

**CONTRACT AND SPECIFICATIONS
FOR
WEC UNIT 1 BURNER TIP REPLACEMENT
CITY OF HASTINGS
HASTINGS, NEBRASKA
Contract No. HU 2025-116**

**Sealed Proposals Will Be Opened Promptly At
3:00 PM, Thursday, December 18th, 2025**

Bid Submitted By: _____



Table of Contents

**CONTRACT AND SPECIFICATIONS
FOR
WEC UNIT 1 BURNER TIP REPLACEMENT
FOR
CITY OF HASTINGS
HASTINGS, NEBRASKA**

Contract No. HU 2025-116

I. BIDDING DOCUMENTS

Advertisement for Bids3
Instructions to Bidders4-5
Contact Sheet...6
Bidder Checklist Form7
Mailing Instructions8

II. CONTRACT FORMS

Proposal.....9-11
Agreement.....12-13
Affidavit14
Insurance15

III. TECHNICAL SPECIFICATIONS

Section 1 - General Conditions16-35
Section 2 – Special Conditions36-46
Section 3 – General Description and Scope of Work47-49
Appendix A – Supporting Information50-95

ADVERTISEMENT FOR BIDS

The City of Hastings, Nebraska, will receive bids for: **Whelan Energy Center Unit 1 Burner Tip Replacement HU2025-116** until 3:00 p.m. at the City of Hastings, 1228 N Denver Ave., Hastings, Nebraska, on **Thursday, December 18th, 2025** at which time and place all bids will be publicly opened and read aloud. **Brief description of project:** Contractor to provide craft labor and supervision necessary to replace WEC Unit 1 coal burner nozzle tips and air nozzle tips during the spring 2026 outage 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.

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No bid shall be withdrawn after opening of bids without the consent of the City of Hastings, Nebraska, for a period of sixty (60) days after scheduled time of closing bids.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

DATED AT HASTINGS, NEBRASKA, this 24th day of November, 2025

Tyler Ficken, City Clerk

For City Clerk: Publish and Attach two (2) Proofs of Publication:
December 4th, 2025
December 11th, 2025

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 to the bound volume submitted. Hastings Utilities 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 himself, 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:

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.

BID DOCUMENT MUST BE SUBMITTED WITH BID

INSTRUCTIONS TO BIDDERS

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 or proposal will not be accepted.

Bidder Qualifications: In order for their proposals to be considered, bidders without previous successful work history with Hastings Utilities must demonstrate before the bid opening that they are qualified to perform the work satisfactorily. Each prospective bidder shall submit written evidence of his qualifications to the Owner not less than five (5) days before the date of bid opening. Such evidence shall certify that the bidder:

1. Maintains a permanent place of business;
2. Has available the plant and equipment to do the work;
3. Can supply and manage the necessary labor force;
4. Has technical knowledge and practical experience in work of the type specified;
5. Has available the organization and qualified manpower to do the work;
6. Has adequate financial status to meet the financial obligations incident to the work;
7. Has no just or proper claims pending against him or his work; and
8. Has constructed other facilities of similar type and of equal or greater size and complexity. The evidence shall consist of a listing of the facilities indicating the owner's name, location, approximate dollar value, type of facilities, date of completion, and the size and operating conditions of major equipment.

IF YOU HAVE QUESTIONS OR NEED HELP ON THESE SPECIFICATIONS

CONTRACT NO: HU 2025-116

WEC UNIT 1 BURNER TIP REPLACEMENT

PLEASE CONTACT ANY OF THE FOLLOWING:

PROJECT QUESTIONS

Derek Pfeifer
Production Engineer
Direct Line: 402-462-3673
Email: dpfeifer@cityofhastings.org

Bruce Perry
Maintenance Supervisor
Direct Line: 402-462-3573
Email: 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



BIDDER'S CHECKLIST

- One signed cover sheet with your company's name filled in
- One signed original Proposal
- Exceptions listed on Instruction To Bidders sheet
- Written evidence of Contractor qualifications as outlined in Instructions to Bidders sheet, if no project history with Hastings Utilities
- Acknowledgement of Addenda. All addendums received must be acknowledged and signed, if applicable.
- Firm unit pricing; or the lump sum pricing as applicable (see Proposal).
- A certified check, cashier's check, or bid bond payable to the City of Hastings in an amount no less than five percent (5%) of the bid price included with the sealed bid envelope addressed in accordance with the Mailing or Hand Delivery Instructions.
- Time and Material Rate Sheet

IMPORTANT MAILING (OR HAND DELIVERY) INSTRUCTIONS

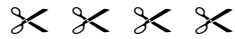
Please address your return envelope as shown in the example below. All bids must be sealed in a properly marked envelope.

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 2025-116
WEC Unit 1 Burner Tip Replacement
For Hastings Utilities
Bid Opens: Thursday, December 18th, 2025 @ 3:00 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 3:00 pm deadline.

**FORMAL PROPOSAL FOR
WEC UNIT 1 BURNER TIP REPLACEMENT
Formal Contract No. HU 2025-116**

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

**Bid Opening: December 18, 2025 (Thursday)
SEALED BIDS MUST BE RECEIVED BY 3:00 P.M. AND
WILL BE OPENED PROMPTLY AT THAT TIME**

The undersigned bidder, having read and examined the specifications and associated contract documents for the above designated equipment, does hereby propose to furnish the labor, equipment and provide the services set forth in this Proposal.

We, the undersigned, being familiar with all parts of this document, do hereby agree to provide Craft Labor for WEC1 Burner Nozzle Tip and Air Nozzle Tip replacements for Hastings Utilities, Hastings, Nebraska as specified to purchaser for the following firm prices.

BID SECTION I: WEC UNIT I BURNER AND AIR NOZZLE TIP REPLACEMENT

Item No.	Description	Unit Price	Total Price
1	Provide labor, equipment, and supervision to remove and replace sixteen (16) WEC Unit 1 burner nozzle tips and thirty-six (36) air nozzle tips, per Section 3 specifications.	<u>LUMP SUM</u>	\$
TOTAL PRICE			
_____			\$ _____
<i>(Price In Words)</i>			

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

**FORMAL PROPOSAL FOR
WEC UNIT 1 BURNER TIP REPLACEMENT
Formal Contract No. HU 2025-116**

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 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 they 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 (must select one).

No Yes

Exceptions (must select one):

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

All exceptions to the proposal shall be noted as an exception to the bid.

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.

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.

**FORMAL PROPOSAL FOR
WEC UNIT 1 BURNER TIP REPLACEMENT
Formal Contract No. HU 2025-116**

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 3:00 PM DEADLINE

AGREEMENT

THIS AGREEMENT, made and entered into this day of 2025, 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 Burner Tip Replacement, HU2025-116.**

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

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:

Hastings Utilities
1228 North Denver Avenue
P.O. Box 398
Hastings, Nebraska 68902-0289
Attention: Derek Pfeifer
Or, via email to 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 contractor's burner and air nozzle scope is completed and the area passed to plant personnel. The project completion date is at the end of day, Wednesday, April 22nd, 2026.
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 money payable under this Contract unless written consent of the Purchaser has been

SECTION 1 - GENERAL CONDITIONS

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.

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

SECTION 1 - GENERAL CONDITIONS

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 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

SECTION 1 - GENERAL CONDITIONS

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.

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.

SECTION 1 - GENERAL CONDITIONS

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.

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.

SECTION 1 - GENERAL CONDITIONS

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 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

SECTION 1 - GENERAL CONDITIONS

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.

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.

SECTION 1 - GENERAL CONDITIONS

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.

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.

SECTION 1 - GENERAL CONDITIONS

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 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.

SECTION 1 - GENERAL CONDITIONS

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

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.

SECTION 1 - GENERAL CONDITIONS

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

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
-----------------------	-------------

SECTION 1 - GENERAL CONDITIONS

Limits of at least: \$1,000,000 per occurrence; \$1,000,000 aggregate

Policy shall provide for a retroactive date prior to the starting date of services for which this agreement applies. Policy shall not exclude damages for bodily injury, property damage, or pollution liability. Coverage shall remain in force for a minimum of 3 years following substantial completion of construction through either policy renewal or the purchase of an Extended Reporting Provision. Contractor agrees to waive its rights of recovery. Subcontractor's insurer shall endorse the policy to waive subrogation against Owner and their respective agents, officers, directors and employees.

GC.29.13 Transportation Insurance – When Applicable

Contractor shall purchase inland marine coverage at the expense of Contractor on all equipment and materials, where Purchaser has an insurable interest. Insurance shall protect for Contractor and Purchaser from physical loss of equipment while loading, unloading, in transit to jobsite, and until equipment or materials have been installed or received by Purchaser.

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

Unless otherwise provided, Contractor shall purchase and maintain property insurance, a.k.a. builder's risk insurance, on the building construction project in amount thereto for entire work at site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in contract documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final acceptance of work by Owner. Insurance shall include interests of Owner, Contractor, Subcontractor, and sub-subcontractors in work. This property insurance covering work will have deductible for each occurrence, which will be responsibility of Contractor.

Before an exposure to loss may occur, the Contractor will provide a copy of the property insurance policy or evidence of property insurance, upon request that includes all property insurance coverages.

Waivers of Subrogation: Owner, Contractor, and all Subcontractors waive all rights against

(1) each other and any of their subcontractors, sub-subcontractors, agents and employees, each of the other, and (2) Owner's or Contractor's consultants, separate contractors, if any, and any of their subcontractors, sub-subcontractors, agents and employees, for damages caused by fire or other perils to extent covered by property insurance obtained, or other property insurance applicable to work, except such rights as they have to proceeds of such insurance held by Owner and/or Contractor as fiduciary. Contractor shall require of consultants, separate contractors, if any, and subcontractors, sub-subcontractors, agents and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. Policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay insurance premium directly or indirectly and whether or not person or entity had an insurable interest in property damaged.

SECTION 1 - GENERAL CONDITIONS

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.

SECTION 1 - GENERAL CONDITIONS

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 five percent (5%) of the total contract amount for all work completed including change orders.

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 the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland

SECTION 1 - GENERAL CONDITIONS

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.
- (5) **Sanctions for Noncompliance:** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the (Recipient) shall impose such

SECTION 1 - GENERAL CONDITIONS

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

SECTION 2 - SPECIAL CONDITIONS

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:

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

SECTION 2 - SPECIAL CONDITIONS

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

SECTION 2 - SPECIAL CONDITIONS

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.

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.

SECTION 2 - SPECIAL CONDITIONS

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 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.

SECTION 2 - SPECIAL CONDITIONS

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.

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

SECTION 2 - SPECIAL CONDITIONS

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.

SC.38.1 ON PRIVATE PROPERTY.

Not used.

SECTION 2 - SPECIAL CONDITIONS

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.

SC.46 ARTIFACTS.

Not used.

SECTION 2 - SPECIAL CONDITIONS

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 labor to install replacement burner and air nozzle tips for Unit 1 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 arrange a site visit.

3.002 Schedule. This shall include the completion of various activities in accordance with the milestone time periods and dates listed.

Activity	Schedule
Bid Opening	December 18th, 2025
Contract Award Date	December 30th, 2025
Outage Dates	March 20 th , 2026 to May 1, 2026
Begin Installation	March 25 th , 2026
Complete Installation	April 22 nd , 2026

3.003 Scope. The Contractor will provide labor, equipment, and supervision to remove and replace the following nozzle tips:

- Coal Nozzle Tips for “A”, “B”, “C”, and “D” elevations. All four corners. Sixteen total coal nozzles.
 - See drawings 62-30030-CUST, 896P-M01-014, 896P-M01-015, 896P-M01-019, and 896P-M01-020
 - Measure and record burner insertion length and position
 - Disconnect tilt linkage in compartment
 - Loosen coal nozzle support assembly
 - Remove burner through front of windbox
 - Inspect and document burner and windbox compartment condition with HU personnel
 - Remove cotter pin for pivot and plug weld for nozzle adjusting link
 - Verify the holes for pins to be 1/64” to 1/32” larger than the pins
 - Replace coal nozzle tip, nozzle link pin, and re-plug weld linkage.
 - Lubricate all pivot pins and bearing surfaces with a coating of HU supplied high temperature lubricant. This includes all link pins, bell crank stationary pins, and other pins inside the windbox compartment.
 - Reinstall the burner assembly and linkage

SECTION 3 - GENERAL DESCRIPTION AND SCOPE OF WORK

- Seal plate should fit on the coal nozzle with 1/8” maximum and 1/16” minimum clearance between seal plate and coal nozzle on all four sides. With pivot pins inserted, seal plate should make its full travel without binding.
- The adjustable coal nozzle tip should fit over the seal and have 3/32” maximum and 1/64” minimum clearance on all sides.
- The coal nozzle should be checked to make sure that the nozzle support lug and tilt mechanism is on the correct size.
- When the nozzle and tip assembly have been installed in the windbox assembly, make sure 1/4” clearance is maintained all around throughout the tilt range.
- With the burner tilts set at 0 degrees (or 50% on the air drives), check the tips to confirm they are at 0 degrees. The tips shall be +/-1 degree from vertical. If necessary, adjust the nozzle assembly turnbuckle
- Air Nozzle Tips for CCOFA, “DD” Aux Air, “CD” Aux Air, “BC” Aux Air, “AB” Warm-up with Oil Gun, and “AA” UFA. All four corners. 36 total air nozzles (some compartments have two or three nozzles).
 - See drawings 62-30030-CUST, 896P-M01-012, 896P-M01-013, 896P-M01-016, 896P-M01-017, 896P-M01-018, 896P-M01-019, and 896P-M01-020
 - Measure and record nozzle insertion length and position
 - Disconnect tilt linkages in compartment
 - Remove air turning vane plate
 - Remove pivot pins from inside of the nozzle tip. Insert a 1/2” -13 UNC bolt in hole tapped in pivot pin to assist in its removal.
 - “CD”, “BC”, and “AB” will be difficult, but possible, to remove the pivot pins with the gas modules in place due to space constraints. If Contractor chooses to remove the gas modules for convenience, “AB” and “BC” are to be left out, the windbox patched, and the gas module materials saved for future relocation. “CD” should be reinstalled as found. See drawings 896P-M01-007 and 896P-M01-008
 - Remove nozzle and linkage arm into furnace, or through windbox. Manufacturers recommend them removed through furnace.
 - Inspect and document nozzle and windbox compartment condition with HU personnel
 - Remove plug weld for nozzle adjusting link.
 - Verify the holes for pins to be 1/64” to 1/32” larger than the pins
 - Replace air nozzle tip and re-plug weld linkage.
 - Lubricate all pivot pins and bearing surfaces with a coating of HU supplied high temperature lubricant. This includes all link pins, bell crank stationary pins, and other pins inside the windbox compartment.
 - Reinstall the air nozzle and linkage. Install pivot pins.
 - Reinstall air turning vanes
 - Clearances around adjustable nozzle tips should be 1/2” (by design) or 1/4” (minimum) all around the tip throughout the tilt range.

SECTION 3 - GENERAL DESCRIPTION AND SCOPE OF WORK

- With the air nozzle tilts set at 0 degrees (or 50% on the air drives), check the tips to confirm they are at 0 degrees. The tips shall be +/-1 degree from vertical. If necessary, adjust the nozzle assembly turnbuckle

Contractor will be responsible for protecting the existing plant equipment during the removal and installation processes. It will be the contractor's responsibility to make sure the installation of the nozzles, linkages, and related equipment are installed properly.

Contractor will provide all necessary tools and equipment needed to complete project. All work shall be coordinated with Hastings Utilities as to not interfere with other activities on site.

Contractor is responsible for determining the crew makeup to finish the project on time, however two crews working concurrently on separate corners is recommended.

3.004 Hastings Utilities work scope:

The following work will be completed by HU:

1. LOTO of all components to perform a proper and safe disassembly and installation of burner and nozzle assemblies.
2. Provide station services including water, air, and electrical power.
3. Provide sanitary services in the form of portable toilets.
4. Removal and installation of all electrical and instrumentation.
5. Provide scaffolding exterior to windbox at all four corners
6. Provide scaffold inside the furnace.
7. Supply of all materials, including nozzles, fasteners, gaskets, and associated materials.
8. Label and remove coal elbows and static pressure tap valves
9. On "AB" elevation, remove oil gun assembly. See drawing 7677.63.3400-052
10. Label and remove remaining valves, sheeting, and insulation
11. After contractor installs burners and nozzles, install remaining components, including instrumentation, valves, sheeting, new insulation, and coal elbows

APPENDIX A

PROJECT INFORMATION

FOR

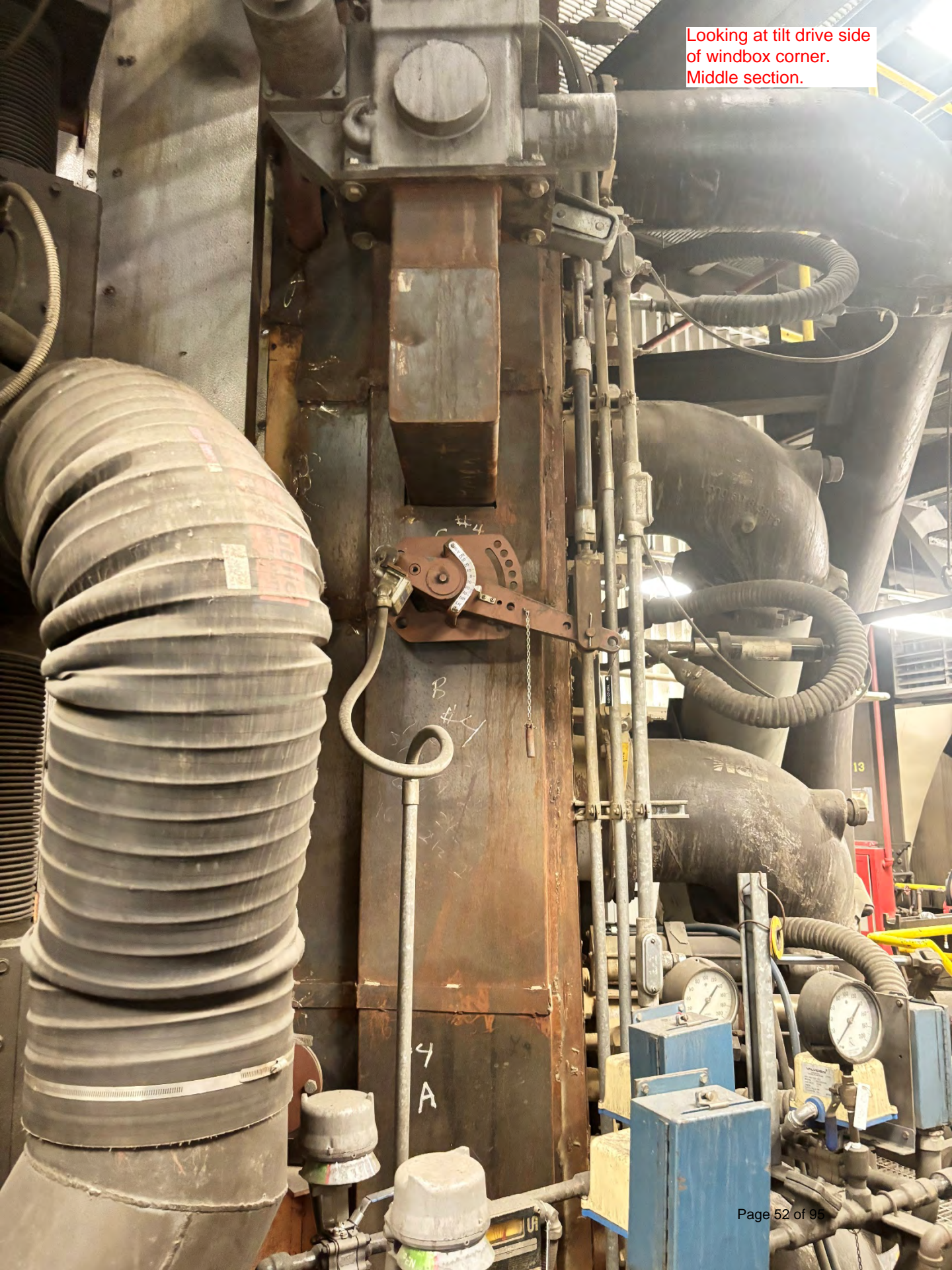
CONTRACT NO. HU 2025-116

**CRAFT LABOR FOR WEC1 BURNER & AIR NOZZLE
REPLACEMENTS**

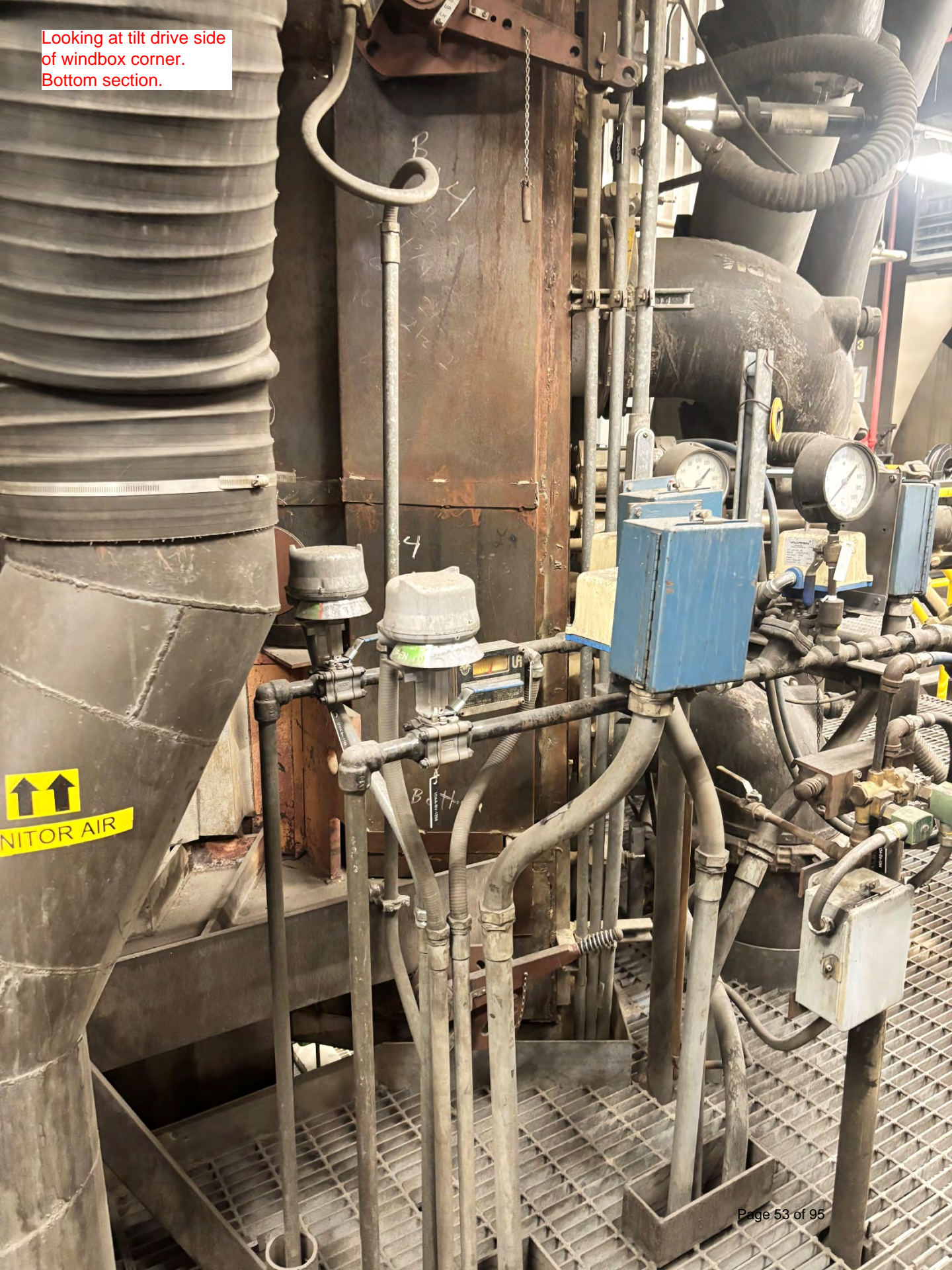
Looking at tilt drive side of windbox corner. Top section.



Looking at tilt drive side
of windbox corner.
Middle section.



Looking at tilt drive side
of windbox corner.
Bottom section.



↑↑
NITOR AIR

Looking at burner front.
Bottom Section



Looking at burner front.
Top Section



Looking above front of windbox corner structural steel for removal of burner modules. Typical of all corners.



Insulation that HU will remove and replace.



Thermafiber

Product Code		Lo. of Pieces
835317		7
Thickness (in)	Width (in)	Length (in)
2 X	24 X	48

IND QTY 7 INDUSTRIAL BOARD BRD 80 PLN 2x24x48 SWP@7 NPM

Special Product Information

WARNING This product can expose you to chemicals including formaldehyde, which is known to the State of California to cause cancer. For more information, go to www.P65Warning.ca.gov



Commercial and Industrial Insulation
Thermafiber, Inc.

UNFACED BATTS AND BLANKETS
CONTENTS NOT OVER 100 SQ. FT. (FORM A)
ISSUE NO. 0054434

SURFACE BURNING CHARACTERISTICS
FLAME SPREAD 0 SMOKE DEVELOPED 0

!Caution

Ensure adequate ventilation in work area. Respiratory protection is not typically necessary under normal conditions. However, avoid prolonged and repeated breathing of dust that may cause temporary mechanical upper respiratory track irritation. Avoid avoid prolonged and repeated breathing of dust that may cause temporary mechanical upper respiratory track irritation. Avoid avoid prolonged and repeated breathing of dust that may cause temporary mechanical upper respiratory track irritation. Avoid avoid prolonged and repeated breathing of dust that may cause temporary mechanical upper respiratory track irritation.

Contact with mineral wool dust may cause temporary eye and skin irritation (mechanical). Wear eye protection and long sleeved and loose fitting clothing closed at the neck and wrists while working with this product to avoid irritation. Persons with chronic and systemic skin or eye disease should use extra ordinary protection. Wash work clothing separately from other clothing. Rinse and wash thoroughly after use.

FIRST AID: For skin irritation, rinse with cool water, followed by washing with soap and warm water. For eye irritation, flush eyes thoroughly with water for 15 minutes. If irritation continues, or product is swallowed, consult a physician.

MATERIAL SAFETY DATA SHEET: MSDS and additional product safety information available on the web site www.thermafiber.com or by calling (800) 363-2111.

260220 09:59 JTF-001

Typical Close Coupled
Over Fire Air Nozzle



Typical "DD" Aux Air
Elevation



Typical "CD" and "BC" elevation



Typical "AB" with warm-up oil nozzle

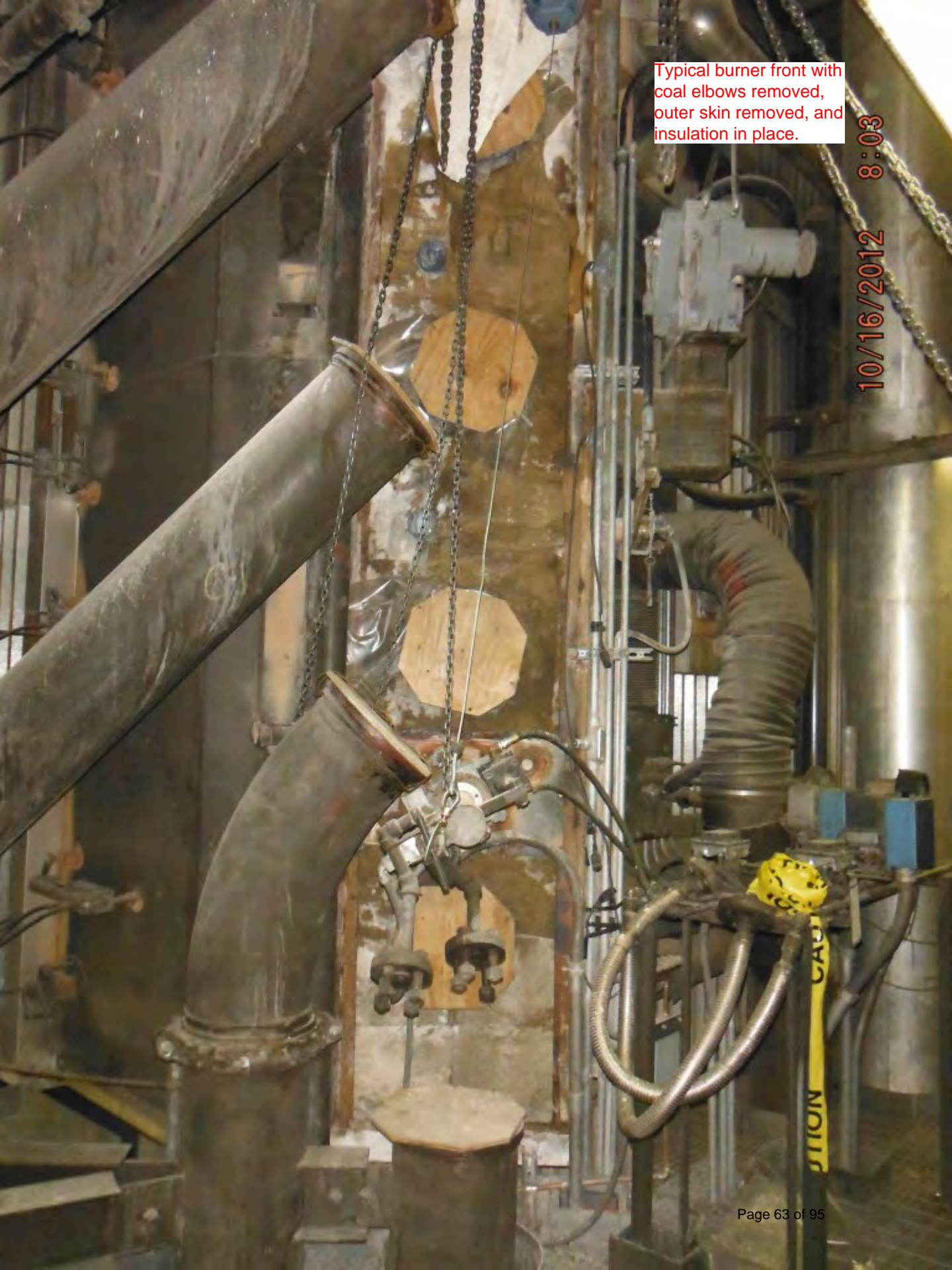


Inside windbox during construction. CCOFA, DD, and D coal elevation shown. Note linkage and air turning vane.

10/29/2012 16:04

Typical burner front with coal elbows removed, outer skin removed, and insulation in place.

10/16/2012 8:03





Typical burner front with everything removed, including insulation, inner plates, and outer skin.

10/17/2012 9:19

Removing burner assembly.



10/19/2012 9:35

Typical section with no nozzles, no linkage, and the gas manifold in place. This is prior to installing the pins.



10/31/2012 8:57

Typical AB section with oil nozzle. Note the linkages, gas manifold, and oil nozzles. Also, the air turning vane is removed, which will be required to gain access to the pivot pins.



11/ 1/2012 14:07

Typical elevation with all air and oil segments out. In process of removing the bottom coal burners.



11 / 2 / 2012 13:51

Typical elevation with all air and oil segments out. In process of removing the bottom coal burners.



11 / 3 / 2012 12:25

Oil gun assembly removed.

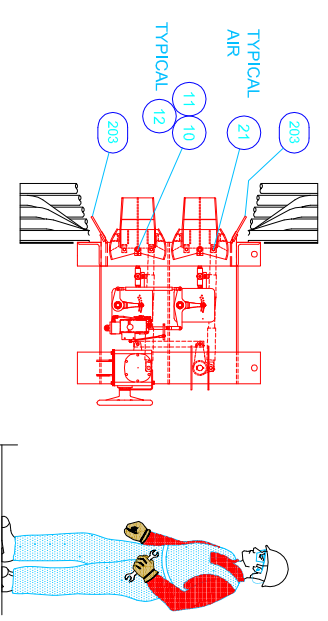
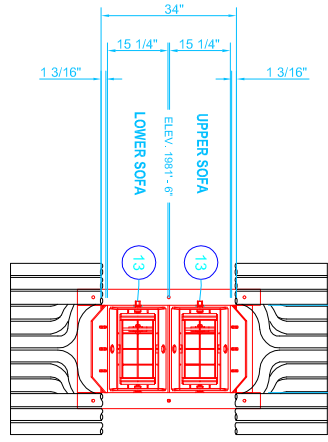


11/ 6/2012 11:30

Burners and nozzles
reinstalled with only
inner plates installed.

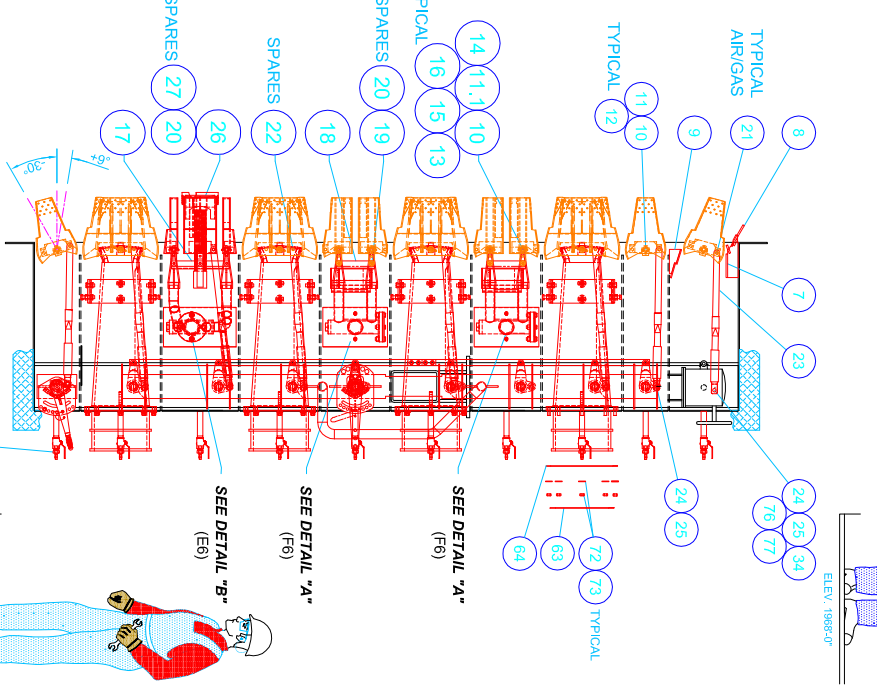
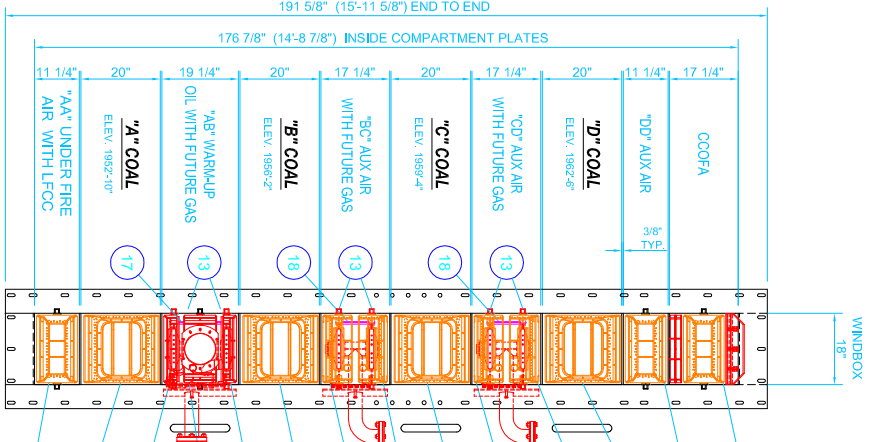
11/ 8/2012 14:24

SOFA WINDBOX

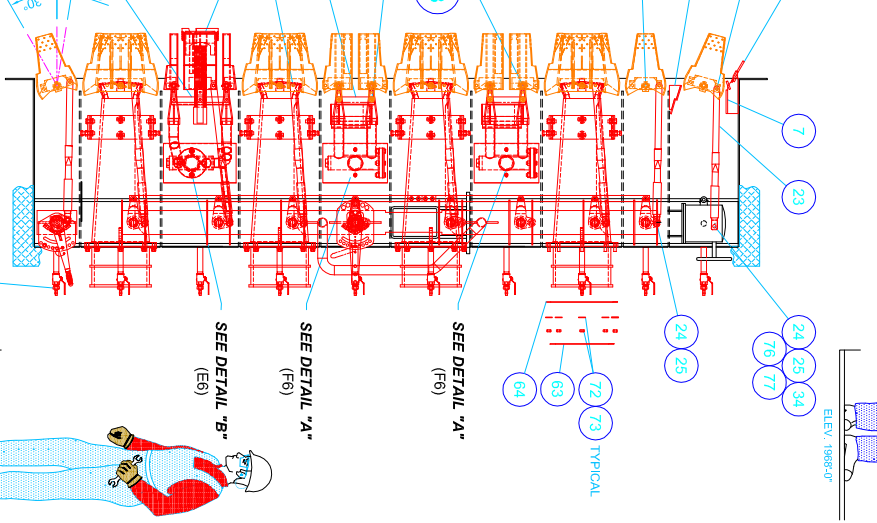


SOFA WINDBOX WITH ±20° HORIZONTAL MANUAL DIRECTIONAL CONTROL AND ±30° VERTICAL TILT CONTROL

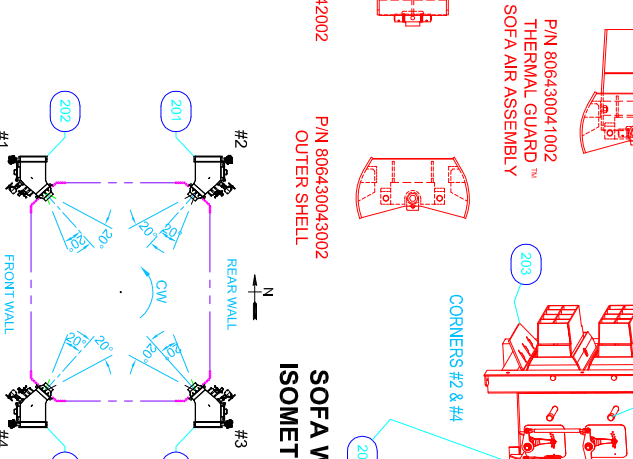
MAIN WINDBOX FURNACE VIEW



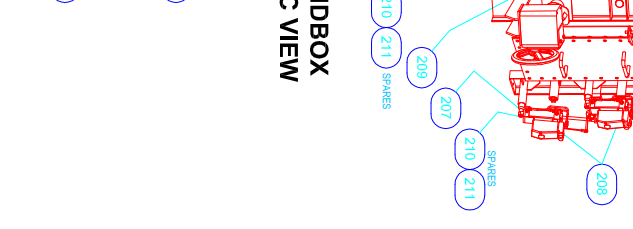
ELEVATION SIDE VIEW



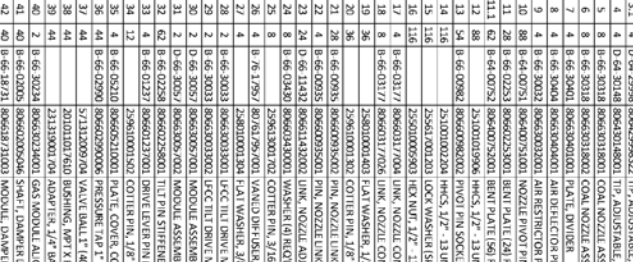
SOFA WINDBOX PLAN VIEW



SOFA WINDBOX ISOMETRIC VIEW



MAIN WINDBOX PLAN VIEW



SOFA WINDBOX BILL OF MATERIAL

Item	Qty	Description	Part No.	Material	Dimensions (in.)	Weight (lbs.)
1	12	DRIVE SHAFT	806430042002	203-304	10.5 x 3.5 x 4.75	85
2	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
3	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
4	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
5	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
6	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
7	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
8	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
9	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
10	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
11	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
12	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
13	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
14	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
15	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
16	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
17	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
18	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
19	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
20	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
21	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
22	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
23	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
24	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
25	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
26	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
27	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
28	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
29	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
30	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
31	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
32	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
33	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
34	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
35	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
36	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
37	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
38	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
39	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
40	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
41	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
42	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
43	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
44	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
45	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
46	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
47	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
48	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
49	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
50	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
51	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
52	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
53	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
54	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
55	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
56	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
57	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
58	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
59	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
60	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
61	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
62	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
63	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
64	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
65	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
66	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
67	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
68	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
69	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
70	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
71	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
72	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
73	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
74	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
75	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
76	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
77	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
78	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
79	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
80	8	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110

NEW ITEMS SUPPLIED FOR 2018 OUTAGE (PARTIAL QUANTITIES)

Item	Qty	Description	Part No.	Material	Dimensions (in.)	Weight (lbs.)
1	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
2	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
3	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
4	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
5	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
6	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
7	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
8	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
9	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
10	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110

COMPLETED B/M ARE ITEMS SUPPLIED IN 2012 OUTAGE

Item	Qty	Description	Part No.	Material	Dimensions (in.)	Weight (lbs.)
1	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
2	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
3	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
4	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
5	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
6	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
7	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
8	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
9	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110
10	1	DRIVE SHAFT	806430042002	203-304	7.5 x 3.7 x 3.75	110

REVISIONS

REV	DATE	BY	REVISION
0	8/27/2018	dtr	RELEASED ARRANGEMENT DRAWING

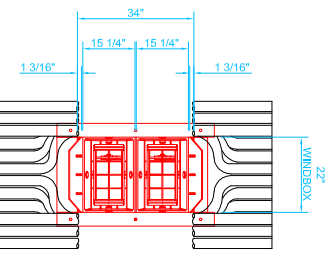
DESCRIPTION: 16" WINDBOX GENERAL EQUIPMENT ARRANGEMENT

CUSTOMER: HASTINGS UTILITIES WHELAN UNIT #1
 ITEM NO. APPROX. WEIGHT:
 CUST. REF. DWG.
 CUST. ORD. NO.
 DRAWN BY: dtr
 CHK BY: TH
 DATE: 8/27/2018
 SCALE: NONE
 DWG NO: 62-30030-CUST
 SHEET NO: 1

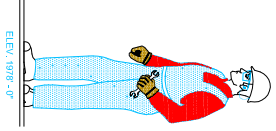
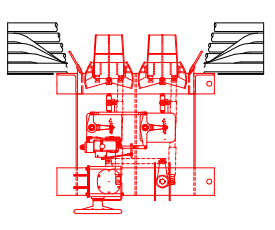


584 POPLAR RD.
 HONEY BROOK, PA 19344
 610-273-2457
 FAX 610-273-2438

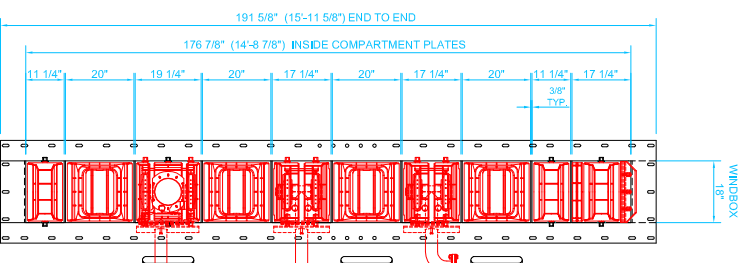
SOFA WINDBOX



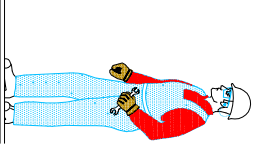
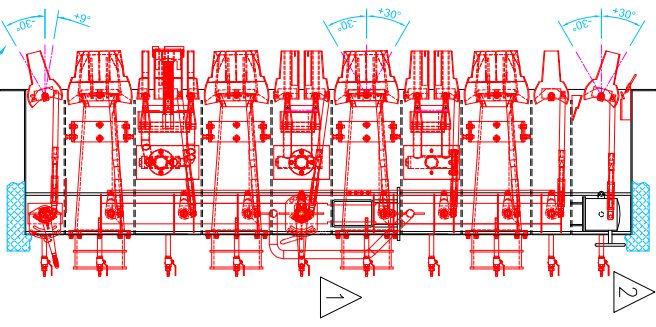
UPPER SOFA
ELEV. 1881'-0"



MAIN WINDBOX



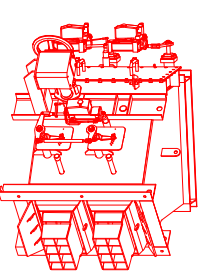
COOFA
"D" AUX AIR
ELEV. 1882'-0"
"C" COAL
ELEV. 1883'-0"
"B" AUX AIR WITH FUTURE GAS
ELEV. 1884'-0"
"A" COAL
ELEV. 1885'-0"
"AB" WARM-UP OIL WITH FUTURE GAS
ELEV. 1886'-0"
"A" COAL
ELEV. 1887'-0"
"AA" UNDER FIRE AIR WITH LFCC



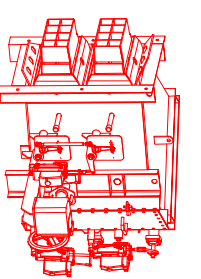
ELEVATION FURNACE VIEW

ELEVATION SIDE VIEW
CORNERS #2 & #4 AS SHOWN
CORNERS #1 & #3 OPPOSITE

TILT RANGE INDICATED IS MIN./MAX. FOR NOZZLE TIPS. TILT RANGE REQUIRED FOR PERFORMANCE MAY DIFFER. TYPICAL FOR ALL COMPARTMENTS.
ALL ELEVATIONS INDICATED ARE TO TOP OF GRATING

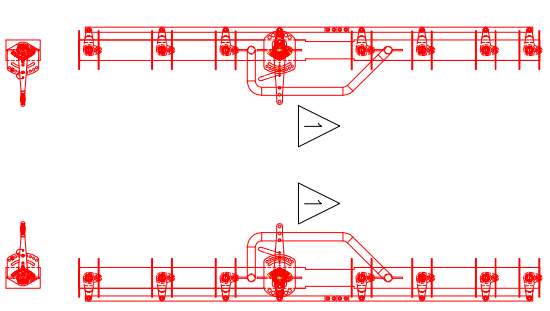


CORNERS #1 & #3



CORNERS #2 & #4

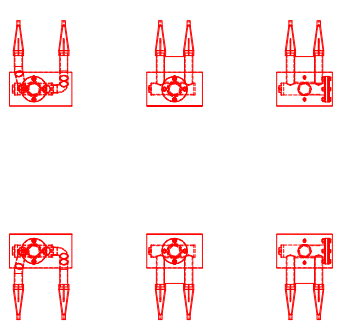
TILT UPGRADE



CORNERS #2 & #4

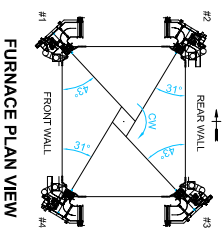
CORNERS #1 & #3

FUTURE GAS



CORNERS #2 & #4

CORNERS #1 & #3

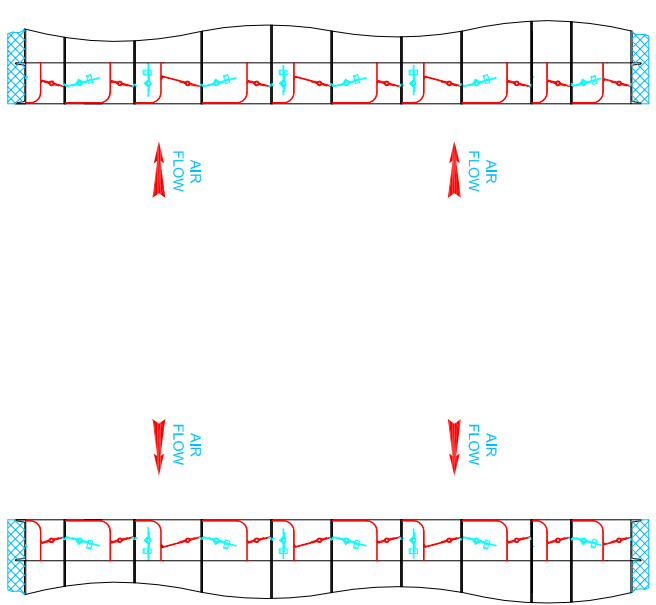


FURNACE PLAN VIEW

REFERENCE DRAWINGS

- 896P-M01-001 GENERAL EQUIPMENT ARRANGEMENT MAIN & SOFA WINDBOXES
- 896P-M01-002 MAIN WINDBOX NEW EQUIPMENT ARRANGEMENT
- 896P-M01-003 MAIN & SOFA WINDBOX BILL OF MATERIAL
- 896P-M01-004 MAIN WINDBOX DEMOLITION
- 896P-M01-005 MAIN WINDBOX MODIFICATIONS
- 896P-M01-006 MAIN WINDBOX INSTALLATION
- 896P-M01-007 "CD", "BC" AND "AB" GAS COMPARTMENT MODIFICATIONS
- 896P-M01-008 "CD", "BC" AND "AB" GAS COMPARTMENT INSTALLATION
- 896P-M01-009 DAMPER BOX DEMO, MODS AND VENTURI PLATE INSTALLATION
- 896P-M01-010 DAMPER BOX BEARING INSTALLATION
- 896P-M01-011 COMPARTMENT MINIMUM TOLERANCE STANDARDS
- 896P-M01-012 COOFA - 17 1/4" COMPARTMENT
- 896P-M01-013 "D", "C", "B" AND "A" COAL - 20" COMPARTMENT
- 896P-M01-015 COAL NOZZLE ASSEMBLY STATIONARY, TIP AND SEAL PLATE ASSEMBLY
- 896P-M01-016 "CD" AND "BC" AUX AIR WITH FUTURE GAS - 17 1/4" COMPARTMENT
- 896P-M01-017 "AB" WARM-UP OIL AUX AIR WITH FUTURE GAS - 19 1/4" COMPARTMENT
- 896P-M01-018 "AA" UNDER FIRE AIR - 11 1/4" COMPARTMENT
- 896P-M01-019 MODULE, TILT DRIVE ASSEMBLY, LH & RH
- 896P-M01-020 MODULE, LFCC DRIVE ASSEMBLY, LH & RH
- 896P-M02-001 SOFA EQUIPMENT ARRANGEMENT AND BILL OF MATERIAL
- 896P-M02-002 SOFA ASSEMBLY - SHEET 1 OF 2
- 896P-M02-003 SOFA ASSEMBLY - SHEET 2 OF 2

DAMPER BOX WITH VENTURI PLATES ADDED



ELEVATION SIDE VIEW
CORNERS #2 & #4

ELEVATION SIDE VIEW
CORNERS #1 & #3

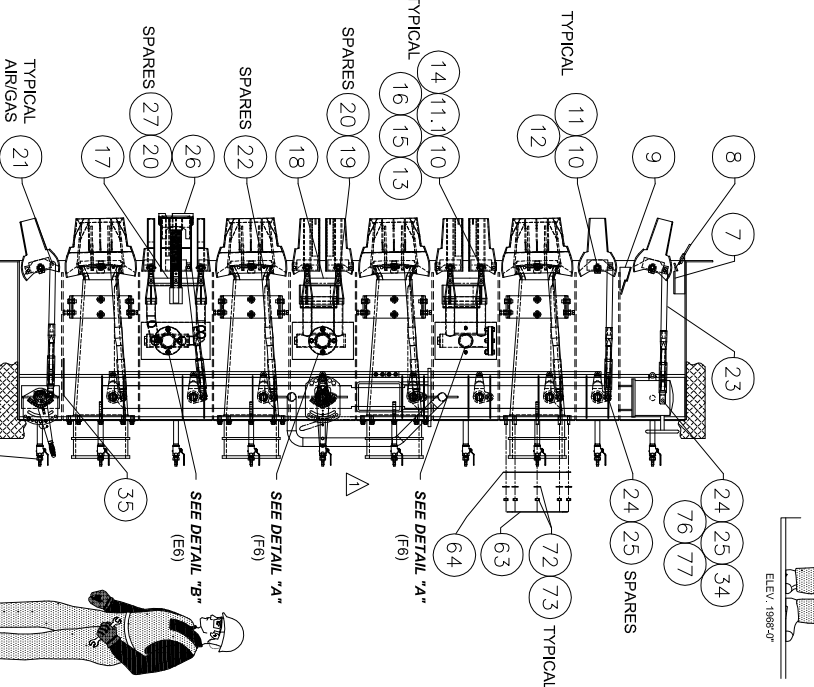
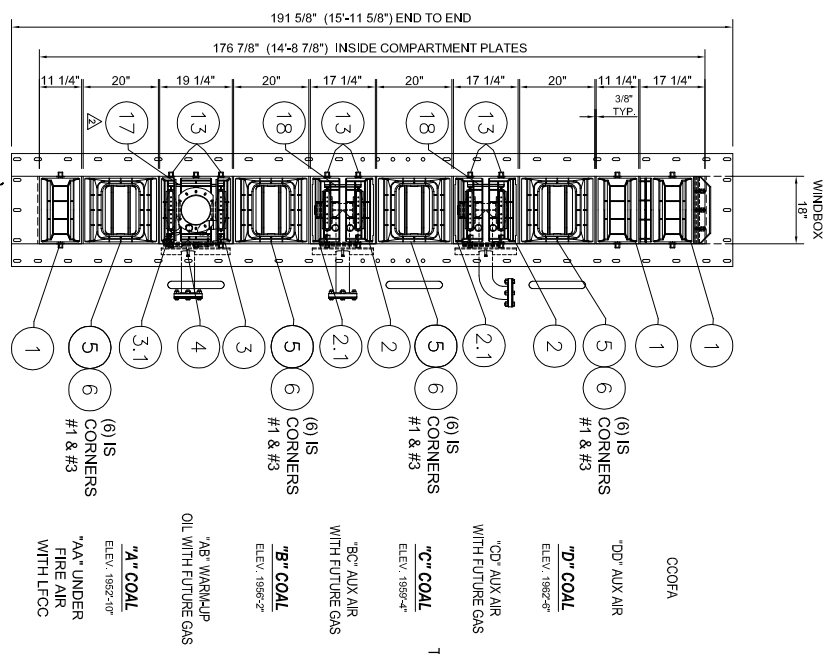
NOTES:
1. REFER TO 896P-M01-003 FOR COMPLETE BILL OF MATERIAL.

CONTRACT NAME: LOW NOX BURNERS CONTRACT NO. 175120.85.3301		APPROVED BY: _____	
DESIGNED BY: _____		DRAWN BY: JHH	
CHECKED BY: DRR		DATE: 4/2/2012	
SCALE: N/A		SIZE: 0	
DRAWING NO. 896P-M01-001			

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

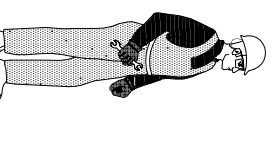


MAIN WINDBOX FURNACE VIEW

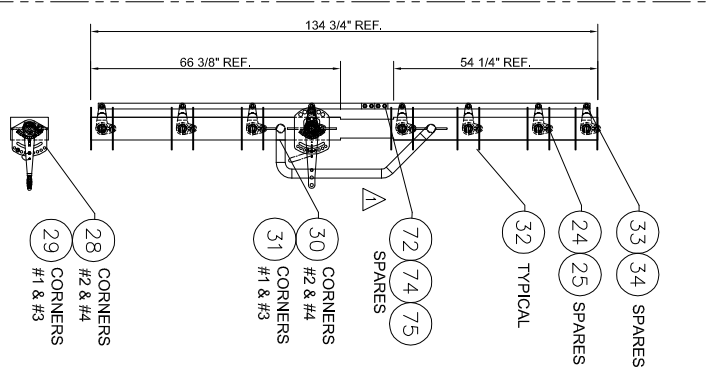


ELEVATION FURNACE VIEW

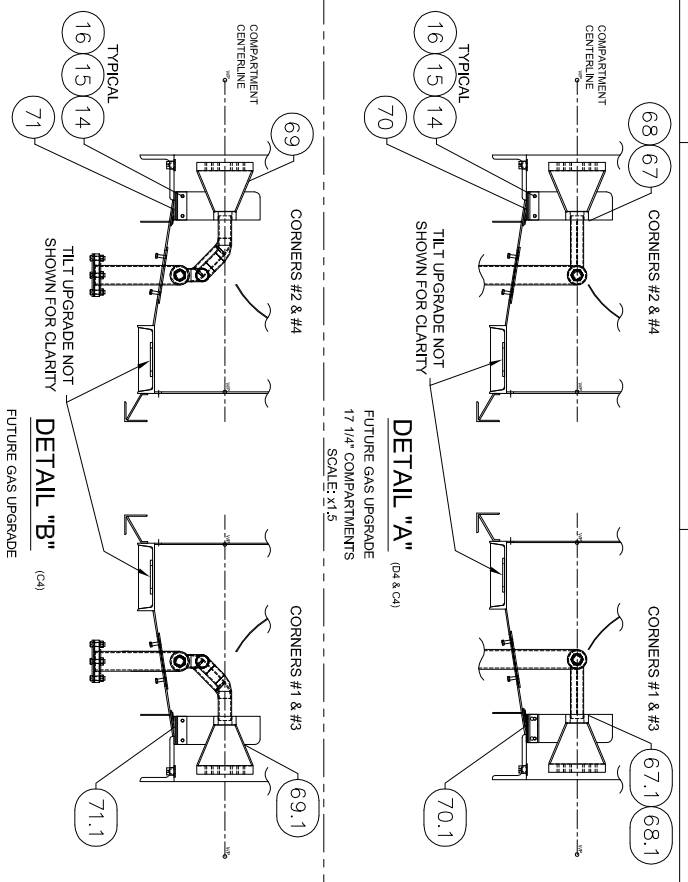
ELEVATION SIDE VIEW CORNERS #2 & #4 AS SHOWN CORNERS #1 & #3 OPPOSITE



TILT UPGRADE



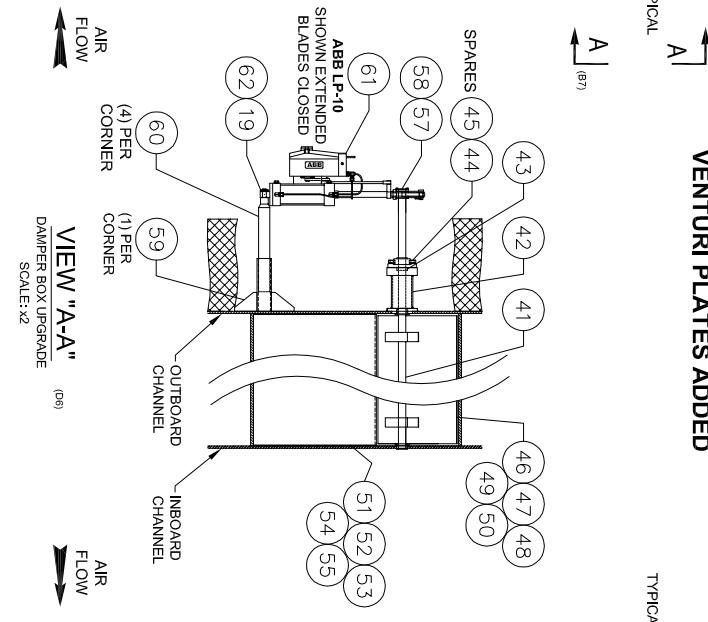
ELEVATION SIDE VIEW CORNERS #2 & #4 SHOWN CORNERS #1 & #3 OPPOSITE



REFERENCE ITEMS:

- 40 REFER TO 896P-M01-007 (F4) FOR USAGE.
- 65 REFER TO 896P-M01-005 (F5) FOR USAGE.
- 66 REFER TO NOTE 3.

DAMPER BOX WITH VENTURI PLATES ADDED



ELEVATION SIDE VIEW CORNERS #2 & #4

ELEVATION SIDE VIEW CORNERS #1 & #3

- NOTES:**
1. REFER TO 896P-M01-001 FOR COMPLETE DRAWING REFERENCE.
 2. REFER TO 896P-M01-003 FOR COMPLETE BILL OF MATERIAL.
 3. ALL METAL TO METAL MECHANICAL JOINTS TO BE SPRAYED WITH DRY MOLY FLM LUBRICANT. ITEM NUMBER 66.
 4. ITEMS NOTED AS SPARES INDICATE ITEMS THAT ARE SHIPPED ASSEMBLED AND SPARES HAVE BEEN SHIPPED LOOSE.



CONTRACT NAME: LOW NOX BURNERS		APPROVED BY:	
CONTRACT NO. 175120.65.3307		DESIGNED BY:	
3	2/6/13	SUBMITTED FOR RECORD	JHH DRR
2	8/28/12	ADDED ITEMS T7 & 18 IN ELEV. VIEWS	DRR DG
1	5/29/12	BRACKET CHANGE & DETAILS REMOVED	JHH DRR
0	4/25/12	RELEASE FOR CONTRACT	JHH DG
A	3/30/12	ISSUE FOR REVIEW	JHH DRR
NO. DATE		REVISIONS	BY
D-82-20030-2		MAIN WINDBOX NEW EQUIPMENT ARRANGEMENT	



CONTRACT NAME: LOW NOX BURNERS		APPROVED BY:	
CONTRACT NO. 175120.65.3307		DESIGNED BY:	
3	2/6/13	SUBMITTED FOR RECORD	JHH DRR
2	8/28/12	ADDED ITEMS T7 & 18 IN ELEV. VIEWS	DRR DG
1	5/29/12	BRACKET CHANGE & DETAILS REMOVED	JHH DRR
0	4/25/12	RELEASE FOR CONTRACT	JHH DG
A	3/30/12	ISSUE FOR REVIEW	JHH DRR
NO. DATE		REVISIONS	BY
D-82-20030-2		MAIN WINDBOX NEW EQUIPMENT ARRANGEMENT	

MAIN WINDBOX BILL OF MATERIAL

Item	Qty	Part No	Description	Material	Dimensions (In.)	Weight (Lbs.)
1	121	D-66-2097	8066029202 TYP. ADJUSTABLE THERMAL GARD AIR NOZZLE	SA-206-309	10.6 X 15.6 X 17.6	85
2	8	D-66-3000	8066030002 TYP. ADJUSTABLE THERMAL GARD AIR NOZZLE	SA-206-309	7.8 X 12.4 X 17.6	110
2.1	8	D-66-3000	8066030032 TYP. ADJUSTABLE THERMAL GARD GAS NOZZLE	SA-206-309	7.8 X 12.4 X 17.6	110
3	4	D-66-2998	8066029982 TYP. ADJUSTABLE GAS NOZZLE	SA-206-309	3.1 X 11.1 X 17.6	50
3.1	4	D-66-2998	8066029982 TYP. ADJUSTABLE GAS NOZZLE	SA-206-309	3.1 X 11.1 X 17.6	50
4	4	D-66-3018	8066030180 COAL NOZZLE ASSEMBLY - "A" - CORNERS #2 & #4	SA-206-309	8.8 X 17 X 17.6	90
5	4	D-66-3018	8066030180 COAL NOZZLE ASSEMBLY - "B" - CORNERS #2 & #4	SA-206-309	17.6 X 19 X 65	700
6	4	D-66-3018	8066030180 COAL NOZZLE ASSEMBLY - "C" & "D" - CORNERS #1 & #3	SA-206-309	17.6 X 19 X 65	700
7	4	D-66-3024	8066030240 AIR DEFLECTOR PLATE	SA-206-309	3 X 10 X 17	
8	4	D-66-3024	8066030240 AIR DEFLECTOR PLATE	SA-206-309	3 X 10 X 17	
9	4	D-66-3024	8066030240 AIR DEFLECTOR PLATE	SA-206-309	3 X 10 X 17	
10	88	D-66-0075	8066007502 PIN, NOZZLE PIVOT PIN (80) REQ'D. (8) SPARES	304 S/S		
11	1.1	D-66-0075	8066007502 PIN, NOZZLE PIVOT PIN (80) REQ'D. (8) SPARES	304 S/S		
11.1	62	D-66-0075	8066007502 PIN, NOZZLE PIVOT PIN (80) REQ'D. (8) SPARES	304 S/S		
12	88	D-66-0082	8066008202 PIVOT PIN SOCKET (56) REQ'D. (6) SPARES	18-8 S/S		
13	54	D-66-0082	8066008202 PIVOT PIN SOCKET (49) REQ'D. (6) SPARES	303 S/S		
14	116	D-66-0082	8066008202 PIVOT PIN SOCKET (49) REQ'D. (12) SPARES	18-8 S/S		
15	116	D-66-0082	8066008202 PIVOT PIN SOCKET (49) REQ'D. (12) SPARES	18-8 S/S		
16	116	D-66-0082	8066008202 PIVOT PIN SOCKET (49) REQ'D. (12) SPARES	18-8 S/S		
17	4	D-66-0317	8066031704 LINK, NOZZLE CONNECTING - "A" - WARM-UP OIL	C/S	1.2 X 1.5	
18	8	D-66-0317	8066031704 LINK, NOZZLE CONNECTING - "C" & "D" - AUX AIR	C/S	1.2 X 1.0	
19	36	D-66-0335	8066030335 COUPLER PIN, 1/2" DIA X 1.161 (28) REQ'D. (8) SPARES	18-8 S/S		
20	36	D-66-0335	8066030335 COUPLER PIN, 1/2" DIA X 1.161 (28) REQ'D. (8) SPARES	304 S/S		
21	28	D-66-0095	8066009502 PIN, NOZZLE ADJUSTING ASSEMBLY	C/S	2 X 2 X .38	
22	4	D-66-0095	8066009502 PIN, NOZZLE ADJUSTING ASSEMBLY	C/S		
23	24	D-66-1042	8066104202 WASHER (4) REQ'D. (4) SPARES	18-8 S/S		
24	8	D-66-0949	8066094902 WASHER (4) REQ'D. (4) SPARES	18-8 S/S		
25	8	D-66-1057	8066105702 VANE DIAPHRAGM SEAL TUBE EXTENSION ASSEMBLY	309 S/S	9.9 X 20	
26	4	D-66-1057	8066105702 VANE DIAPHRAGM SEAL TUBE EXTENSION ASSEMBLY	18-8 S/S		
27	4	D-66-3003	8066030034 FLAT WASHER, 3/8" (SPARES)	C/S		
28	2	D-66-3003	8066030034 FLAT WASHER, 3/8" (SPARES)	C/S	10 X 22 X 20	70
29	2	D-66-3003	8066030034 FLAT WASHER, 3/8" (SPARES)	C/S	10 X 22 X 20	55
30	2	D-66-3007	8066030072 LOCK WASHER (59) FT. 1/2" (104) REQ'D. (12) SPARES	C/S	20 X 24 X 134 X 2	400
31	2	D-66-3007	8066030072 LOCK WASHER (59) FT. 1/2" (104) REQ'D. (12) SPARES	C/S	20 X 24 X 134 X 2	400
32	62	D-66-0238	8066023802 TYP. STIFFENER PLATE (58) REQ'D. (6) SPARES	C/S	3 X 8 X 12	
33	4	D-66-0237	8066023702 TYP. STIFFENER PLATE (58) REQ'D. (6) SPARES	C/S	3 X 8 X 12	
34	12	D-66-0510	295912001002 COUPLER PIN, 1/2" DIA X 2.172 (4) REQ'D. (8) SPARES	1018 C/S		
35	4	D-66-0510	8066051002 COUPLER PIN, 1/2" DIA X 2.172 (4) REQ'D. (8) SPARES	18-8 S/S		
36	44	D-66-0299	8066029906 PRESSURE TAP 1" (40) REQ'D. (4) SPARES	A-59F	3/4 X 6 X 10	
37	44	D-66-0299	8066029906 PRESSURE TAP 1" (40) REQ'D. (4) SPARES	A-59F	2 X 2 X 10	
38	44	D-66-0299	8066029906 PRESSURE TAP 1" (40) REQ'D. (4) SPARES	C/S		
39	44	D-66-0299	8066029906 PRESSURE TAP 1" (40) REQ'D. (4) SPARES	C/S		
40	2	D-66-3024	8066030240 GAS MODULE ALIGNMENT TOOL	C/S	2 X 11 X 20	
41	40	D-66-0205	8066020506 SHAFT, DAMPER DRIVE	304 S/S	1 X 1 X 47	
42	40	D-66-1873	8066187303 MODULE, DAMPER BEARING ASSEMBLY	C/S	4 X 4 X 10	
43	44	D-66-0170	561109001702 U-SEALS (40) REQ'D. (4) SPARES	RENOLOI	1 X 3 X 3	
44	10	D-66-0170	561109001702 U-SEALS (40) REQ'D. (4) SPARES	C/S GR5 7P	1 X 1 X 2	
45	10	D-66-0170	561109001702 U-SEALS (40) REQ'D. (4) SPARES	C/S	1 X 1 X 1	
46	4	D-66-3001	8066030012 BLADE, DAMPER OPPOSED - COPIA	C/S	2 X 7 X 30	
47	16	D-66-3001	8066030102 BLADE, DAMPER OPPOSED - "D" - THRU "A" COAL	C/S	2 X 7 X 30	
48	8	D-66-3001	8066030103 BLADE, DAMPER OPPOSED - "C" & "B" - AUX AIR	C/S	2 X 11 X 30	
49	4	D-66-3001	8066030104 BLADE, DAMPER OPPOSED - "A" - WARM-UP OIL	C/S	2 X 11 X 30	
50	8	D-66-3001	8066030105 BLADE, DAMPER OPPOSED - "D" & UNDER FIRE AIR	C/S	2 X 7 X 30	
51	4	D-66-3001	8066030101 AERODYNAMIC VENTURI PLATE - COPIA	C/S	11 X 12 X 30	
52	16	D-66-3001	8066030104 AERODYNAMIC VENTURI PLATE - "D" - THRU "A" COAL	C/S	12 X 16 X 30	
53	8	D-66-3001	8066030103 AERODYNAMIC VENTURI PLATE - "C" & "B" - AUX AIR	C/S	9 X 12 X 30	
54	4	D-66-3001	8066030101 AERODYNAMIC VENTURI PLATE - "A" - WARM-UP OIL	C/S	5 X 12 X 30	
55	8	D-66-3001	8066030105 AERODYNAMIC VENTURI PLATE - "D" & UNDER FIRE AIR	C/S	5 X 12 X 30	
56	44	D-66-0198	8066019804 DAMPER BOX SEAL ANGLE (40) REQ'D. (4) SPARES	A-36	1 X 1 X 15	
57	40	D-66-0198	8066019804 DAMPER BOX SEAL ANGLE (40) REQ'D. (4) SPARES	A-36	1 X 2 X 7	
58	40	D-66-0198	8066019804 DAMPER BOX SEAL ANGLE (40) REQ'D. (4) SPARES	A-36	1 X 2 X 7	
59	4	D-66-1872	8066187202 BRACKET, ABB MODULING - "A", UNDER FIRE AIR	C/S	1 X 3 X 2	
60	16	D-66-0289	8066028903 PIVOT PIN - POSITIONER - LONG	C/S	2 X 5 X 8	
61	40	D-66-0289	8066028903 PIVOT PIN - POSITIONER - LONG	1018 C/S	2 X 2 X 15	
62	4	D-66-0289	8066028903 PIVOT PIN - POSITIONER - LONG	C/S 5P		
63	16	D-66-3025	8066030252 GASKET, COAL NOZZLE, STATIONARY TO FRONT PANEL	NON-ASBESTOS	1 X 20 X 20	
64	16	D-66-3025	8066030252 GASKET, COAL NOZZLE, STATIONARY TO FRONT PANEL	NON-ASBESTOS	1 X 20 X 20	
65	2	D-66-0310	8066031003 NOZZLE SOCKET ALIGNMENT TOOL	C/S	2 X 2 X 22	
66	6	D-66-3023	8066030232 LUBRICANT MOTOR OIL (100) BORE MINIMUM SAE 15W-40 CAN	C/S	17 X 25 X 31	100
67	2	D-66-3023	8066030232 LUBRICANT MOTOR OIL (100) BORE MINIMUM SAE 15W-40 CAN	C/S	17 X 25 X 31	100
68	2	D-66-3023	8066030232 LUBRICANT MOTOR OIL (100) BORE MINIMUM SAE 15W-40 CAN	C/S	17 X 25 X 31	100
69	2	D-66-3023	8066030232 LUBRICANT MOTOR OIL (100) BORE MINIMUM SAE 15W-40 CAN	C/S	14 X 25 X 31	100
70	4	D-66-3029	8066030292 MODULE, GAS SPUD ASSEMBLY - "A" - WARM-UP OIL COMPARTMENT, CORNERS #2 & #4	C/S	17 X 25 X 31	100
71	4	D-66-3029	8066030292 MODULE, GAS SPUD ASSEMBLY - "B" - WARM-UP OIL COMPARTMENT, CORNERS #2 & #4	C/S	17 X 25 X 31	100
72	4	D-66-3029	8066030292 MODULE, GAS SPUD ASSEMBLY - "C" - WARM-UP OIL COMPARTMENT, CORNERS #2 & #4	C/S	17 X 25 X 31	100
73	4	D-66-3029	8066030292 MODULE, GAS SPUD ASSEMBLY - "D" - WARM-UP OIL COMPARTMENT, CORNERS #2 & #4	C/S	17 X 25 X 31	100
74	4	D-66-3029	8066030292 MODULE, GAS SPUD ASSEMBLY - "A" - WARM-UP OIL COMPARTMENT, CORNERS #2 & #4	C/S	17 X 25 X 31	100
75	4	D-66-3029	8066030292 MODULE, GAS SPUD ASSEMBLY - "B" - WARM-UP OIL COMPARTMENT, CORNERS #2 & #4	C/S	17 X 25 X 31	100
76	4	D-66-3029	8066030292 MODULE, GAS SPUD ASSEMBLY - "C" - WARM-UP OIL COMPARTMENT, CORNERS #2 & #4	C/S	17 X 25 X 31	100
77	4	D-66-3029	8066030292 MODULE, GAS SPUD ASSEMBLY - "D" - WARM-UP OIL COMPARTMENT, CORNERS #2 & #4	C/S	17 X 25 X 31	100

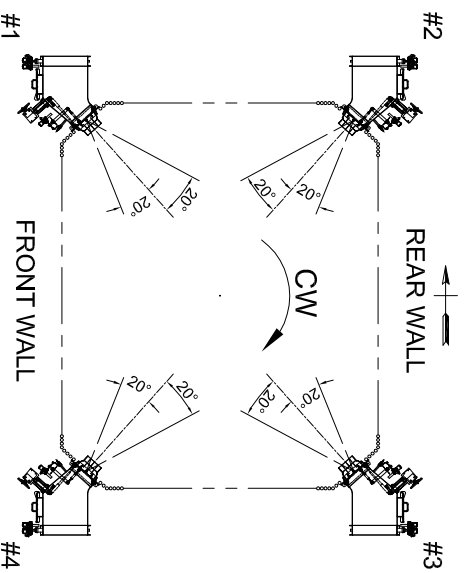
Item	Qty	Drawing	Part No	Description	Material	Dimensions (In.)	Weight (Lbs.)
40	2	B-66-30234	806630234001	GAS MODULE ALIGNMENT TOOL	C/S	2 x 11 x 20	
65	2	D-66-03103	806603103003	NOZZLE SOCKET ALIGNMENT TOOL	C/S	2 x 2 x 22	

SPECIAL TOOLS

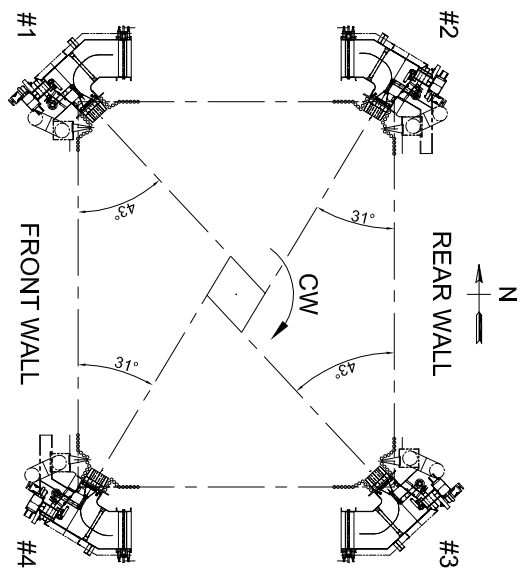
DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

Item	Qty	Drawing	Part No	Description	Material	Dimensions (In.)	Weight (Lbs.)
201	2	D-66-30156	806630156001	SOFA ASSEMBLY CORNERS #2 & #4	C/S	46.6 X 65.68	1700
202	2	D-66-30156	806630156002	SOFA ASSEMBLY CORNERS #1 & #3	C/S	46.6 X 65.68	1700
203	8	B-66-30108	806603010804	AIR DEFLECTOR	309 S/S	1 X 8 X 22	
204	8		2011011017610	VALVE BALL 1"	C/S		
205	8		2011011017610	BUSHING, HPFT X FPT, 1" X 3/8"	C/S		
206	8	B-66-02369	806602369002	PIVOT PIN, ABB POSITIONER	1018 C/S	2 X 2 X 8	
207	8		5810140026933	ABB LP-108A 10000 W/ ZDC POSITIONER & FILTER/REGULATOR	C/S		
208	4		288010001403	FLAT WASHER, 1/2" (SPARES)	C/S		
210	10		295912001303	RETAINING RING, E-STYLE, FOR 1/2" DIA. SHAFT (SPARES)	C/S		

Bill of Material - SOFA WINDBOX



SOFA WINDBOX FURNACE PLAN VIEW



MAIN WINDBOX FURNACE PLAN VIEW

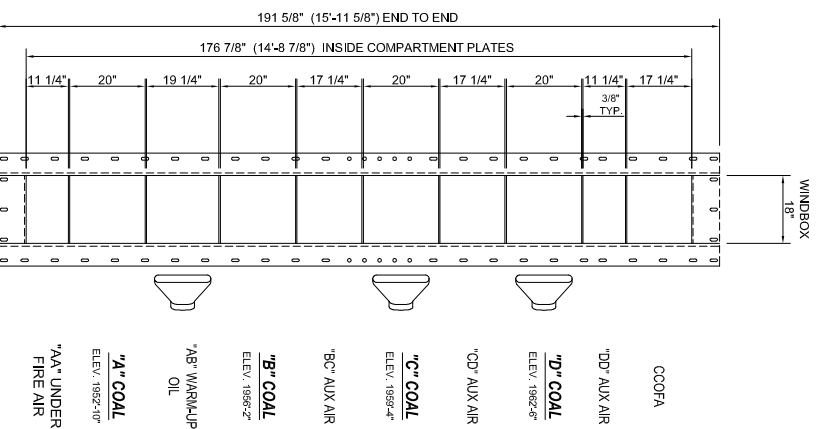
- NOTES:**
1. REFER TO 896P-M01-001 FOR COMPLETE DRAWING REFERENCE LIST.
 2. REFER TO 896P-M01-002 FOR MAIN WINDBOX BILL REFERENCES.
 3. REFER TO 896P-M02-001 FOR SOFA WINDBOX BILL REFERENCES.
 4. ITEMS NOTED AS SPARES INDICATE ITEMS THAT ARE SHIPPED ASSEMBLED AND SPARES HAVE BEEN SHIPPED LOOSE.
 5. ITEMS WHERE NO WEIGHT IS SHOWN INDICATES LESS THAN 50 LBS.

CONTRACT NAME: LOW NOX BURNERS	APPROVED BY:
CONTRACT NO: 175120353301	DESIGNED BY:
	DRAWN BY: JHH
	CHECKED BY: DRR

2	2/6/13	SUBMITTED FOR RECORD	JHH	DRR
1	5/29/12	ITERS 5, 6, 11, 23, 26, 73, 74, 208 & 209 CHANGED & ADDED ITEM 75	JHH	DRR
0	4/26/12	RELEASE FOR CONTRACT	JHH	DG
A	3/30/12	ISSUE FOR REVIEW	JHH	DRR
NO.	DATE	REVISIONS	DRAWN BY	CHECKED BY

FUEL TECH	APPROVED BY:
Technologies to enable clean efficient energy™	DESIGNED BY:
FUEL TECH, INC. 27801 BELLA VISTA PKWY, WILMINGTON, IL 60555	DRAWN BY: JHH
	CHECKED BY: DRR
	DATE: 3/30/2012
	SCALE: N/A
	SIZE: D
	DRAWING NO: 896P-M01-003

**MAIN WINDBOX
FURNACE VIEW**



**ELEVATION
FURNACE VIEW**

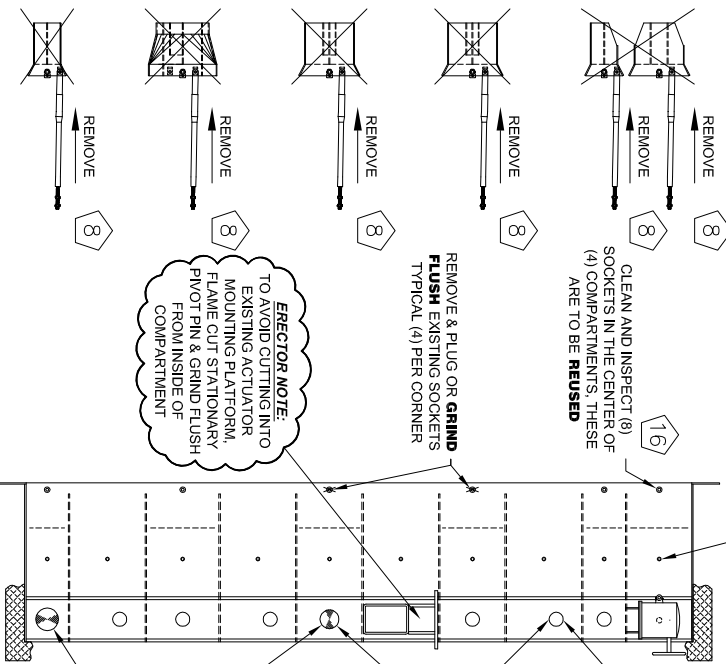
8 NOZZLE TIPS, LINKS & PIVOT PINS ARE ALL TO BE REMOVED AND **DISCARDED** TYPICAL (6) COMPARTMENTS

13 REMOVE EXISTING PRESSURE TAPS FROM CORNER #1 ONLY TYPICAL (10) PLACES (PRESSURE TAPS DO NOT EXIST IN OTHER CORNERS)

16 CLEAN AND INSPECT (8) SOCKETS IN THE CENTER OF (4) COMPARTMENTS. THESE ARE TO BE **REUSED**

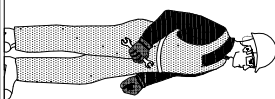
8 REMOVE & PLUG OR **GRIND FLUSH** EXISTING SOCKETS TYPICAL (4) PER CORNER

8 **ERECTOR NOTE:** TO AVOID CUTTING INTO EXISTING ACTUATOR MOUNTING PLATFORM, FLAME CUT STATIONARY PIVOT PIN & GRIND FLUSH FROM INSIDE OF COMPARTMENT



**VIEW "A-A"
ELEVATION SIDE VIEW** (E8 - F8)
CORNERS #2 & #4 AS SHOWN
CORNERS #1 & #3 OPPOSITE

ELEV. 1896'-0"

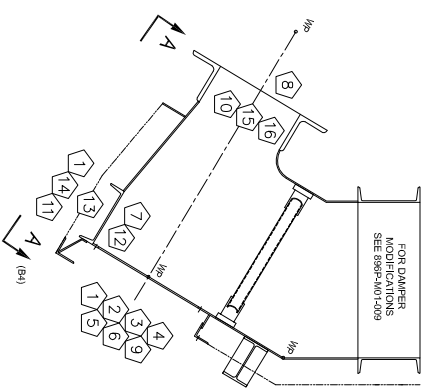


1

DEMOLITION:

- REMOVE ALL CABLES, INSTRUMENTATION, CASING AND INSULATION FROM THE WINDBOX FRONT AND SIDES WHERE DEMOLITION IS REQUIRED.
- REMOVE ALL SCANNERS AND SCANNER GUIDE PIPES. **SAVE** ALL PARTS. THESE WILL BE REINSTALLED.
- REMOVE OIL GUN DIFFUSER ASSEMBLY & **DISCARD**. REMOVE OIL GUN AND OIL GUN GUIDE PIPE. **SAVE** ALL PARTS. THESE WILL BE REINSTALLED.
- REMOVE ALL INNER AND OUTER REMOVABLE FRONT PANELS IN THE COOFA, AUXILIARY AND AIRROL COMPARTMENTS. **SAVE** THE PANELS. THESE WILL BE REINSTALLED. HARDWARE TO BE **DISCARDED** & REPLACED BY ERECTOR.
- REMOVE ALL COAL PIPING ELBOWS AND STRAIGHT SECTIONS NECESSARY TO ACCESS THE COAL FRONT PANELS. **SAVE** THE SPLIT RINGS.
- REMOVE THE COAL COMPARTMENT INNER AND OUTER FRONT PANELS. **SAVE** THE PANELS. THESE WILL BE REINSTALLED. HARDWARE TO BE **DISCARDED** & REPLACED BY ERECTOR.
- DISCONNECT ALL NOZZLE ADJUSTING LINKS. **DISCARD** HARDWARE.
- REMOVE ALL AIR AND OIL NOZZLE TIPS WITH LINKAGE. **DISCARD** ALL PARTS.
- REMOVE ALL STATIONARY COAL NOZZLE ASSEMBLIES AND LINKS FROM THE WINDBOX. THESE ARE TO BE **DISCARDED**. **SAVE** SPLIT RINGS & HARDWARE.
- REMOVE ANY EXISTING AIR RESTRICTOR PLATES IN THE AIR OR COAL COMPARTMENT AND **DISCARD**. CLEAN TOP AND BOTTOM COMPARTMENT PLATES AS REQUIRED.
- DISCONNECT THE EXTERIOR VERTICAL DRIVE LINK. **SAVE** LINK FOR IT WILL BE REINSTALLED.
- HARDWARE TO BE **DISCARDED** & REPLACED BY ERECTOR.
- HARDWARE TO REMAINING NOZZLE & TILT DRIVE MECHANISMS INSIDE AND OUTSIDE ALL CAN BE **DISCARDED**.
- FLAME CUT AND REMOVE ALL STATIONARY PIVOT PINS, BEARING HOUSINGS & EXISTING PRESSURE TAPS AND **DISCARD**.
- INSPECT MAIN CHANNEL INSIDE AND OUTSIDE. CLEANUP, REPAIR OR REPLACE AS REQUIRED.
- INSPECT ALL WINDBOX COMPARTMENT PLATES. REPAIR AS REQUIRED SO THAT COMPARTMENTS ARE WITHIN TOLERANCES OF ±1/8" OF DIMENSIONS SHOWN.
- INSPECT AND CLEAN ALL CENTER SOCKETS EXCEPT IN THE "D" & "B" AUX AIR COMPARTMENTS. THESE WILL NOT BE REUSED. NEW SOCKETS WILL BE INSTALLED IN THESE COMPARTMENTS. GRIND FLUSH REMAINING SOCKETS.
- REFER TO DRAWING 989P-M01-109 FOR DAMPER BOX DEMOLITION.
- ANY INSULATION THAT IS REMOVED HAS TO BE REINSTALLED WITH A SUITABLE SUBSTITUTE AND ANY OUTER LAGGING THAT WAS REMOVED MUST ALSO BE REPLACED ONCE WORK IS COMPLETED.

**MAIN WINDBOX
FURNACE PLAN VIEW**
CORNERS #2 & #4 AS SHOWN
CORNERS #1 & #3 OPPOSITE

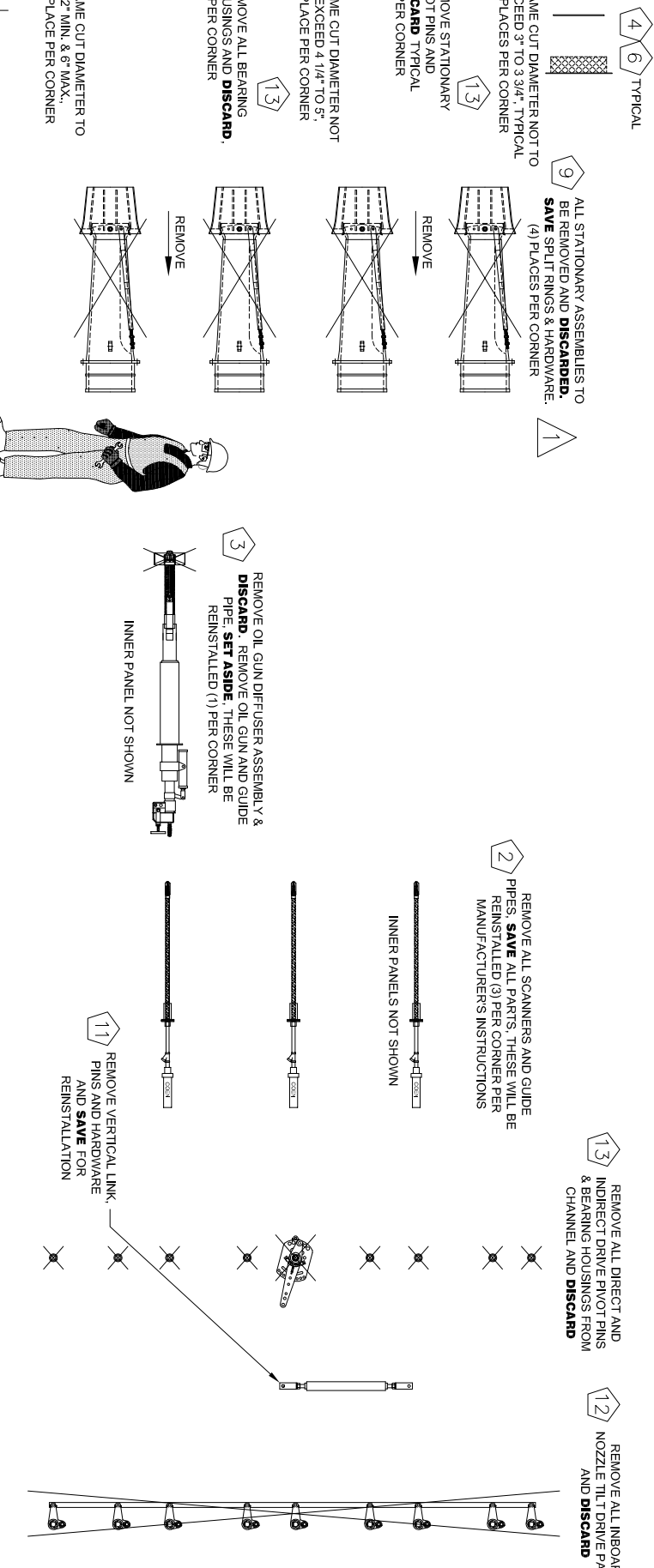


2 REMOVE ALL SCANNERS AND GUIDE PIPES. **SAVE** ALL PARTS. THESE WILL BE REINSTALLED (3) PER CORNER PER MANUFACTURER'S INSTRUCTIONS

11 REMOVE VERTICAL LINK, PINS AND HARDWARE AND **SAVE** FOR REINSTALLATION

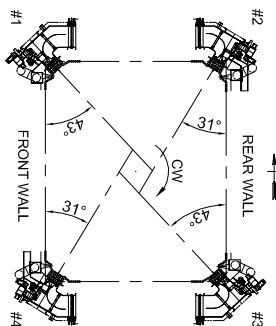
13 REMOVE ALL DIRECT AND INDIRECT DRIVE PIVOT PINS & BEARING HOUSINGS FROM CHANNEL AND **DISCARD**

12 REMOVE ALL INBOARD NOZZLE TILT DRIVE PARTS AND **DISCARD**



ELEV. 1896'-0"

ALL ELEVATIONS INDICATED ARE TO TOP OF GRATING



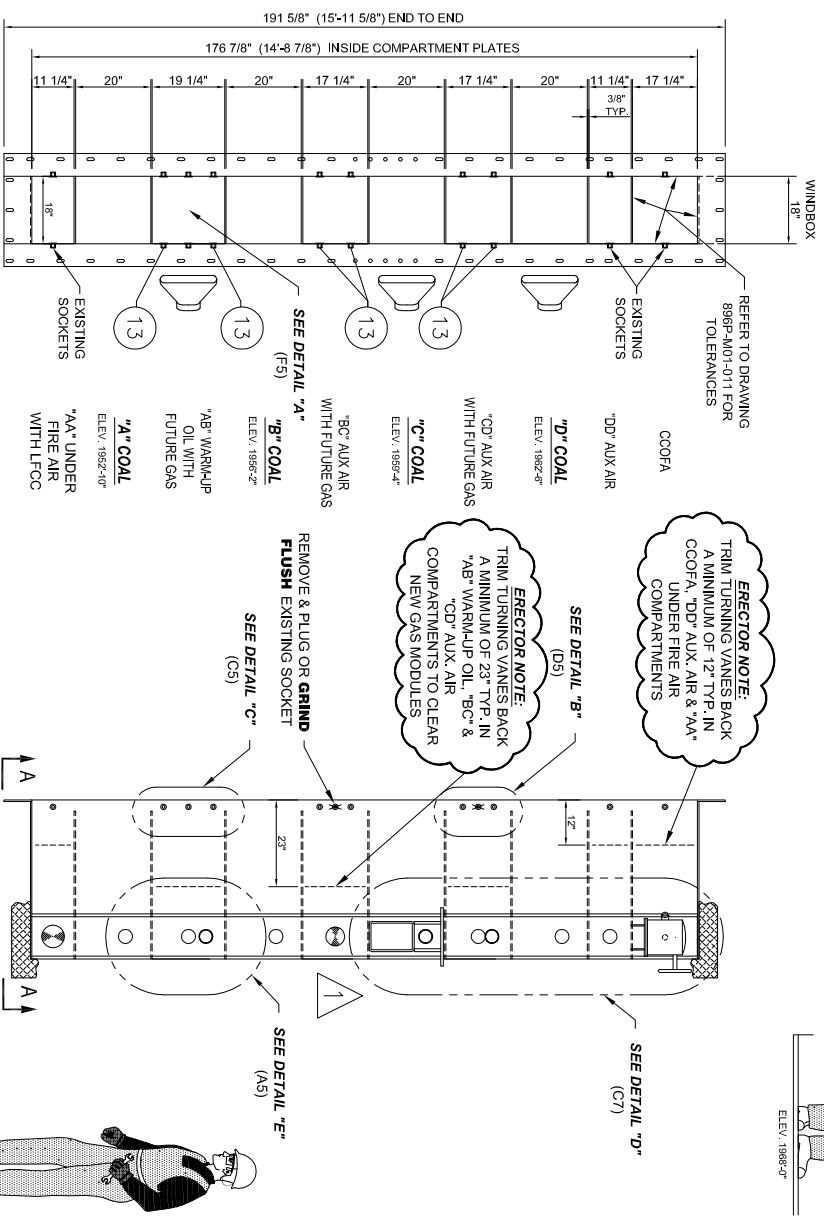
FURNACE PLAN VIEW

NOTES:
1. SEQUENCE OF DEMOLITION TO BE DETERMINED BY ERECTION CONTRACTOR.
2. ERECTOR MAY BE REQUIRED TO MODIFY, MOVE, RELOCATE OR CUT AWAY COMPONENTS SUCH AS FLOUT NOT LIMITED TO ELECTRICAL, PIPE HANGERS, PLATFORM, STEEL, ETC. IN ORDER TO INSTALL NEW EQUIPMENT. REMEMBER TO CONSIDER BOILER EXPANSION IN THE HOT POSITION WHEN MAKING NECESSARY CHANGES.

CONTRACT NAME: LOW NOX BURNERS CONTRACT NO: 175120.65.3307		APPROVED BY:
DESIGNED BY: JHH		DESIGNED BY: JHH
DRAWN BY: JHH		CHECKED BY: DRR
DATE: 3/23/2012		SCALE: N/A
SIZE: 0		DRAWING NO: 896P-M01-004

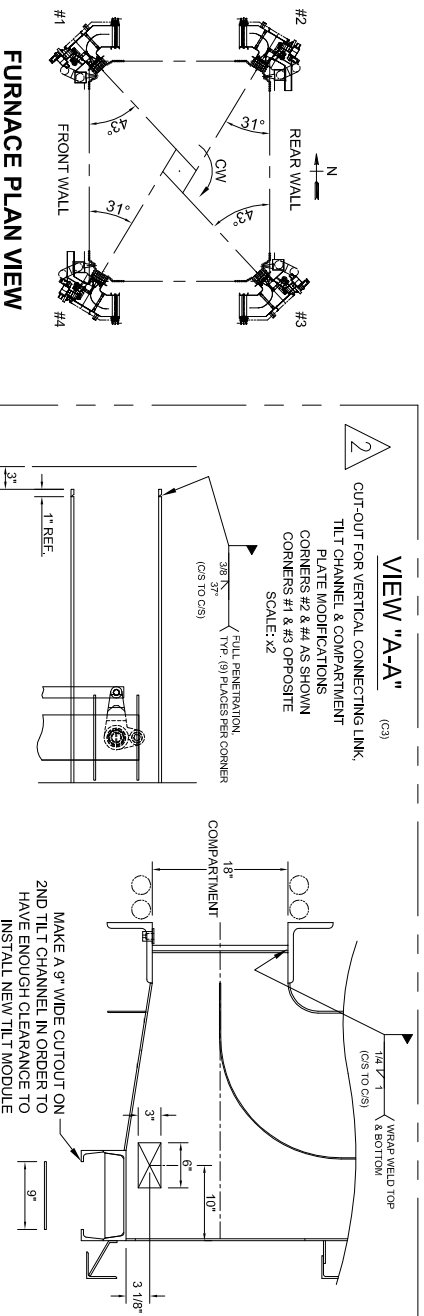
NO.	DATE	REVISIONS
2	2/6/13	SUBMITTED FOR RECORD
1	5/29/12	CHANGE TO NOTE 9
0	4/26/12	RELEASE FOR CONTRACT
A	3/23/12	ISSUE FOR REVIEW

**MAIN WINDBOX
FURNACE VIEW**



**ELEVATION
FURNACE VIEW**

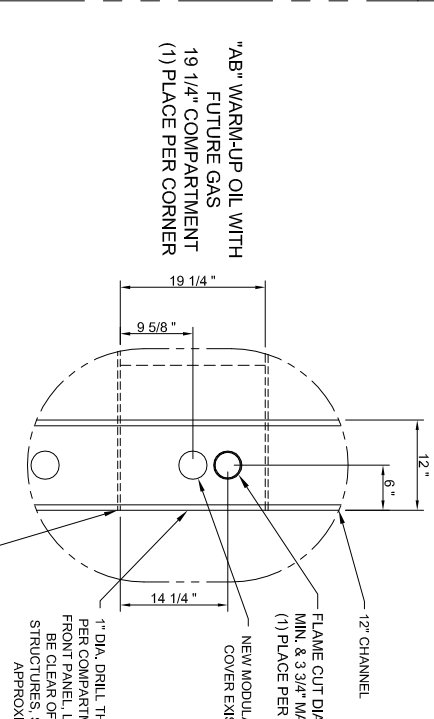
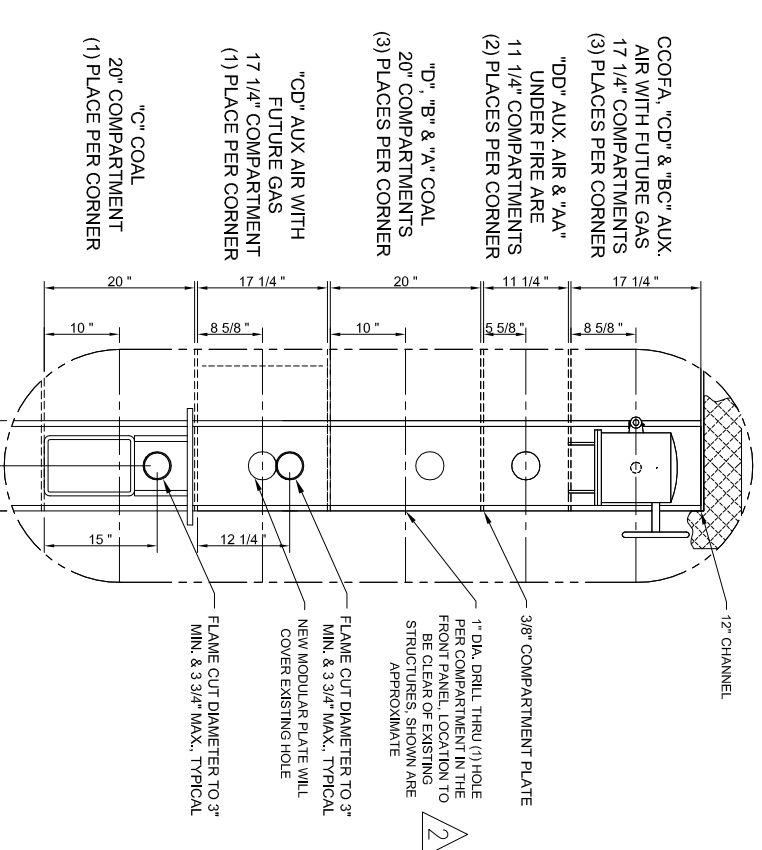
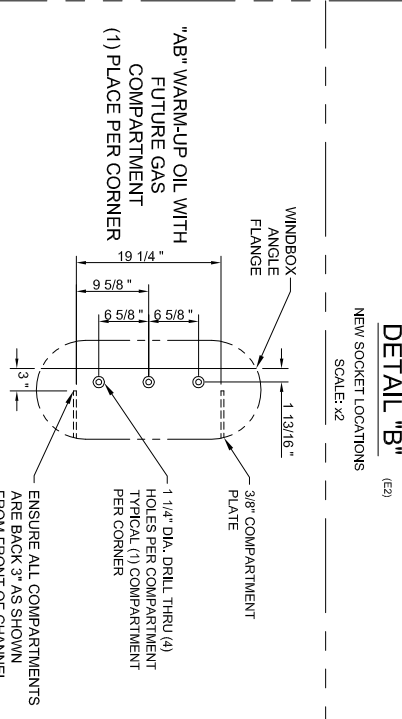
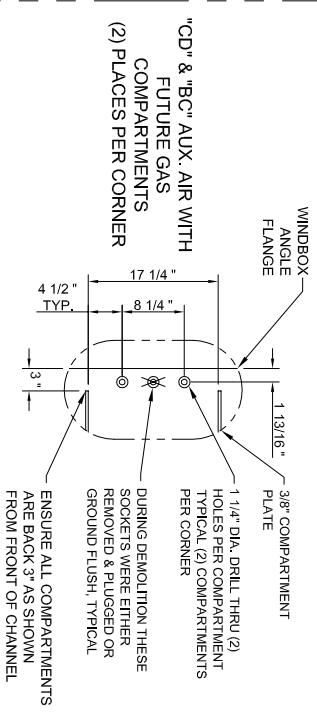
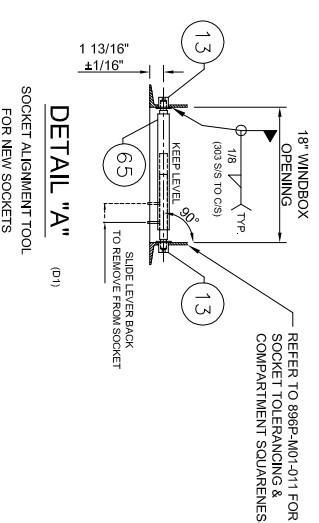
**ELEVATION SIDE VIEW
CORNERS #2 & #4 AS SHOWN
CORNERS #1 & #3 OPPOSITE**



FURNACE PLAN VIEW

BILL OF MATERIAL

Item Qty	Drawing	Part No	Description	Material
13	B-66-00982	806600982002	PIVOT PIN SOCKET (48) REQ'D, (6) SPARES	303 S/S
65	D-66-03103	806603103003	NOZZLE SOCKET ALIGNMENT TOOL	C/S



- NOTES:**
1. ALL DIMENSIONS ARE IN INCHES.
 2. ALL DIMENSIONS TO COMPARTMENT PLATES ARE TO THE INSIDE OF THE COMPARTMENT.
 3. ENSURE ALL DEMOLITION IS COMPLETED AND WINDBOX SPES AND CHANNELS ARE CLEAN FOR LFCC & MAIN TILT MODULE INSTALLATION.
 4. LAYOUT AND CUT HOLES AS SHOWN IN ALL COMPARTMENTS. HOLES MUST BE FREE OF ANY OBSTRUCTIONS.
 5. PRESSURE TAPS TO BE RELOCATED IF OBSTRUCTIONS EXIST AT SHOWN LOCATIONS.
 6. ERECTOR MAY NEED TO MODIFY EXISTING PLATFORMS AND/OR SUPPORT STEEL WITH THE INSTALLATION OF NEW EQUIPMENT BEING INSTALLED. EXPANSION OF THE BOLTER MUST BE CONSIDERED.
 7. PLATFORM STEEL AT ELEVATION 1950'-0" MAY REQUIRE MODIFICATION DUE TO THE LFCC LOCATION IN THE HOT POSITION.
 8. ITEMS NOTED AS SPARES INDICATE ITEMS THAT ARE SHIPPED ASSEMBLED AND SPARES HAVE BEEN SHIPPED LOOSE.

NO.	DATE	REVISIONS	DESIGNED BY:	CHECKED BY:	APPROVED BY:
2	2/6/13	SUBMITTED FOR RECORD	JHH	DRR	
1	5/29/12	DETAIL F & HOLE OUT OMITTED	JHH	DRR	
0	4/26/12	RELEASE FOR CONTRACT	JHH	DG	
A	3/23/12	ISSUE FOR REVIEW	JHH	DRR	

FUELTECH
Technologies to enable clean efficient energy™

CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO: 175120.65.3301

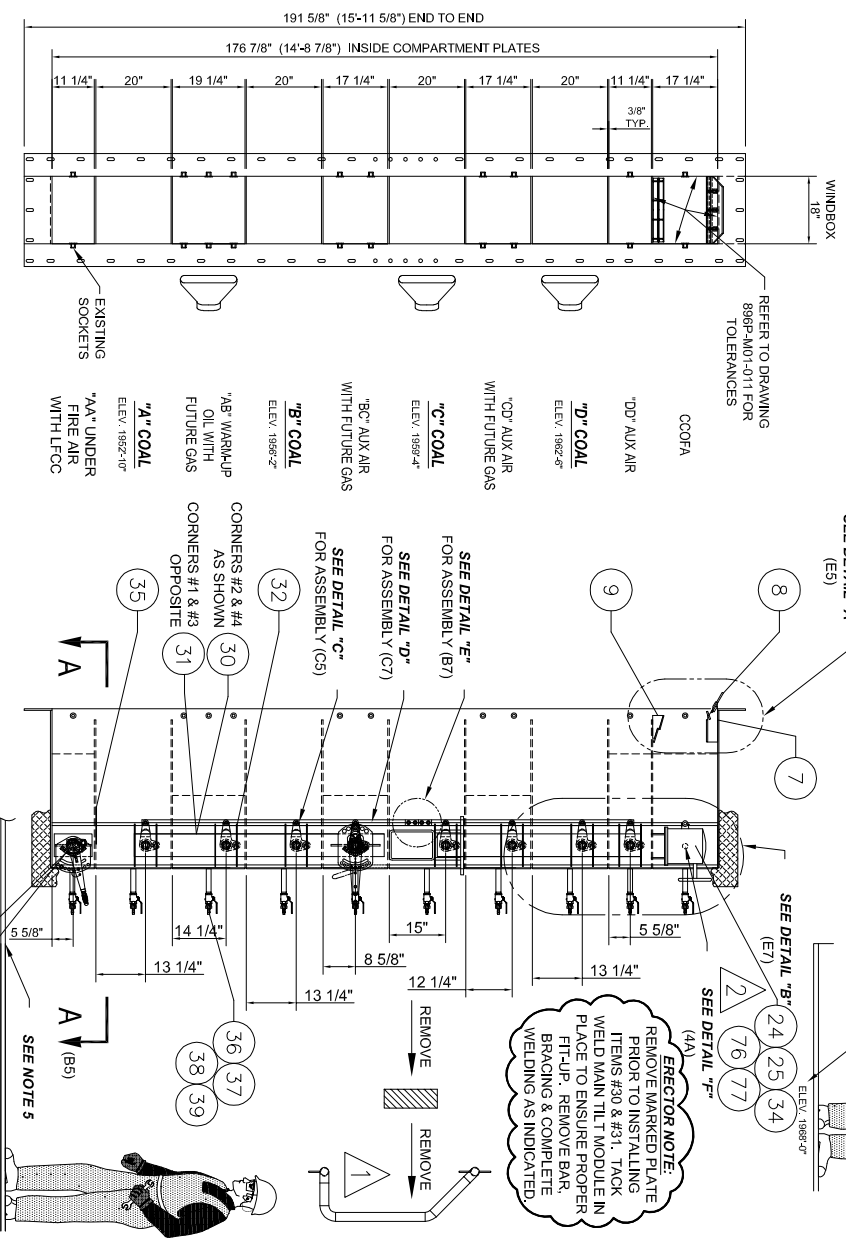
DESIGNED BY: JHH
DRAWN BY: JHH
CHECKED BY: DRR

DATE: 3/23/2012
SCALE: N/A
SIZE: D

896P-M01-005

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

MAIN WINDBOX FURNACE VIEW



ELEVATION FURNACE VIEW

ELEVATION SIDE VIEW CORNERS #2 & #4 AS SHOWN CORNERS #1 & #3 OPPOSITE

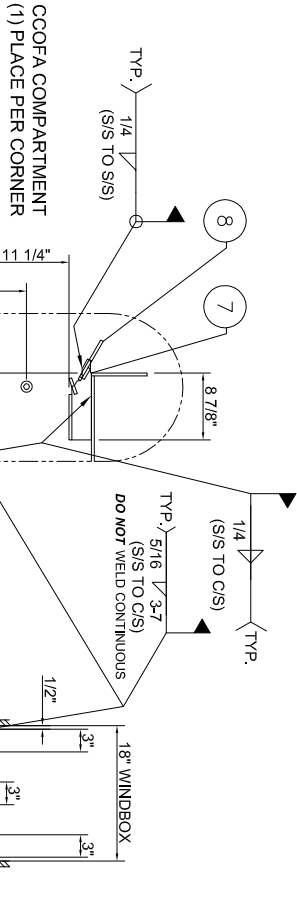
FURNACE PLAN VIEW

Item	Qty	Drawing	Part No.	Description	Material
7	4	3-66-30401	80659040101	PLATE, DIVIDER	SA-240-309
8	4	3-66-30404	80659040401	AIR DEFLECTOR PLATE	SA-240-309
9	4	3-66-30430	80659043001	AIR RESTRICTOR PLATE	SA-240-309
24	8	3-66-03430	806590343001	WASHER (4) REQD. (4) SPARES	LOW CARBON A569
25	8	3-66-30033	80659030033	COTTER PIN, 3/16\"/>	
28	2	3-66-30033	80659030033	FCC TILT DRIVE MODULE ASSEMBLY - LH - CORNERS #2 & #4	C/S
29	2	3-66-30033	80659030033	FCC TILT DRIVE MODULE ASSEMBLY - RH - CORNERS #1 & #3	C/S
30	2	D-66-30057	80659005702	MODULE ASSEMBLY, TILT-DRIVE ASSEMBLY - LH - CORNERS #2 & #4	C/S
31	2	D-66-30057	80659005702	MODULE ASSEMBLY, TILT-DRIVE ASSEMBLY - RH - CORNERS #1 & #3	C/S
32	62	3-66-02258	806590225801	TILT PIN, STIFFENER PLATE (56) REQD. (6) SPARES	C/S
33	4	3-66-01237	806590123701	DRIVE LEVER PIN (SPARES)	1018-C/S
34	8	3-66-05210	806590521001	COTTER PIN, 1/8\"/>	
35	4	3-66-05210	806590521001	PLATE, COVER CONNECTING LINK	C/S
36	44	3-66-02990	806590299006	PRESSURE TAP T1 (40) REQD. (4) SPARES	A-53-F
37	44	57131209704	VALVE BALL T1 (40) REQD. (4) SPARES	C/S	
38	44	201011017610	BUSHING, MPT X FPT, 1\"/>		
39	44	231319001204	ISA38 (40) REQD. (4) SPARES	C/S	
40	44	232510008615	HEX NUT, 5/8\"/>		
72	4	231001023702	HNCS, 5/8\"/>		
74	4	231001023702	HNCS, 5/8\"/>		
75	4	231001023702	HNCS, 5/8\"/>		
76	4	806590429001	PIVOT PIN	C/S GR 5	
77	4	806590429001	COLLAR	C/S GR 5	



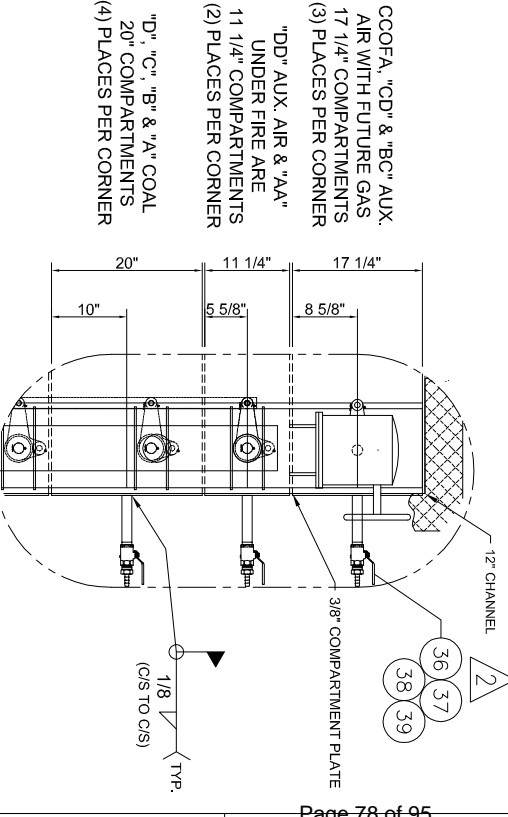
ALL ELEVATIONS INDICATED ARE TO TOP OF GRATING

RECTOR NOTE:
REMOVE MARKED PLATE PRIOR TO INSTALLING ITEMS #30 & #31. TACK WELD MAIN TILT MODULE IN PLACE TO ENSURE PROPER FIT-UP. REMOVE BAR, BRACING & COMPLETE WELDING AS INDICATED



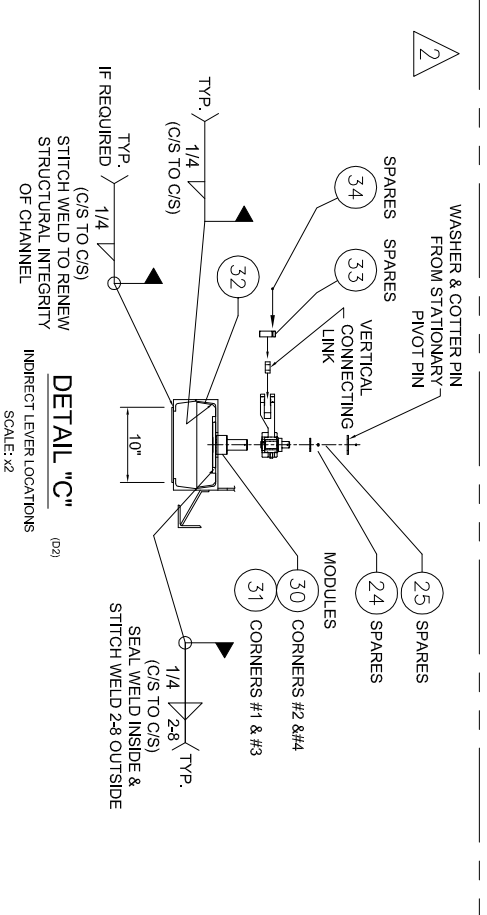
DETAIL "A"

NEW RESTRICTOR PLATE & CROTCH COOLING LOCATION
SCALE: 1:2



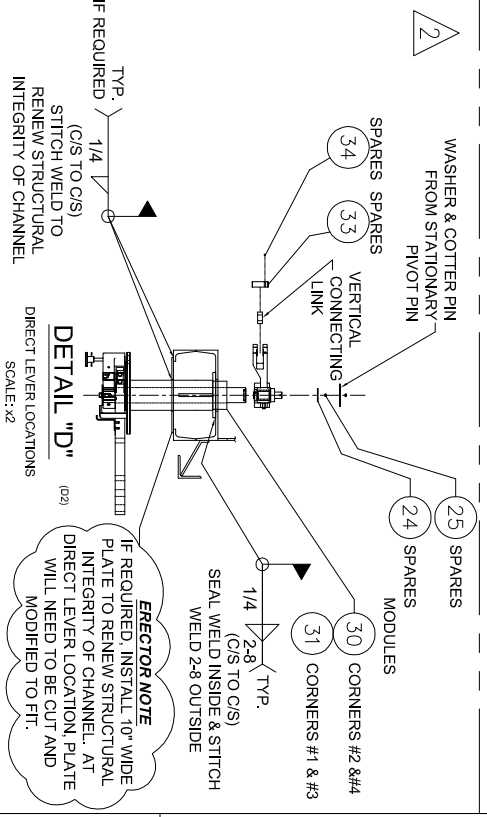
DETAIL "B"

PRESSURE TAP LOCATIONS
SCALE: 1:2



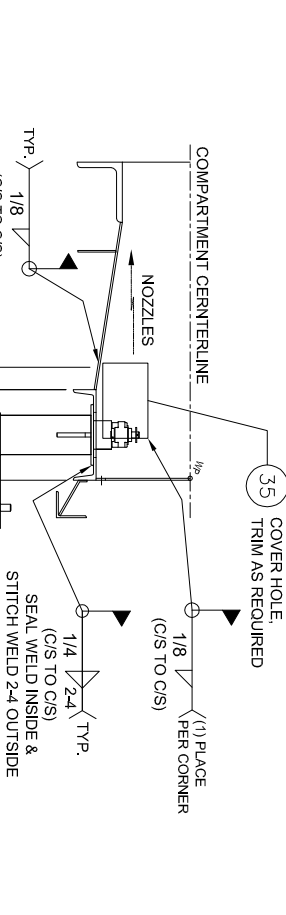
DETAIL "C"

INDIRECT LEVER LOCATIONS
SCALE: 1:2



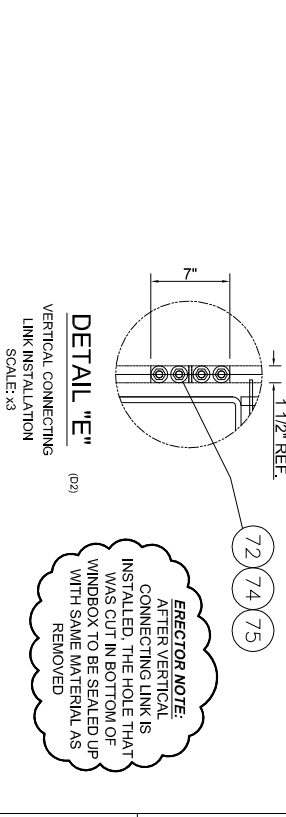
DETAIL "D"

DIRECT LEVER LOCATIONS
SCALE: 1:2



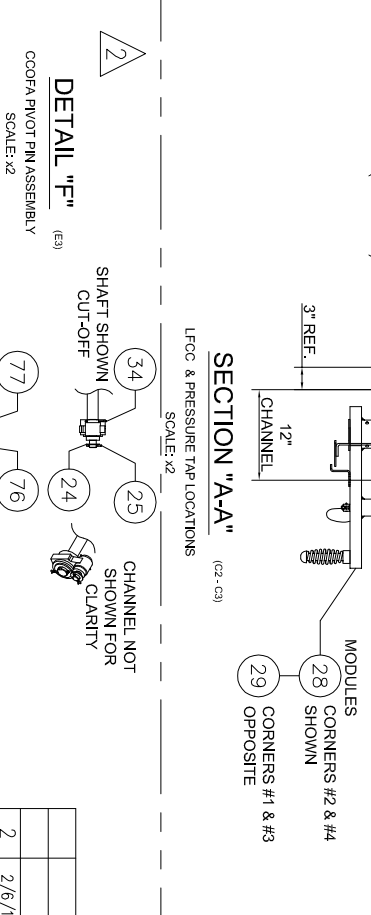
SECTION "A-A"

LFCC & PRESSURE TAP LOCATIONS
SCALE: 1:2



DETAIL "E"

VERTICAL CONNECTING LINK INSTALLATION
SCALE: 1:3



DETAIL "F"

COOFA PIVOT PIN ASSEMBLY
SCALE: 1:2

NOTES:

- ALL DIMENSIONS ARE IN INCHES.
- ALL DIMENSIONS TO COMPARTMENT PLATES ARE TO THE INSIDE OF THE COMPARTMENT.
- REPAIR, REPLACE OR CUT OFF ANY COMPARTMENT PLATES THAT MAY BE WARPED OR DAMAGED IN ALL COMPARTMENTS.
- ERECTOR MAY NEED TO MODIFY EXISTING PLATFORMS AND OR SUPPORT STEEL WITH THE INSTALLATION OF NEW EQUIPMENT BEING INSTALLED. EXPANSION OF THE BOLLER MUST BE CONSIDERED.
- PLATFORM STEEL, AT ELEVATION 1950'-0" MAY REQUIRE MODIFICATION DUE TO THE LFCC LOCATION IN THE HOT TAP POSITION.
- THE HOT TAP POSITION.
- ITEMS NOTED AS SPARES INDICATE ITEMS THAT ARE SHIPPED ASSEMBLED AND SPARES HAVE BEEN SHIPPED LOOSE.

NO.	DATE	REVISIONS
2	2/6/13	SUBMITTED FOR RECORD
1	5/29/12	BRACKET CHANGE & ADDED ITEM 75
0	4/26/12	RELEASE FOR CONTRACT
A	3/26/12	ISSUE FOR REVIEW

FUELTECH
Technologies to enable clean efficient energy™
FUEL TECH, INC. 2800 BELLA VISTA HWY, WASHINGTON, IL 60555
HASTINGS OFFICES
HASTINGS, NEBRASKA
HASTINGS, NEBRASKA
HASTINGS, NEBRASKA

APPROVED BY: _____
DESIGNED BY: _____
DRAWN BY: JHH
CHECKED BY: DRR
DATE: 3/26/2012
SCALE: N/A
SIZE: D

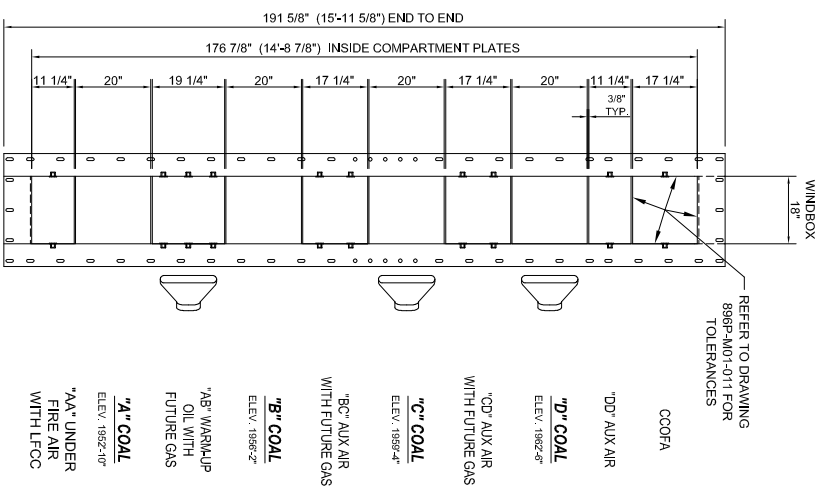
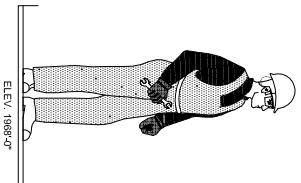
CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO: 175126353301

DRAWING NO: 896P-M01-006

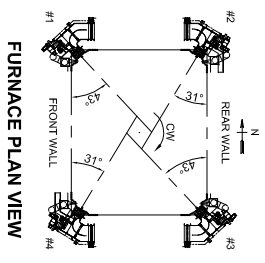
DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

D-62-30030-6

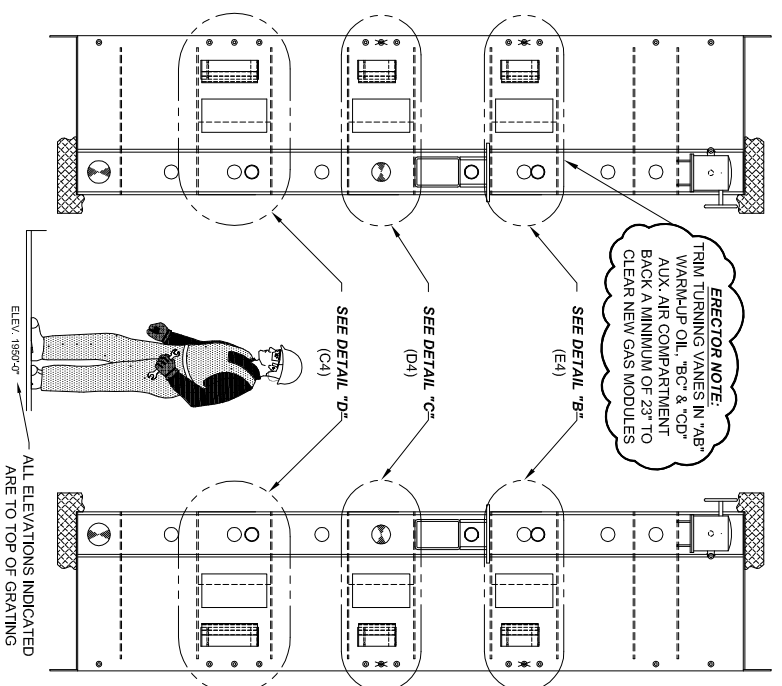
**MAIN WINDBOX
FURNACE VIEW**



**ELEVATION
FURNACE VIEW**

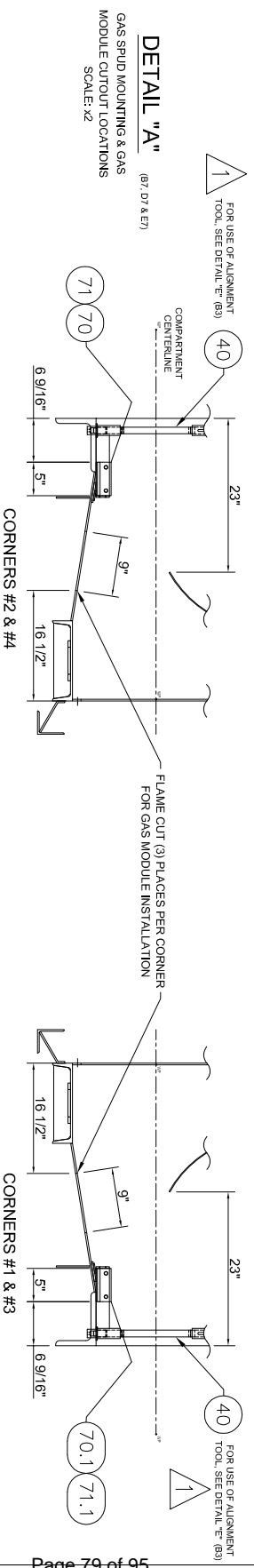


**ELEVATION SIDE VIEW
CORNERS #2 & #4**



**ELEVATION SIDE VIEW
CORNERS #1 & #3**

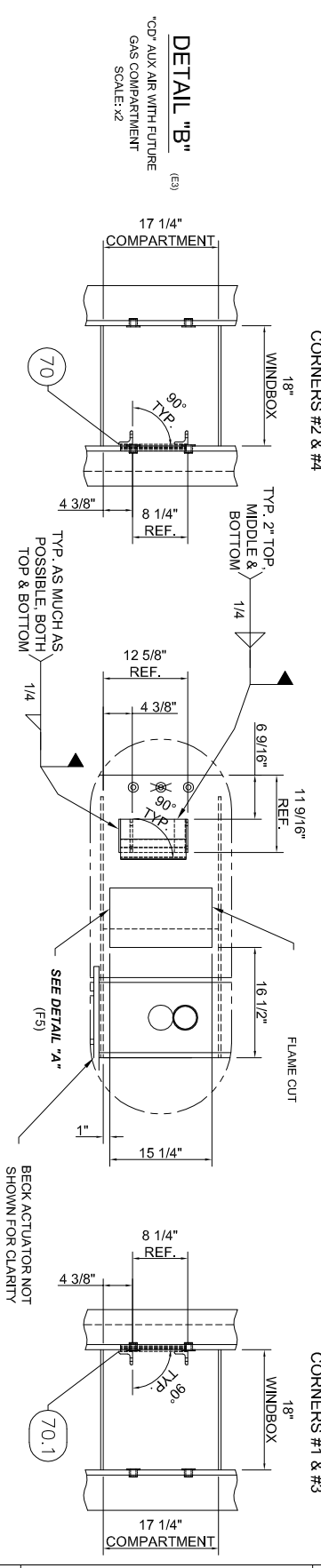
DETAIL "A"
(B7, D7 & E7)



CORNERS #2 & #4

CORNERS #1 & #3

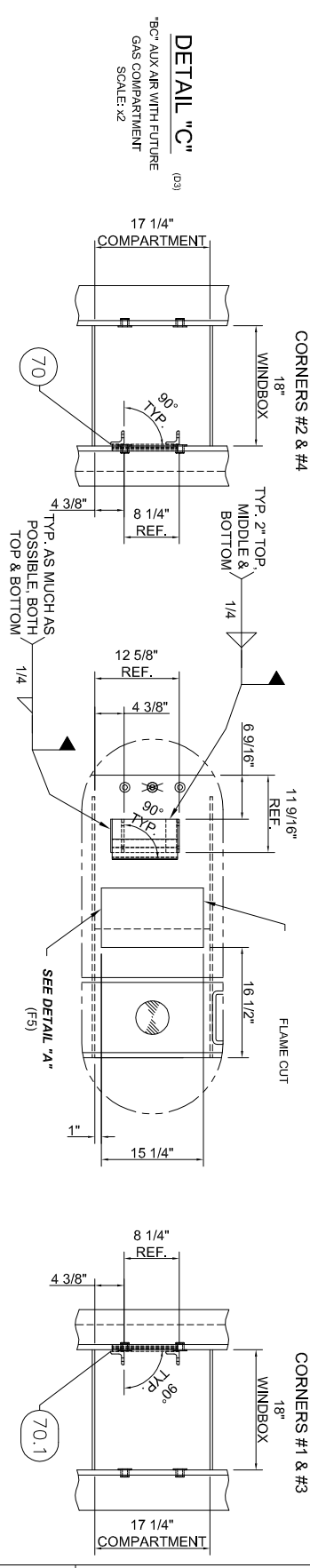
DETAIL "B"
(E3)



CORNERS #2 & #4

CORNERS #1 & #3

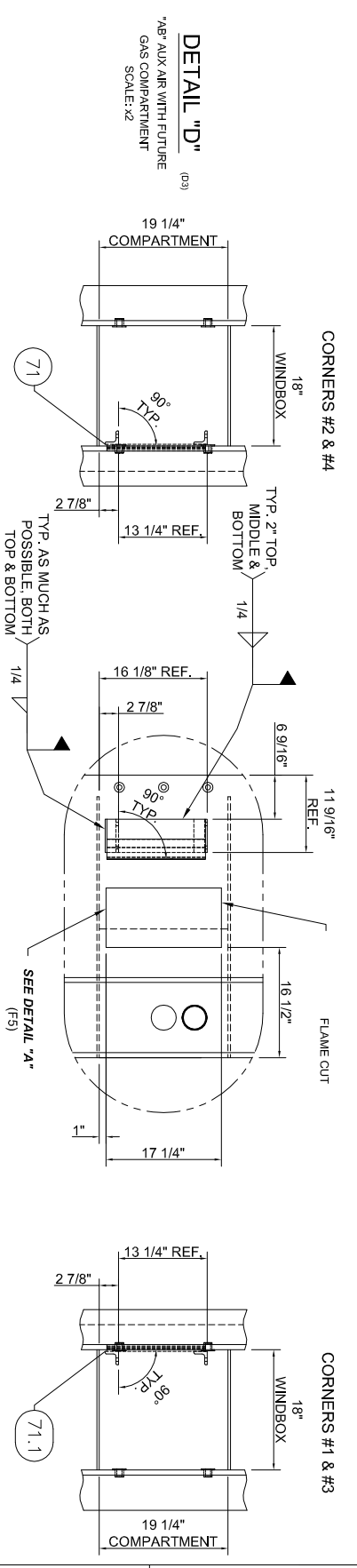
DETAIL "C"
(B3)



CORNERS #2 & #4

CORNERS #1 & #3

DETAIL "D"
(B3)



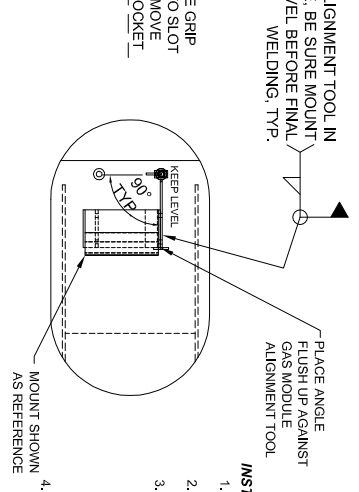
CORNERS #2 & #4

CORNERS #1 & #3

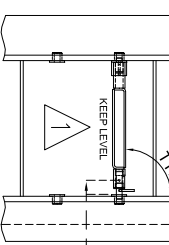
NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. ALL DIMENSIONS TO COMPARTMENT PLATES ARE TO THE INSIDE OF THE COMPARTMENT.
3. ENSURE ALL BENDING BREAKS, SLOTTING AND CHANNELS ARE CLEAN FOR GAS LAYOUT AND CUT HOLES AS SHOWN IN ALL COMPARTMENTS. HOLES MUST BE FREE OF ANY OBSTRUCTIONS.
4. DESTROY THIS DRAWING.
5. ERECTORS MAY NEED TO MODIFY EXISTING PLATFORMS AND/OR SUPPORT STEEL WITH THE INSTALLATION OF NEW EQUIPMENT BEING INSTALLED. EXPANSION OF THE BOILER MUST BE CONSIDERED.

INSTALLATION OF GAS SPUD MODULE MOUNTS



DETAIL "E"
(F5 & F6)



BILL OF MATERIAL

Item	Qty	Drawing	Part No	Description	Material
40	2	B-66-30234	806630234001	GAS MODULE ALIGNMENT TOOL	C/S
70	4	B-66-30240	806630240002	MOUNT, GAS SPUD MODULE, 17 1/4" COMPARTMENTS, CORNERS #2 & #4	C/S
70.1	4	B-66-30240	806630240001	MOUNT, GAS SPUD MODULE, 17 1/4" COMPARTMENTS, CORNERS #1 & #3	C/S
71	2	B-66-30241	806630241002	MOUNT, GAS SPUD MODULE, 19 1/4" COMPARTMENTS, CORNERS #2 & #4	C/S
71.1	2	B-66-30241	806630241001	MOUNT, GAS SPUD MODULE, 19 1/4" COMPARTMENTS, CORNERS #1 & #3	C/S

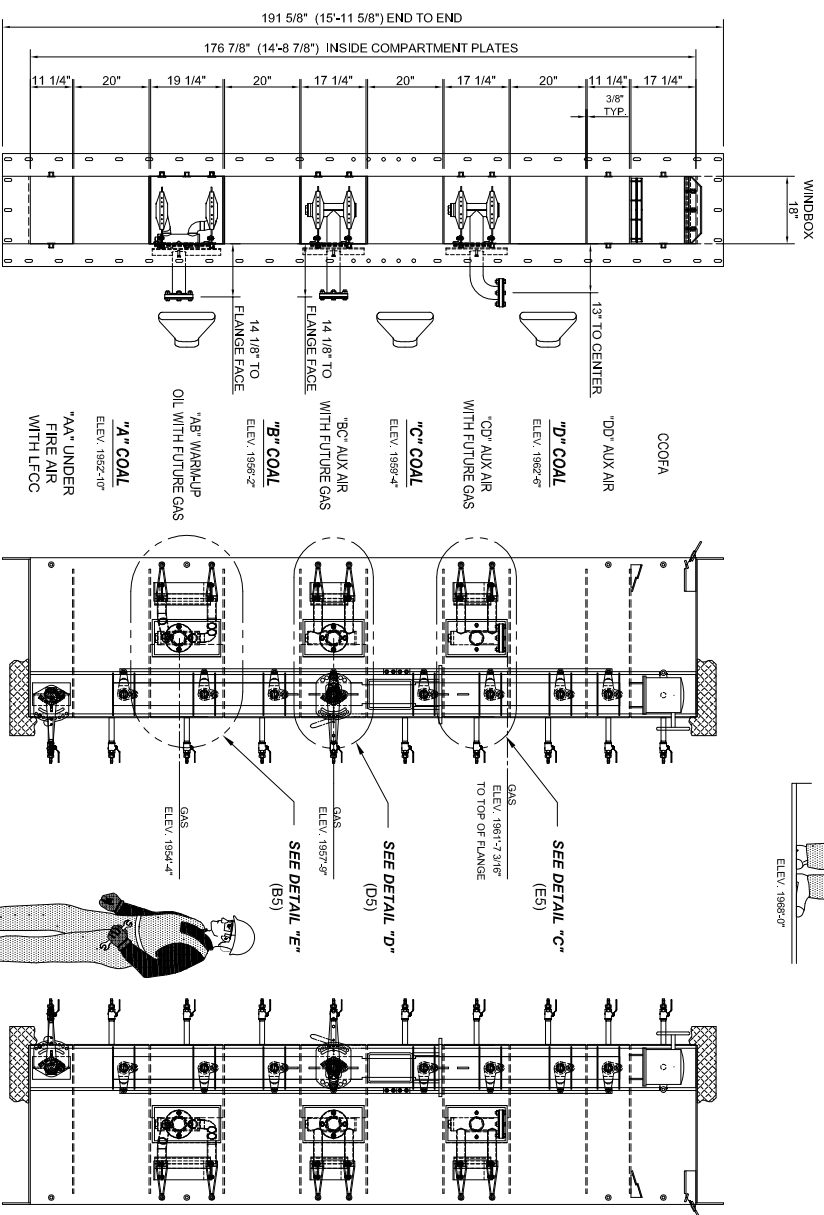
DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

D-62-30030-7

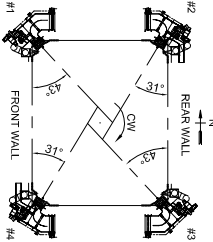
NO.	DATE	REVISIONS	DRAWN BY	CHECKED BY
2	2/6/13	SUBMITTED FOR RECORD	JHH	DRR
1	5/29/12	ITEM 40 CHANGED	JHH	DRR
0	4/29/12	RELEASE FOR CONTRACT	JHH	DG
A	3/29/12	ISSUE FOR REVIEW	JHH	DRR

CONTRACT NAME:	LOW NOX BURNERS
CONTRACT NO.:	175120.65.3301
APPROVED BY:	
DESIGNED BY:	
DRAWN BY:	JHH
CHECKED BY:	DRR
DATE:	3/29/2012
SCALE:	N/A
DRAWING NO.:	899F-M01-007

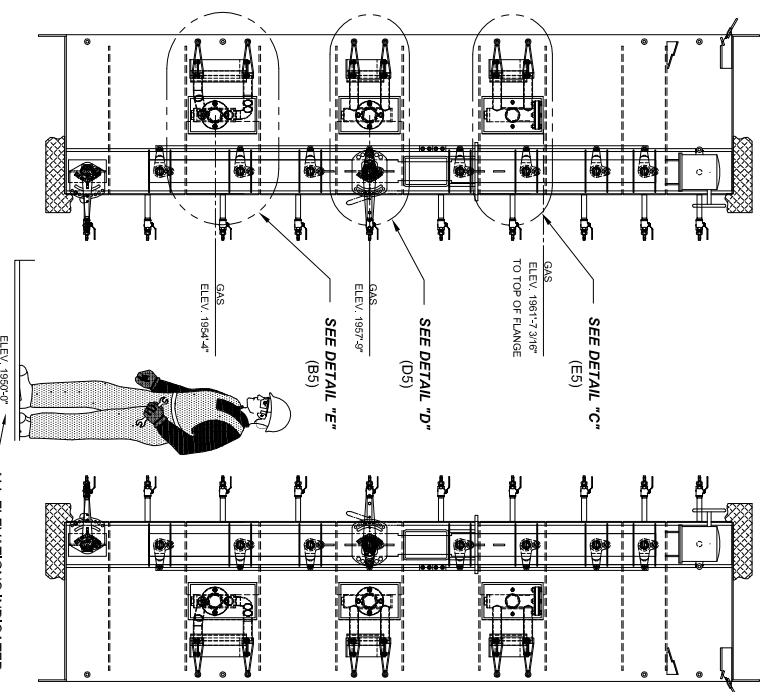
**MAIN WINDBOX
FURNACE VIEW**



**ELEVATION
FURNACE VIEW**



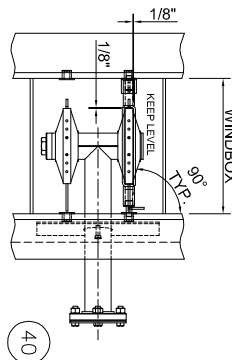
**ELEVATION SIDE VIEW
CORNERS #2 & #4**



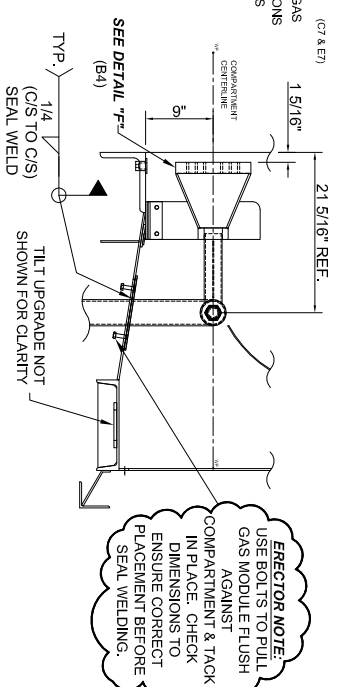
**ELEVATION SIDE VIEW
CORNERS #1 & #3**



**DETAIL "F"
GAS MODULE ALIGNMENT TOOL
FOR INSTALLATION CHECK
SCALE: 1:2**

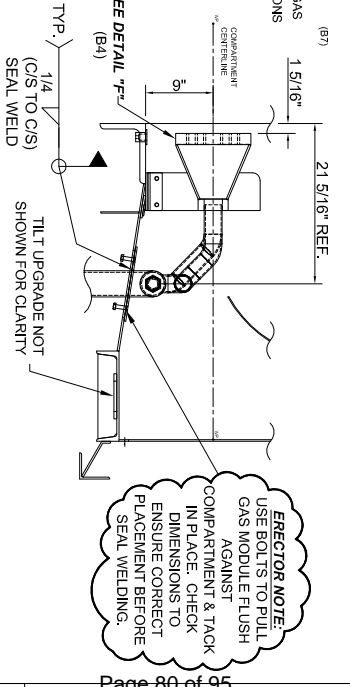


**DETAIL "A"
GAS SPUD MOUNTING & GAS
MODULE CUTOFF LOCATIONS
17 1/4\"/>**



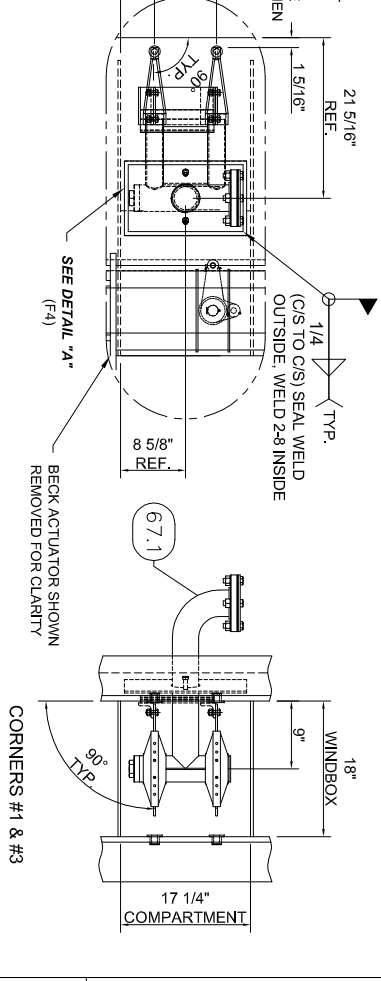
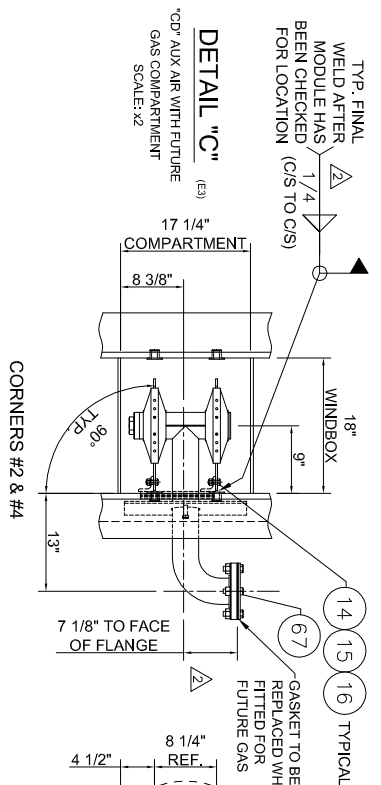
ERECTOR NOTE:
USE BOLTS TO PULL GAS MODULE FLUSH AGAINST COMPARTMENT & TRACK IN PLACE. CHECK DIMENSIONS TO ENSURE CORRECT PLACEMENT BEFORE SEAL WELDING.

**DETAIL "B"
GAS SPUD MOUNTING & GAS
MODULE CUTOFF LOCATIONS
19 1/4\"/>**

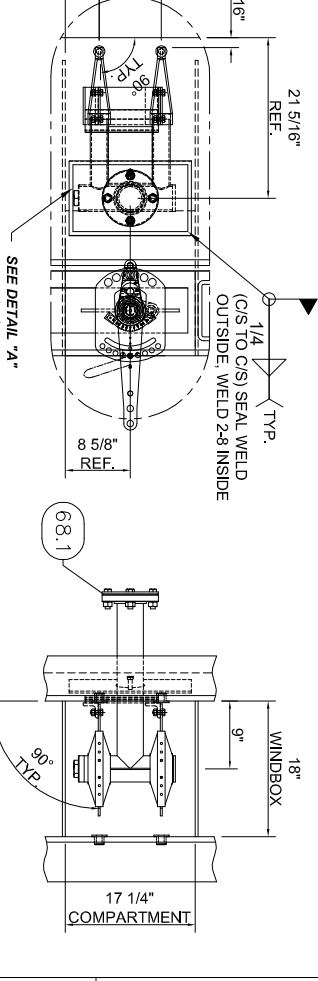
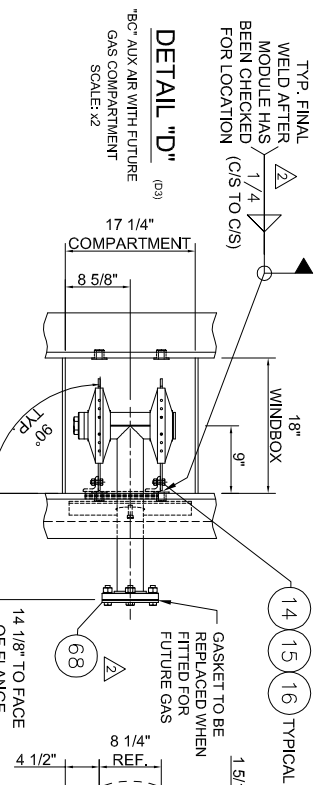


ERECTOR NOTE:
USE BOLTS TO PULL GAS MODULE FLUSH AGAINST COMPARTMENT & TRACK IN PLACE. CHECK DIMENSIONS TO ENSURE CORRECT PLACEMENT BEFORE SEAL WELDING.

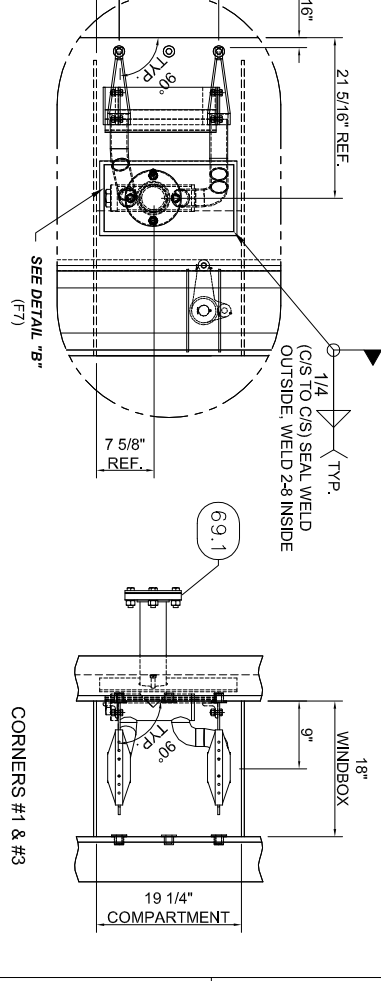
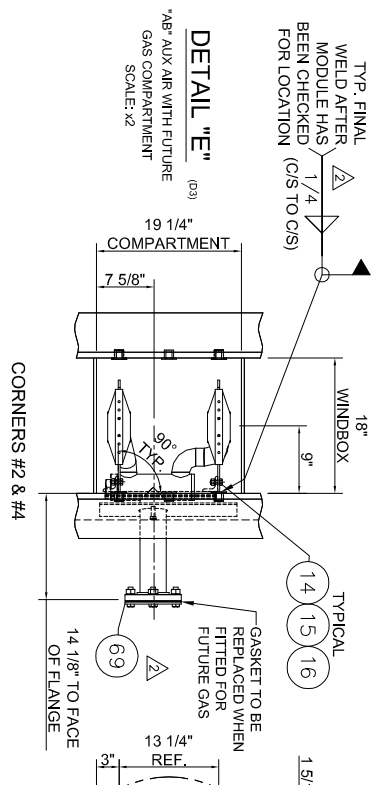
**DETAIL "C"
"C" AUX AIR WITH FUTURE
GAS COMPARTMENT
SCALE: 1:2**



**DETAIL "D"
"D" AUX AIR WITH FUTURE
GAS COMPARTMENT
SCALE: 1:2**



**DETAIL "E"
"E" AUX AIR WITH FUTURE
GAS COMPARTMENT
SCALE: 1:2**



GAS SPUD MODULE INSTALLATION CHECK

1. PLACE ITEM 40 IN SOCKETS AS SHOWN, AND KEEP FLUSH AGAINST SIDE OF CHANNEL.
2. LEVEL OUT GAS MODULE ALIGNMENT TOOL AND CHECK THAT GAS SPUDS ARE CENTERED WITHIN ALIGNMENT TOOL WITH AN .1/8" GAP ALL THE WAY AROUND.
3. GAS SPUD SHOULD BE FLUSH WITH ALIGNMENT TOOL, ONCE CHECKED. FINAL WELD ACCORDING TO DRAWING 896P-A01-007.

NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. ALL DIMENSIONS TO COMPARTMENT PLATES ARE TO THE INSIDE OF THE COMPARTMENT.
3. REPAIR, REPLACE OR CUT OFF COMPARTMENT PLATES THAT MAY BE WARPED OR DAMAGED IN ALL FUTURE GAS COMPARTMENTS.
4. ERECTOR MAY NEED TO MODIFY EXISTING PLATFORMS AND OR SUPPORT STEEL WITH THE INSTALLATION OF NEW EQUIPMENT BEING INSTALLED. EXPANSION OF THE BOILER MUST BE CONSIDERED.
5. ALL GAS MODULES ARE SHOP PRESSURE TESTED TO 75 PSI.
6. ITEMS NOTED AS SPARES INDICATE ITEMS THAT ARE SHIPPED ASSEMBLED AND SPARES HAVE BEEN SHIPPED LOOSE.

BILL OF MATERIAL

Item	Qty	Drawing	Part No	Description	Material
14	116		251001000204	HKCS, 1/2" - .33 UNCL X 1 1/2" LG (104) RECD, (12) SPARES	18-8 S/S
15	116		255617003203	LOCK WASHER (SPUT), 1/2" (104) RECD, (12) SPARES	18-8 S/S
16	116		255010005903	HEX NUT, 1/2" - .13 UNCL (104) RECD, (12) SPARES	18-8 S/S
40	2	B-66-30234	806630234001	GAS MODULE ALIGNMENT TOOL	C/S
67	2	B-66-30237	806630237001	"C" AUX AIR COMPARTMENT CORNERS #2 & #4	C/S
67.1	2	B-66-30237	806630237002	MODULE, GAS SPUD ASSEMBLY, "C" AUX AIR COMPARTMENT, CORNERS #1 & #3	C/S
68	2	B-66-30238	806630238001	MODULE, GAS SPUD ASSEMBLY, "B" AUX AIR COMPARTMENT, CORNERS #1 & #3	C/S
68.1	2	B-66-30238	806630238002	MODULE, GAS SPUD ASSEMBLY, "B" AUX AIR COMPARTMENT, CORNERS #2 & #4	C/S
69	2	B-66-30239	806630239001	MODULE, GAS SPUD ASSEMBLY, "A" WARM-UP OIL COMPARTMENT, CORNERS #2 & #4	C/S
69.1	2	B-66-30239	806630239002	MODULE, GAS SPUD ASSEMBLY, "A" WARM-UP OIL COMPARTMENT, CORNERS #1 & #3	C/S

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

D-62-30030-8

NO.	DATE	REVISIONS	BY	CHECKED
3	2/6/13	SUBMITTED FOR RECORD	JHH	DRR
2	8/29/12	FINAL WELD ADDED	DRR	DG
1	5/29/12	NOTE ADDED	JHH	DRR
0	4/26/12	RELEASE FOR CONTRACT	JHH	DG
A	3/30/12	ISSUE FOR REVIEW	JHH	DRR



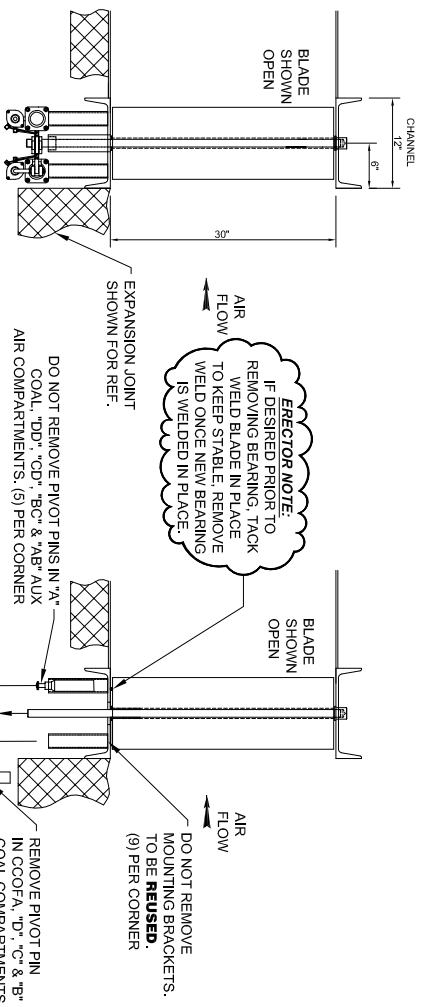
Technologies to enable clean efficient energy™

CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO: 175120.65.3301

APPROVED BY: .
DESIGNED BY: .
DRAWN BY: JHH
CHECKED BY: DRR

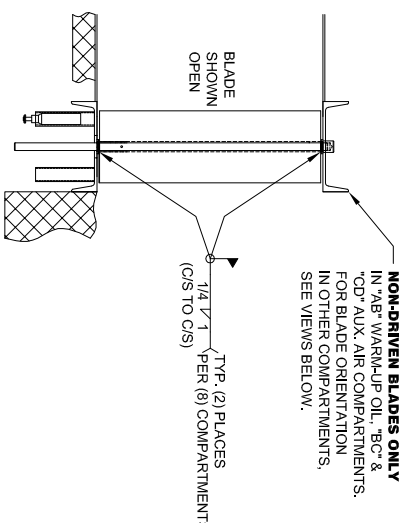
DATE: 3/30/2012
SCALE: N/A
SIZE: D

DRAWING NO: 896P-M01-008



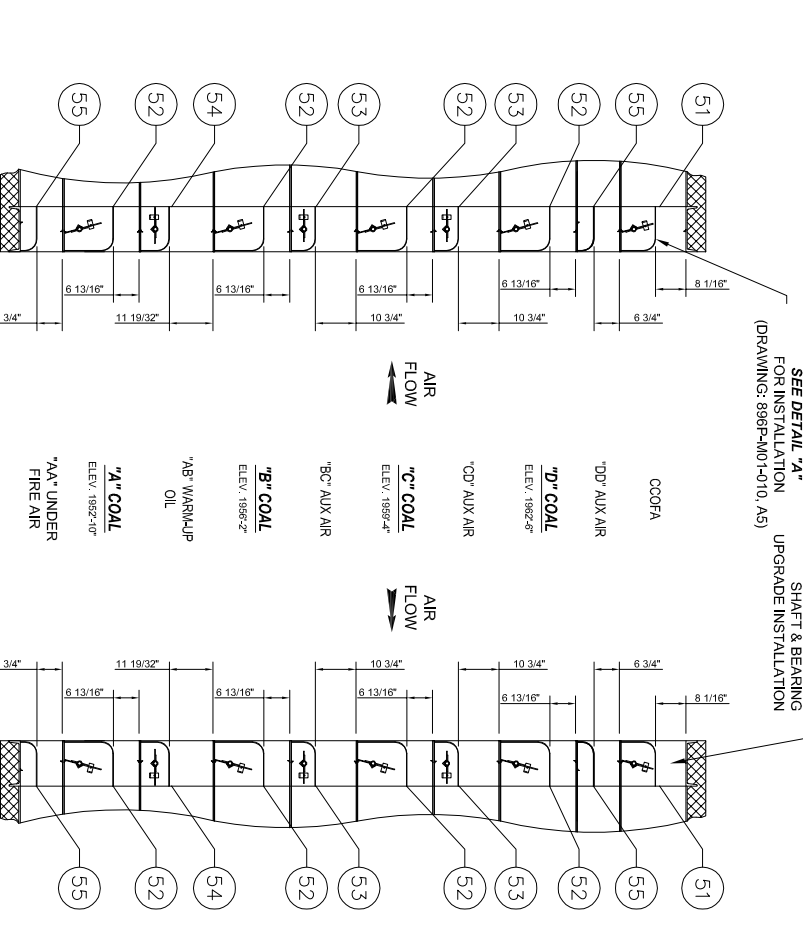
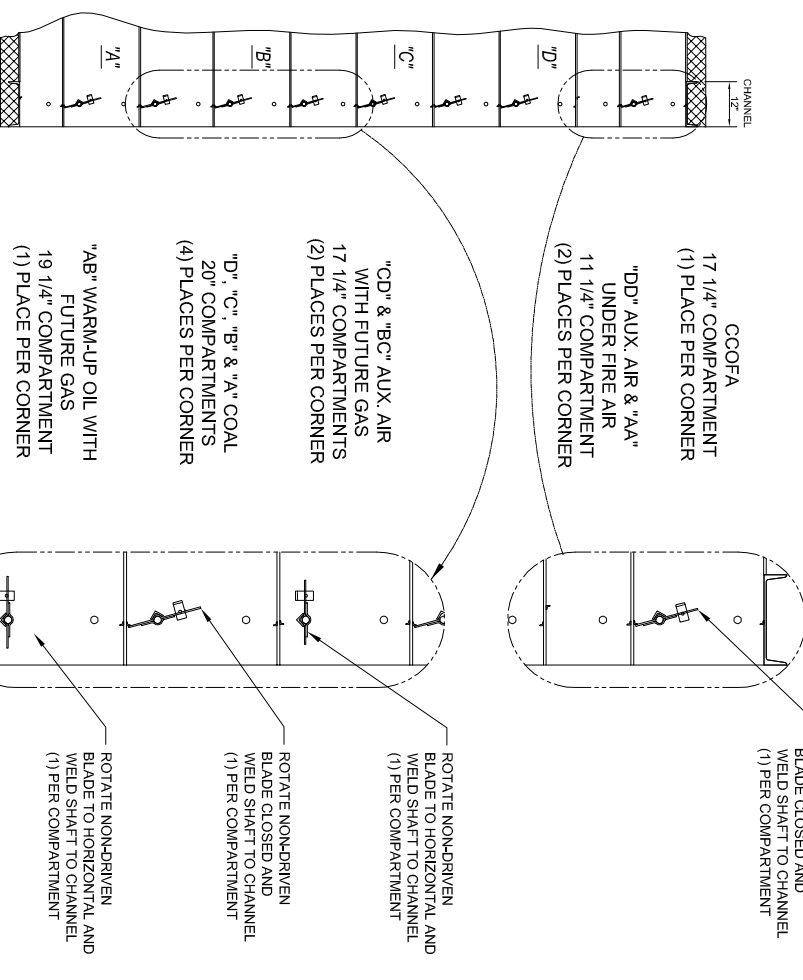
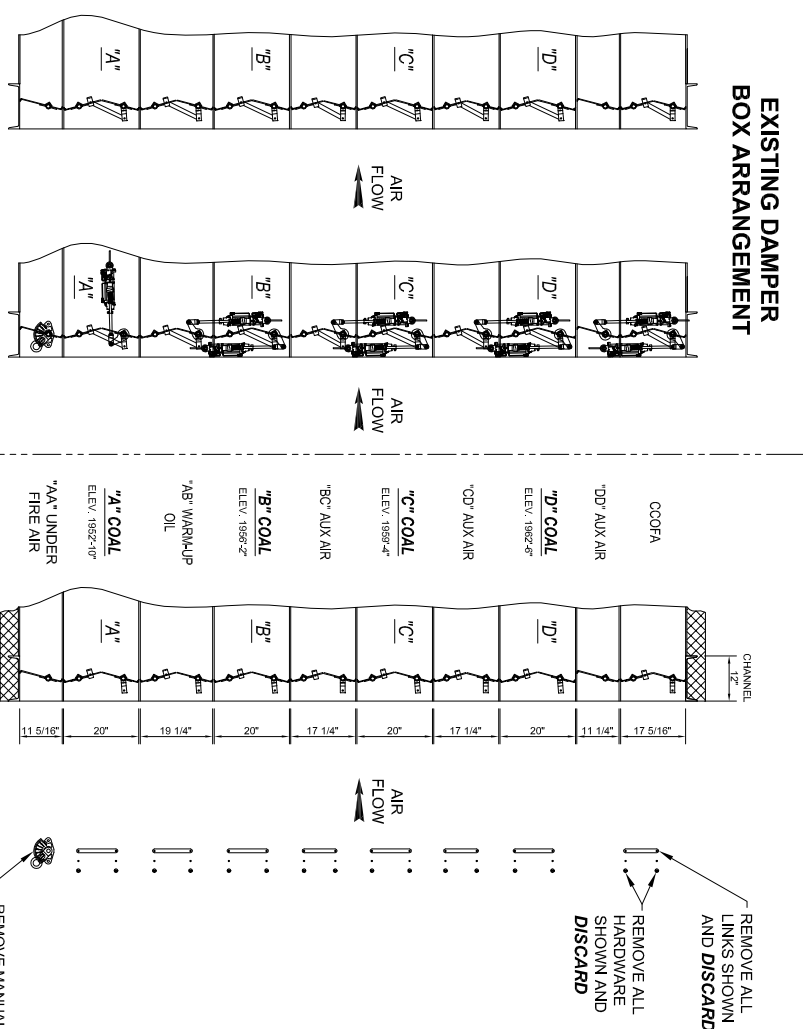
DAMPER BOX DEMOLITION

TOP VIEW
CORNERS #2 & #4 AS SHOWN
CORNERS #1 & #3 OPPOSITE
SCALE: X2

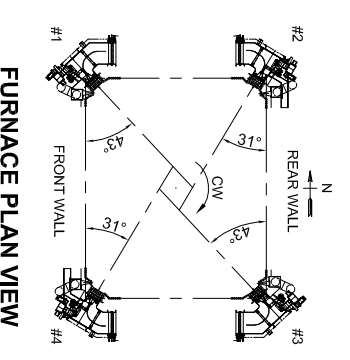


DAMPER BOX MODIFICATION

TOP VIEW
CORNERS #2 & #4 AS SHOWN
CORNERS #1 & #3 OPPOSITE
SCALE: X2



VENTURI PLATE INSTALLATION



BILL OF MATERIAL

Item	Qty	Drawing	Part No	Description	Material
51	4	B-66-30001	806630001001	AERODYNAMIC VENTURI PLATE - COOFA	C/S
52	16	B-66-30001	806630001002	AERODYNAMIC VENTURI PLATE - "D" THRU "A" COAL	C/S
53	8	B-66-30001	806630001003	AERODYNAMIC VENTURI PLATE - "CD" & "BC" AUX AIR	C/S
54	4	B-66-30001	806630001004	AERODYNAMIC VENTURI PLATE - WARM-UP OIL	C/S
55	8	B-66-30001	806630001005	AERODYNAMIC VENTURI PLATE - "D" & UNDER FIRE AIR	C/S

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

D-62-30030-9

NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. DIMENSIONAL TOLERANCES SHOULD BE ±1/8" UNLESS OTHERWISE SPECIFIED.
3. COMPARTMENT SET POINTS SHOULD BE ±1/8" ON ORIGINAL EQUIPMENT.
4. ERROU NOT BE DETEED TRED TEECTICAL PIPE HATERS PLATE OR STEEL ETC. IN ORDER TO INSTALL NEW EQUIPMENT REMEMBER TO CONSIDER BOILER EXPANSION IN THE HOT POSITION WHEN MAKING NECESSARY CHANGES.

DAMPER BOX SIDE VIEW
CORNERS #2 & #4 AS SHOWN

DAMPER BOX SIDE VIEW
CORNERS #1 & #3 AS SHOWN

NO.	DATE	REVISIONS
2	2/6/13	SUBMITTED FOR RECORD
1	5/29/12	NOTE ADDED
0	4/26/12	RELEASE FOR CONTRACT
A	3/27/12	ISSUE FOR REVIEW

CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO.: 115120353501

FUELTECH
Technologies to enable clean efficient energy™
FUEL TECH, INC. 2800 BELLA VISTA PKWY, WABERNVILLE, IL 60555

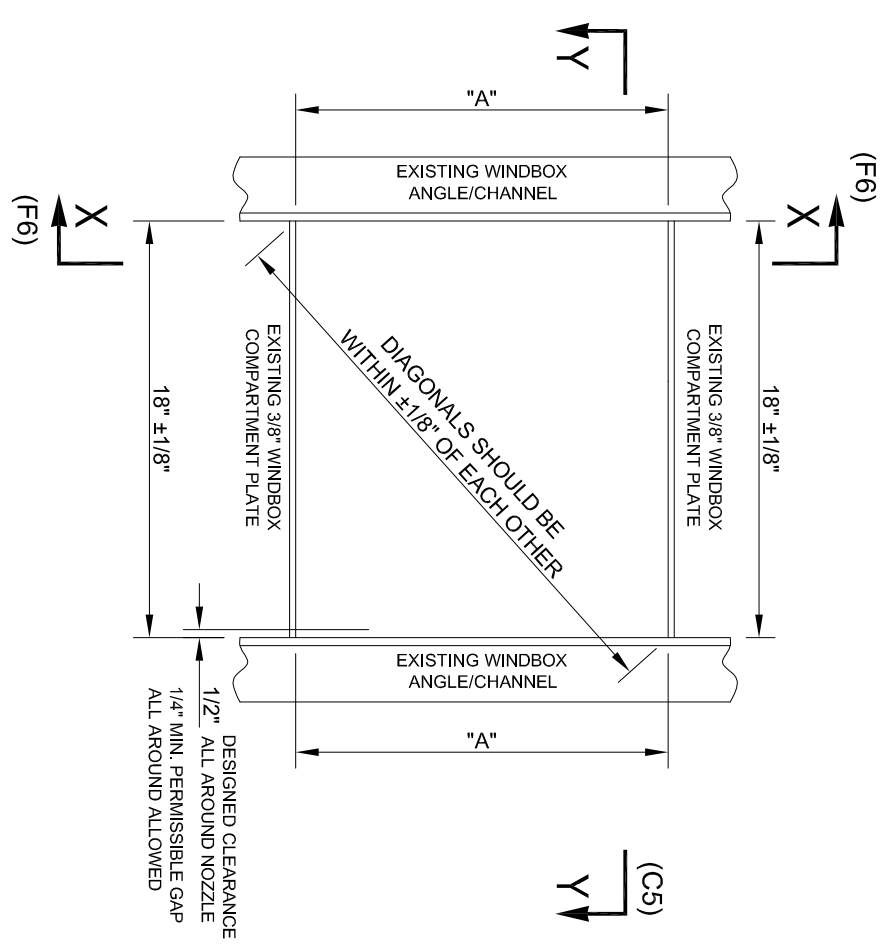
HASTINGS OUTLET
HASTINGS, NEBRASKA

DAMPER BOX DEMO, MOIS AND VENTURI PLATE INSTALLATION

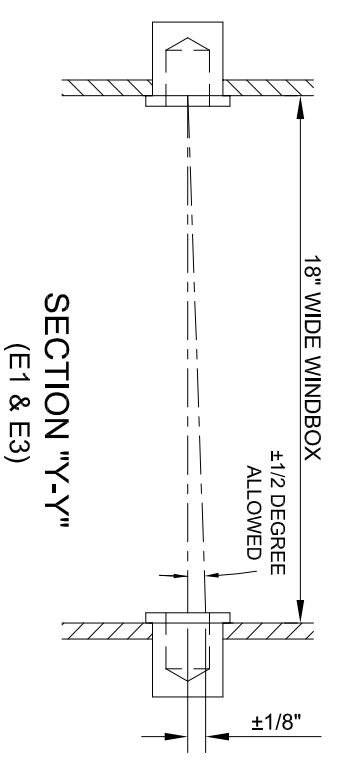
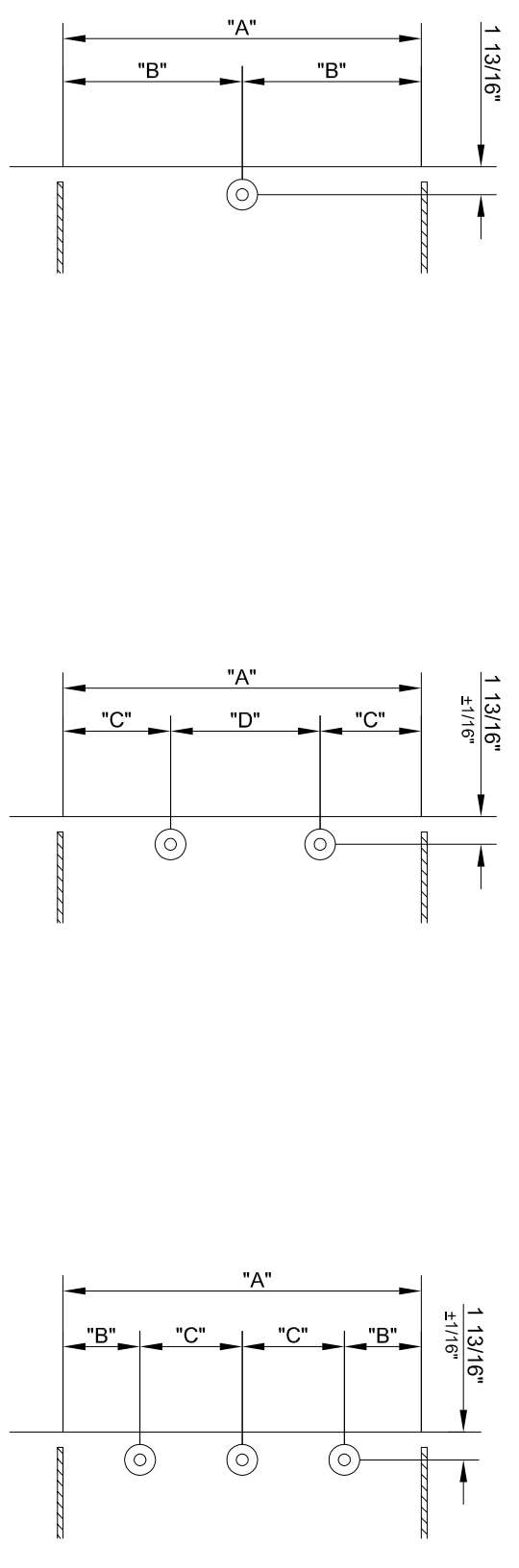
APPROVED BY: _____
DESIGNED BY: JHH
DRAWN BY: JHH
CHECKED BY: DRR
DATE: 3/27/2012
SCALE: N/A
SIZE: D

DRAWING NO. 896P-M01-009

WINDBOX
FURNACE SIDE



WINDBOX FURNACE SIDE
SECTION "X-X"
(F1 & C1)



- NOTES:
1. REFER TO THE ORIGINAL WINDBOX GENERAL ARRANGEMENT DRAWING FOR WINDBOX LAYOUT AND ADDITIONAL INFORMATION.
 2. REFER TO THE ORIGINAL INSTRUCTION MANUAL FOR MAINTENANCE AND OPERATION OF TILTING TANGENTIAL BURNERS.
 3. ERECTOR TO VERIFY SQUARENESS OF EACH COMPARTMENT TO FACILITATE NORMAL MOVEMENT OF NOZZLE TIPS WITHIN EACH COMPARTMENT. COMPARTMENT TOLERANCES ARE SUGGESTED AND WILL BE UTILIZED ONLY WHERE SQUARENESS AND FUNCTIONALITY CANNOT BE ACHIEVED.

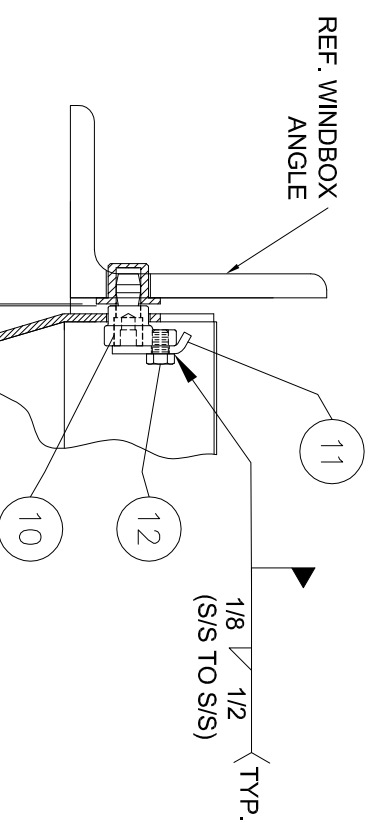
COMPARTMENT DESCRIPTION	"A" ±1/8"	"B" ±1/8"	"C" ±1/16"	"D" ±1/16"	REFER TO DETAIL
CCOFA	17 1/4"	8 5/8"	-	-	DETAIL "AA" (D4)
"D" AUX AIR & "AA" UNDER FIRE AIR	11 1/4"	5 5/8"	-	-	DETAIL "AA" (D4)
COAL "A" - "D"	20"	-	-	-	-
"CD" & "BC" AUX AIR WITH FUTURE GAS	17 1/4"	-	4 1/2"	8 1/4"	DETAIL "BB" (D6)
"AB" WARM-UP OIL WITH FUTURE GAS	19 1/4"	3"	6 5/8"	-	DETAIL "CC" (D8)

CONTRACT NAME: LOW NOX BURNERS CONTRACT NO.: 175120.65.3501		APPROVED BY:
		DESIGNED BY:
FUEL TECH, INC. 2801 BELLA VISTA PKWY, WARRENVILLE, IL 60555		DRAWN BY: JHH
HASTINGS UTILITIES CENTER UNIT 1		CHECKED BY: DRR
HASTINGS, NEBRASKA		DATE: 5/22/2012
COMPARTMENT MINIMUM TOLERANCE STANDARDS		SCALE: N/A
NO. DATE REVISIONS		DRAWING NO. 896P-M01-011
1	2/6/13	SUBMITTED FOR RECORD
0	5/29/12	RELEASE FOR CONTRACT
		DRAWN BY: JHH
		DRR
		CHECKED BY: DRR

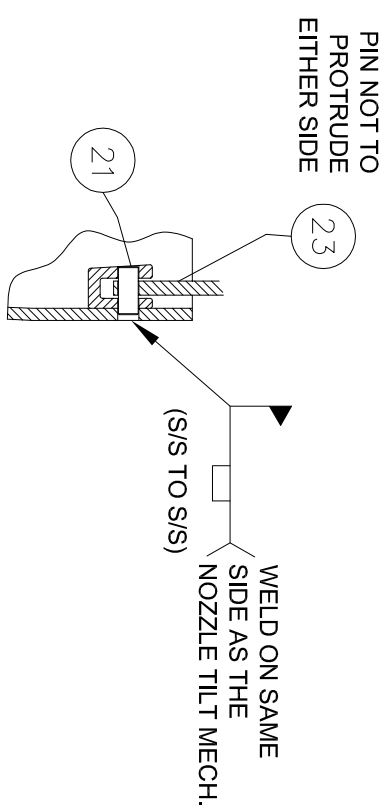
DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

Item	Qty	Drawing	Part No	Description	Material
1	12	D-64-29997	806429997302	TIP, ADJUSTABLE, THERMAL GUARD AIR NOZZLE	SA-240-309
7	4	B-66-30401	806630401001	PLATE, DIVIDER	SA-240-309
8	4	B-66-30404	806630404001	AIR DEFLECTOR PLATE	SA-240-309
9	4	B-66-30032	806630032001	AIR RESTRICTOR PLATE	SA-240-309
10	88	B-64-00751	806400751001	NOZZLE PIVOT PIN (80) REQ'D. (8) SPARES	304 S/S
11	28	B-66-02253	806602253001	BENT PIVOT PIN (24) REQ'D. (4) SPARES	304 S/S
12	88		251001019906	HHCS, 1/2" - 13 UNC X 3/4" LG (80) REQ'D. (8) SPARES	18-8 S/S
21	28	B-66-00935	806600935002	PIN, NOZZLE LINK, AIR (24) REQ'D. (4) SPARES	304 S/S
23	24	D-66-11432	806611432002	LINK, NOZZLE ADJUSTING ASSEMBLY	C/S
24	8	B-66-03430	806603430001	WASHER (4) REQ'D. (4) SPARES	LOW CARBON A569
25	8		259613001702	COTTER PIN, 3/16" DIA X 1 1/2" LG (4) REQ'D. (4) SPARES	18-8 S/S
34	12		259610001502	COTTER PIN, 1/8" DIA X 2 1/2" LG (4) REQ'D. (8) SPARES	18-8 S/S
76	4		806603429001	PIVOT PIN	304 S/S
77	4		806600948001	COLLAR	1018

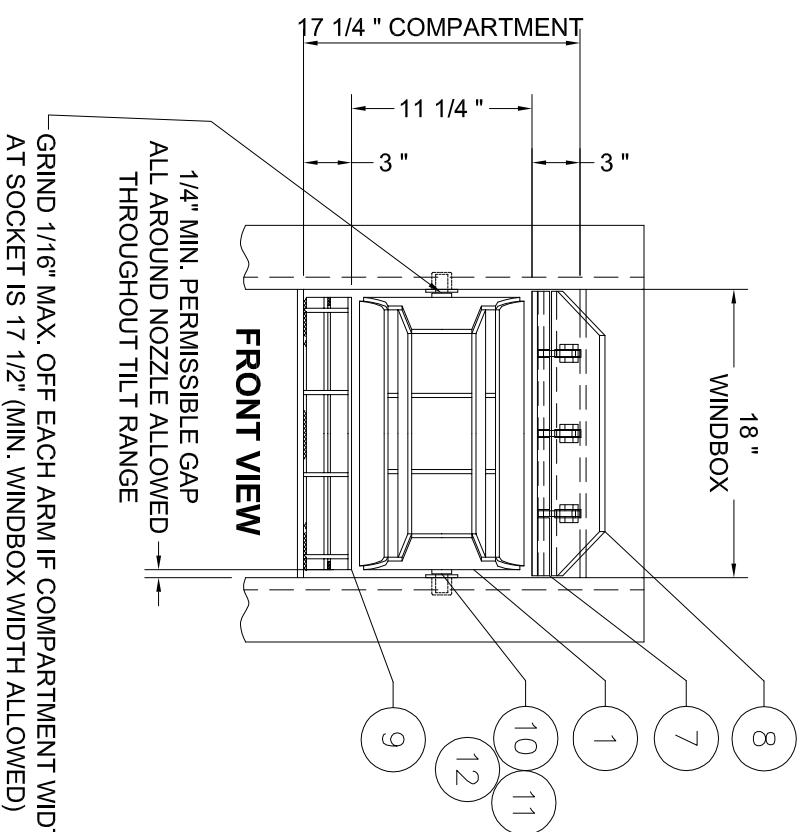
REFER TO DRAWING 896P-M01-003 FOR COMPLETE BILL OF MATERIAL



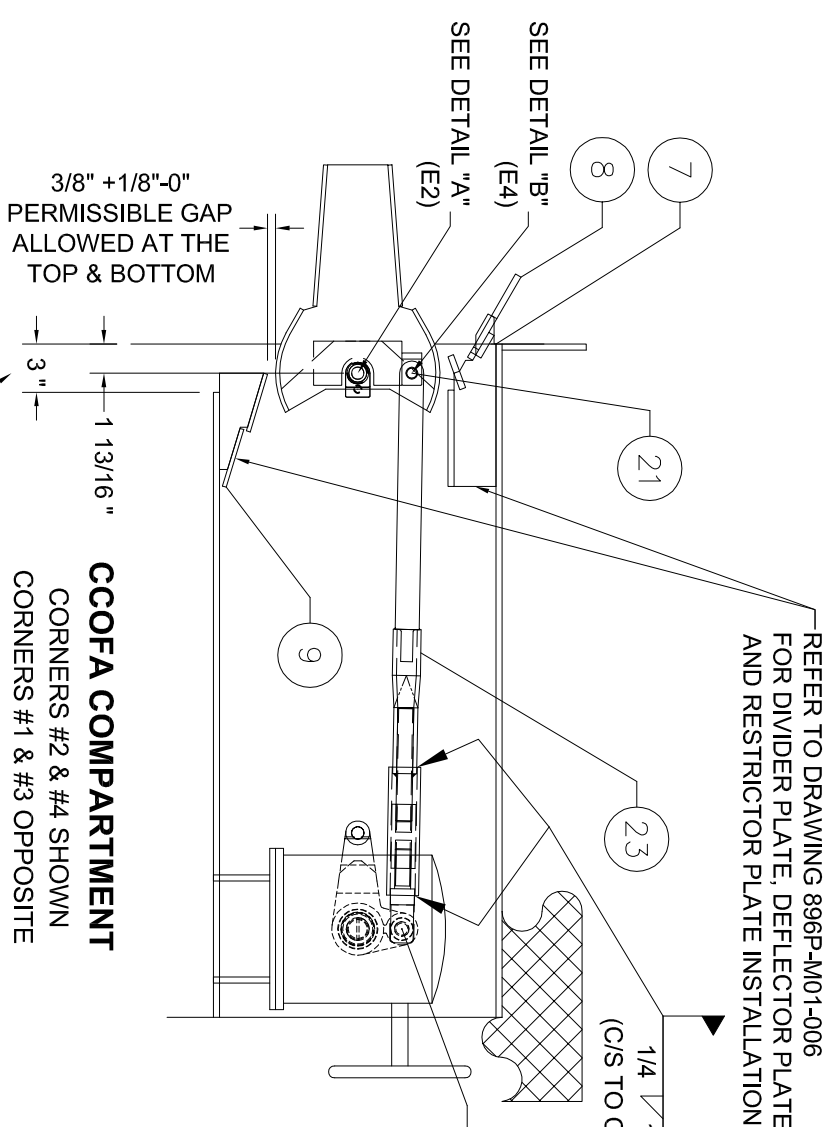
DETAIL "A" (C4)
(2) PLACES PER COMPARTMENT



DETAIL "B" (C4)
(1) PLACE PER COMPARTMENT

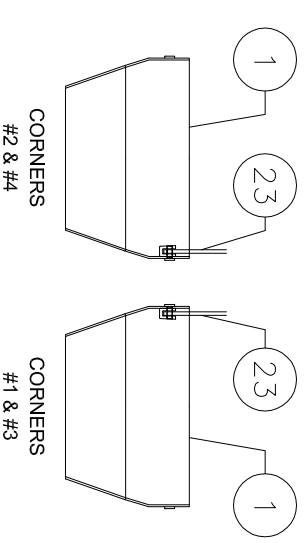


GRIND 1/16" MAX. OFF EACH ARM IF COMPARTMENT WIDTH AT SOCKET IS 17 1/2" (MIN. WINDBOX WIDTH ALLOWED)



EDGE OF COMPARTMENT TO BE EXTENDED TO 3", AS SHOWN

CCOFA COMPARTMENT
CORNERS #2 & #4 SHOWN
CORNERS #1 & #3 OPPOSITE



FURNACE PLAN VIEW

- NOTES:**
1. DIMENSIONS ARE IN INCHES.
 2. DIMENSIONAL TOLERANCES SHOULD BE $\pm 1/8"$ UNLESS OTHERWISE SPECIFIED.
 3. COMPARTMENT PLATE SPACING SHOULD BE $\pm 1/8"$ ON ORIGINAL EQUIPMENT.
 4. WHEN INSTALLING NOZZLE TIP MAINTAIN A 1/16" GAP ON EACH SIDE OF SOCKET, GRIND AS REQUIRED.

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

D-62-30030-12

NO.	DATE	REVISIONS	DRAWN BY	CHECKED BY
1	2/6/13	SUBMITTED FOR RECORD	JHH	DRR
0	5/29/12	RELEASE FOR CONTRACT	JHH	DRR

CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO.: 175120.65.3501

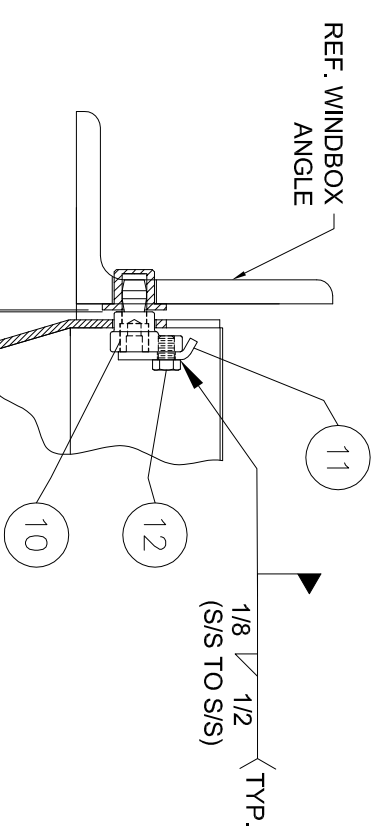


FUEL TECH, INC. 2801 BELLA VISTA PKWY. WARDVILLE, IL. 60555
HASTINGS UTILITIES CENTER UNIT 1
HASTINGS, NEBRASKA
DATE: 5/22/2012
CHECKED BY: DRR

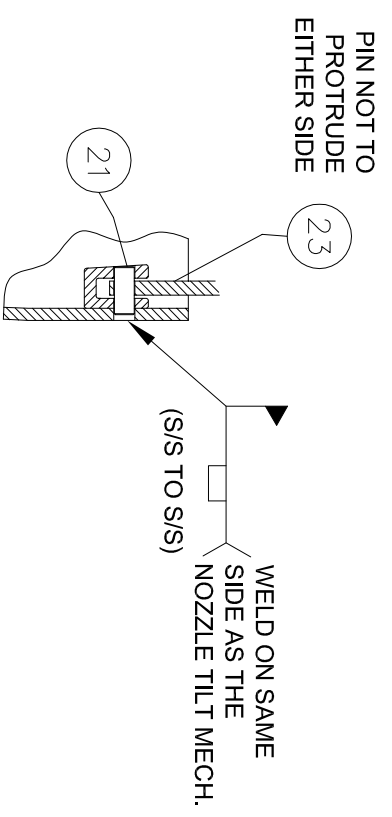
APPROVED BY: _____
DESIGNED BY: _____
DRAWN BY: JHH
SCALE: N/A
SIZE: D
DRAWING NO.: 896P-M01-012

Item	Qty	Drawing	Part No	Description	Material
1	12	D-64-29997	80642997302	TIP, ADJUSTABLE, THERMAL GUARD AIR NOZZLE	SA-240-309
10	88	B-64-00751	806400751001	NOZZLE PIVOT PIN (80) REQ'D, (8) SPARES	304 S/S
11	28	B-66-02253	806602253001	BENT PLATE (24) REQ'D, (4) SPARES	304 S/S
12	88	251001019906	806600935002	IHCS, 1/2" - 13 UNC X 3/4" LG (80) REQ'D, (8) SPARES	18-8 S/S
21	28	B-66-00935	806600935002	PIN, NOZZLE LINK, AIR (24) REQ'D, (4) SPARES	304 S/S
23	24	D-66-11432	806611432002	LINK, NOZZLE ADJUSTING ASSEMBLY	C/S
24	8	B-66-03430	806603430001	WASHER (4) REQ'D, (4) SPARES	LOW CARBON A569
25	8	259613001702	806613001702	COTTER PIN, 3/16" DIA X 1 1/2" LG (4) REQ'D, (4) SPARES	18-8 S/S

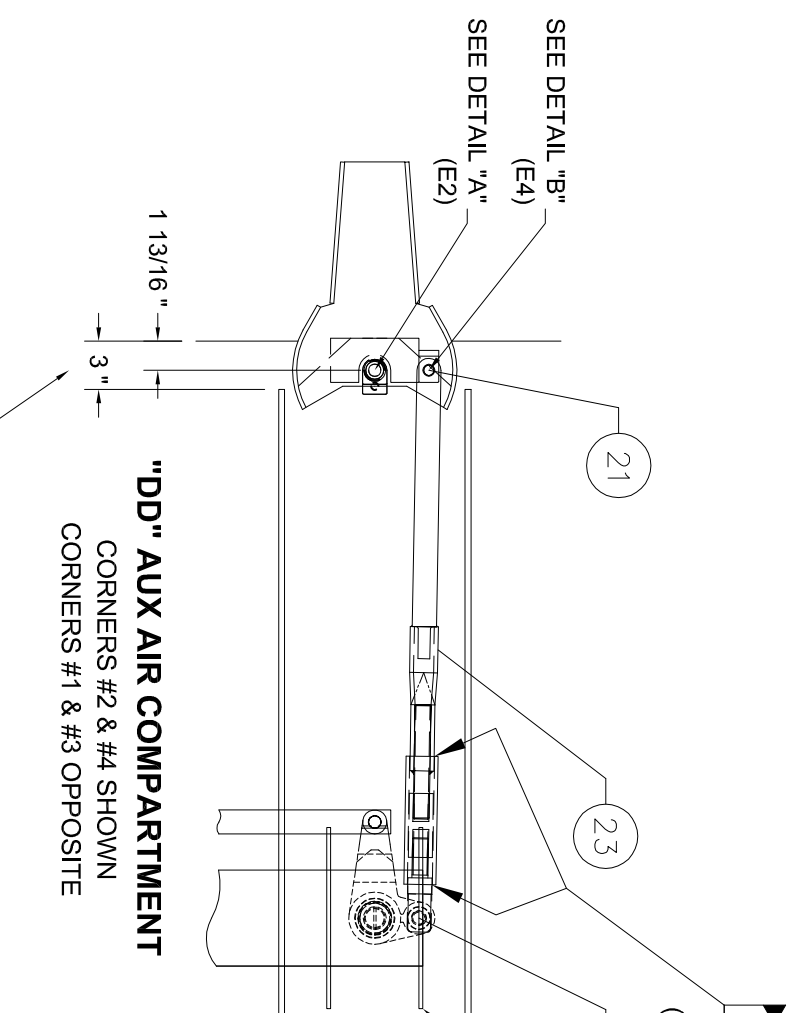
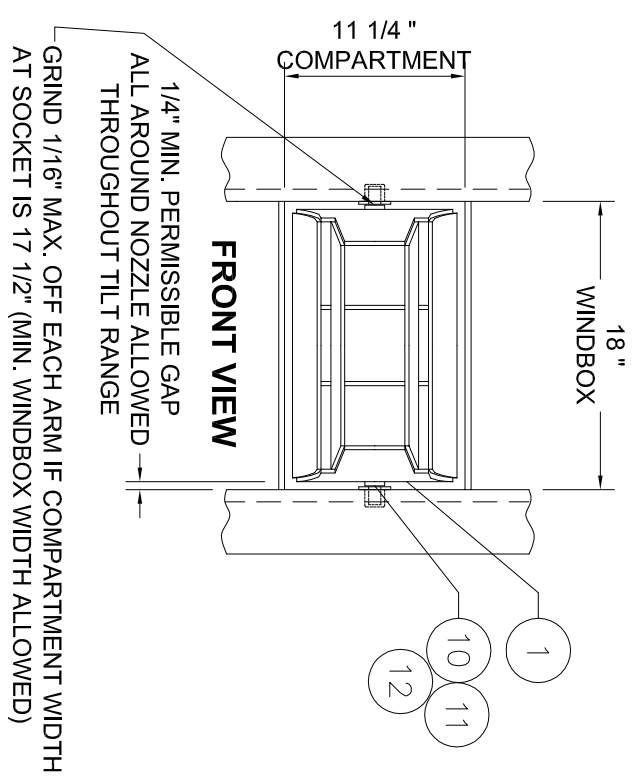
REFER TO DRAWING 896P-M01-003 FOR COMPLETE BILL OF MATERIAL



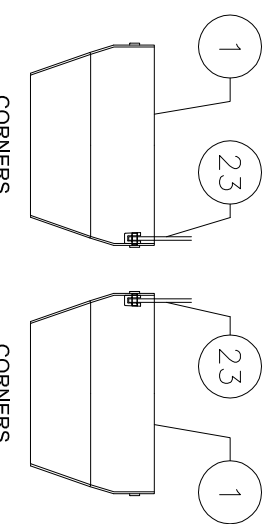
DETAIL "A" (C4)
(2) PLACES PER COMPARTMENT



DETAIL "B" (C4)
(1) PLACE PER COMPARTMENT



FURNACE PLAN VIEW



- NOTES:**
1. DIMENSIONS ARE IN INCHES.
 2. DIMENSIONAL TOLERANCES SHOULD BE ±1/8" UNLESS OTHERWISE SPECIFIED.
 3. COMPARTMENT PLATE SPACING SHOULD BE ±1/8" ON ORIGINAL EQUIPMENT.
 4. WHEN INSTALLING NOZZLE TIP MAINTAIN A 1/16" GAP ON EACH SIDE OF SOCKET, GRIND AS REQUIRED.

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

D-62-30030-13

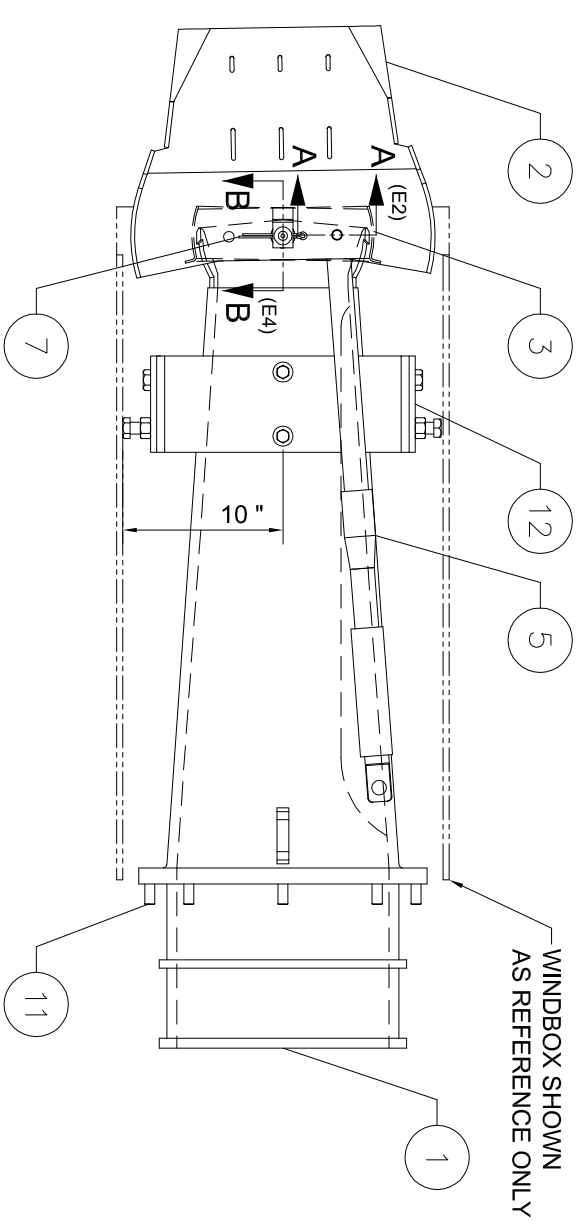
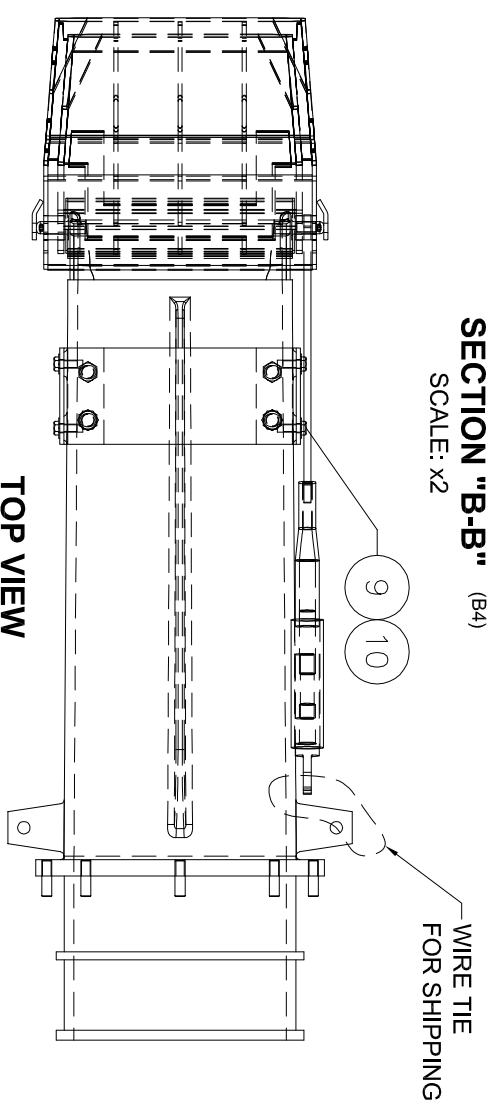
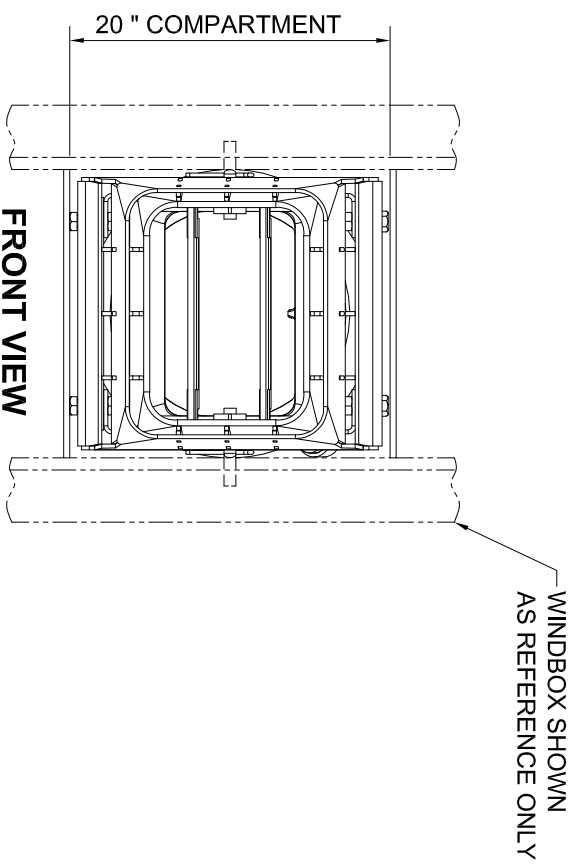
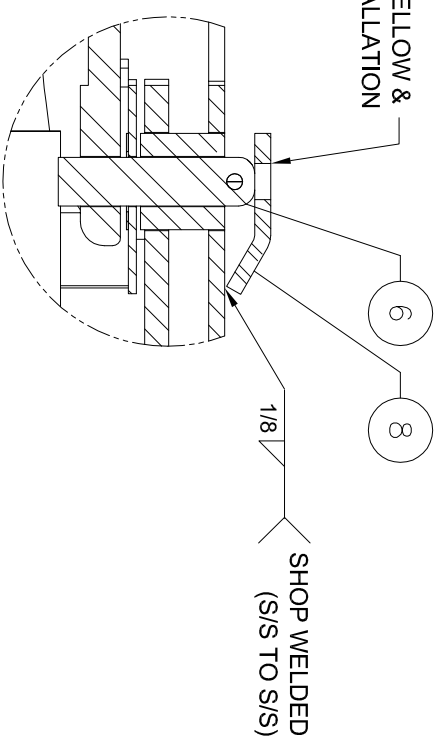
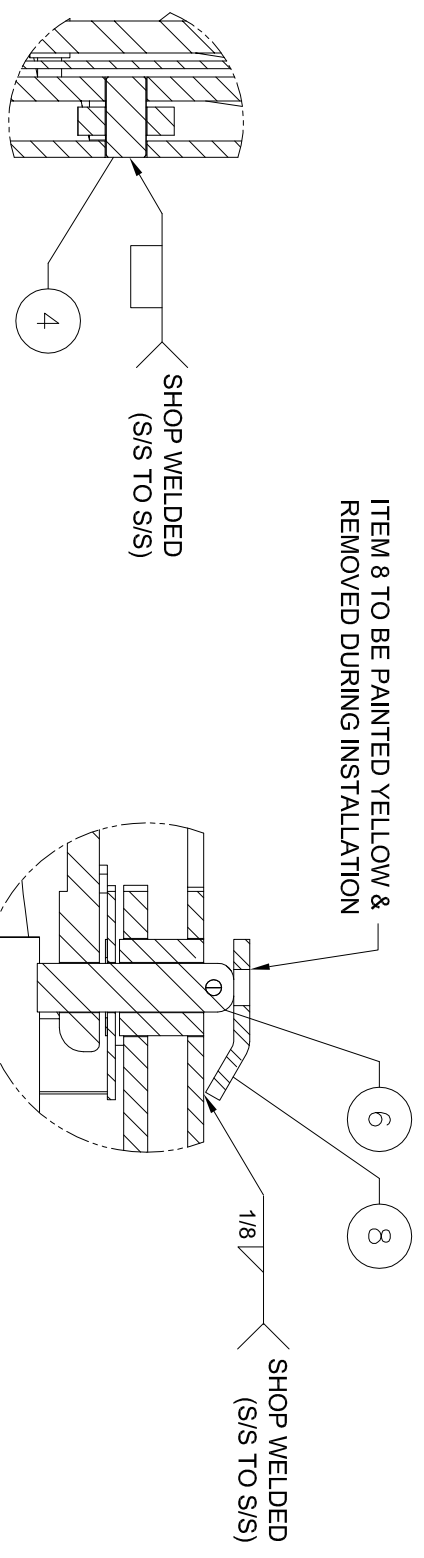
NO.	DATE	REVISIONS	DRAWN BY	CHECKED BY
1	2/6/13	SUBMITTED FOR RECORD	JHH	DRR
0	5/29/12	RELEASE FOR CONTRACT	JHH	DRR

CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO.: 175120.65.3501



FUEL TECH, INC. 27001 BELLA VISTA PKWY, WARDVILLE, IL 60555
HASTINGS UTILITIES CENTER UNIT 1
HASTINGS, NEBRASKA
DATE: 5/22/2012
SCALE: N/A
SIZE: 0

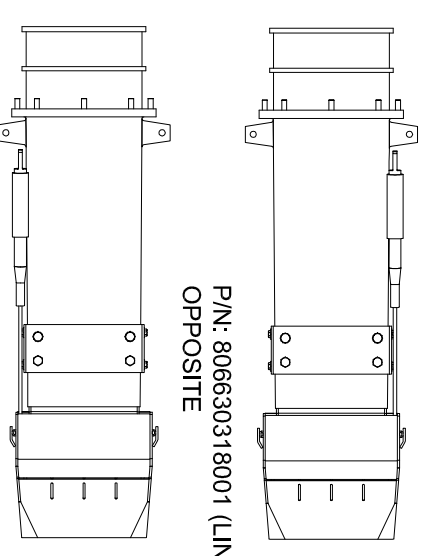
APPROVED BY: _____
DESIGNED BY: _____
DRAWN BY: JHH
CHECKED BY: DRR
DRAWING NO.: 896P-M01-013



Bill of Material - 806630318

Item	Qty	Drawing	Part No	Description	Material
1	1	B-61-29971	806129971001	STATIONARY COAL NOZZLES-CASTING	C/S
2	1	D-63-30004	806330004001	TIP, ADJ. THERMAL GUARD COAL NOZZLE	309 S/S
3	1	B-63-30003	806330003001	SEAL PLATE	309 S/S
4	1	B-66-00935	806600935001	PIN, NOZZLE LINK, COAL	304 S/S
5	1	B-66-11432	806611432002	LINK, NOZZLE ADJUSTING ASSEMBLY	C/S
6	2	B-66-08719	806608719004	PIVOT PIN	SA-479-304
7	2		259612001402	COTTER PIN, 1/4" DIA x 4" LG	18-8 S/S
8	2	B-64-00752	806400752001	BENT PLATE	303/304 S/S
9	4		251001001101	HHC5, 1/2"-.13 UNC x 1 1/2" LG	C/S GR 5 ZP
10	4		258010002202	FLAT WASHER, 1/2"	C/S ZP
11	8		251706006103	STUD, 5/8"-.11 UNC x 2 1/4" LG	C/S
12	1	B-66-03621	806603621001	COAL NOZZLE SUPPORT ASSEMBLY	C/S

REFER TO DRAWING 896P-M01-003 FOR COMPLETE BILL OF MATERIAL



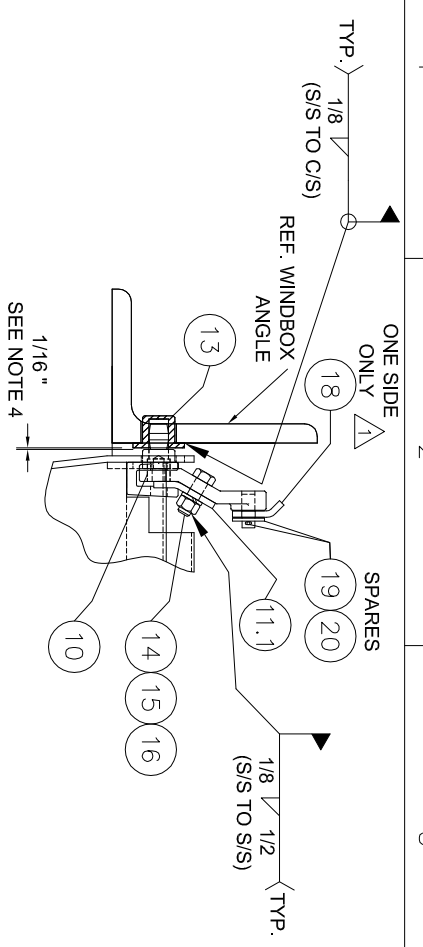
NOTES:

1. ALL CARBON STEEL PARTS TO BE PAINTED (1) COAT WELDABLE RED OXIDE PRIMER.
2. ALL METAL TO METAL MECHANICAL JOINTS TO BE SPRAYED WITH DRY MOLY FILM LUBRICANT. R-V PIN. 651112001001.
3. ENSURE RIB IS ON TOP WHEN WELDING LINK IN UPPER HOLE OF NOZZLE TIP.

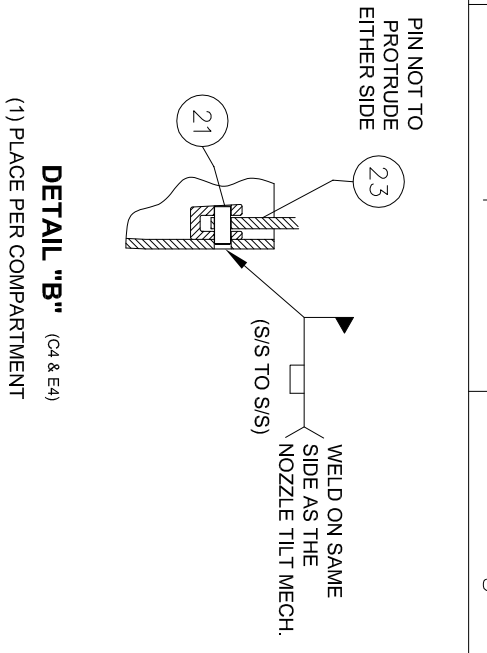
DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

D-62-30030-15

CONTRACT NAME: LOW NOX BURNERS		APPROVED BY:	
CONTRACT NO. 175120.65.301		DESIGNED BY:	
<p>FUEL TECH, INC. 2501 BELLA VISTA PKWY, WARRENVILLE, IL 60555 Technologies to enable clean efficient energy™ HASTINGS UTILITIES CENTER UNIT 1 HASTINGS, NEBRASKA</p>		DRAWN BY: JHH	
		CHECKED BY: DRR	
1	2/6/13	SUBMITTED FOR RECORD	JHH DRR
0	5/29/12	RELEASE FOR CONTRACT	JHH DRR
NO.	DATE	REVISIONS	DRAWN BY
			CHECKED BY
			SCALE: N/A
			DATE: 5/23/2012
			DRAWING NO. 896P-M01-015
			SIZE: 0



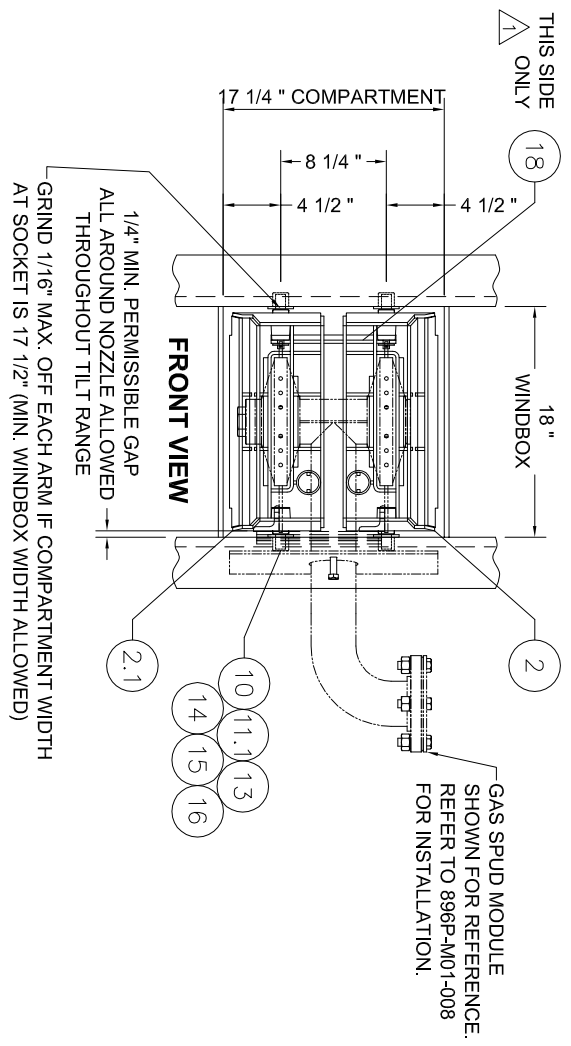
DETAIL "A" (C4 & E4)
(4) PLACES PER COMPARTMENT



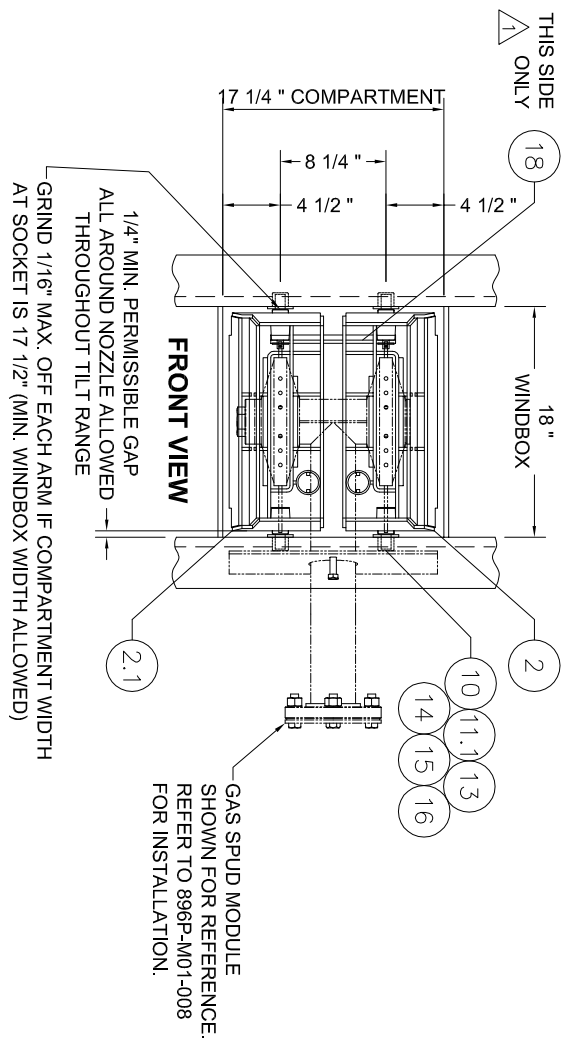
DETAIL "B" (C4 & E4)
(1) PLACE PER COMPARTMENT

Item	Qty	Drawing	Part No	Description	Material
2	8	D-64-30000	806430000312	TIP ADJUSTABLE, THERMAL GUARD GAS NOZZLE	SA-240-309
2.1	8	D-64-30000	806430000322	TIP ADJUSTABLE, THERMAL GUARD GAS NOZZLE	SA-240-309
10	88	B-64-00751	806400751001	NOZZLE PIVOT PIN (80) REQ'D, (8) SPARES	304 S/S
11.1	62	B-64-00752	806400752001	BENT PLATE (56) REQ'D, (6) SPARES	304 S/S
13	54	B-66-00982	806600982002	PIVOT PIN SOCKET, 2" FLANGE (48) REQ'D, (6) SPARES	303 S/S
14	116		251001002204	HHCS, 1/2" - 13 UNC X 1 1/2" LG (104) REQ'D, (12) SPARES	18-8 S/S
15	116		255617001203	LOCK WASHER (SPURT), 1/2" (104) REQ'D, (12) SPARES	18-8 S/S
16	116		255010005903	HEX NUT, 1/2" - 13 UNC (104) REQ'D, (12) SPARES	18-8 S/S
18	8	B-66-03177	806603177026	LINK, NOZZLE CONNECTING, "CD" & "BC" AUX AIR	C/S
19	36		258010001403	FLAT WASHER, 1/2" (28) REQ'D, (8) SPARES	18-8 S/S
20	36		259610001302	COTTER PIN, 1/8" DIA X 1" LG (28) REQ'D, (8) SPARES	18-8 S/S
21	28	B-66-00935	806600935002	PIN, NOZZLE LINK, AIR (24) REQ'D, (4) SPARES	304 S/S
23	24	D-66-11432	806611432002	LINK, NOZZLE ADJUSTING ASSEMBLY	C/S
24	8	B-66-03430	806603430001	WASHER (4) REQ'D, (4) SPARES	LOW CARBON A569
25	8	259613001702	COTTER PIN, 3/16" DIA X 1 1/2" LG (4) REQ'D, (4) SPARES		18-8 S/S

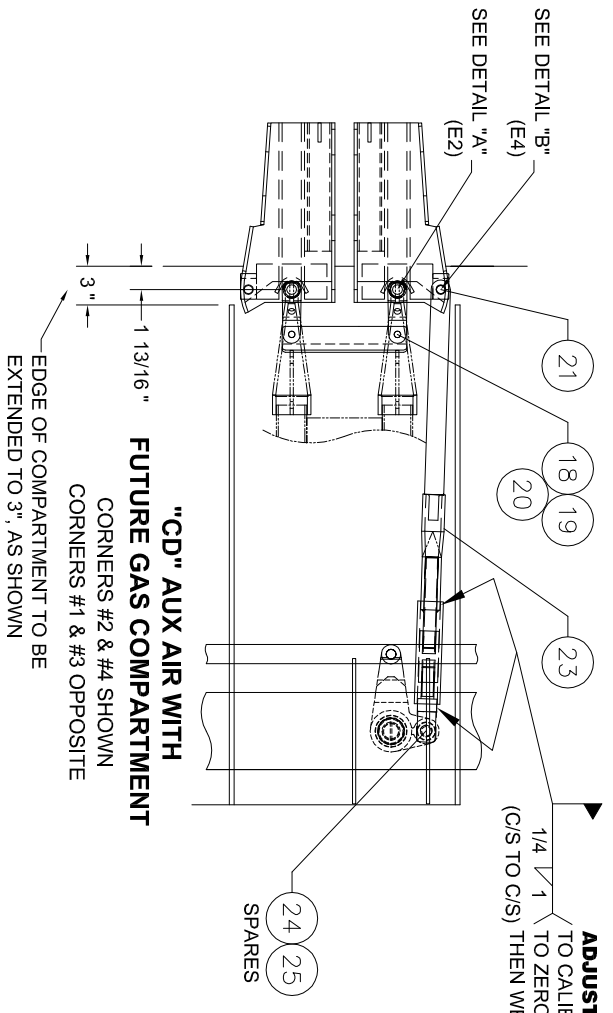
REFER TO DRAWING 896P-M01-003 FOR COMPLETE BILL OF MATERIAL



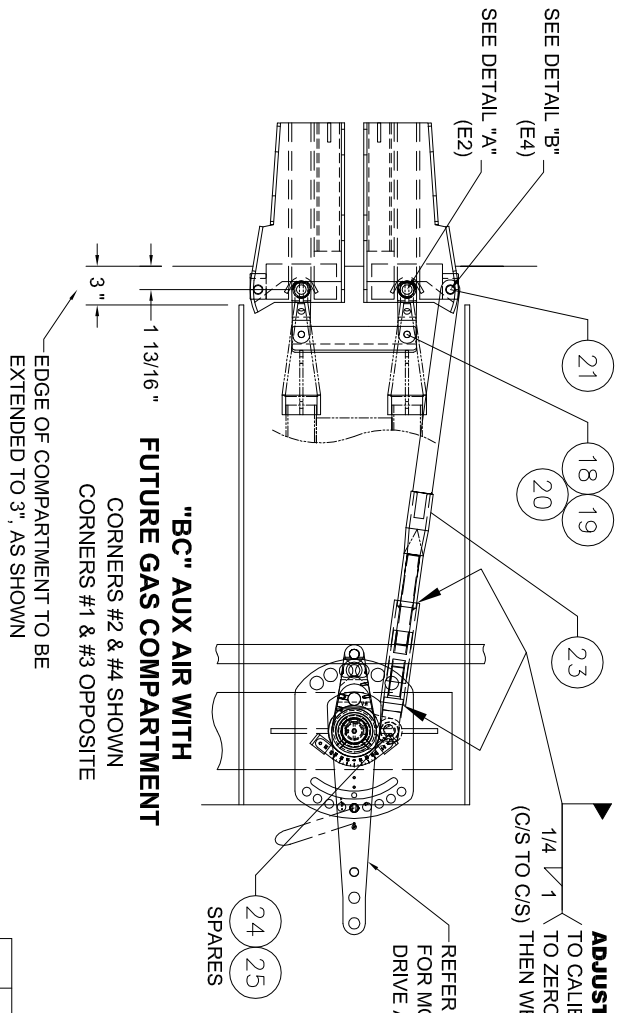
FRONT VIEW
GRIND 1/16" MAX. OFF EACH ARM IF COMPARTMENT WIDTH AT SOCKET IS 17 1/2" (MIN. WINDBOX WIDTH ALLOWED)



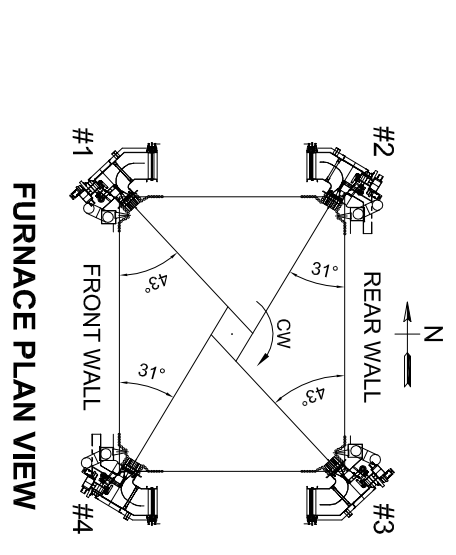
FRONT VIEW
GRIND 1/16" MAX. OFF EACH ARM IF COMPARTMENT WIDTH AT SOCKET IS 17 1/2" (MIN. WINDBOX WIDTH ALLOWED)



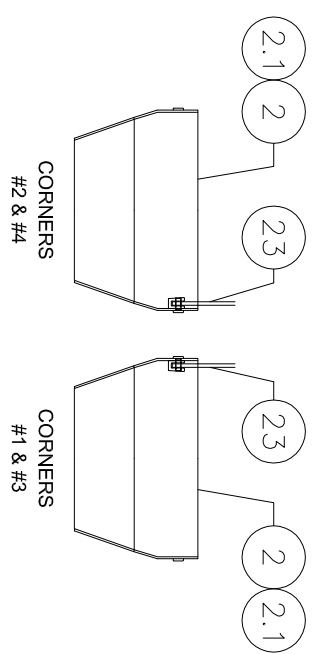
"CD" AUX AIR WITH FUTURE GAS COMPARTMENT
CORNERS #2 & #4 SHOWN
CORNERS #1 & #3 OPPOSITE
EDGE OF COMPARTMENT TO BE EXTENDED TO 3", AS SHOWN



"BC" AUX AIR WITH FUTURE GAS COMPARTMENT
CORNERS #2 & #4 SHOWN
CORNERS #1 & #3 OPPOSITE
EDGE OF COMPARTMENT TO BE EXTENDED TO 3", AS SHOWN



FURNACE PLAN VIEW



CORNERS #2 & #4
CORNERS #1 & #3

- NOTES:**
1. DIMENSIONS ARE IN INCHES.
 2. DIMENSIONAL TOLERANCES SHOULD BE ±1/8" UNLESS OTHERWISE SPECIFIED.
 3. COMPARTMENT PLATE SPACING SHOULD BE ±1/8" ON ORIGINAL EQUIPMENT.
 4. WHEN INSTALLING NOZZLE TIP MAINTAIN A 1/16" GAP ON EACH SIDE OF SOCKET, GRIND AS REQUIRED.

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

D-62-30030-16

NO.	DATE	REVISIONS	DESIGNED BY	CHECKED BY	SCALE	SIZE
1	8/29/12	ADDED ITEM 18 FRONT VIEW	JHH	DG		
2	2/6/13	SUBMITTED FOR RECORD	JHH	DRR		
0	5/29/12	RELEASE FOR CONTRACT	JHH	DRR		

CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO. 175120.65.3501

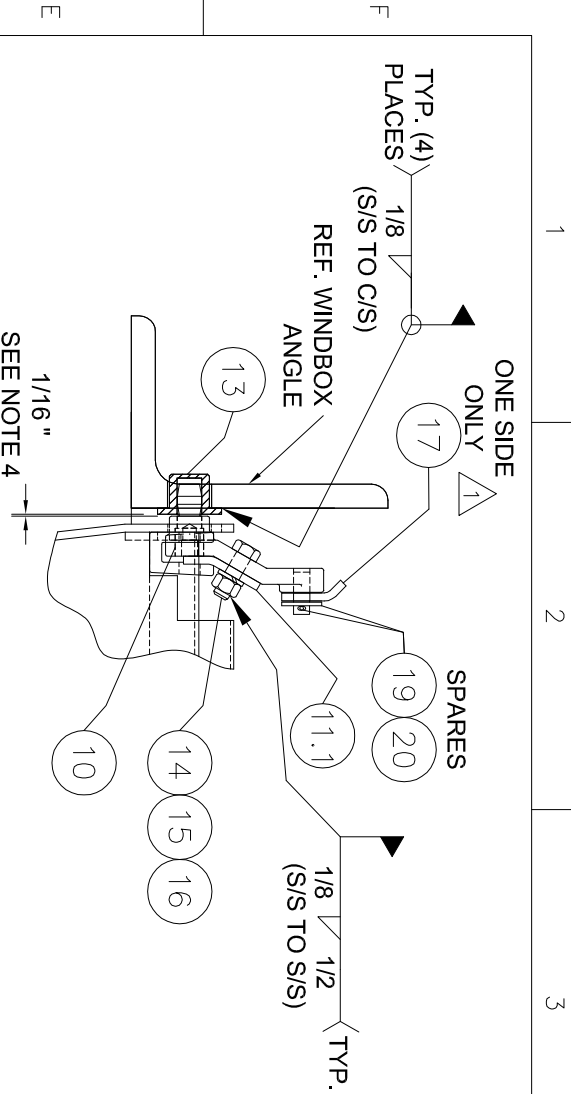


APPROVED BY: _____
DESIGNED BY: _____
DRAWN BY: JHH
CHECKED BY: DRR
DATE: 5/23/2012
SCALE: N/A
SIZE: D

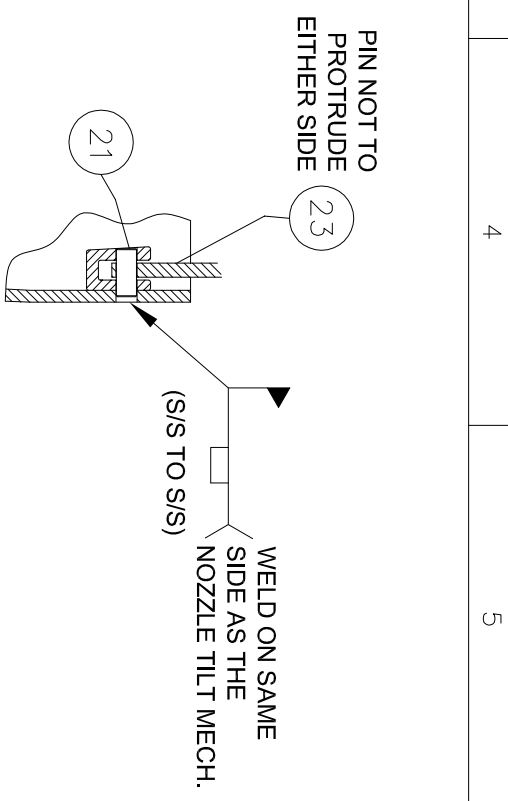
A B C D E F

1 2 3 4 5 6 7 8

A B C D E F



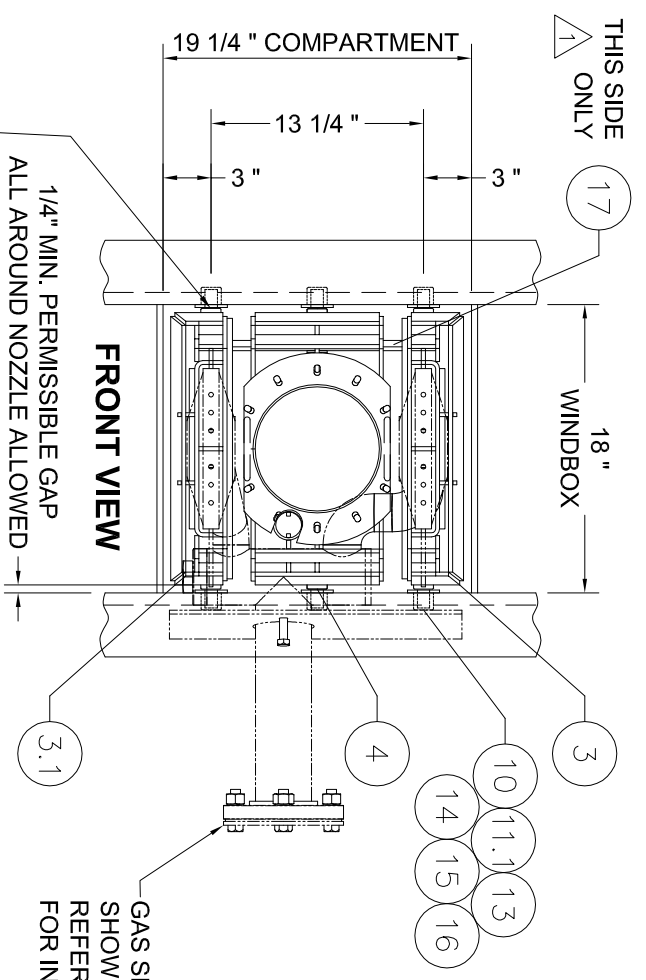
DETAIL "A" (D4)
(6) PLACES PER COMPARTMENT



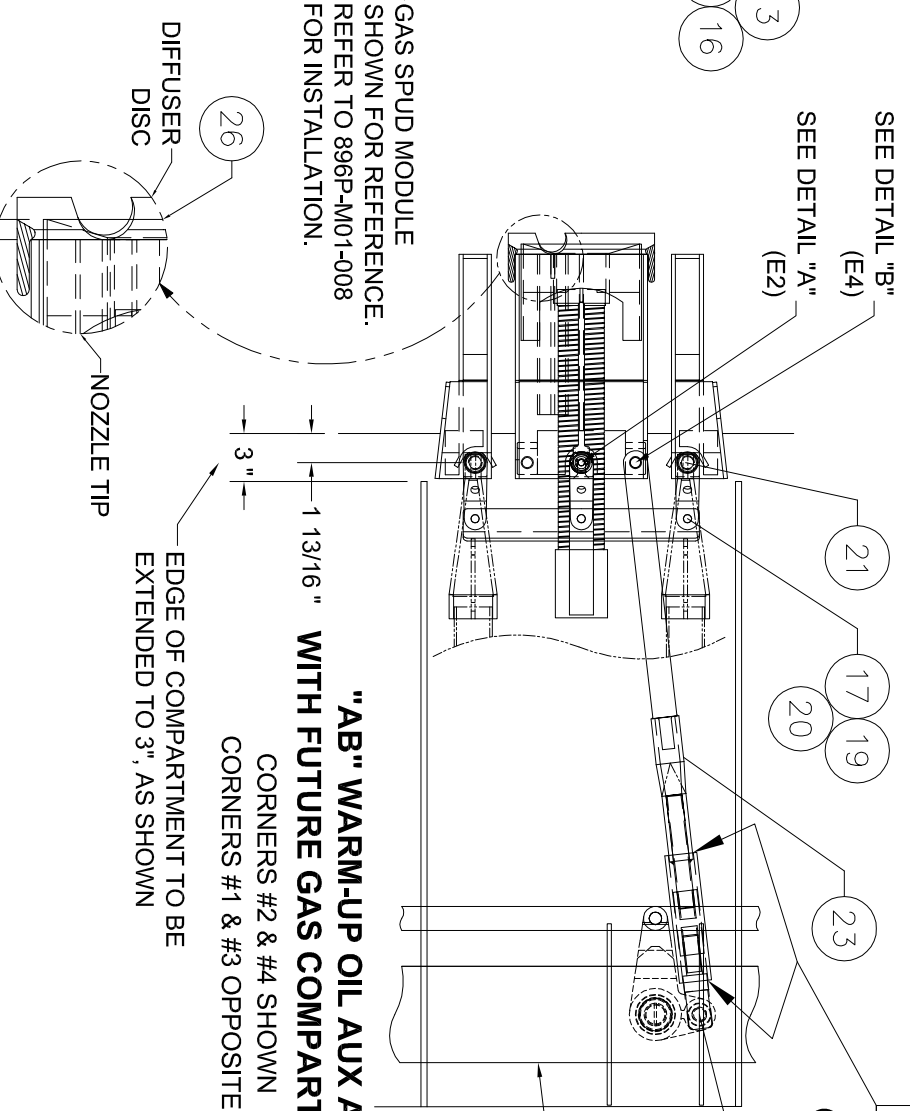
DETAIL "B" (D4)
(1) PLACE PER COMPARTMENT

Item	Qty	Drawing	Part No	Description	Material
3	4	D-64-29998	806429998312	TIP, ADJUSTABLE, GAS NOZZLE	SA-240-309
3.1	4	D-64-29998	806429998322	TIP, ADJUSTABLE, GAS NOZZLE	SA-240-309
4	4	D-64-30148	806430148001	TIP, ADJUSTABLE, OIL NOZZLE WITH DIFFUSER DISC	SA-240-309
10	88	B-64-00751	806400751001	NOZZLE PIVOT PIN (80) REQ'D, (8) SPARES	304 S/S
11.1	62	B-64-00752	806400752001	BENT PLATE (56) REQ'D, (6) SPARES	304 S/S
13	54	B-66-00982	806600982002	PIVOT PIN SOCKET, 2" FLANGE (48) REQ'D, (12) SPARES	303 S/S
14	116		251001002204	HHCS, 1/2" - 13 UNC X 1 1/2" LG (104) REQ'D, (12) SPARES	18-8 S/S
15	116		255617001203	LOCK WASHER (SPUT), 1/2" (104) REQ'D, (12) SPARES	18-8 S/S
16	116		255010005903	HEX NUT, 1/2" - 13 UNC (104) REQ'D, (12) SPARES	18-8 S/S
17	4	B-66-03177	806603177004	LINK, NOZZLE CONNECTING, "AB" WARM-UP OIL	C/S
19	36		258010001403	FLAT WASHER, 1/2" (28) REQ'D, (8) SPARES	18-8 S/S
20	36		259610001302	COTTER PIN, 1/8" DIA X 1" LG (28) REQ'D, (8) SPARES	18-8 S/S
21	28	B-66-00935	806600935002	PIN, NOZZLE LINK, AIR (24) REQ'D, (4) SPARES	304 S/S
23	24	D-66-11432	806611432002	LINK, NOZZLE ADJUSTING ASSEMBLY	C/S
24	8	B-66-03430	806603430001	WASHER (4) REQ'D, (4) SPARES	LOW CARBON A569
25	8		259613001702	COTTER PIN, 3/16" DIA X 1 1/2" LG (4) REQ'D, (4) SPARES	18-8 S/S

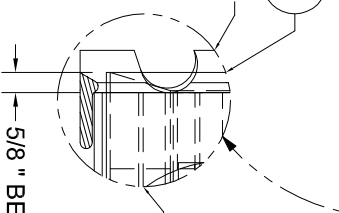
REFER TO DRAWING 896P-M01-003 FOR COMPLETE BILL OF MATERIAL



1/4" MIN. PERMISSIBLE GAP ALL AROUND NOZZLE ALLOWED THROUGHOUT TILT RANGE
GRIND 1/16" MAX. OFF EACH ARM IF COMPARTMENT WIDTH AT SOCKET IS 17 1/2" (MIN. WINDBOX WIDTH ALLOWED)



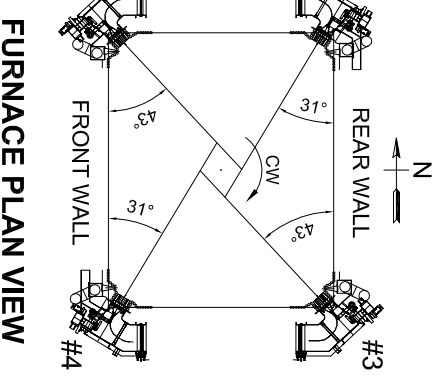
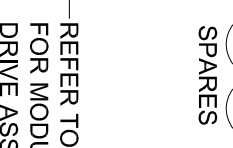
"AB" WARM-UP OIL AUX AIR CORNERS #2 & #4 SHOWN CORNERS #1 & #3 OPPOSITE
EDGE OF COMPARTMENT TO BE EXTENDED TO 3", AS SHOWN



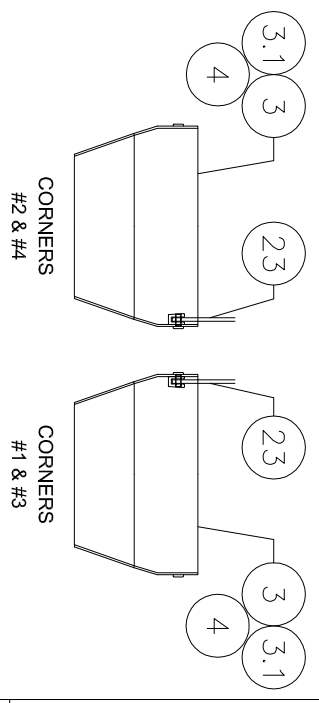
SCALE: X2

ADJUST TURNBUCKLE TO CALIBRATE NOZZLE TO ZERO DEGREES (C/S TO C/S) THEN WELD

REFER TO 896P-M01-019 FOR MODULE, TILT DRIVE ASSEMBLY



FURNACE PLAN VIEW



CORNERS #2 & #4
CORNERS #1 & #3

- NOTES:**
1. DIMENSIONS ARE IN INCHES.
 2. DIMENSIONAL TOLERANCES SHOULD BE ±1/8" UNLESS OTHERWISE SPECIFIED.
 3. COMPARTMENT PLATE SPACING SHOULD BE ±1/8" ON ORIGINAL EQUIPMENT.
 4. WHEN INSTALLING NOZZLE TIP MAINTAIN A 1/16" GAP ON EACH SIDE OF SOCKET, GRIND AS REQUIRED.

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

D-62-30030-17

NO.	DATE	REVISIONS	DESIGNED BY:	CHECKED BY:	APPROVED BY:
2	2/6/13	SUBMITTED FOR RECORD	JHH	DRR	
1	8/29/12	ADDED ITEM 17 FRONT VIEW	DRR	DG	
0	5/29/12	RELEASE FOR CONTRACT	JHH	DRR	

CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO.: 175120.65.3501

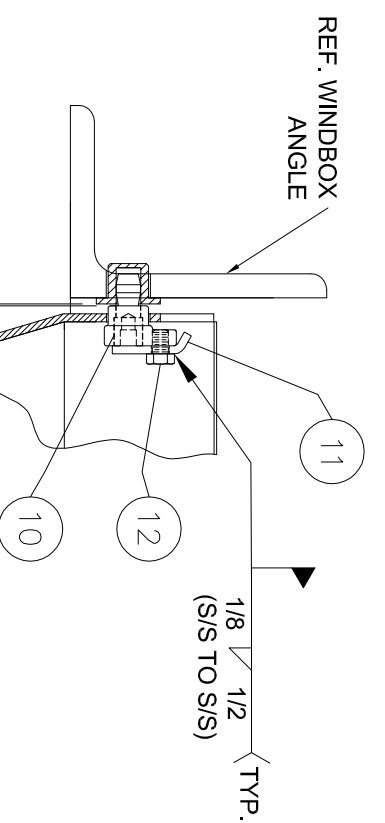


FUEL TECH, INC. 2700 BELLA VISTA PKWY. WARRENVILLE, IL 60555
HASTINGS UTILITIES CENTER UNIT 1
HASTINGS, NEBRASKA

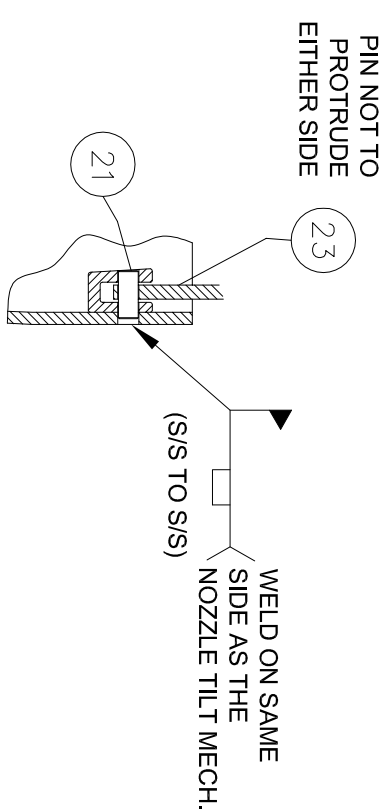
DATE: 5/23/2012
SCALE: N/A
DRAWING NO.: 896P-M01-017

Item	Qty	Drawing	Part No	Description	Material
1	12	D-64-29997	806429997302	TIP, ADJUSTABLE, THERMAL GUARD AIR NOZZLE	SA-240-309
10	88	B-64-00751	806400751001	NOZZLE PIVOT PIN (80) REQ'D. (8) SPARES	304 S/S
11	28	B-66-02253	806602253001	BENT PLATE (24) REQ'D. (4) SPARES	304 S/S
12	88		251001019906	HHCS, 1/2" -13 UNC X 3/4" LG (80) REQ'D. (8) SPARES	18-8 S/S
21	28	B-66-00935	806600935002	PIN, NOZZLE LINK, AIR (24) REQ'D. (4) SPARES	304 S/S
23	24	D-66-11432	806611432002	LINK, NOZZLE ADJUSTING ASSEMBLY	C/S
24	8	B-66-03430	806603430001	WASHER (4) REQ'D. (4) SPARES	LOW CARBON A566P
25	8		259613001702	COTTER PIN, 3/16" DIA X 1 1/2" LG (4) REQ'D. (4) SPARES	18-8 S/S

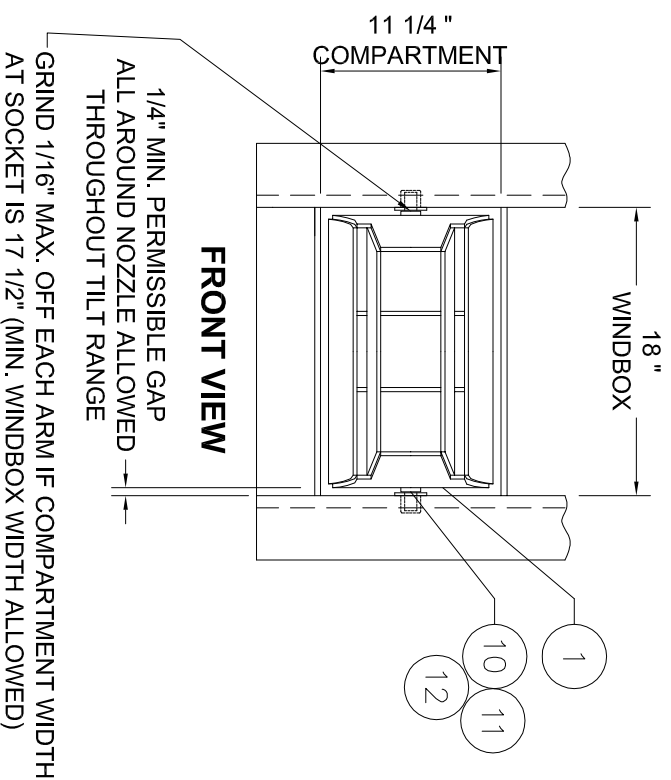
REFER TO DRAWING 896P-M01-003 FOR COMPLETE BILL OF MATERIAL



DETAIL "A" (C4)
(2) PLACES PER COMPARTMENT

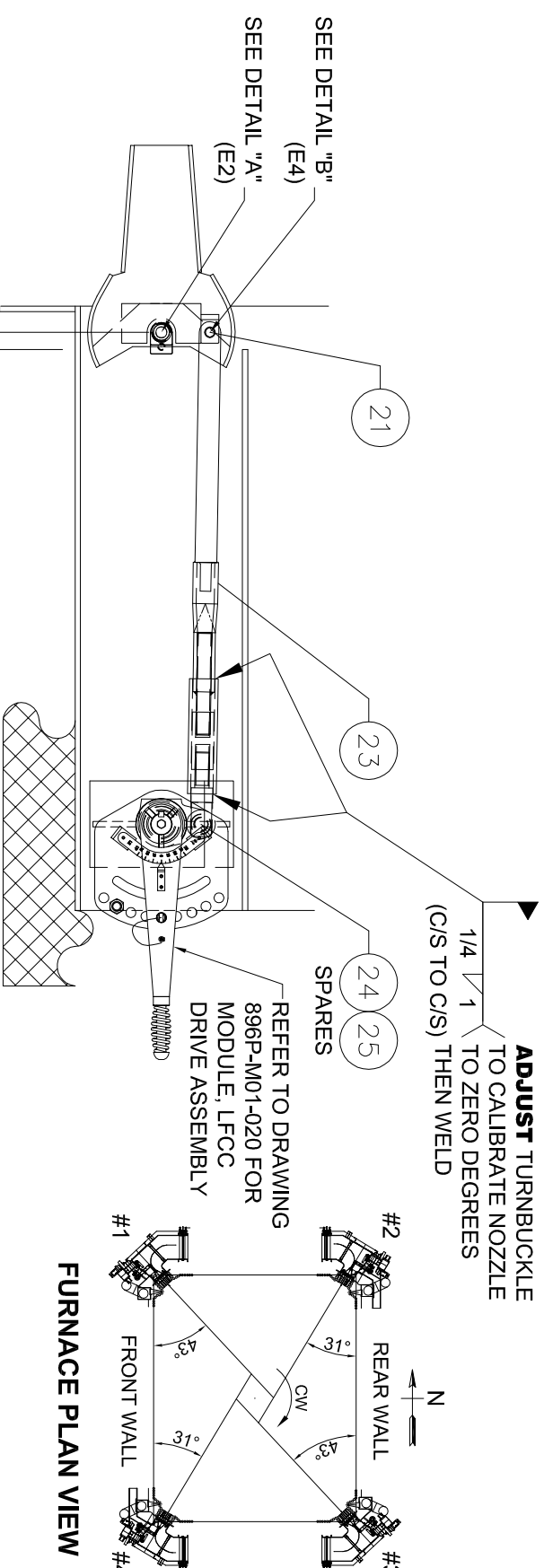


DETAIL "B" (C4)
(1) PLACE PER COMPARTMENT

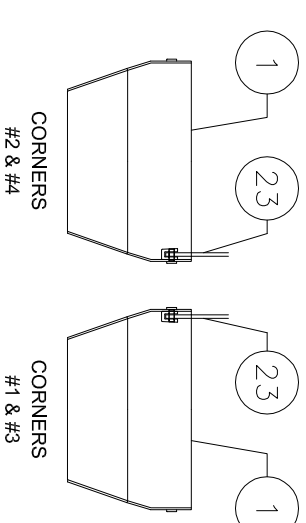


1/4" MIN. PERMISSIBLE GAP ALL AROUND NOZZLE ALLOWED THROUGHOUT TILT RANGE

GRIND 1/16" MAX. OFF EACH ARM IF COMPARTMENT WIDTH AT SOCKET IS 17 1/2" (MIN. WINDBOX WIDTH ALLOWED)



"AA" UNDERFIRE AIR COMPARTMENT
CORNERS #2 & #4 SHOWN
CORNERS #1 & #3 OPPOSITE
EDGE OF COMPARTMENT TO BE EXTENDED TO 3", AS SHOWN



- NOTES:**
1. DIMENSIONS ARE IN INCHES.
 2. DIMENSIONAL TOLERANCES SHOULD BE ±1/8" UNLESS OTHERWISE SPECIFIED.
 3. COMPARTMENT PLATE SPACING SHOULD BE ±1/8" ON ORIGINAL EQUIPMENT.
 4. WHEN INSTALLING NOZZLE TIP MAINTAIN A 1/16" GAP ON EACH SIDE OF SOCKET, GRIND AS REQUIRED.

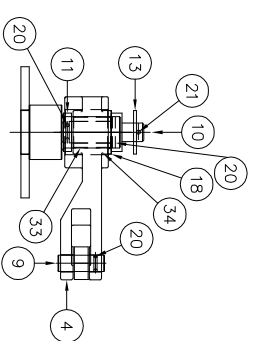
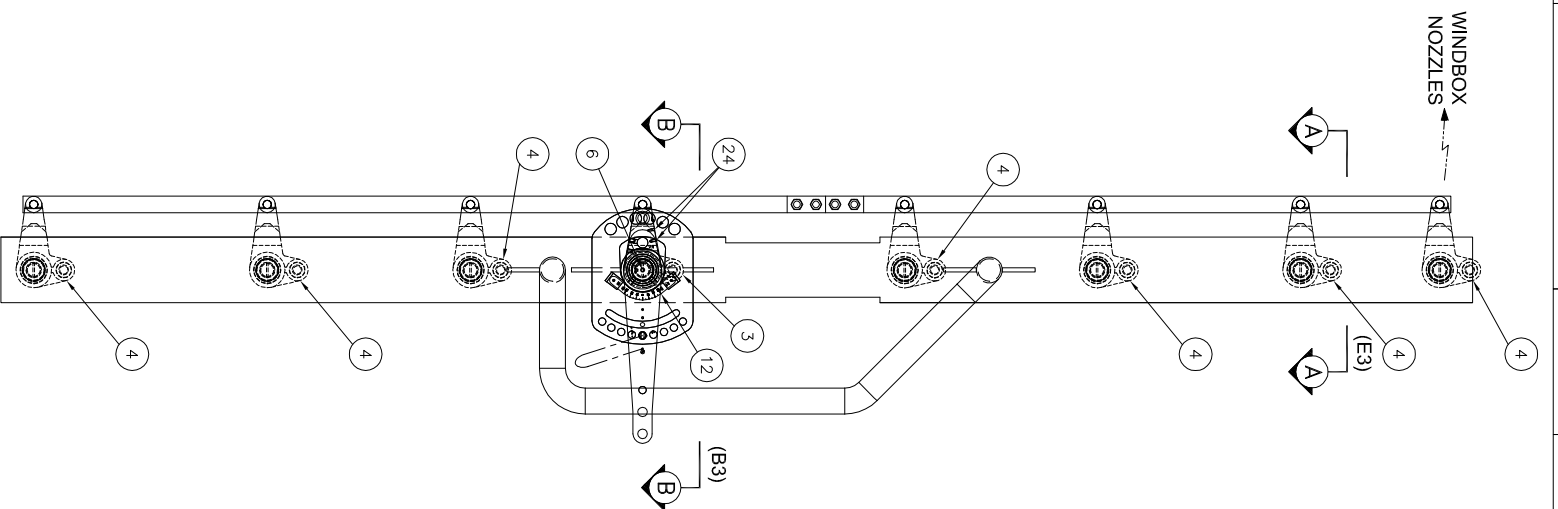
DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

D-62-30030-18

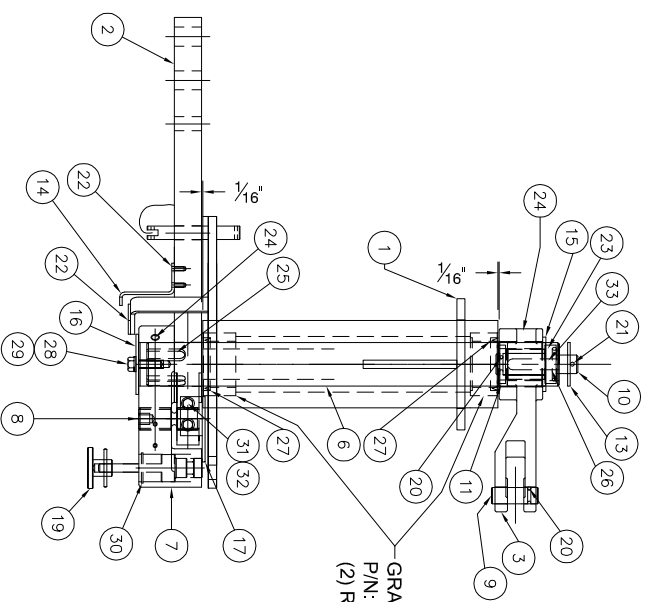
NO.	DATE	REVISIONS	BY	CHECKED BY
1	2/6/13	SUBMITTED FOR RECORD	JHH	DRR
0	5/29/12	RELEASE FOR CONTRACT	JHH	DRR

CONTRACT NAME: LOW NOX BURNERS		APPROVED BY:
CONTRACT NO.: 175120.65.3501		DESIGNED BY:
FUEL TECH, INC. 2801 BELLA VISTA PKWY, WARRENVILLE, IL 60555		DRAWN BY: JHH
HASTINGS UTILITIES CENTER UNIT 1		CHECKED BY: DRR
HASTINGS, NEBRASKA		DATE: 5/22/2012
"AA" UNDERFIRE AIR - 11 1/4" COMPARTMENT		SCALE: N/A
DRAWN BY: JHH		SIZE: 0
CHECKED BY: DRR		DRAWING NO: 896P-M01-018

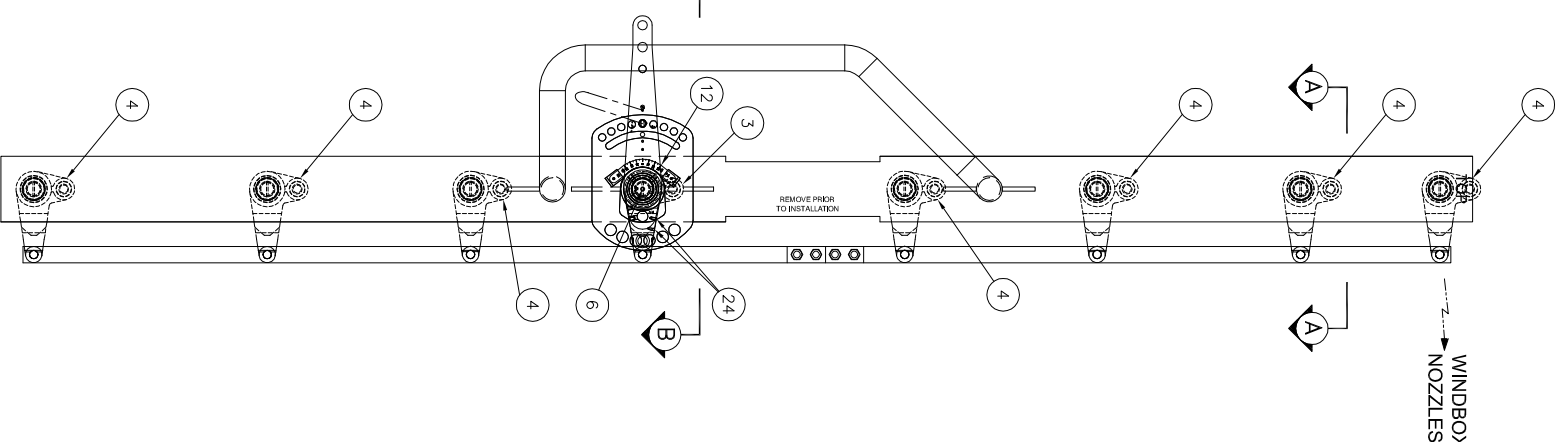
ITEM	PART DESCRIPTION	-001 (LEFT)	-002 (RIGHT)
1	MODULE TILT DRIVE WELDMENT	806630055001	806630055002
3	DIRECT LEVER ASSY	806601728013	806601728014
4	INDIRECT LEVER ASSY	806601728011	806601728012
6	DRIVE SHAFT	806630056001	806630056002
12	INDICATOR PLATE	806601315001	806601315002



SECTION A-A (E1 - E2)
INDIRECT LEVER LOCATION
(RIGHT HAND COMPONENTS SHOWN)
SCALE: X2



SECTION B-B (C1 - C2)
DIRECT LEVER LOCATION
(RIGHT HAND COMPONENTS SHOWN)
SCALE: X2



RIGHT HAND ASSEMBLY

RV P/N: 806630057002

Item	Qty	Drawing	Part No	Description	Material
1	1	D-66-30055	SEE TABLE	MODULE WELDMENT, TILT-DRIVE ASSEMBLY	C/S
2	1	B-66-03778	806603778001	LEVER, TILT DRIVE	C/S
3	1	D-66-01728	SEE TABLE	LEVER, DIRECT MACHINING	CAST STEEL 1020
4	7	D-66-01728	SEE TABLE	LEVER, INDIRECT MACHINING	CAST STEEL 1020
5	1	B-66-30266	806630266001	BAR, VERTICLE CONNECTING	C/S
6	1	B-66-30056	SEE TABLE	SHAFT, DRIVE	C/S
7	1	B-66-03505	806603505001	LEVER, DRIVE	C/S
8	1	B-66-02612	806602612001	DRIVE LEVER SHEAR PIN	1045-CF
9	8	B-66-01237	806601237001	DRIVE LEVER PIN	1018 CRS
10	8	B-66-03429	806603429001	PIVOT PIN	304 S/S
11	8	B-66-00948	806600948001	COLLAR	1018
12	1	B-66-01315	SEE TABLE	INDICATOR PLATE	304 S/S
13	8	B-66-03430	806603430001	WASHER	LOW CARBON A569
14	1	B-66-01889	806601889001	INDICATOR	SA-240-304
15	1	B-66-02448	806602448001	KEEPER PLATE, INNER	C/S
16	1	B-66-02450	806602450001	KEEPER PLATE, OUTER	LOW CARBON A569
17	1	B-66-03390	806603390001	SPRING PLUNGER RETAINING CLIP	C/S
18	7	B-66-01624	806601624001	WASHER (SPECIAL)	C/S
19	1	B-66-03432	806603432001	PLUNGER ASSEMBLY	C/S
20	23	259610001502	259610001502	COTTER PIN, 1/8" DIA x 2 1/2" LG	18-8 S/S
21	8	259613001702	259613001702	COTTER PIN, 3/16" DIA x 1 1/2" LG	18-8 S/S
22	4	251208002602	251208002602	RHMS, PHLP, 10-32 UNF x 1/4" LG	18-8 S/S
23	1	259613001202	259613001202	COTTER PIN, 3/16" DIA x 3" LG	18-8 S/S
24	3	251501003206	251501003206	SHSS, CUP POINT, 3/8"-16 UNC x 3/4" LG	ALLOY STL
25	2	255312001101	255312001101	KEY STOCK, UNDERSIZE, 1/2" SQ X 1 3/8" LG	C1018
26	2	255312001101	255312001101	KEY STOCK, UNDERSIZE, 1/2" SQ X 1 1/2" LG	C1018
27	2	561105001370	561105001370	U-SEALS	EKONOL
28	1	251001016806	251001016806	HHCS, 3/8"-16 UNC X 3/4" LG	18-8 S/S
29	1	255614001303	255614001303	LOCK WASHER (SPLT), 3/8"	18-8 S/S
30	1	259511001403	259511001403	RETAINING RING, INTERNAL	C/S ZP
31	2	251001050302	251001050302	HHCS, 5/16-18 UNC x 1/2" LG	C/S GR 5
32	2	255612001302	255612001302	LOCK WASHER (SPLT), 5/16"	C/S
33	8	B-66-02630	806602630001	BUSHING	303 S/S
34	7	B-66-02630	806602630002	BUSHING	303 S/S

REFER TO DRAWING 896P-M01-003 FOR COMPLETE BILL OF MATERIAL

- NOTES:**
1. PAINT: (1) COAT WELDABLE RED OXIDE PRIMER.
 2. STENCIL: "RV" AND "P/N" MINIMUM 1/2" HIGH LETTERS.
 3. ALL METAL TO METAL MECHANICAL JOINTS TO BE SPRAYED WITH DRY MOLY FILM LUBRICANT P/N: 651112001001.

CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO.: 175120.65.3501



FUEL TECH, INC. 2701 BELLA VISTA PKWY, WARRENVILLE, IL 60555
HASTINGS UTILITIES CENTER UNIT 1
HASTINGS, NEBRASKA

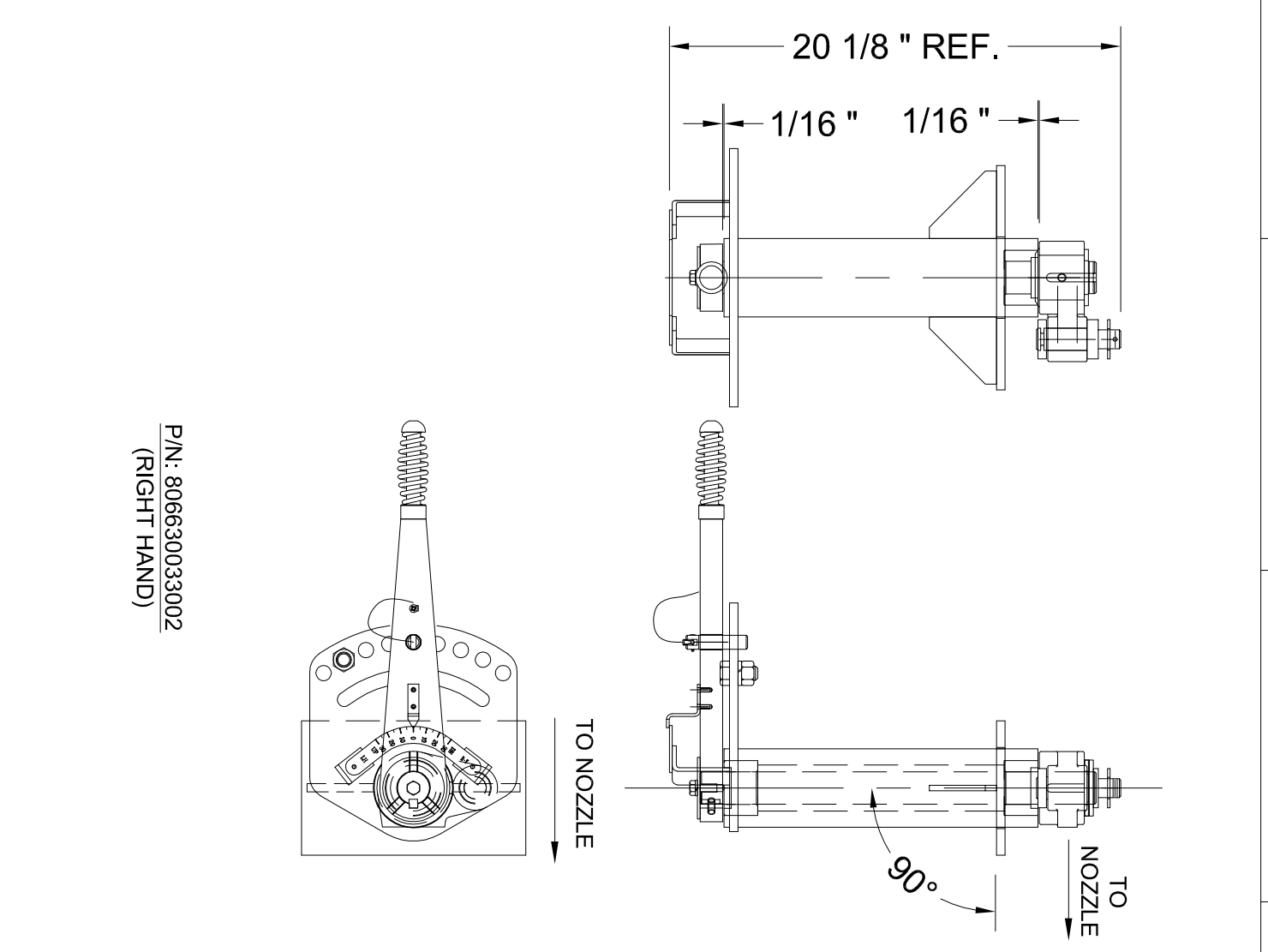
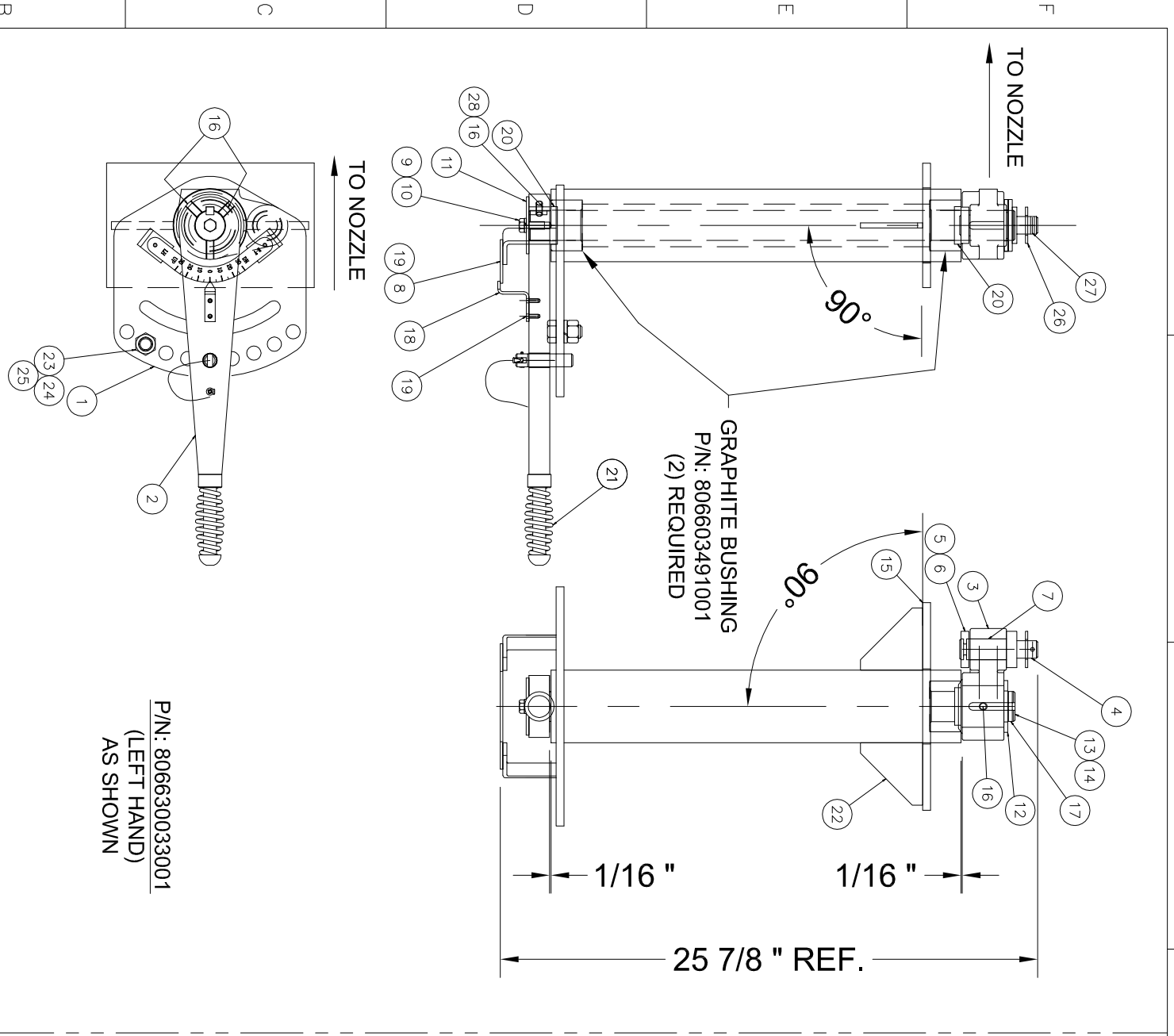
NO.	DATE	REVISIONS	DESIGNED BY:	CHECKED BY:	APPROVED BY:
1	2/6/13	SUBMITTED FOR RECORD	JHH	DRR	
0	5/29/12	RELEASE FOR CONTRACT	JHH	DRR	

D-62-30030-19

LEFT HAND ASSEMBLY

RV P/N: 806630057001

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.



Item	Qty	Drawing	Part No.	Description	Material
1	1	B-66-30201	806629542001	HOUSING BEARING ASSEMBLY	CAST STEEL 1020
2	1	B-66-29542	806629542001	LEVER DRIVE ASSEMBLY	304 S/S
3	1	B-66-05602	SEE TABLE	LEVER DIRECT CUT OFF	304 S/S
4	1	B-66-03429	806600429001	PIVOT PIN	1018
5	1	B-66-00948	806600948001	COLLAR	18-8 S/S
6	1	B-66-02630	806602630001	COTTER PIN, 1/8" DIA X 2 1/2" LG	303 S/S
7	1	B-66-02630	806602630001	BUSHING	304 S/S
8	1	B-66-02630	806602630001	INDICATOR PLATE	18-8 S/S
9	1	251001016806	HHCS, 3/8"-16 UNC X 3/4" LG		18-8 S/S
10	1	255614001303	LOCK WASHER (SPHL), 3/8"		LOW CARBON A569
11	1	B-66-02460	806602460001	KEEPLER PLATE, OUTER	C/S
12	1	B-66-01624	806601624001	WASHER (SPECIAL)	C/S
13	1	B-66-04009	SEE TABLE	SHAFT DRIVE	18-8 S/S
14	1	255311001002	KEY STOCK, UNDERSIZE, 3/8" SQ X 1 1/2" LG		5A-36
15	1	1010P000L018	PLATE, 3/8" X 6" X 10" LG		ALLOY STL
16	3	251501002008	SHSS, CLIP POINT, 3/8"-16 UNC X 3/4" LG		18-8 S/S
17	1	259613201602	COTTER PIN, 3/16" DIA X 2 1/2" LG		5A-240-304
18	1	B-66-14872	806614872001	INDICATOR	18-8 S/S
19	4	251206002602	RHMS, PHLP, 10-32 UNF X 1/4" LG		EKONOL
20	2	561105001570	U-SEAL		C/S
21	1	B-66-00910	806600910001	HANDLE ASSEMBLY	5A-36
22	2	1010P000H018	PLATE, 1/4" X 3" X 3" LG		18-8 S/S
23	1	251001023106	HHCS, 5/8"-11 UNC X 1 1/4" LG		18-8 S/S
24	1	255010005603	HEX NUT, 5/8"-11 UNC		18-8 S/S
25	1	255619001203	LOCK WASHER (SPHL), 5/8"		18-8 S/S
26	1	B-66-03430	806603430001	WASHER	LOW CARBON A569
27	1	259613201702	COTTER PIN, 3/16" DIA X 1 1/2" LG		18-8 S/S
28	1	255311001002	KEY STOCK, UNDERSIZE, 3/8" SQ X 1 1/2" LG		18-8 S/S

REFER TO DRAWING 896P-M01-003 FOR COMPLETE BILL OF MATERIAL

P/N: 806630033001
(LEFT HAND)
AS SHOWN

P/N: 806630033002
(RIGHT HAND)

- NOTES:**
1. PAINT: (1) ONE COAT WELDABLE RED OXIDE PRIMER.
 2. STENCIL: "RV" & "P/N" MIN. 1/2" HIGH LETTERS.
 3. ALL WELD WIRE ER70S-6 OR E71T-1.
 4. ALL METAL TO METAL MECHANICAL JOINTS TO BE SPRAYED WITH DRY MOLY FILM LUBRICANT; R-V P/N: 651112001001.

ASSEMBLY P/N	CORNER	ITEM 1	ITEM 3	ITEM 8	ITEM 13
806630033002	#1 & #3	806630201001	806605802002	806601315002	806604009011
806630033001	#2 & #4	806630201002	806605802001	806601315001	806604009012

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

NO.	DATE	REVISIONS	BY	CHECKED	DESCRIPTION
1	2/6/13	SUBMITTED FOR RECORD	JHH	DRR	HASTINGS OUTLET ENTER UNIT 1
0	5/29/12	RELEASE FOR CONTRACT	JHH	DRR	HASTINGS, NEBRASKA

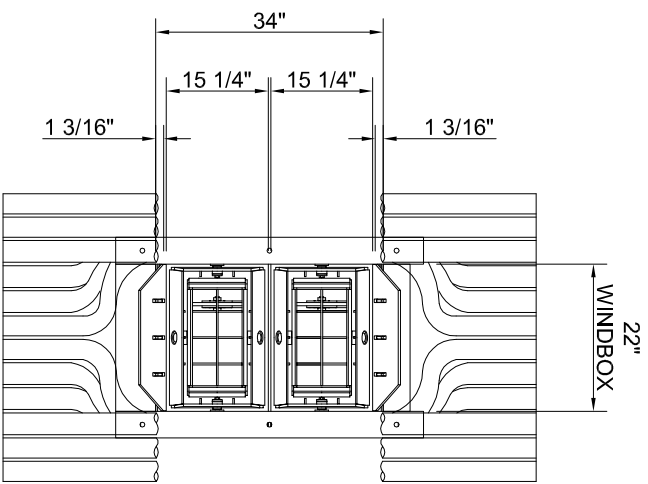
CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO.: 175120.65.3301



APPROVED BY: _____
DESIGNED BY: _____
DRAWN BY: JHH
CHECKED BY: DRR
DATE: 5/23/2012
SCALE: N/A
SIZE: 0

A 1 2 3 4 5 6 7 8

SOFA WINDBOX



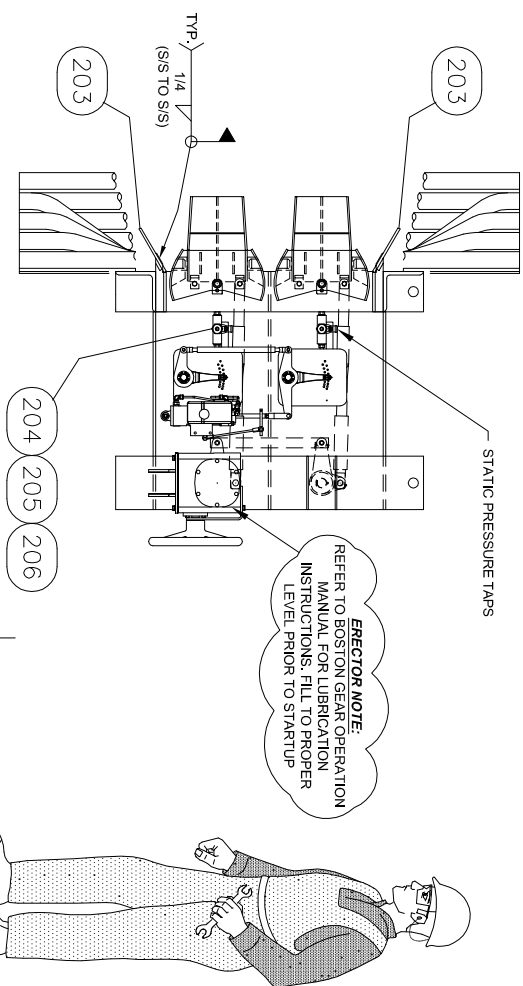
UPPER SOFA
ELEV. 1981'-6"

LOWER SOFA

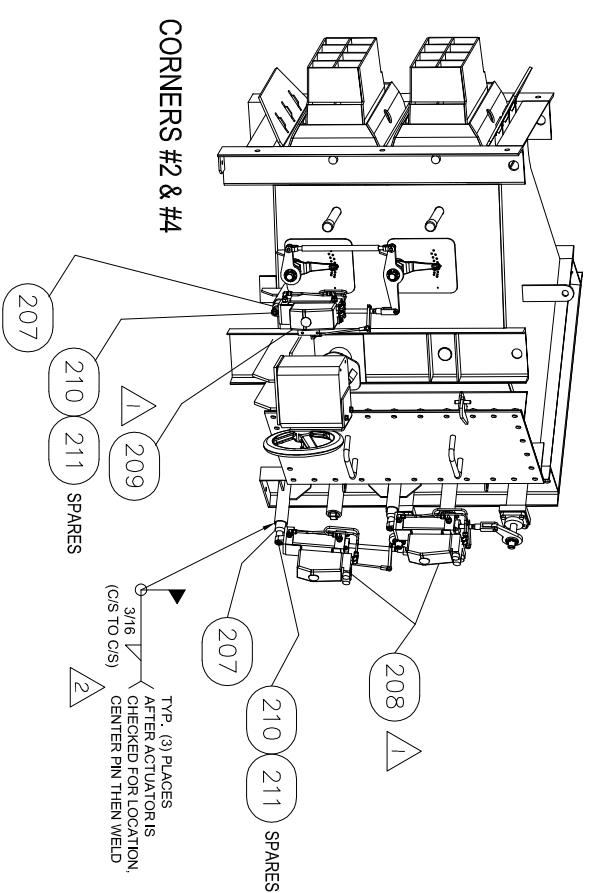
ELEVATION FURNACE VIEW
CORNERS #2 & #4 AS SHOWN
CORNERS #1 & #3 OPPOSITE

ELEVATION SIDE VIEW
CORNERS #2 & #4 AS SHOWN
CORNERS #1 & #3 OPPOSITE

ELEV. 1978'-0"
ALL ELEVATIONS INDICATED ARE TO TOP OF GRATING



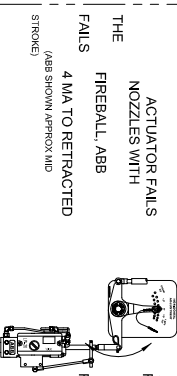
CORNERS #2 & #4



NOZZLE HORIZONTAL ADJUSTMENT

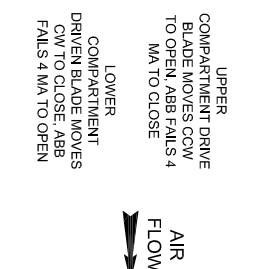


CORNERS #1 & #3

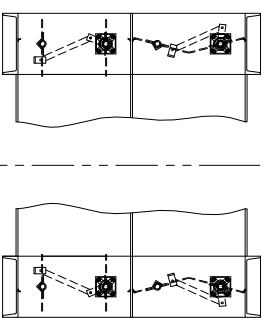


CORNERS #2 & #4

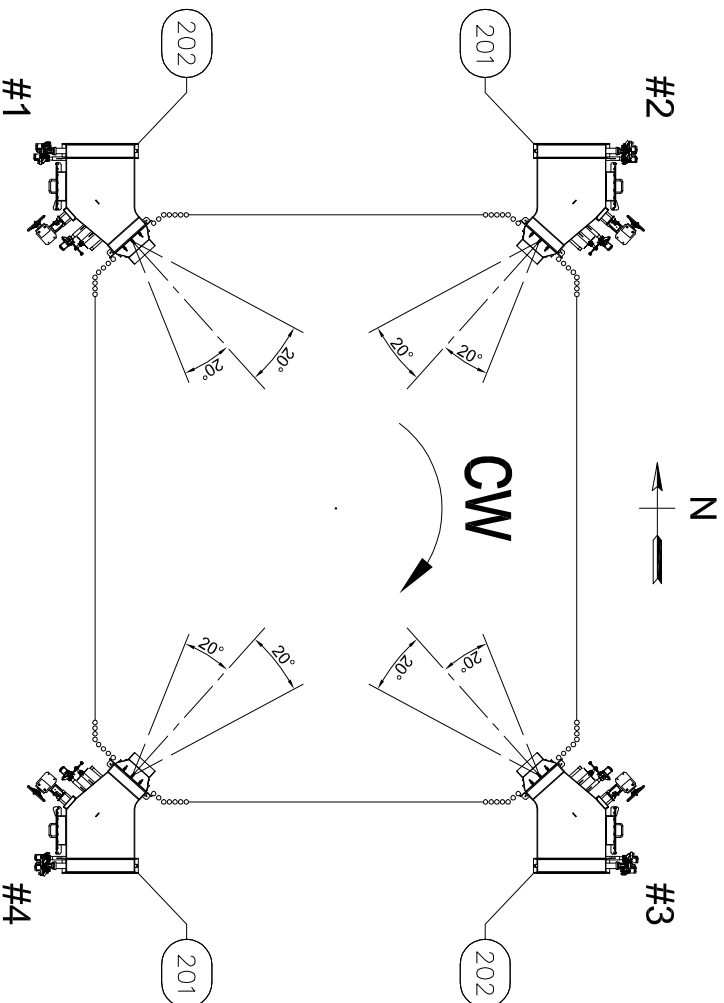
DAMPER BOX



CORNERS #1 & #3

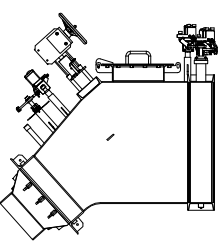


CORNERS #2 & #4

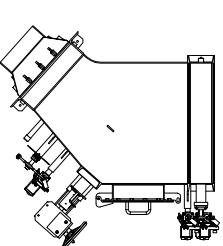


FURNACE PLAN VIEW

PLAN VIEW
CORNERS #1 & #3 OPPOSITE



PLAN VIEW
CORNERS #2 & #4 AS SHOWN



- REFERENCE DRAWINGS:**
- 896P-M01-001 GENERAL EQUIPMENT ARRANGEMENT
 - 896P-M02-002 SOFA ASSEMBLY - SHEET 1 OF 2
 - 896P-M02-003 SOFA ASSEMBLY - SHEET 2 OF 2
- NOTES:**
1. ALL DIMENSIONS ARE IN INCHES.
 2. DIMENSION TOLERANCES SHOULD BE ±1/4" UNLESS OTHERWISE SPECIFIED.
 3. ALL EQUIPMENT INSTALLED SHOULD BE HELD TO ±1/8".
 4. ACTUATOR FAIL POSITIONS ON THE "CONDITION" LOSS OF CONTROL SIGNAL.
 5. ITEMS NOTED AS SPARES INDICATE ITEMS THAT ARE SHIPPED ASSEMBLED AND SPARES HAVE BEEN SHIPPED LOOSE.

Bill of Material - SOFA WINDBOX

Item	Qty	Drawing	Part No.	Description	Material	Dimensions (in)	Weight (Lbs)
201	2	D-62-30156	809630156001	SOFA ASSEMBLY CORNERS #2 & #4	C/S	46 x 65 x 69	1700
202	2	D-62-30156	809630156002	SOFA ASSEMBLY CORNERS #1 & #3	C/S	46 x 65 x 69	1700
203	8	B-62-30106	809630106001	AIR REFLECTOR	309 S/S	3 x 8 x 22	
204	8		571312006704	VALVE BALL 1"	C/S		
205	8		201011017810	BUSHING, MFT X FPI, 1" X 3/8"	C/S		
206	8		231319001704	BAR	1018 CRS	2 x 2 x 8	
207	12	B-62-02389	806602389002	PIVOT PIN - ABB POSITIONER ASSEMBLY			
208	8	581012002203	581012002203	AABB LP-108A 10000 W TZO C POSITIONER & FILTER/REGULATOR			
209	4	581014002803	581014002803	AABB LP-208A 10000 W TZO C POSITIONER & FILTER/REGULATOR			
210	10	2589010001403	2589010001403	FLAT WASHER, 1/2" (50APRS)	C/S		
211	10	259912001303	259912001303	RETAINING RING, E STYLE, FOR 1/2" DIA. SHAFT (SPARES)	C/S		

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

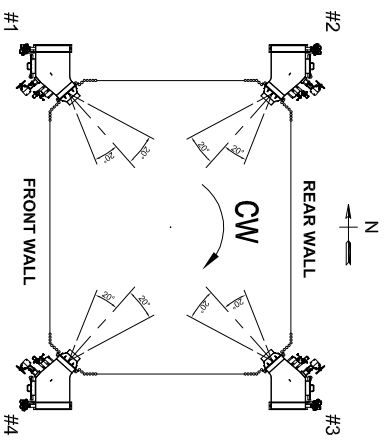
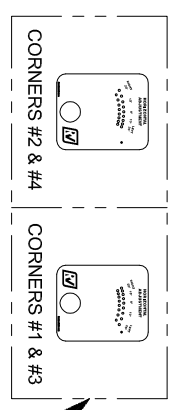
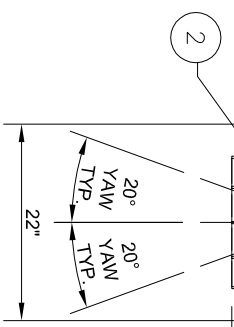
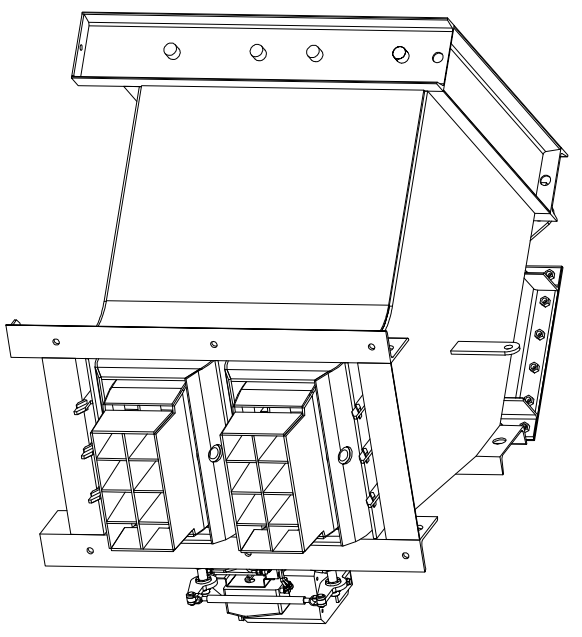
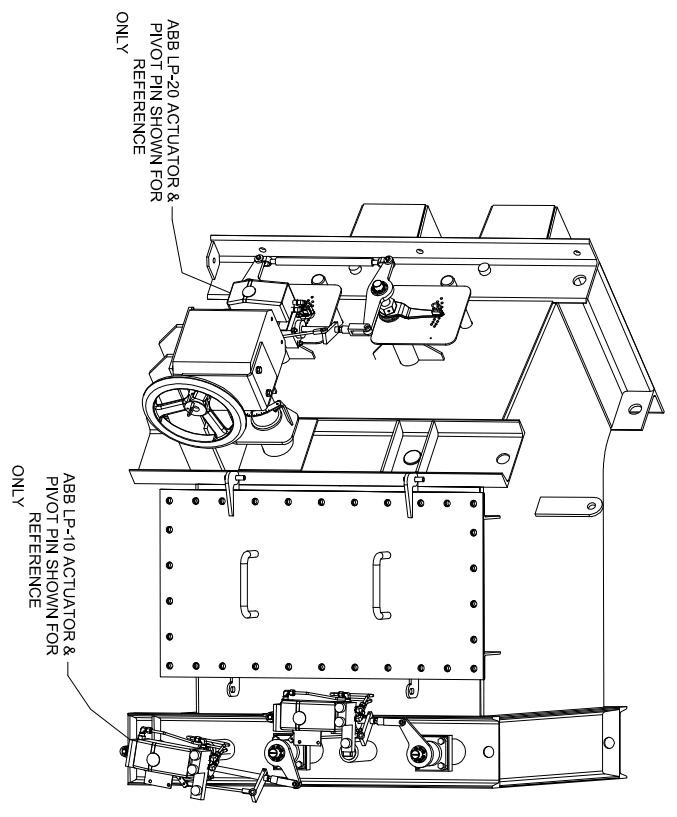
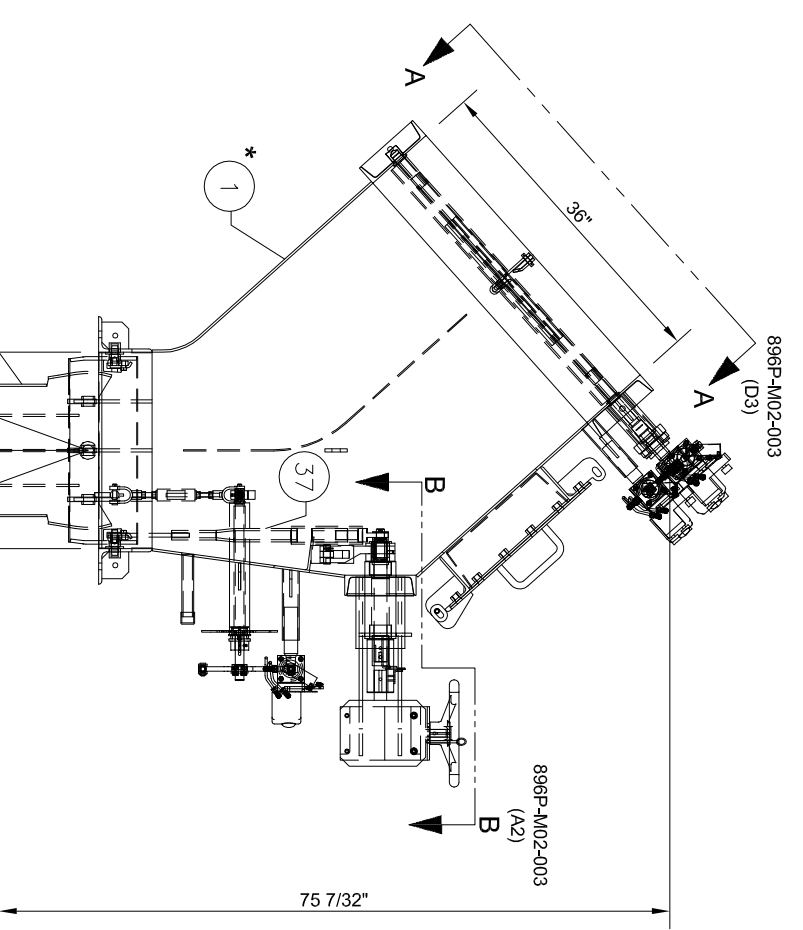
D-62-30030-21

NO.	DATE	REVISIONS	DRWN BY	CHECKED BY	APPROVED BY:
3	2/6/13	SUBMITTED FOR RECORD	JHH	DRR	
2	8/29/12	ADDED WELD FOR ITEM 208 & 209	DRR	DG	
1	5/29/12	ITEMS 208 & 209 QUANTITY CHANGED	JHH	DRR	
0	4/26/12	RELEASE FOR CONTRACT	JHH	DG	
A	4/2/12	ISSUE FOR REVIEW	JHH	DRR	

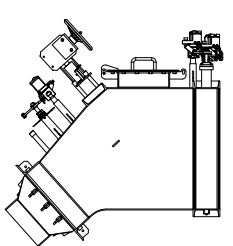


CONTRACT NAME: LOW NOX BURNERS
CONTRACT NO.: 175120.65.3301

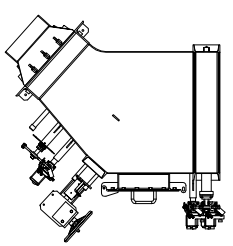
APPROVED BY:
DESIGNED BY:
DRAWN BY: JHH
CHECKED BY: DRR
DATE: 4/2/2012
SCALE: N/A
SIZE: D



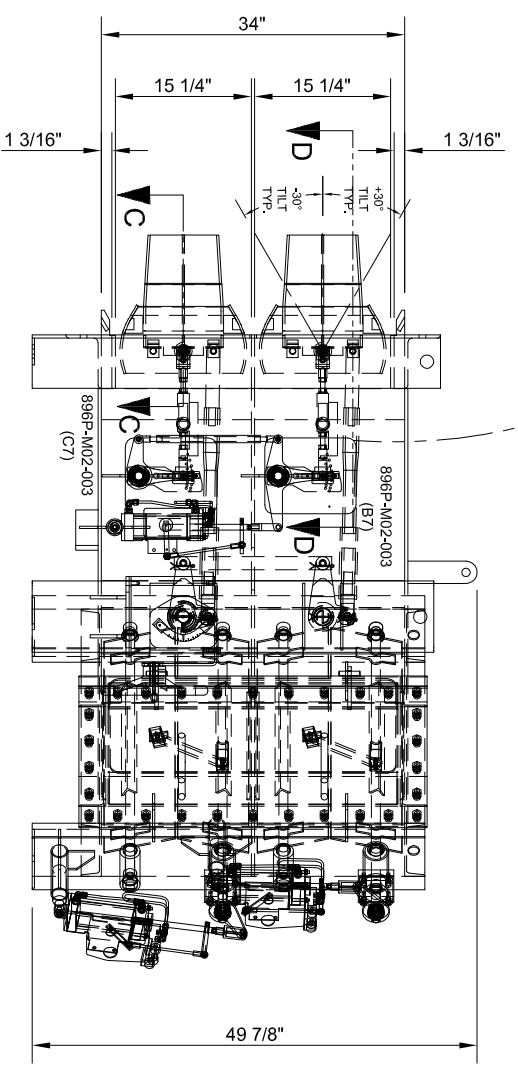
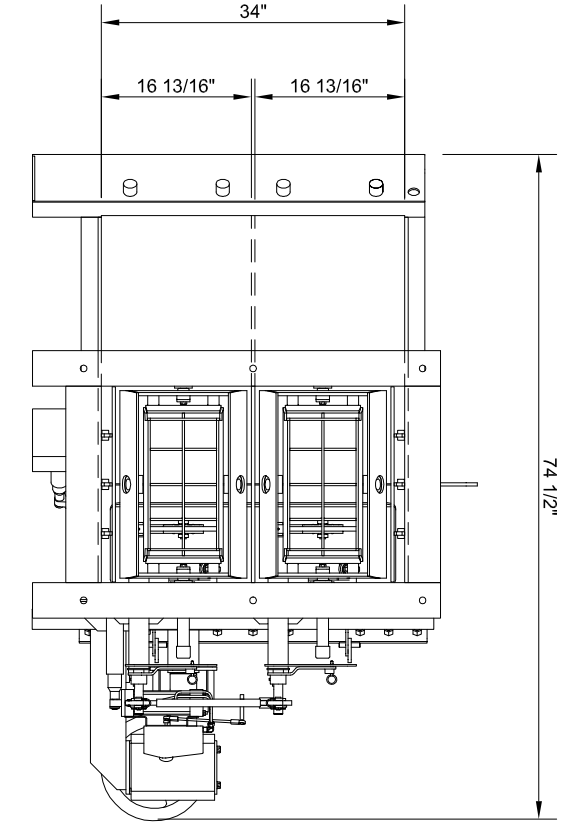
FURNACE PLAN VIEW



**PLAN VIEW
CORNERS #1 & #3 OPPOSITE
P/N: 806630156002**



**PLAN VIEW
CORNERS #2 & #4 AS SHOWN
P/N: 806630156001**



REFERENCE DRAWINGS:
 896P-M02-001 SOFA EQUIPMENT ARRANGEMENT AND BILL OF MATERIAL
 896P-M02-003 SOFA ASSEMBLY - SHEET 2 OF 2

- NOTES:**
1. STENCIL: "R-V", "P/N" ASSEMBLED WEIGHT & TAG NUMBER WITH 1" MIN. HIGH TEXT.
 2. PAINT ALL CARBON STEEL (1) COAT WELDABLE RED OXIDE PRIMER.
 3. WELD SHIPPING STRAP TO EACH NOZZLE AND PAINT SAFETY YELLOW.
 4. ALL METAL MECHANICAL JOINTS TO BE SPRAYED WITH DRY MOLY-FILM LUBRICANT P/N: 651112001001.
 5. (*) DENOTES AN ITEM THAT CHANGES FROM AS SHOWN TO OPPOSITE HAND.

CONTRACT NAME: LOW NOX BURNERS
 CONTRACT NO.: 175120.65.3301

APPROVED BY:		DATE: 4/2/2012	
DESIGNED BY:		SCALE: N/A	
DRAWN BY: JHH		SIZE: D	
CHECKED BY: DRB		DRAWING NO.: 896P-M02-002	

NO.	DATE	REVISIONS	BY	CHECKED BY
1	2/6/13	SUBMITTED FOR RECORD	JHH	DRR
0	5/29/12	RELEASE FOR CONTRACT	JHH	DRR

D-62-30030-22

DESIGNS REPRESENTED ON THIS DRAWING ARE THE PROPERTY OF FUEL TECH. ALL RIGHTS ARE RESERVED. ANY USE OTHER THAN THAT DESCRIBED IN THE CUSTOMER CONTRACT REQUIRES WRITTEN PERMISSION.

