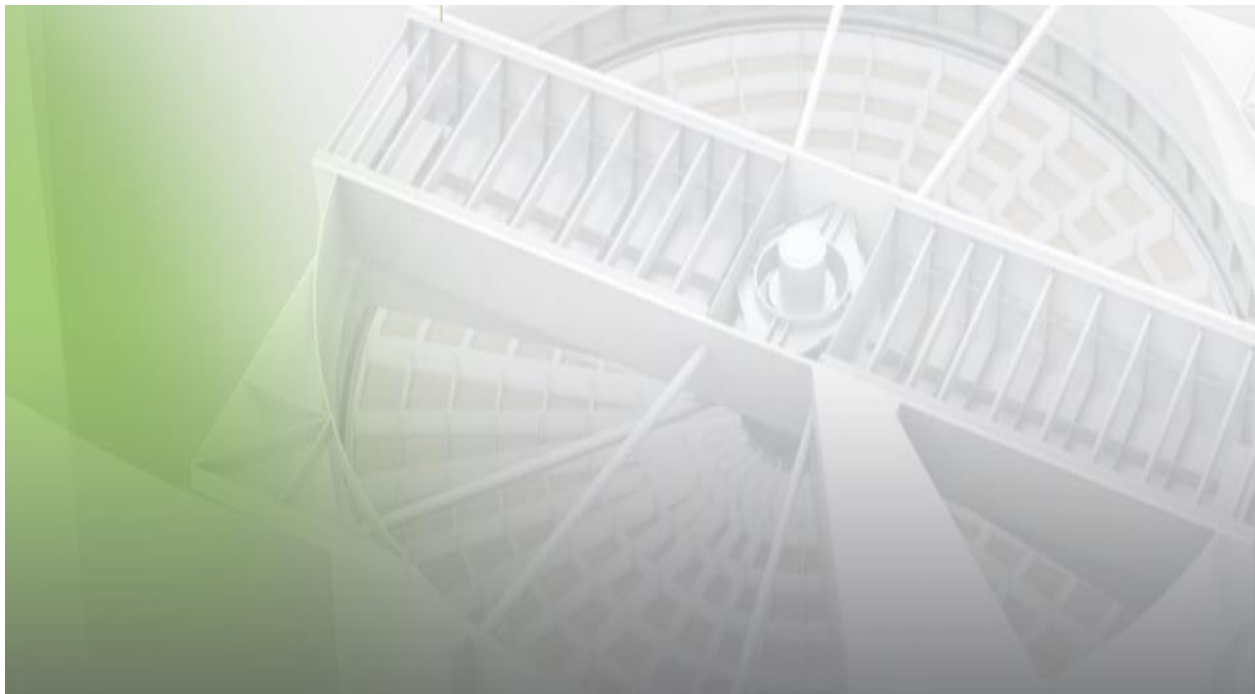
### UNIT 1

### LAP-3845

**(1) Size 25.5 Ljungström® Air Preheater**

Report Date: 4/20/19

Written By: Travis Tozer



|                  |                              |             |            |                |         |
|------------------|------------------------------|-------------|------------|----------------|---------|
| Contract:        | LAP 3845                     |             |            | Fuel:          | Coal    |
| Unit #           | 1                            | Serial #    | 6759 CW    | Size/Type:     | 25.5 VI |
| Service:         | Travis Tozer                 | Visit Type: | Inspection | Visit Date:    | 4/15/19 |
| Customer Contact | Email Address                |             |            | Phone          |         |
| Bruce Perry      | bperry@hastingsutilities.com |             |            | (402) 462-3573 |         |

### Scope of Work:

The purpose of this service visit was to provide Maintenance Supervisor Bruce Perry with a detailed inspection of Unit #1's Size 25.5 Ljungström® Air Preheater. This service visit began March 15, 2019. This report will detail inspection findings for Unit 1's Ljungström® Air Preheater while on site and also provides future recommendations to improve the reliability & efficiency of these particular air preheaters while in operation.

### Executive Summary:

The air preheater was found to be in good condition, overall. Whatever corrosive agent present in the cold end has caused the cold end element to deteriorate to the point of requiring replacement within the next year or two. Pieces of broken element are being found downstream of the heater and that will worsen as the element breaks down further.

A few minor recommendations can be found on the following page.

## Recommendations:

- Replace cold end heating element
- Verify guide and support bearing dipstick lines for accuracy
- Monitor material loss on pin rack pins
- Continue to monitor post split gap
- Consider a mineral spirits flush of the support bearing housing during the next oil replacement
  - Debris and fly ash can accumulate in the bearing housing over time and restrict oil flow

## Inspection Report:

### 1. Heater #1

#### I. Rotors

- Ongoing monitoring of the rotor post split found no measureable change from the previous inspection (**Picture 1**).



- Oil from an overfill of the guide bearing has leaked into the hot end of the air heater (**Picture 2**). This amount of oil is not a concern.





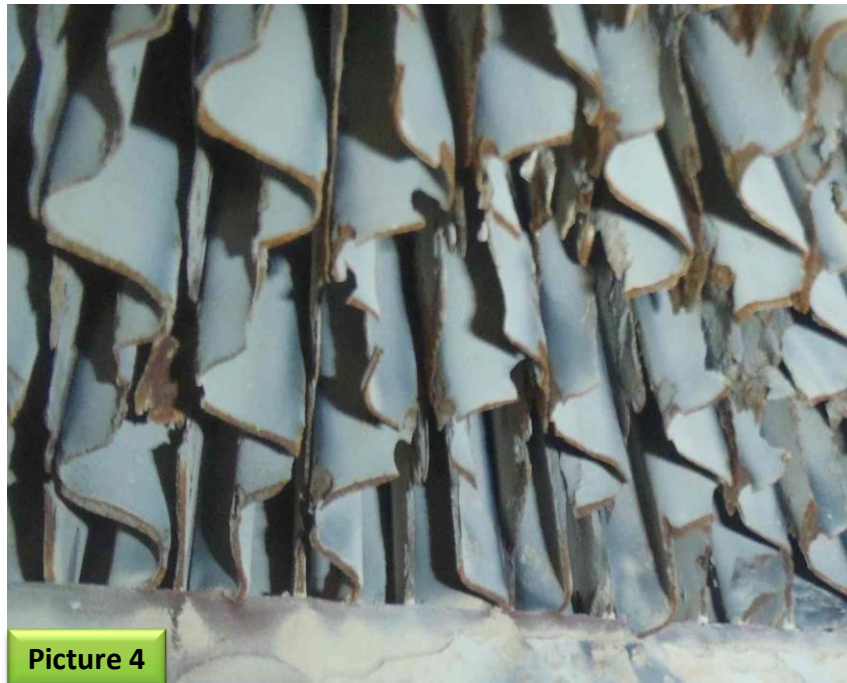
## II. Heating Element – Hot End

- Hot end element is in generally good condition (**Picture 3**). Some minor but hardened buildup was seen around the perimeter of some of the baskets but it is not believed that this will measurably affect flow through the unit.



## III. Heating Element – Cold End

- Cold end element sheets are deteriorating due to corrosion (**Picture 4**). Sheets are beginning to fall through the baskets (**Picture 5**). Replacement of the cold end element may be necessary.



Picture 5



#### IV. Seals – Hot End

- Hot end seals are in generally good condition.
- Radial clearance against the north sector plate is tighter than against the south (Picture 6, 7).

North  
Sector  
Plate



Picture 6

South  
Sector  
Plate

Picture 7



- Bypass seal clearance is good and T-bar wear is minimal (**Picture 8**).

Picture 8



#### V. Seals – **Cold End**

- Cold end radial seals were replaced during the previous outage and are in good condition.

#### VI. Housing

- Small cracks were found in both the gas and air sides of the hot end where the center section meets the housing (**Picture 9** North Air side, **Picture 10** South Gas side). Repairs were planned for the outage but not confirmed.

Picture 9



Crack found in the air side, above the north sector plate

Picture 10



Crack found in the gas side, above the south sector plate

#### VII. Rotor Drives

- No new issues were found or reported during this inspection.

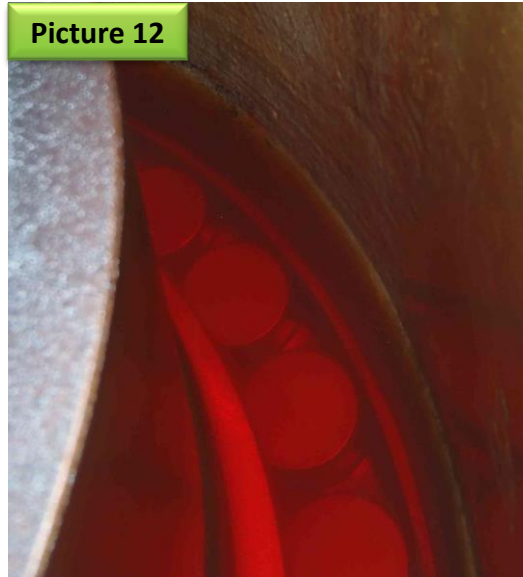
#### VIII. Bearings

- Too much oil appears to have been added to the guide bearing and is flowing down the trunnion (**Picture 11**).

Picture 11



- The oil level should be only ¼” above the bearing rollers (**Picture 12**).



- The issues regarding the support bearing oil circulation system are ongoing. A drip tray was installed under the circulation pump to capture the leak and is regularly emptied. A kerosene flush of the support bearing housing is recommended to remove any buildup or debris that has settled in the bottom of the bearing housing.

#### IX. Cleaning Devices

- No issues were observed or reported during this site visit.

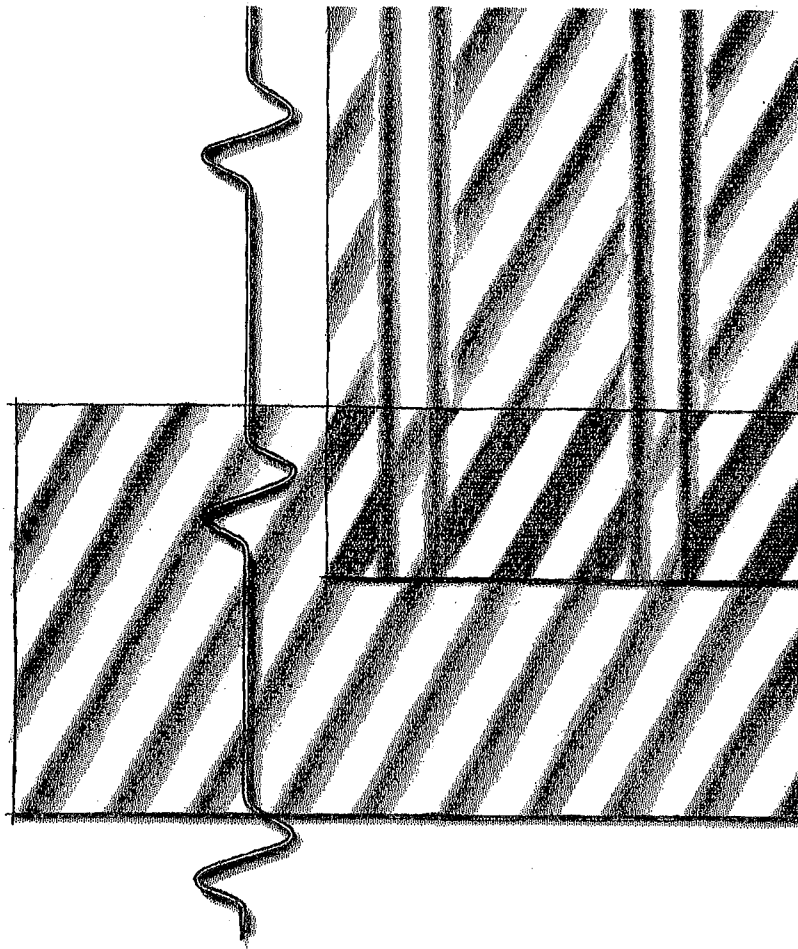
It was a pleasure to work with all parties involved at Gerald Whelan Station. Thanks to Bruce Perry and the plant staff for the assistance and hospitality during this visit. If there are any questions that should arise from the contents of this report, feel free to contact Western Region Sales Manager Dave Bintz or myself at any time.

Respectfully,

**Travis Tozer**  
**ARVOS LJUNGSTRÖM LLC.**  
**Western Region Service Manager**  
**Phone: 785-806-1344**  
[travis.n.tozer@arvos-group.com](mailto:travis.n.tozer@arvos-group.com)  
[www.ljungstrom-global.com](http://www.ljungstrom-global.com)

**Dave Bintz**  
**ARVOS LJUNGSTRÖM LLC.**  
**Director, Sales & Service North America**  
**Phone: 214-887-6442**  
[dave.bintz@arvos-group.com](mailto:dave.bintz@arvos-group.com)  
[www.ljungstrom-global.com](http://www.ljungstrom-global.com)

# HEATING ELEMENT

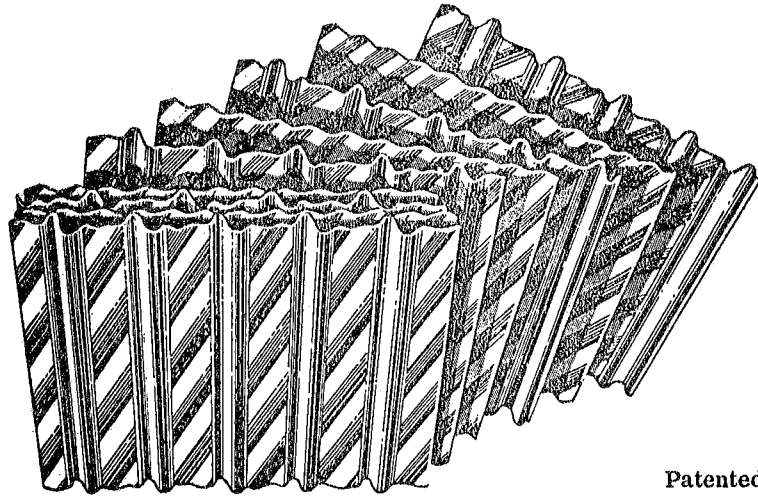


## DESCRIPTION

The heating element is a compact arrangement of formed metal sheets contained in the rotor in two or more layers. The basketed element in the cold end, where the air is admitted and the flue gases are discharged, can be removed through an access door in the air preheater housing without disturbing sealing members or other preheater components. When one edge of the cold end element has thinned to approximately one-third its original thickness, the baskets can be reversed for extended element life. The type of element and steel used is listed on the General Specification sheet in the DESCRIPTION section of this manual.

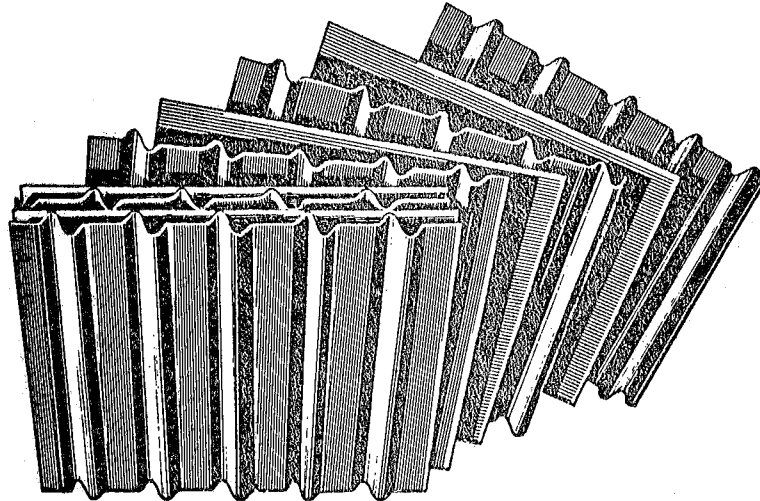
## CLEANING

Instructions for removing deposits from the heating element are described in the CLEANING DEVICE section of this manual. Special care should be taken to see that the heating element remains free of deposit build up, particularly during start up periods. (Refer to OPERATION section.)



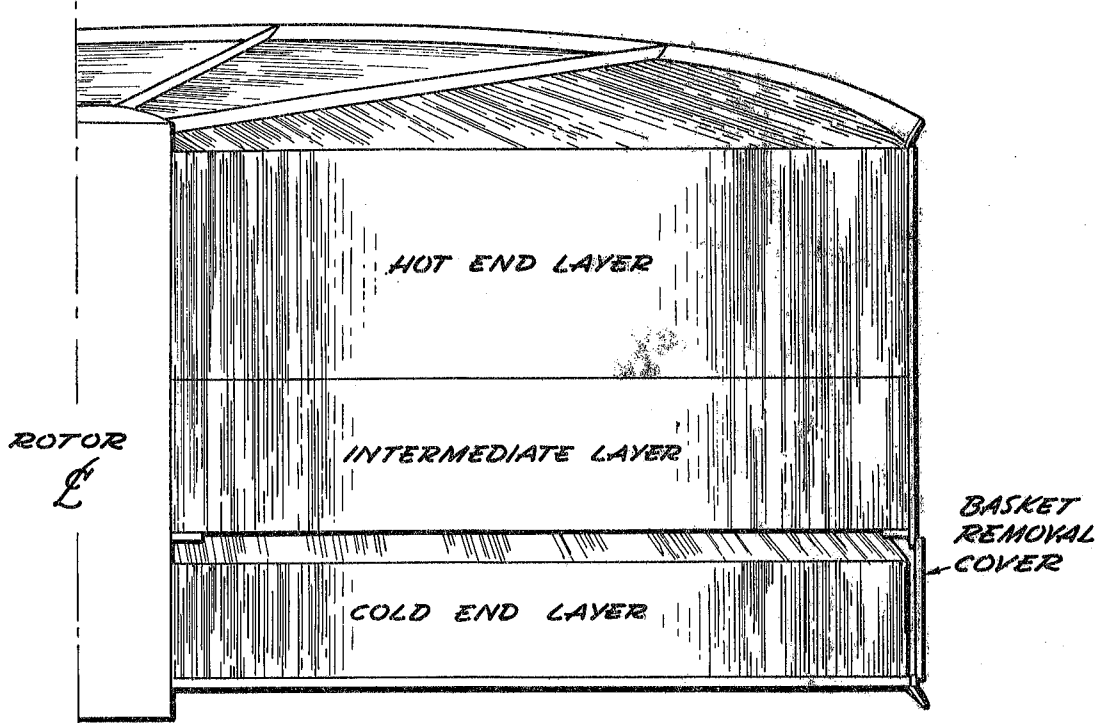
Patented

**DOUBLE UNDULATED HEATING ELEMENT**  
Installed in hot end; also intermediate layer(s) if provided.

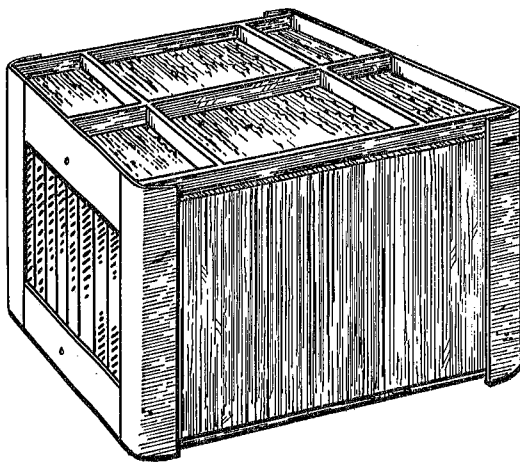


**NOTCHED FLAT HEATING ELEMENT**  
Installed in cold end of air preheater.

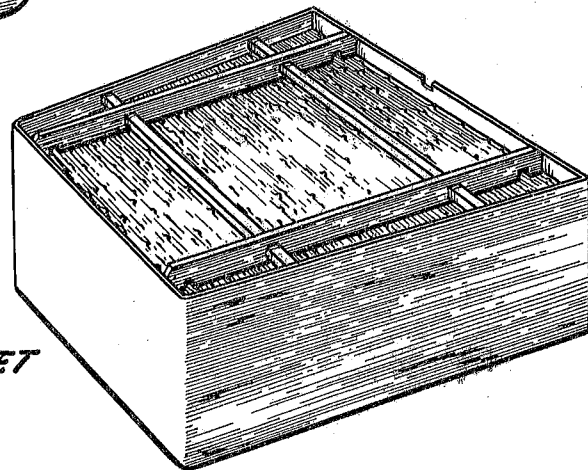
**HEAT  
TRANSFER  
ELEMENT**



SECTION OF ROTOR SHOWING LAYERS OF HEATING ELEMENTS  
TYPE VI AIR PREHEATER



TYPICAL HOT END OR  
INTERMEDIATE BASKET



TYPICAL COLD END BASKET



## RECOMMENDED PROCEDURE FOR REPLACEMENT OF HEAT TRANSFER SURFACE

### TYPE VIR & VI

#### Cold End Surface

1. Open rotor housing cold end basket removal door.
2. Rotate rotor to line up rotor basket removal cover with opening in rotor housing.
3. Remove cover from rotor basket removal opening.
4. Remove cold end element baskets. The number of cold end baskets to be removed and replaced in each sector varies with the size of the air preheater.

A piece of 1/4" rod or pipe with a hook on one end to fit slot in basket wrapper and a handle on the other end will be required to remove and replace baskets. Rod or pipe should be long enough to reach innermost basket.

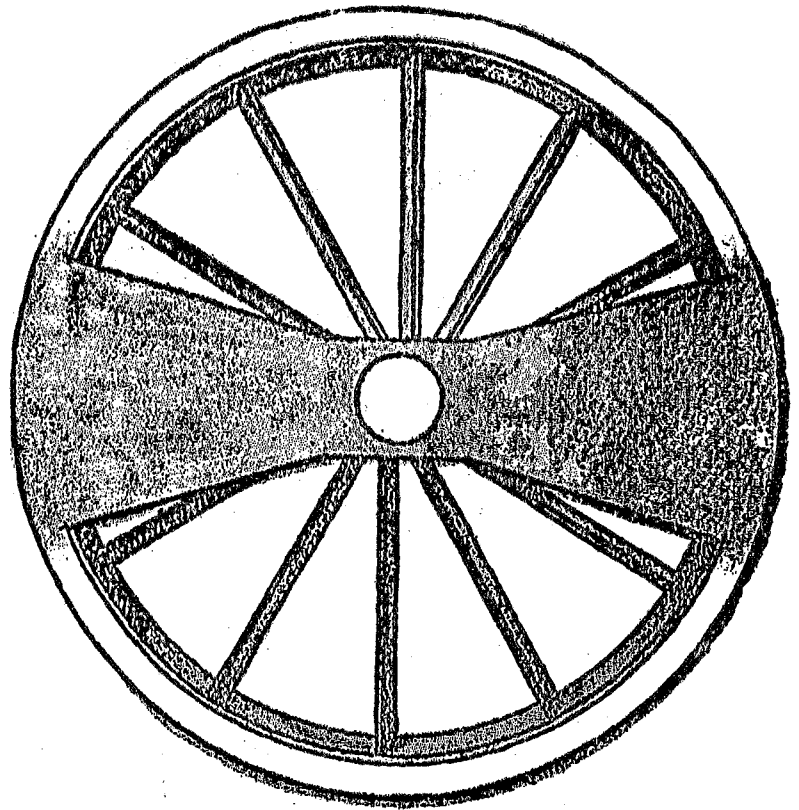
5. Install new baskets starting with innermost basket which is designated as the "A" basket.
6. Install sector cover using sealing compound under cover.
7. Rotate rotor to adjacent sector. Remove cover, element baskets and install new baskets and replace cover. Follow this procedure until all cold end element baskets have been replaced.

#### Hot and/or Intermediate Basketed Surface

1. Hot and/or intermediate element baskets may be removed from air outlet or gas inlet duct just above air preheater. As to which of these ducts is used depends on duct configuration and access.
2. Once it has been established as to which duct baskets are to be removed, layout and burn opening in duct of sufficient size to accommodate largest element basket. Preferred location is center of long side of duct.
3. Remove hot end radial and circumferential seals.
4. Install monorail or similar arrangement in line with, and just above, opening in duct for use of hoist in removing present baskets and installing new baskets.

5. Rotate rotor so that sector lines up with opening and monorail.
6. Using a two line sling with right angle hooks of 1/4" material which will slip under basket holding bars, remove baskets from rotor compartments and transfer to outside of air preheater.
7. Install new element baskets in rotor compartments and rotate rotor to adjacent sector. Remove and install new element baskets. Repeat this procedure until all element baskets have been replaced.
8. Reapply and set to proper clearances radial and circumferential seals.
9. Remove hoist and close up opening in duct.

# ROTOR SEALS



## DESCRIPTION

Seals are provided at both ends of the air preheater to minimize leakage between the air side and the gas side of the preheater.

The hot and cold end radial seals are attached to each diaphragm of the rotor and are set at a specified clearance from the sector plates which separate the air and gas streams.

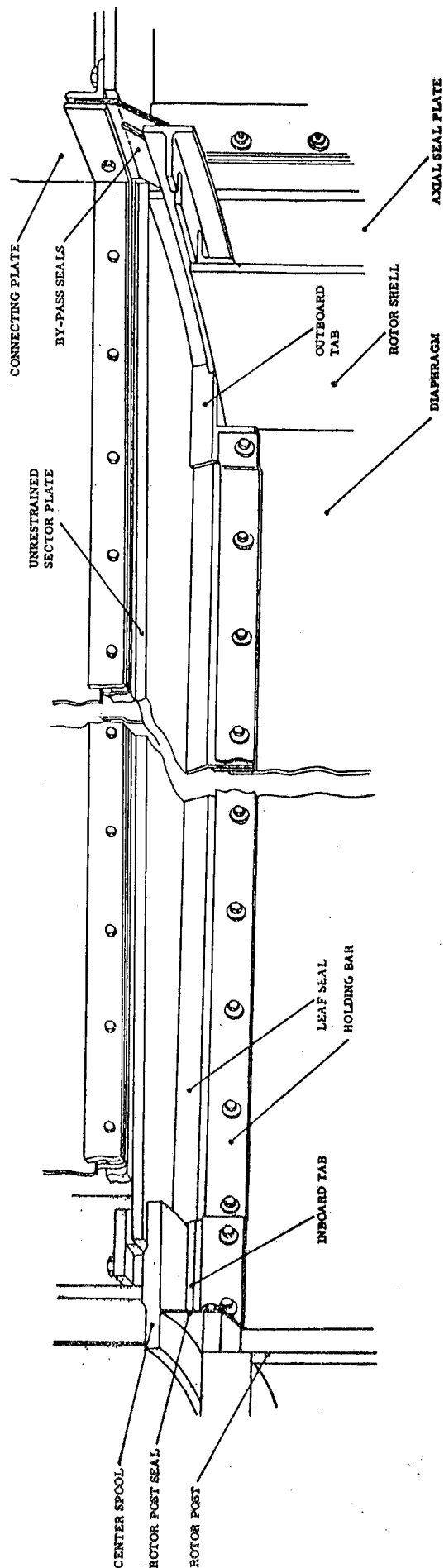
The seals provided at the rotor post are set to operate with minimum clearance with respect to the horizontal sealing surface of the sector plate center section.

The circumferential seals provide sealing between the periphery of the rotor and sealing surface of the connecting plate and/or the preheater housing.

All seals may be adjusted to necessary clearances.

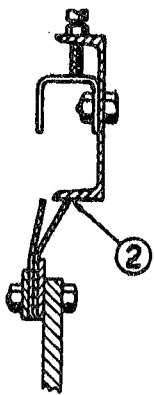
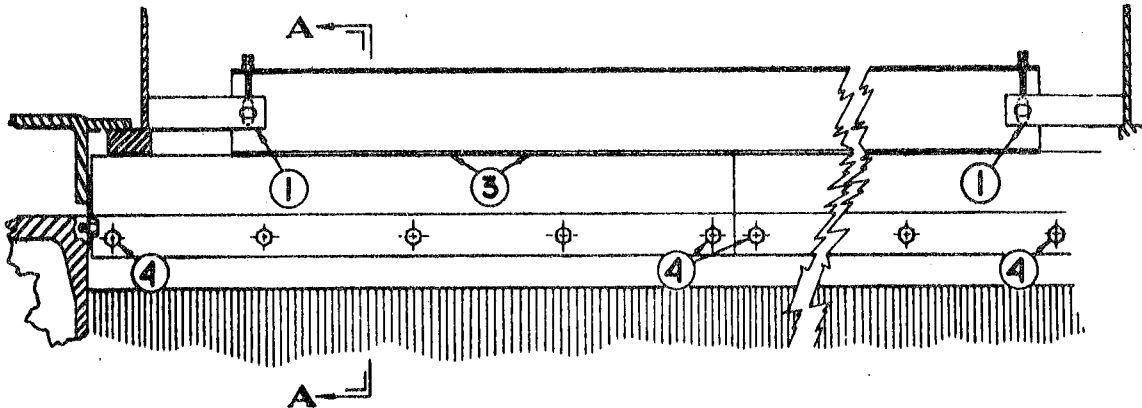
Information on the types of seals provided for the air preheater equipment furnished for this installation is covered in the following pages of this section.

# Radial Seals - Standard Type



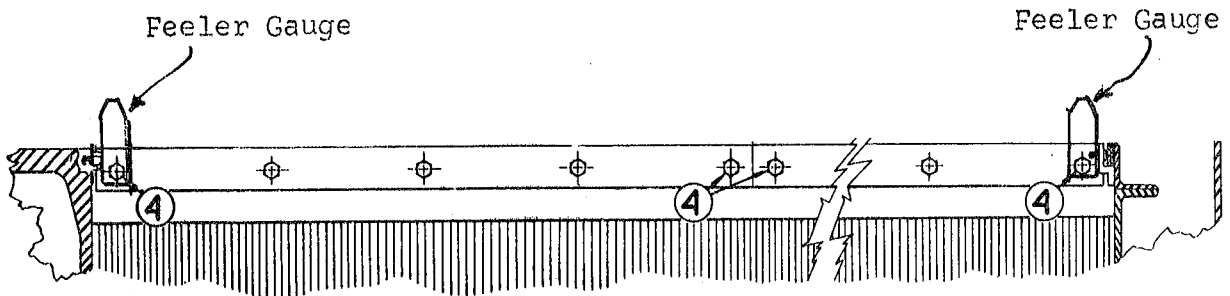
## RADIAL SEAL INSTALLATION

To set straight edge, bolt finger gauges in radial seal bolt holes inboard and outboard on one diaphragm. Set each one to sector plate in accordance with seal setting chart with feeler gauges. Then rotate the finger gauges to straight edge and set straight edge to gauges.



**SECTION AA**

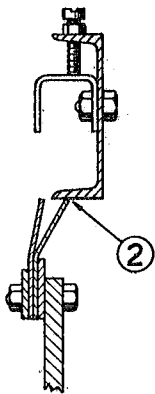
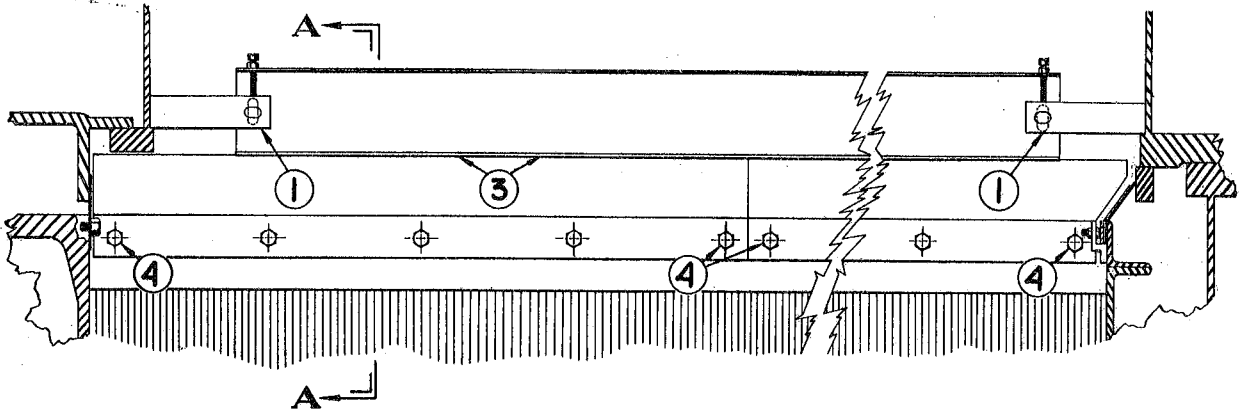
1. Attach the seal straight-edge to the support channels (Item #1) welded inside the connecting plate.
2. Install the radial seals (Item #2) to the leading rotation side of the rotor diaphragms. Leave loose and moved back toward element for additional sector plate clearance. (On the bottom of V & VI heaters move upward element and tighten two bolts (Item #4) each section to temporarily hold in place.
3. Install and set straight edge (Item #3) to clearances from sector plates in accordance with the seal clearance chart.
4. Set one seal so each section touches across the full length of the straight edge. Turn rotor and check this first seal clearance across the sector plates. If clearance is not correct reset the straight edge to correct and then set remaining seals.



## REPLACING RADIAL SEALS

Air preheaters in the smaller size range are not furnished with a seal straight-edge. Set the radial seals on these smaller preheaters directly to the sector plate according to the clearances given on the seal clearance chart included in this section.

If a seal straight-edge is furnished, replace and adjust each radial seal individually according to the following procedure:



**SECTION AA**

1. Attach the seal straight-edge to the support channels (Item #1) welded inside the connecting plate.

2. Set the seal straight-edge to the trailing edge of an existing radial seal. (Item #2), then remove the seal.

3. Install the new seal so it touches across the full length of the seal straight-edge (Item #3). Tighten the inner and outer bolts of each seal section first (Item #4), then tighten the remaining bolts.

4. Check the seal clearance at both sector plates, by referring to the seal clearance chart\* included in this section. If clearance is not correct, adjust the seal to the surface offering the most clearance. If adjustments are necessary, return the seal to the straight-edge and reset the straight-edge.

5. Set the remaining radial seals to the straight-edge as described in step #2.

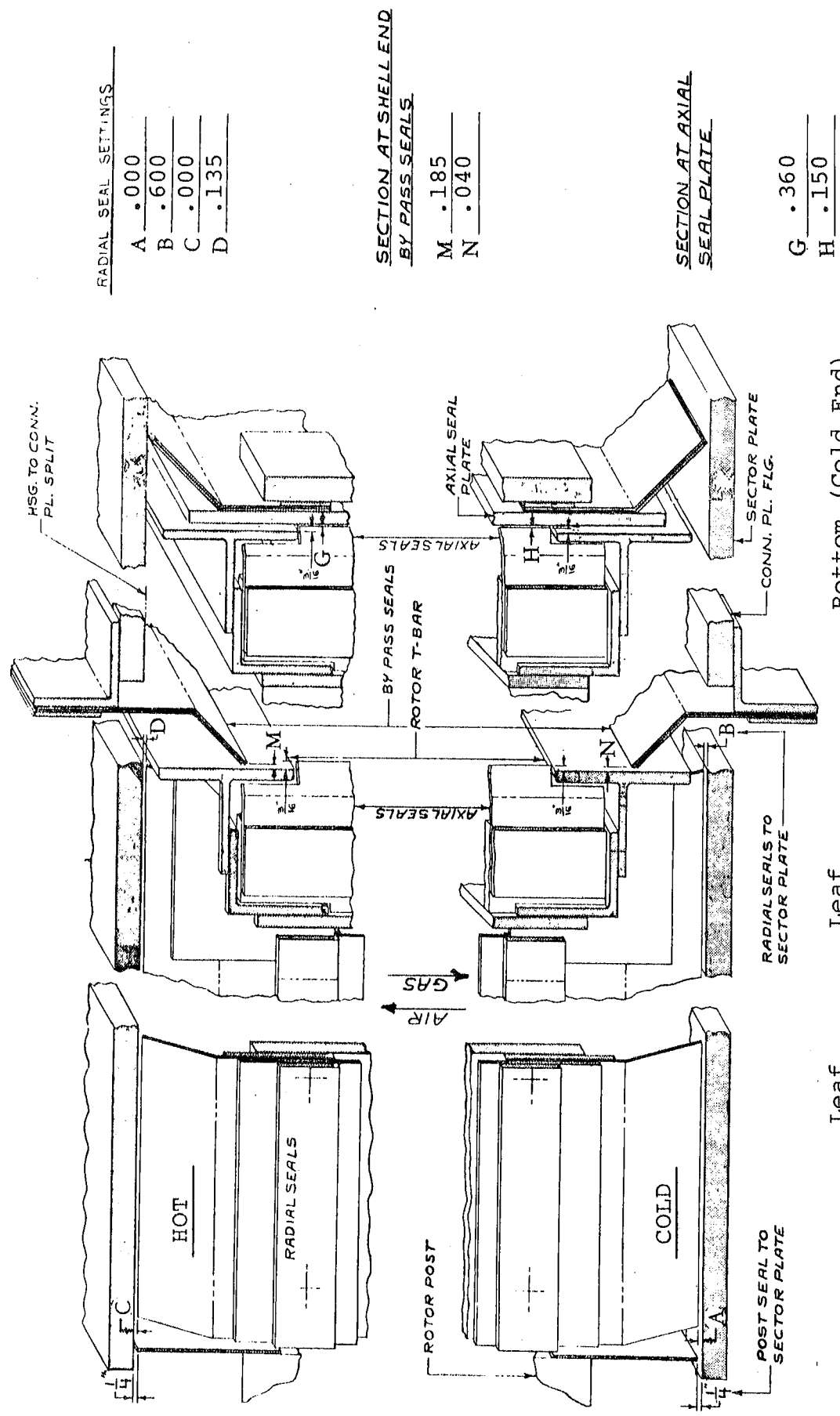
\*The clearances on the seal clearance chart are theoretical. Using the clearance of existing seals is the most accurate means of setting new radial seals.

## REPLACING ROTOR POST SEALS

It will seldom be necessary to replace rotor post seals. If the occasion should arise, they are installed the same as the existing seal. No adjustment for clearance is necessary.

AIR PREHEATER COMPANY SPECIFICATIONS

|                                   |                    |                    |                       |                 |
|-----------------------------------|--------------------|--------------------|-----------------------|-----------------|
| SIZ. AND TYPE<br>25-1/2-VI        | DESIGN<br>CUSTOMER | CITY OF HASTINGS   | ORDER NO.<br>LAP-3845 | DATE<br>6/19/78 |
| DESCRIPTION<br>SEAL SETTING CHART | GROUP NO.<br>7000  | SERIAL NO.<br>6759 | SHEET NO.             |                 |



TYPE OF SEALS — HOT Leaf COLD Leaf TYPE OF SUPPORT Bottom (Cold End)  
 FUEL Coal, EVAPORATION 557,000 # HOUR  
 UNIT #1

AXIAL SEAL — UNRESTRAINED SECTOR PLATE  
 HEATER SIZE 24 1/2 — 32

M-64

North East corner of air heater shown. Lagging to Be Removed by HU. Access Door for basket removal and I-beam for trolley behind this lagging.



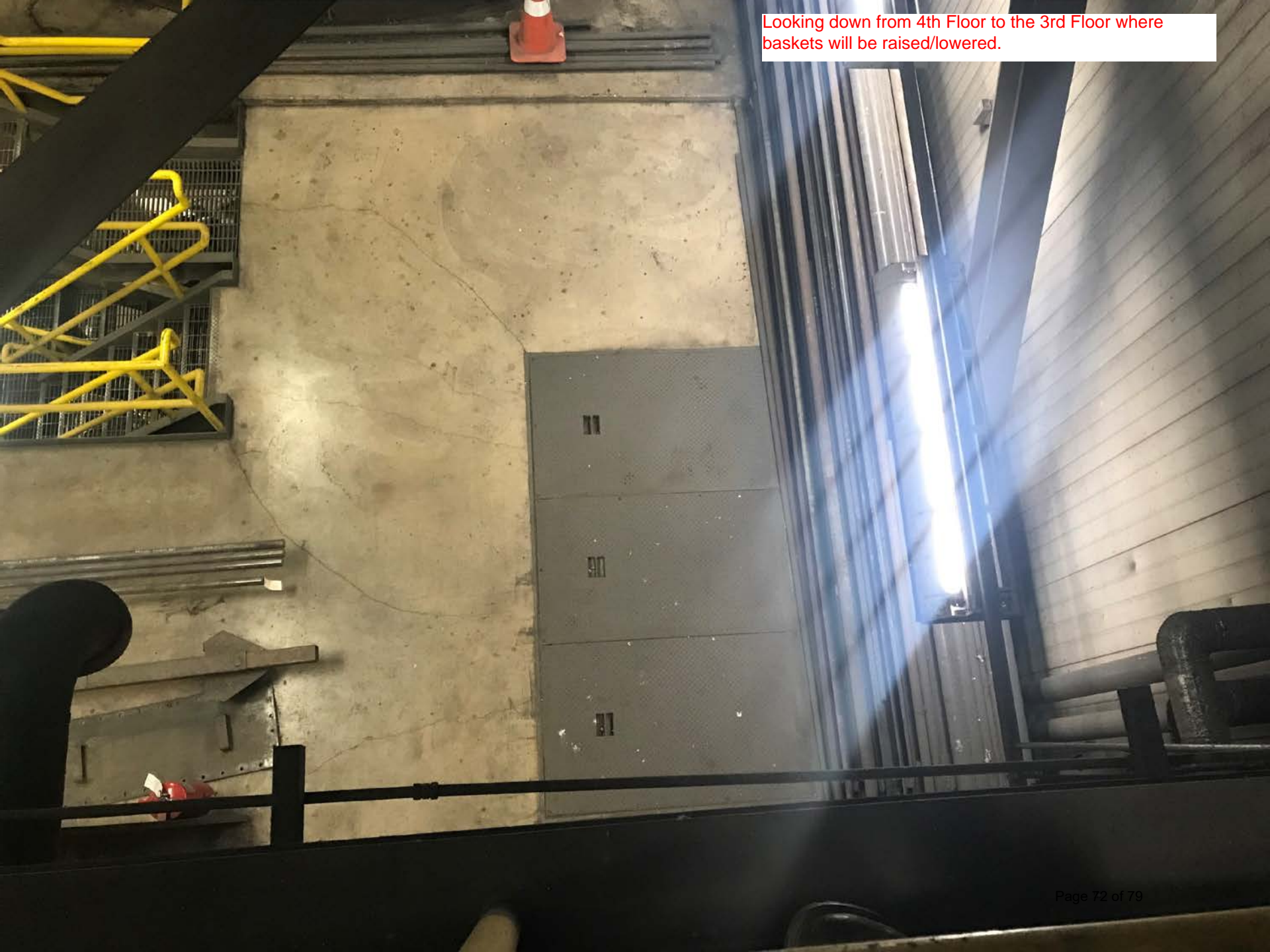


North East corner of air heater, 4th Floor. Contractor to utilize this beam and area for moving baskets.

Beam for Lowering/  
Raising baskets  
between 4th and  
3rd Floor



Looking down from 4th Floor to the 3rd Floor where baskets will be raised/lowered.



Looking NW at NE corner of air heater

I beam and Door for basket removal.



Looking North near the work area in the NE corner of the air heater



Looking SE near the work area in the NE corner of the air heater

Removal Hatch



Construction Power  
in NW corner of air  
heater

Looking West towards  
Turbine Deck on the 3rd  
Floor



Looking West on  
Turbine Deck on the 3rd  
Floor where the baskets  
will be staged





Looking East towards the first floor exit garage from the 3rd Floor. Old baskets to be lowered through this opening to the 1st floor and taken out this garage door.

