



Working Together for a
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BID SPECIFICATION PACKAGE

for

BOILER INSPECTION AND REPAIR SPRING 2021 OUTAGE

C 130062

Bid Opening Date/Time

Tuesday, February 23, 2021 at 2:15 p.m. (local time)
City of Grand Island, City Hall
100 East 1st Street, P.O. Box 1968
Grand Island, NE 68802-1968

Contact Information

Tylor Robinson
City of Grand Island – Utilities Department
Platte Generating Station
308/385-5496

Date issued: January 29, 2021

**ADVERTISEMENT TO BIDDERS
FOR
BOILER INSPECTION AND REPAIR - SPRING 2021 OUTAGE
FOR
CITY OF GRAND ISLAND, NEBRASKA**

Sealed bids for Boiler Inspection and Repair -Spring 2021 Outage will be received at the office of the City Clerk, 100 E. First Street, P.O. Box 1968, Grand Island, Nebraska 68802, until **Tuesday, February 23, 2021 at 2:15 p.m. local time**, FOB the City of Grand Island, freight prepaid. Bids will be publicly opened at this time in the Grand Island City Hall City Clerk's Office located on 1st floor of City Hall. **Submit an original and three copies if submitting by mail.** Bid package and any Addendas are also available on-line at www.grand-island.com under Business-Bids and Request for Proposals-Bid Calendar under the bid opening date. Bidding documents, plans and specifications for use in preparing bids may be downloaded from the QuestCDN website www.QuestCDN.com for a small fee. Submitting through QuestCDN requires one original document of the bid to be uploaded. **Bids received after the specified time will not be considered.**

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S.73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. Successful bidder shall maintain a drug free workplace policy. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

Each bidder shall submit with the bid a certified check, a cashiers check, or bid bond payable to the City of Grand Island in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the bidder and the entering into a contract within fifteen (15) days at the bid price if accepted by the City. **Your certified check, cashiers check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid.** Each envelope must be clearly marked indicating its contents. **Failure to submit the necessary qualifying information and correct number of copies in clearly marked and separate envelopes will result in your bid not being opened or considered.** Only surety companies authorized to do business in the State of Nebraska may issue bid bonds.

Bids will be evaluated by the Purchaser based on price, schedule, quality, adherence to schedule, plan and specifications, economy and efficiency of operation, experience and reputation of the bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The Purchaser reserves the right to reject any or all bids, to waive irregularities therein, and to accept whichever bid that may be in the best interest of the City, at its sole discretion.

No bidder may withdraw his/her bid for a period of thirty (30) days after date of bid opening.

RaNae Edwards, City Clerk

Advertised

(All bids must be submitted on this form)

BOILER INSPECTION AND REPAIR - SPRING 2021 OUTAGE
BID DATA FORM

CITY OF GRAND ISLAND
GRAND ISLAND, NE

The undersigned Bidder, having examined all specifications and other bidding documents, and all addenda thereto, and being acquainted with and fully understanding all conditions relative to the specified materials and equipment, hereby proposes to provide labor, equipment, materials and supervision on a time and material basis to support the inspection and repair of generator components and auxiliary equipment as needed during the Spring Outage 2021 at Platte Generating Station FOB the City of Grand Island, freight prepaid, at the following price:

<u>ITEM DESCRIPTION</u>	<u>EXTENDED COST</u>
Base Bid:	
Mobilization/Demobilization	\$ _____
Labor (T&M)	\$ _____
Applicable Sales tax*	\$ _____
Total Base Bid	\$ _____

Bidder Company Name Date

Company Address City State Zip

Print Name of Person Completing Bid Signature

Email: _____ Telephone No. _____

*** If bidder fails to include sales tax in their bid price or takes exception to including sales tax in their bid price, the City will add a 7.5% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due. The State of Nebraska Department of Revenue has determined that building cleaning and maintenance services are taxable on both materials and labor.**

Exceptions Noted - Bidder acknowledges there are *Exceptions* and/or *Clarifications* noted to the above bid, and those exceptions are fully explained on a separate sheet, clearly marked, and included with the Bid.

According to Nebraska Sales and Use Tax Requirements, Section 1-017, Contractors, check which option you have selected to file with the Nebraska Department of Revenue:

Nebraska law provides a sales and use tax exemption on contractor labor charges for the construction, repair, or annexation of any structure used for the generation, transmission, or distribution of electricity. Separately stated contractor labor would be exempt, all materials are taxable according to the contractor's option.

Option 1 (Section 1-017.05) _____ Option 2 (Section 1-017.06) _____ Option 3 (Section 1-017.07) _____

If the Nebraska sales and use tax election is not filed or noted above, the contractor will be treated as a retailer under Option 1 for sales and use tax purposes.

By checking this box, Bidder acknowledges the specified completion date of the project is **May 9, 2021**.

By checking this box, Bidder acknowledges that Addenda Number(s) _____ were received and considered in Bid preparation.

Note: If Bidder supplies individual unit pricing information as supplemental pricing to the base material and labor cost above, said individual pricing is proprietary information and should not be released under a public records request. The total base bid is not considered proprietary information and will be released pursuant to City Procurement Code.

Any exceptions the bidder wishes to take regarding the Owners specifications and/or contract documents must be submitted with the bid, and noted above under "Exceptions Noted". Time is of the essence in the evaluation of proposals, the execution of contract documents for the execution of the work. Submittal of proposals that include terms and conditions unacceptable to the Owner, or that lack the information and clarity required by these specifications may be subject to rejection at the sole discretion of the Owner.

CHECKLIST FOR BID SUBMISSION

FOR

BOILER INSPECTION AND REPAIR - SPRING 2021 OUTAGE

Bids must be received by the City Clerk before 2:15 p.m. on Tuesday, February 23, 2021.

The following items must be completed for your bid to be considered.

- Submittal of bid documents:
 - Option 1 – Mailing:** A signed original and three (3) copies of the bidding documents. Failure to submit the correct number of copies may result in your bid not being considered.
 - Note: Your certified check, cashiers check or bid bond should be clearly marked in a separate envelope attached to the signed original bid.
 - Option 2 – QuestCDN (online):** Purchase the bid specification through QuestCDN. Upload the signed original of the Bid Data Form, along with any supporting material required to meet the bid specification through QuestCDN. Upload your bid bond online through QuestCDN. *Bidders using Certified check or Cashiers' Check must mail said check to the office of the City Clerk no later than the scheduled bid opening date and time and clearly marked with the project name.*
- Bidders must complete and sign the Bid Data Form provided in these Documents. All blank spaces must be filled in. Bidders shall acknowledge receipt of any Addenda information on the Bid Data Form.
- A certified check, cashiers' check or bid bond in a separate envelope attached to the **outside of the envelope containing the original bid**. Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information in clearly marked and separate envelopes will result in your bid not being opened.
- Selection of Nebraska Sales Tax Option. If the Nebraska sales and use tax election is not filed or noted above, the Contractor will be treated as a retailer under Option 1 for sales and use tax purposes.
- A reference list of at least three (3) projects of similar scope and complexity including a description, name and phone contact.
- A summary of the experience of the Superintendent proposed for this project.
- A List of subcontractor's names and references.
- Copy of Contractor's ASME "R" Stamp.
- Firm lump sum pricing; firm unit pricing in case adjustments are necessary, and breakout of sales tax pricing.
- A proposed schedule and sample timesheet.
- A description of the standard terms and conditions which will be in effect during the project.
- Exceptions to the specification or Owner's Contract Document must be submitted with the bid and noted on the Bid Data Form as time is of the essence.
- Acknowledgment of Addenda Number(s) _____.

Please check off each item as completed to ensure compliance. If you have any questions, please feel free to contact our office prior to the bid opening date/time.

INSTRUCTIONS TO BIDDERS

1. GENERAL INFORMATION.

The following instructions outline the procedure for preparing and submitting Bids. Bidders must fulfill all requirements as specified in these Documents.

2. TYPE OF BID.

Bidders shall be required to submit prices for all items listed in the Bid Data Form.

3. PREPARATION OF BIDS.

Bidders shall use only the Bid Data Form provided in these Documents. All blank spaces in the Bid Data Form must be filled in, preferably in BLACK ink, in both words and figures where required. No changes to the wording or content of the forms is permitted. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures.

Prices stated shall be f.o.b. with freight and full insurance paid by Bidder, to the job site located in Grand Island, Nebraska.

The Bidder shall acknowledge receipt of all Addenda in the Bid Data Form. Bids received without acknowledgement or without the Addendum enclosed will be considered informal.

Individual unit pricing as listed on the Bid Data Form or supplied as supplemental information may be deemed proprietary information and not be released under a public records request. The total amount of the bid is not considered proprietary information and will be released pursuant to City Procurement Code.

4. SUBMISSION OF BIDS.

All Bids must be submitted intact with the correct number of copies no later than the time prescribed, at the place, and in the manner set forth in the ADVERTISEMENT FOR BIDS. Bids must be made on the Bid Data Form provided herein. Each Bid mailed must be submitted intact in a sealed envelope, so marked as to indicate its contents without being opened, and delivered in person or addressed and mailed in conformance with the instructions in the ADVERTISEMENT FOR BIDS.

5. BID SECURITY.

Bids must be accompanied by cash, a certified check, or cashier's check drawn on a bank which is insured by the Federal Deposit Insurance Corporation, or a bid bond issued by a Surety authorized to issue such bonds in the state where the Work is located, in the amount of 5 percent of the bid amount payable to OWNER. This bid security shall be given as a guarantee that the Bidder will not withdraw their Bid for a period of **thirty (30) days after** bid opening, and that if awarded the Contract, the successful Bidder will execute the attached Contract and furnish a properly executed Performance Bond and Payment Bond, each in the full amount of the Contract price, within the time specified.

The Attorney-in-Fact that executes this bond on behalf of the Surety must attach a notarized copy of his/her power of attorney as evidence of his/her authority to bind the Surety on the date of execution of the bond. Where State Statute requires, certification by a resident agent shall also be provided.

6. RETURN OF BID SECURITY.

Within fifteen (15) days after the award of the Contract, the OWNER will return the bid securities to all Bidders whose Bids are not to be further considered in awarding the Contract. All other retained bid securities will be held until the Contract has been finally executed, after which all bid securities, other than Bidders' bonds and guarantees which have been fortified, will be returned to the respective Bidders whose Bids they accompanied.

7. BASIS OF AWARD.

The award will be made by the OWNER on the basis of the Bid from the lowest responsive, responsible Bidder which, in the OWNER's sole and absolute judgment will best serve the interest of the OWNER. All Bids will be considered on the following basis:

Delivery time	Conformance with the terms of the Bid
Bid price	Documents
Cost of installation	
Suitability to project requirements	Responsibility and qualification of Bidder

The OWNER reserves the right to reject all Bids, or any Bid not in conformance with the intent of the Bid Documents, and to waive any informalities and irregularities in said Bids.

8. EXECUTION OF CONTRACT.

The successful Bidder shall, within fifteen (15) days after receiving notice of award, sign and deliver to the OWNER the Contract hereto attached together with the acceptable bonds as required in these Bid Documents. Within fifteen (15) days after receiving the signed Contract with acceptable bond(s) from the successful Bidder, the OWNER's authorized agent will sign the Contract. Signature by both parties constitutes execution of the Contract.

9. PERFORMANCE AND PAYMENT BONDS.

The successful Bidder shall file with the OWNER Performance and Payment Bonds in the full amount (100 percent) of the Contract price, as security for the faithful performance of the Contract and the payment of all persons supplying labor and materials for the Work under this Contract, and to cover all guarantees against defective workmanship or materials, or both, for a period of one (1) year after the date of final acceptance of the Work by the OWNER. The Surety furnishing these bonds shall have a record of service satisfactory to the OWNER, be authorized to do business in the State where the OWNER's project is located and shall be named on the current list of approved Surety Companies, acceptable on Federal bonds as published by the Audit Staff, Bureau of Accounts, U.S. Treasury Department.

The Attorney-in-Fact (Resident Agent) who executes these bonds on behalf of the Surety must attach a notarized copy of his/her power-of-attorney as evidence of his/her authority to bind the Surety on the date of execution of the bond.

10. TIME OF COMPLETION.

The time of completion of the Work to be performed under this Contract is the essence of the Contract. The time allowed for the completion of the Work is stated in the Bid Data Form.

11. GRATUITIES AND KICKBACKS.

City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefor. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

12. FISCAL YEAR.

The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

CONTRACT AGREEMENT

THIS AGREEMENT made and entered into by and between **[SUCCESSFUL BIDDER]**, hereinafter called the Contractor, and the **CITY OF GRAND ISLAND, NEBRASKA**, hereinafter called the City.

WITNESSETH:

THAT, WHEREAS, in accordance with law, the City has caused contract documents to be prepared and an advertisement calling for bids to be published for BOILER INSPECTION AND REPAIR - SPING 2021 OUTAGE; and

WHEREAS, the City, in the manner prescribed by law, has publicly opened, examined, and canvassed the bids submitted, and has determined the aforesaid Contractor to be the lowest responsive and responsible bidder, and has duly awarded to said Contractor a contract therefore, for the sum or sums named in the Contractor's bid, a copy thereof being attached to and made a part of this Contract;

NOW, THEREFORE, in consideration of the compensation to be paid to the Contractor and of the mutual agreements herein contained, the parties have agreed and hereby agree, the City for itself and its successors, and the Contractor for itself, himself/herself, or themselves, and its, his/her, or their successors, as follows:

ARTICLE I. That the following documents shall comprise the Contract, and shall together be referred to as the "Agreement" or the "Contract Documents";

1. This Contract Agreement.
2. City of Grand Island's Specification for this project.
3. **[NAME OF SUCCESSFUL BIDDER]** bid signed and dated **[DATE OF BID]**.

In the event of any conflict between the terms of the Contract Documents, the provisions of the document first listed shall prevail.

ARTICLE II. That the Contractor shall (a) furnish all tools, equipment, superintendence, transportation, and other construction materials, services and facilities; (b) furnish, as agent for the City, all materials, supplies and equipment specified and required to be incorporated in and form a permanent part of the completed work; (c) provide and perform all necessary labor; and (d) in a good substantial and workmanlike manner and in accordance with the requirements, stipulations, provisions, and conditions of the Contract documents as listed in the attached General Specifications, said documents forming the Contract and being as fully a part thereof as if repeated verbatim herein, perform, execute, construct and complete all work included in and covered by the City's official award of this Contract to the said Contractor, such award being based on the acceptance by the City of the Contractor's bid;

ARTICLE III. That the City shall pay to the Contractor for the performance of the work embraced in this Contract and the Contractor will accept as full compensation therefore the sum (subject to adjustment as provided by the Contract) of **[DOLLAR AMOUNT] (\$00.00)** for all services, materials, and work covered by and included in the Contract award and designated in the foregoing Article II; payments thereof to be made in cash or its equivalent in the manner provided in the General Specifications.

The total cost of the Contract includes:

Base Bid:

Mobilization/Demobilization	\$	_____
Labor (T&M)	\$	_____
Applicable Sales tax*	\$	_____
Total Base Bid	\$	_____

Contractor Option _____

The City of Grand Island, Nebraska operates on a fiscal year beginning October 1st and ending on the following September 30th. It is understood and agreed that any portion of this agreement which will be performed in a future fiscal year is contingent upon the City Council adopting budget statements and appropriations sufficient to fund such performance.

ARTICLE IV. The Contractor hereby agrees to act as agent for the City in purchasing materials and supplies for the City for this project. The City shall be obligated to the vendor of the materials and supplies for the purchase price, but the Contractor shall handle all payments hereunder on behalf of the City. The vendor shall make demand or claim for payment of the purchase price from the City by submitting an invoice to the Contractor. Title to all materials and supplies purchased hereunder shall vest in the City directly from the vendor. Regardless of the method of payment, title shall vest immediately in the City. The Contractor shall not acquire title to any materials and supplies incorporated into the project. All invoices shall bear the Contractor's name as agent for the City. This paragraph will apply only to these materials and supplies actually incorporated into and becoming a part of the finished product of the BOILER INSPECTION AND REPAIR-SPING 2021 OUTAGE.

ARTICLE V. That the Contractor shall start work as soon as possible after the Contract is signed and the required bonds and insurance are approved, and that the Contractor shall deliver the equipment, tools, supplies, and materials F.O.B. Platte Generating Station, and complete the work on or before **May 9, 2021.**

ARTICLE VI. The Contractor agrees to comply with all applicable State fair labor standards in the execution of this Contract as required by Section 73-102, R.R.S. 1943. The Contractor further agrees to comply with the provisions of Section 48-657, R.R.S. 1943, pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. During the performance of this Contract, the Contractor and all subcontractors agree not to discriminate in hiring or any other employment practice on the basis, of race, color, religion, sex, national origin, age or disability. The Contractor agrees to comply with all applicable Local, State and Federal rules and regulations. The Contractor agrees to maintain a drug-free workplace policy and will provide a copy of the policy to the City upon request. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

ARTICLE VII. Gratuities and kickbacks: City Code states that it is unethical for any person to offer, give, or agree to give any City employee or former City employee, or for any City

Contract #

Issued:

employee or former City employee to solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, or preparation of any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling, determination, claim or controversy, or other particular matter, pertaining to any program requirement or a contract or subcontract, or to any solicitation or proposal therefor. It shall be unethical for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.

[SUCCESSFUL BIDDER]

By _____ Date _____

Title _____

CITY OF GRAND ISLAND, NEBRASKA

By _____ Date _____
Mayor

Attest: _____

City Clerk

DRAFT

The Contract is in due form according to law and hereby approved.

Attorney for the City Date _____

REQUEST FOR BIDS - GENERAL SPECIFICATIONS

The Bid shall be in accordance with the following and with all attached BID DATA and DETAILED SPECIFICATIONS.

All prices are to be furnished and installed FOB, Grand Island, Nebraska. **All prices shall be firm, and shall include all sales and use taxes as lawfully assessed under laws and regulations of the State of Nebraska.** * If bidder fails to include sales tax in their bid price or takes exception to including sales tax in their bid price, the City will add a 7.5% figure to the bid price for evaluation purposes; however, the City will only pay actual sales tax due.

Mailed bids shall include the following on the **outside** of the mailing envelope: **“Boiler Inspection and Repair-Spring 2021 Outage”**. All bids submitted by mail must include **an original and three copies** of the bid. The bid specification and on-line bidding forms are also available at <http://www.grand-island.com/business/bids-and-request-for-proposals/bid-calendar> under the bid opening date and “Click here for bid document link” through QuestCDN for a fee. If submitting through QuestCDN, **one** original document of the bid is required to be uploaded. No verbal bids will be considered. All sealed bids are due no later than Tuesday, **February 23, 2021 at 2:15 p.m. local time.** to:

Mailing Address: City Clerk
City Hall
P. O. Box 1968
Grand Island, NE 68802-1968

Street Address: City Clerk
City Hall
100 E. First Street
Grand Island, NE 68801

Bids will be opened at this time in the City Hall City Clerk’s Office located on 1st floor of City Hall. Any bid received after the specified date will not be considered.

Bids will be evaluated by the Purchaser based on price, schedule, quality, adherence to schedule, plan and specifications, economy and efficiency of operation, experience and reputation of the bidder, ability, capacity, and skill of the bidder to perform contract required and adaptability of the particular items to the specific use intended.

The successful bidder will be required to comply with fair labor standards as required by Nebraska R.R.S.73-102 and comply with Nebraska R.R.S. 48-657 pertaining to contributions to the Unemployment Compensation Fund of the State of Nebraska. Contractor shall maintain a drug free workplace policy. Every public contractor and his, her or its subcontractors who are awarded a contract by the City for the physical performance of services within the State of Nebraska shall register with and use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska.

The equipment and materials must be new, the latest make or model, unless otherwise specified. Prior to approving the invoice for payment, the City reserves the right to thoroughly inspect and test the equipment to confirm compliance with specifications. Any equipment or material which does not meet the City's requirements will be returned at vendor's expense for correction. The invoice will be paid after approval at the next regularly scheduled City Council meeting and occurring after departmental approval of invoice; the City Council typically meets the second and fourth Tuesday of each month. Invoices must be received well in advance of Council date to allow evaluation and processing time.

Each bidder shall submit with the bid a certified check, a cashier's check, or bid bond payable to the City of Grand Island in an amount no less than five percent (5%) of the bid price which shall guarantee good faith on the part of the Bidder and the entering into a contract within fifteen (15) days at the bid price if accepted by the City. **Your certified check, cashier's check or bid bond must be submitted in a separate envelope attached to the outside of the envelope containing the bid.** Each envelope must be clearly marked indicating its contents. Failure to submit the necessary qualifying information and correct number of copies in clearly marked and separate envelopes will result in your bid not being opened or considered. Only surety companies authorized to do business in the State of Nebraska may issue bid bonds.

Successful bidder shall comply with the City's insurance requirements; performance and payment bonds are required for this project as outlined in the Detailed Specifications and Instructions to Bidders. All bids shall be valid for at least thirty (30) working days after the bid deadline for evaluation purposes.

All bids must be on the bid form and must be signed and dated to be accepted. If exceptions and/or clarifications are noted to the bid, those exceptions must be fully explained on a separate sheet, clearly marked, and included with the Bid. Any changes that are found made to the original bid specification, other than Owner generated Addendums, would result in your bid not being considered. Please contact Tylor Robinson at 308-385-5495, for questions concerning this specification.

BOILER INSPECTION AND REPAIR

Spring 2021 Outage Grand Island Utilities Department - Detailed Specification

1.0 PROJECT DESCRIPTION

1.1 Background

The Unit 1 steam generator at Platte Generating Station is a tangential fired, natural circulation, superheat/reheat, pulverized coal-fired boiler manufactured by ABB-CE (CE Contract No. 13477). The steam generator produces 765,000 lb/hr (MCR) of steam at 1000 F and 1800 psi which is delivered to a 100,000 kW steam turbine. The unit uses Powder River Basin Coal from various mines in the basin.

Steam generator auxiliary equipment includes a vertical rotor, Ljungstrom regenerative air heater (type 27-VI-90), a United Conveyor water impounded "W" type bottom ash storage hopper, and four CE-Raymond pulverizers (type 683 RS).

1.2 LOCATION

The Platte Generating Station is located at 1035 W. Wildwood Drive, two (2) miles south of Grand Island, Nebraska. The plant entrance is located two (2) miles south of U.S. Highway 34 and 1 ½ miles east of U.S. Highway 281.

1.3 CONTACT

Question regarding this specification may be directed to:

Tylor Robinson
Platte Generating Station
1035 W. Wildwood Dr.
Grand Island, NE 68801
Ph. (308) 385-5495
trobenson@giud.com

2.0 SCOPE

2.1 GENERAL

This work will generally consist of providing labor, equipment, materials and supervision on a time and material basis to support the inspection and repair of steam generator components and auxiliary's equipment as needed during the Platte Generating Station Spring 2021 Outage, currently scheduled for April 22, 2021 through May 9, 2021.

Such work may consist of:

- Hydro testing of the boiler with inspection for tube leaks
- Boiler tube repairs
- Boiler tube surface preparation for UT inspection
- Installation of tube shields
- Repair of boiler tube alignment attachments

- Weld repair of cracks in boiler plate steel
- Weld repair of cracks in flue gas ductwork
- Repair of Boiler Refractory

The Contractor shall cooperate with the Owner's representatives and other contractors on site in maintaining individual work areas, laydown and staging areas, break areas and parking areas as to minimize interference with one another's work efforts. The Contractor shall attend periodic joint scheduling meetings to enhance communications and coordination amongst the various Contractors on site.

The Owner anticipates locating tooling and equipment for boiler work under this specification on the ground level below the boiler inside the plant and throughout all levels of the main boiler and adjacent platforms. A staging and laydown area will be provided at the ground level immediately outside the southeast corner of the unit. A break area will be provided.

The City shall provide the materials mentioned, including all tubing, tube shields and clips, electrical power and electrical connections, and a drinking water source. The Owner shall provide temporary, portable restroom facilities.

The Contractor shall provide required hand tools, hoists, chain falls, cutting torches and gases, welding machines, welding leads and consumables, and all other equipment and materials necessary to completely perform the work.

2.2 BOILER INSPECTION

Routine inspections of furnace wall tubes, drum, and headers should be made during semi-annual outages.

During the inspection drums should be opened and hand hole plates removed from headers. The condition of the drum internals should be checked, and internal surfaces inspected for deposits. Tubes should be spot checked, and the tube ends inspected internally for deposits. Where required deposits should be removed, and headers, drums and tubes flushed out with clean water.

Furnace tubes should be examined externally for blistering, burning, corrosion, erosion and cracking. Close attention shall be paid to areas surrounding soot blowers as they are susceptible to erosion.

All Inspections shall be thorough and comprehensive. They shall be made by competent personnel, familiar with boiler operation and maintenance. A record of the inspection shall be kept in a uniform manner so that the results of any change can be compared with former conditions.

Inspections of tubes, as a result of tube failures or conditions expected to lead to failures, should be even more thorough.

2.2.1 Pressure Components

The Contractor shall perform inspections on the steam generators pressure components as soon as possible so that any problem areas discovered can be evaluated and repaired as required. Inspection process shall consist of but not be limited to:

- Apply a Hydrostatic test in accordance with plant procedures and Boiler Code requirements.

- A visual inspection of boiler tubing. Specifically identify soot blower and ash erosion damage in the 1st, 2nd, 3rd, and 4th tubes in from each soot blower to such extent as feasible.
- Conduct tube thickness testing on the tubes around each soot blower wall opening (four tests, one at each point of the compass) and on every unshielded tube along soot blower paths (one test, in the middle of the path unless a more polished area is observed), including the economizer but not including the horizontal superheater. Review the results with the City to identify any repairs needed immediately and document the results for the City in a report.
- Check elements for alignment and evidence of warping or bulging of unit tubing.

2.2.2 Non-Pressure Components

The Contractor shall complete inspections of the steam generators non-pressure components essential to performance and reliability. These duties shall include, but not be limited to:

- Check supports, spacers, alignment bars, and seal plates for proper location and condition.
- Inspect the refractory in all the nose arch, soot blower openings, observation doors, and man way doors.
- Inspect tube shield conditions and document tube shields that need replaced.
- Inspect the refractory and screens in the bottom ash hopper.
- Inspect the Penthouse and all dead air spaces for casing cracks.

2.2.3 Boiler Steam Drum

The contractor shall perform a thorough inspection of the boiler steam drum. The drum inspection shall consist of a visual inspection, checking the drum for corrosion, pitting, or solids carryover. The Contractor shall verify the condition and arrangement of the drum internals.

2.2.4 Soot Blower Inspection

The Contractor shall check for misalignment of the soot blowers, check the depth and travel of all wall blowers and adjust any soot blowers that are out of specification.

2.2.5 Deaerator

The Contractor shall perform routine visual and NDE inspections on the deaerator working components and vessels. Ensure that trays are securely held down and that spray nozzles have adequate tension and are not plugged. Verify that steam box doors swing freely and Look for cracks in the steam box.

2.2.6 Steam Air Heater

The Contractor shall pressure test and visually inspect the steam coil air heater for the existence of leaks in the tubes, headers, and connections, and for the accumulation of foreign matter on the finned surfaces.

2.3 BOILER REPAIRS

All repairs shall be done by competent and qualified personnel and all welding shall be in accordance with applicable codes and standards relating to repairing power boilers and pressure vessels.

The Contractor will receive approval from the City's representative for these repairs prior to starting, shall track all repairs and hours, and report status and hours to the City representative daily. Fully document before and after repairs.

2.3.1 Pressure Components

Contractor shall review all recommendations for pressure part repairs with the Owner's Representative. Those repairs authorized by the Owner will be performed by the Contractor and are expected to generally consist of pad welding and partial tube replacements. Those repairs authorized by the Owner will be performed by the Contractor who shall track all repairs and hours, and report status and hours to the City representative daily, fully document before and after repairs.

2.3.2 Non-Pressure Components

Review all repair recommendations with the Owner's representative to determine scopes of repair based on inspection results. Contractor shall perform all repairs authorized by the Owner, including but not limited to:

1. Replace tube shields that are missing. Tube shields will be furnished by the City.
2. Repair damaged alignment bars.
3. Repair dislodged spacer bars.
4. Repair casing cracks in the penthouse and dead air spaces.
5. All other non-pressure component repairs identified and authorized by the Owner.

2.3.3 Boiler Refractory

The contractor shall repair boiler refractory in sootblower openings, observation doors, and man way doors. The Contractor shall repair the refractory dam at the upper end of the nose arch, and in the bottom ash hoppers. Refractory shall be furnished by the contractor.

2.3.4 Steam Air Heater

The Contractor shall isolate and remove faulty sections of the steam coil air heater and transport faulty sections to the onsite warehouse for shipment to a repair facility.

2.4 REPORT

The Contractor shall produce a report that in detail describes findings during the inspection of the steam generator. No later than 30 days after project completion, the Contractor shall submit two (2) hard copies and (1) one .pdf file of the report. The Contractor shall document in the report repairs that were completed during the Spring 2021 Outage and describe in detail recommended future repairs.

3.0 BIDDING

The Contractor shall include in his bid a lump sum not-to-exceed estimate of all costs associated with the scope of work herein. This includes, but is not limited to all expenses, equipment, labor, mobilization and demobilization, and subcontractors. Please ensure that all bids contain the following as a minimum:

Bids will be evaluated by the Owner based on price, schedule, quality, economy of operation, experience of contractor, and adherence to specification. The primary evaluation factor will be the lump sum price. The owner reserves the right to reject any or all bids or waive informalities and to accept whichever bid that may be in the best interest of owner, at its sole discretion. **Bids must be received by 2:15 P.M. Tuesday, February 23rd, 2021.**

Bidder is solely responsible for obtaining any clarifications to this specification as may be required for the Bidder to submit an accurate and complete bid proposal.

3.1 MOBILIZATION

The bid shall include a firm price for all Mobilization, Demobilization, Tools, Equipment, Supplies, PPE, Expendables, Supervision, and Project Management, Overhead, Fixed Costs, and Expenses.

3.2 SUPERINTENDENT

The bid shall include a lump sum T&M cost of labor for a Site Superintendent to be available on site 10 hours per day from April 22nd - May 8th, 2021.

3.3 INSPECTION AND REPAIR

The bid shall include a lump sum T&M cost of labor for an inspection and repair crew consisting of 1 BM General Foreman and 3 BM Journeymen to be available on site 10 hours per day from April 22nd - May 8th, 2021.

3.4 RATES

The Bid shall include, as a separate T&M rate attachment, firm unit pricing for all labor, equipment, sundries **and expenses reflecting the charges to be used in billing the T&M portions of the work as well as for making any** adjustments that may be required for new work scope additions, additional services other than what is required in this specification or reductions in the same. All travel time and per diems shall be included in the hourly labor rates. The City of Grand Island will not be responsible for travel expenses to and from plant site. The City of Grand Island will not be responsible for any associated overnight expenses.

3.6.1 Terms and Conditions

Provide all other proposed terms and conditions which will be in effect during the performance of the work as a separate attachment **with the bid**. Any exceptions the bidder wishes to take regarding the Owners specifications and contract documents must be submitted **with the bid**.

Time is of the essence in the evaluation of proposals, the execution of contract documents and/or issuance of a Purchase Order for the execution of the work. Submittal of bids that include terms and conditions unacceptable to the Owner, or that lack the information and clarity required by these specifications may be subject to rejection at the sole discretion of the Owner.

A single contract will be awarded for all work included in this specification.

3.6.2 Time and Material Accounting

Contractor shall be required to maintain accurate job logs describing work performed by each crew throughout each day and daily time sheets detailing all work performed and expenses incurred **in the same format as the bid detail submittal**. Daily time sheets shall identify all individuals by name, craft and all hours worked on each portion of the work. Such job logs and time sheets shall accurately account for all man-hours with clear separation and identification of time, equipment and material as required accounting for the actual service hours and expenses. A sample timesheet shall be included in the bid to be approved by the owner's designated representative.

The timesheets/logs shall clearly detail the specific work that was accomplished during the shift. These sheets shall be presented to the Owner's representative on a daily basis for review with the Contractor's superintendent. Any presentation of timesheets/logs deferred more than 48 hrs. before being presented to the Owner's representative shall be null and void. The Owners representative will sign and date these documents as a record of receipt and review. Any corrections that need to be made to such signed documents shall be implemented upon the discovery of the error and both parties shall initial the change made on the form. These records will then serve as record of the work performed and a basis for determining the final billing.

3.5 SUBMITTALS

Contractor shall submit the following documentation for review with the bid:

- References for at least three (3) projects of a similar scope and for a similar size unit, including a description, name, and phone contact.
- Subcontractor's names and reference lists.
- Copy of Contractor's R stamp.
- Superintendent's experience summary.
- Pricing
- Daily T&M Accounting Sheets
- Safety Documentation

3.6 TERMS AND CONDITIONS

Provide any standard terms and conditions which will be in effect during this completion of this scope of work.

3.7 DEVIATIONS

The bid shall provide any explanation of any anticipated deviations from the detailed scope of work or schedules.

The Platte Generating Station is NOT tax exempt and is subject to 7.5% sales tax. See the Nebraska Department of Revenue web site at www.revenue.state.ne.us for contractor's tax information.

4.0 QUALIFICATIONS

The Contractor shall be a firm specializing in the installation, overhaul, repair, and maintenance of steam generating equipment used in the power generation industry. The Contractor shall be capable of fully performing the work without the assistance of City personnel, except as required for the City to identify specific repair locations. A reference list of projects of similar scope and complexity shall be provided with the bid. The Contractor shall possess a valid ASME "R" stamp and valid welding procedures as typical for utility boilers and as specifically required for welds required in these specifications. All welders shall be certified as required for the work performed and the certification documents shall be available to review at the job site. Prior to award, the Contractor shall submit procedures for all welding required in this specification to the City for review.

4.1 SUPERINTENDENT

The Contractor shall provide well qualified Job Superintendent who will fully direct all field operations for the duration of the project, serve as liaison to the Owner's designated representatives, be fully authorized to make any and all decisions affecting the work in the field and coordinate activities between the Contractor and its subcontractors, if any. The Superintendent shall be thoroughly

familiar with Combustion Engineering tangential boilers and auxiliary equipment and have had previous experience with projects of similar scope. A summary of the experience of the Superintendent proposed for this project shall be **provided with the bid**.

5.0 SAFETY

The Contractor shall be responsible for compliance with all safety practices as required by the regulatory agencies governing the Contractor's operations as well as any safety requirements of the Contractor's organization and shall submit historical evidence of such compliance. All personnel working on site will be required to participate in the plant's safety orientation prior to performing any work on site at PGS.

The plant has an equipment lockout/tag out procedure to prevent the unauthorized starting of motors and the unauthorized movement of valves and dampers. The Contractor is required to use the procedure and add its own locks/tags on top of the plant lock/tags if required. *Removal of plant locks/tags is not allowed and is cause for removal from the plant site.*

6.0 INSURANCE

The contractor shall comply with the attached City's insurance requirements

7.0 PERFORMANCE AND PAYMENT BOND

The successful Bidder shall file with the OWNER Performance and Payment Bonds in the full amount (100 percent) of the Contract price, as security for the faithful performance of the Contract and the payment of all persons supplying labor and materials for the Work under this Contract, and to cover all guarantees against defective workmanship or materials, or both, for a period of 1 year after the date of final acceptance of the Work by the OWNER. The Surety furnishing these bonds shall have a record of service satisfactory to the OWNER, be authorized to do business in the State where the OWNER's project is located and shall be named on the current list of approved Surety Companies, acceptable on Federal bonds as published by the Audit Staff, Bureau of Accounts, U.S. Treasury Department.

The Attorney-in-Fact (Resident Agent) who executes these bonds on behalf of the Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond.

8.0 DRAWINGS AND SITE INFORMATION

A selection of drawings has been provided with the bid package for reference only. Additional drawings are available for review at Platte Generating Station office. The Contractor is responsible for making such pre-bid site visits as required to obtain additional details for bidding and execution of the work and for clarification of any questions or concerns the bidder may have related to the work scope and site conditions.

ATTACHMENTS:

D-183702	Boiler Right Side Elevation
13477-4C-1292	Boiler Tube Material Diagram
13477-4C-1291	Boiler Tube Material Diagram
13477-4C-1290	Boiler Tube Material Diagram

MINIMUM INSURANCE REQUIREMENTS
CITY OF GRAND ISLAND, NEBRASKA

The successful bidder shall obtain insurance from companies authorized to do business in Nebraska of such types and in such amounts as may be necessary to protect the Bidder and the interests of the City against hazards or risks of loss as hereinafter specified. This insurance shall cover all aspects of the Bidder's operations and completed operations. Failure to maintain adequate coverage shall not relieve Bidder of any contractual responsibility or obligation. Minimum insurance coverage shall be the amounts stated herein or the amounts required by applicable law, whichever are greater.

1. WORKERS COMPENSATION AND EMPLOYER'S LIABILITY

This insurance shall protect the Bidder against all claims under applicable State workers compensation laws. This insurance shall provide coverage in every state in which work for this project might be conducted. The liability limits shall not be less than the following:

Workers Compensation	Statutory Limits
Employers Liability	\$100,000 each accident
	\$100,000 each employee
	\$500,000 policy limit

2. BUSINESS AUTOMOBILE LIABILITY

This insurance shall be written in comprehensive form and shall protect the Bidder, Bidder's employees, or subcontractors from claims due to the ownership, maintenance, or use of a motor vehicle. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$ 500,000 Combined Single Limit
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3. COMPREHENSIVE GENERAL LIABILITY

The comprehensive general liability coverage shall contain no exclusion relative to explosion, collapse, or underground property. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$ 500,000 each occurrence
	\$1,000,000 aggregate

4. UMBRELLA LIABILITY INSURANCE

This insurance shall protect the Bidder against claims in excess of the limits provided under employer's liability, comprehensive automobile liability, and commercial general liability policies. The umbrella policy shall follow the form of the primary insurance, including the application of the primary limits. The liability limits shall not be less than the following:

Bodily Injury & Property Damage	\$1,000,000 each occurrence
	\$1,000,000 general aggregate

5. ADDITIONAL REQUIREMENTS

The City may require insurance covering a Bidder or subcontractor more or less than the standard requirements set forth herein depending upon the character and extent of the work to be performed by such Bidder or subcontractor.

Insurance as herein required shall be maintained in force until the City releases the Bidder of all obligations under the Contract.

The Bidder shall provide and carry any additional insurance as may be required by special provisions of these specifications.

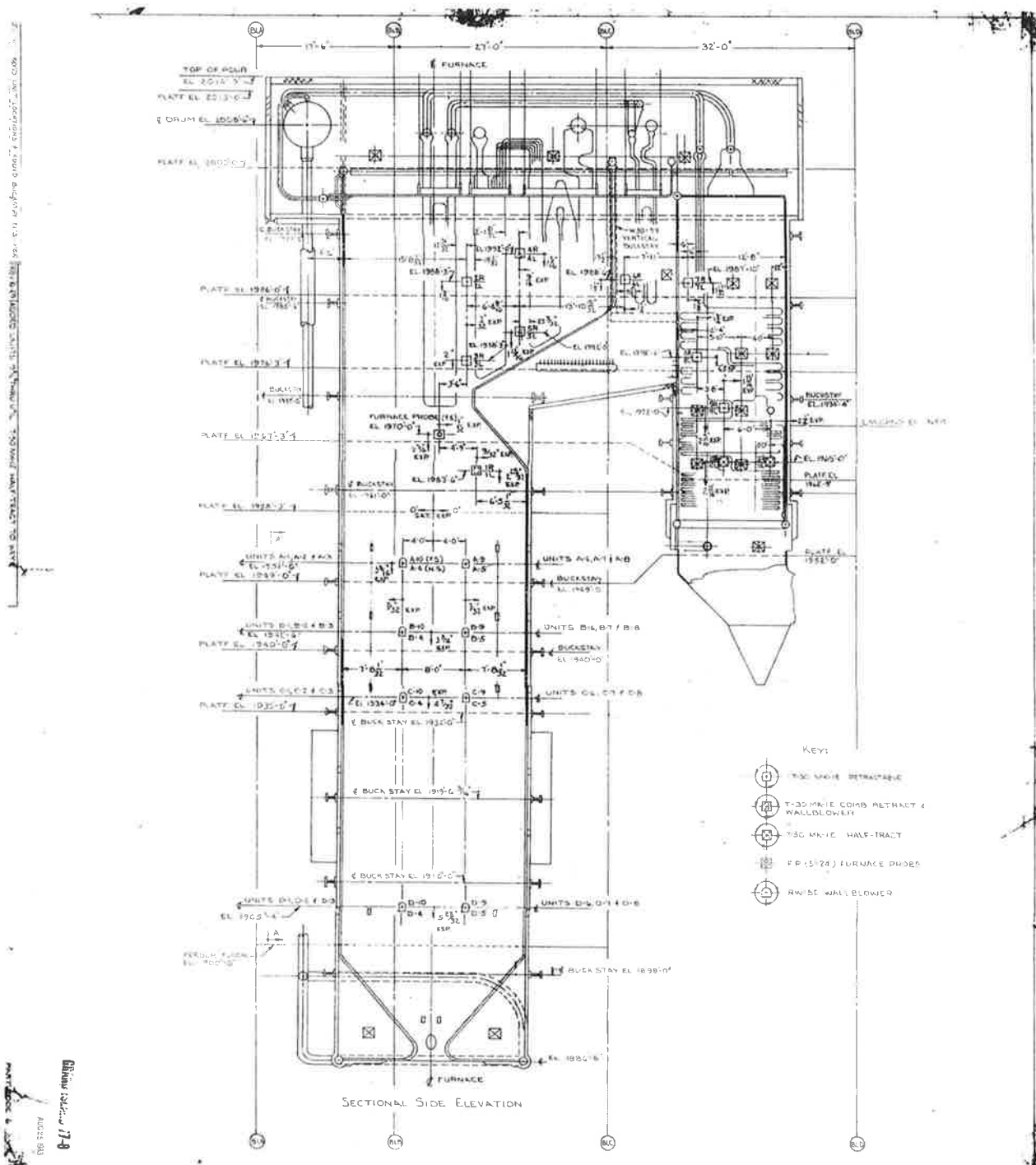
6. CERTIFICATE OF INSURANCE

Satisfactory certificates of insurance shall be filed with the City prior to starting any work on this Contract. **The certificates shall show the City as an additional insured on all coverage except Workers Compensation. The certificate shall state that thirty (30) days written notice shall be given to the City before any policy is cancelled (strike the "endeavor to" wording often shown on certificate forms). If the Bidder cannot have the "endeavor to" language stricken, the Bidder may elect to provide a new certificate of insurance every thirty (30) days during the contract. Bidder shall immediately notify the City if there is any reduction of coverage because of revised limits or claims paid which affect the aggregate of any policy.**

Attachment (H)

Platte Generation Station Boiler Tube Component Thickness

Component	Tube Minimum Design Thickness (t=inches)
Finishing Superheater	0.260"
Superheater Pendant Platen	0.200"
Reheater Finishing	0.148"
Rear Screen Tubes	0.180"
Furnace Tubes	0.220"



<p>51-721</p> <p>BOILER ROOM ELEVATION</p> <p>DATE: 11/20/58</p> <p>BY: J. W. GIBSON</p> <p>CHECKED: J. W. GIBSON</p> <p>APPROVED: J. W. GIBSON</p>		<p>BOILER ROOM DATA</p> <p>BOILER ROOM NO. 1</p> <p>BOILER MAKE: 1930</p> <p>BOILER MODEL: 1930</p> <p>BOILER SERIAL: 1930</p> <p>BOILER TYPE: 1930</p> <p>BOILER CAPACITY: 1930</p> <p>BOILER PRESSURE: 1930</p> <p>BOILER TEMPERATURE: 1930</p> <p>BOILER WEIGHT: 1930</p> <p>BOILER HEIGHT: 1930</p> <p>BOILER WIDTH: 1930</p> <p>BOILER DEPTH: 1930</p> <p>BOILER VOLUME: 1930</p> <p>BOILER SURFACE AREA: 1930</p> <p>BOILER WEIGHT PER CUBIC FOOT: 1930</p> <p>BOILER WEIGHT PER SQUARE FOOT: 1930</p> <p>BOILER WEIGHT PER LINEAL FOOT: 1930</p> <p>BOILER WEIGHT PER TON: 1930</p> <p>BOILER WEIGHT PER CUBIC YARD: 1930</p> <p>BOILER WEIGHT PER SQUARE YARD: 1930</p> <p>BOILER WEIGHT PER LINEAL YARD: 1930</p> <p>BOILER WEIGHT PER TON YARD: 1930</p> <p>BOILER WEIGHT PER CUBIC METER: 1930</p> <p>BOILER WEIGHT PER SQUARE METER: 1930</p> <p>BOILER WEIGHT PER LINEAL METER: 1930</p> <p>BOILER WEIGHT PER TON METER: 1930</p> <p>BOILER WEIGHT PER CUBIC KILOMETER: 1930</p> <p>BOILER WEIGHT PER SQUARE KILOMETER: 1930</p> <p>BOILER WEIGHT PER LINEAL KILOMETER: 1930</p> <p>BOILER WEIGHT PER TON KILOMETER: 1930</p>
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KEY:

- 1-30 W/4E RETRACTABLE
- 1-30 W/4E COMB RETRACT & WALLFLOWER
- 1-30 W/4E HALF-TRACT
- FP (5/24) FURNACE PHOEN
- RW (5/24) WALLFLOWER

SECTIONAL SIDE ELEVATION

51-721

BOILER ROOM ELEVATION

DATE: 11/20/58

BY: J. W. GIBSON

CHECKED: J. W. GIBSON

APPROVED: J. W. GIBSON

BOILER ROOM DATA

BOILER ROOM NO. 1

BOILER MAKE: 1930

BOILER MODEL: 1930

BOILER SERIAL: 1930

BOILER TYPE: 1930

BOILER CAPACITY: 1930

BOILER PRESSURE: 1930

BOILER TEMPERATURE: 1930

BOILER WEIGHT: 1930

BOILER HEIGHT: 1930

BOILER WIDTH: 1930

BOILER DEPTH: 1930

BOILER VOLUME: 1930

BOILER SURFACE AREA: 1930

BOILER WEIGHT PER CUBIC FOOT: 1930

BOILER WEIGHT PER SQUARE FOOT: 1930

BOILER WEIGHT PER LINEAL FOOT: 1930

BOILER WEIGHT PER TON: 1930

BOILER WEIGHT PER CUBIC YARD: 1930

BOILER WEIGHT PER SQUARE YARD: 1930

BOILER WEIGHT PER LINEAL YARD: 1930

BOILER WEIGHT PER TON YARD: 1930

BOILER WEIGHT PER CUBIC METER: 1930

BOILER WEIGHT PER SQUARE METER: 1930

BOILER WEIGHT PER LINEAL METER: 1930

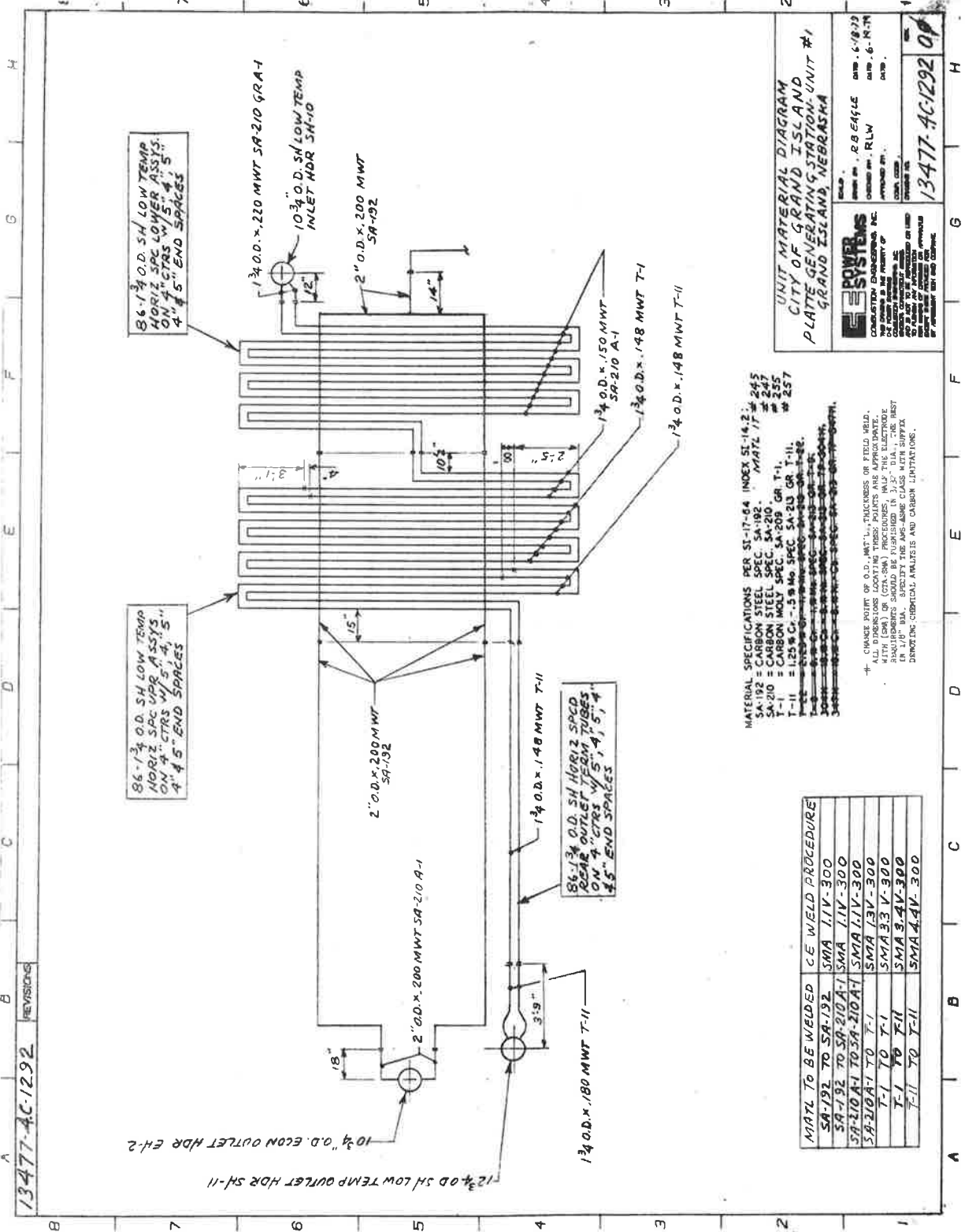
BOILER WEIGHT PER TON METER: 1930

BOILER WEIGHT PER CUBIC KILOMETER: 1930

BOILER WEIGHT PER SQUARE KILOMETER: 1930

BOILER WEIGHT PER LINEAL KILOMETER: 1930

BOILER WEIGHT PER TON KILOMETER: 1930



86-1 3/4 O.D. SH LOW TEMP
HORIZ SPEC UPPER ASSYS
ON 4" CTRS W/ 5", 4", 5"
4" 4.5" END SPACES

86-1 3/4 O.D. SH LOW TEMP
HORIZ SPEC LOWER ASSYS
ON 4" CTRS W/ 5", 4", 5"
4" 4.5" END SPACES

10 3/4" O.D. SH LOW TEMP
OUTLET HDR SH-11

10 3/4" O.D. ECON OUTLET HDR EH-2

MATERIAL SPECIFICATIONS PER SI-17-64 INDEX SI-14.2:
SA-192 = CARBON STEEL SPEC SA-192 MATL IT # 245
SA-210 = CARBON STEEL SPEC SA-210 # 247
T-1 = CARBON MOLY SPEC SA-209 GR T-1 # 255
T-11 = 1.25% Cr - 0.5% Mo SPEC SA-213 GR T-11 # 257
T-11 = 1.25% Cr - 0.5% Mo SPEC SA-213 GR T-11 # 257
T-11 = 1.25% Cr - 0.5% Mo SPEC SA-213 GR T-11 # 257
T-11 = 1.25% Cr - 0.5% Mo SPEC SA-213 GR T-11 # 257

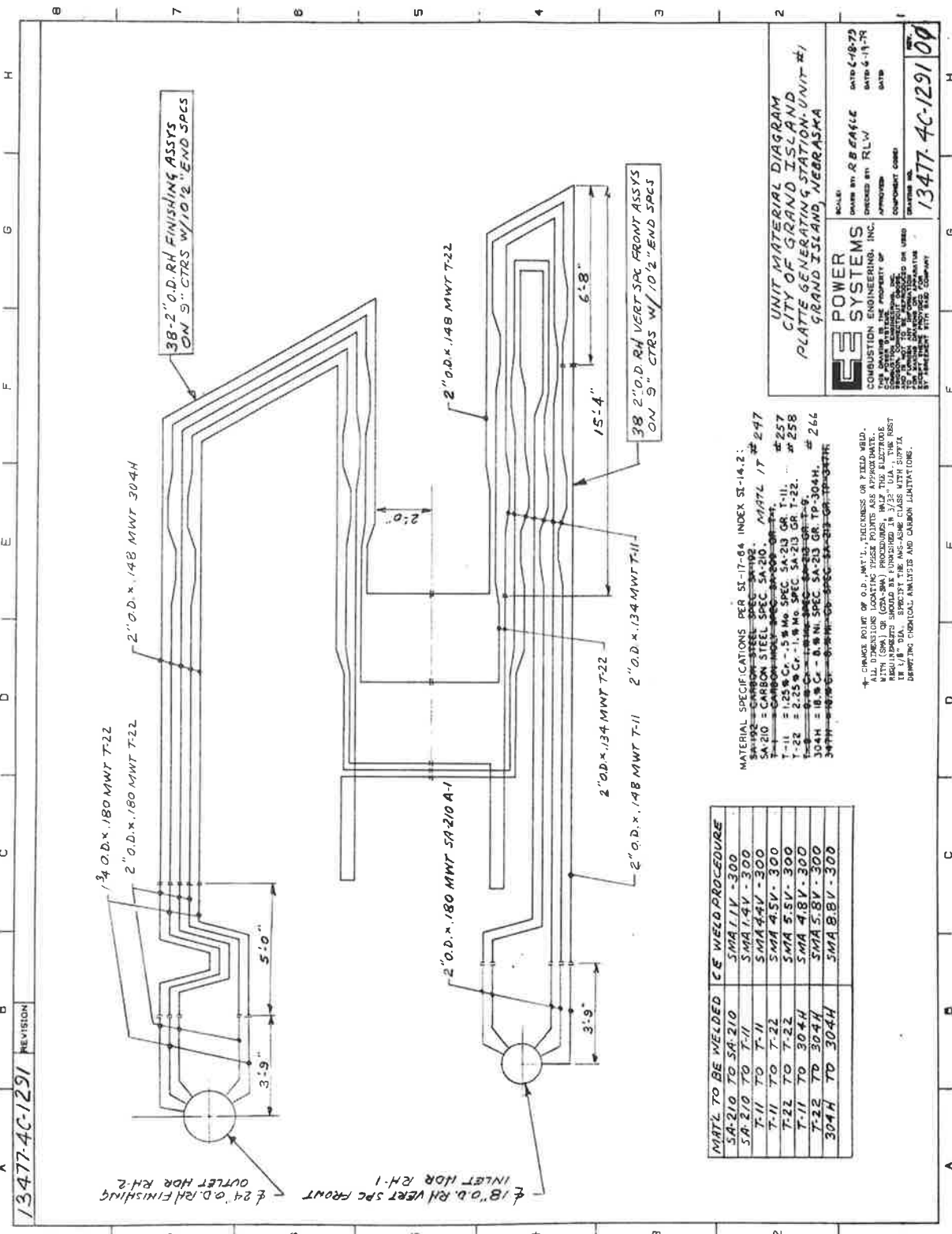
* CHANGE POINT OF O.D., MAT'L, THICKNESS OR FIELD WELD.
ALL DIMENSIONS INCLUDING TOLERANCES ARE APPROXIMATE.
DIMENSIONS SHOULD BE FURNISHED IN 3/32" DIA., THE REST
IN 1/8" DIA. SPECIFY THE ASS-ASME CLASS WITH SUFFIX
INDICATING CHEMICAL ANALYSIS AND CARBON LIMITATIONS.

MATL TO BE WELDED	CE WELD PROCEDURE
SA-192 TO SA-192	SMA 1.1V-300
SA-192 TO SA-210A-1	SMA 1.1V-300
SA-210A-1 TO SA-210A-1	SMA 1.1V-300
SA-210A-1 TO T-1	SMA 1.3V-300
T-1 TO T-1	SMA 1.3V-300
T-1 TO T-11	SMA 3.4V-300
T-11 TO T-11	SMA 4.4V-300

CITY OF GRAND ISLAND
PLATE GENERATING STATION, UNIT #1
GRAND ISLAND, NEBRASKA

POWER SYSTEMS
DESIGNED BY: R.B. EASLE
DATE: 6/18/72
CHECKED BY: R.L.W.
DATE: 6-18-72
APPROVED BY:
DATE:

13477-AC-1292 00



13477-4C-1291 REVISION

OUTLET HOR RH-2
INLET HOR RH-1

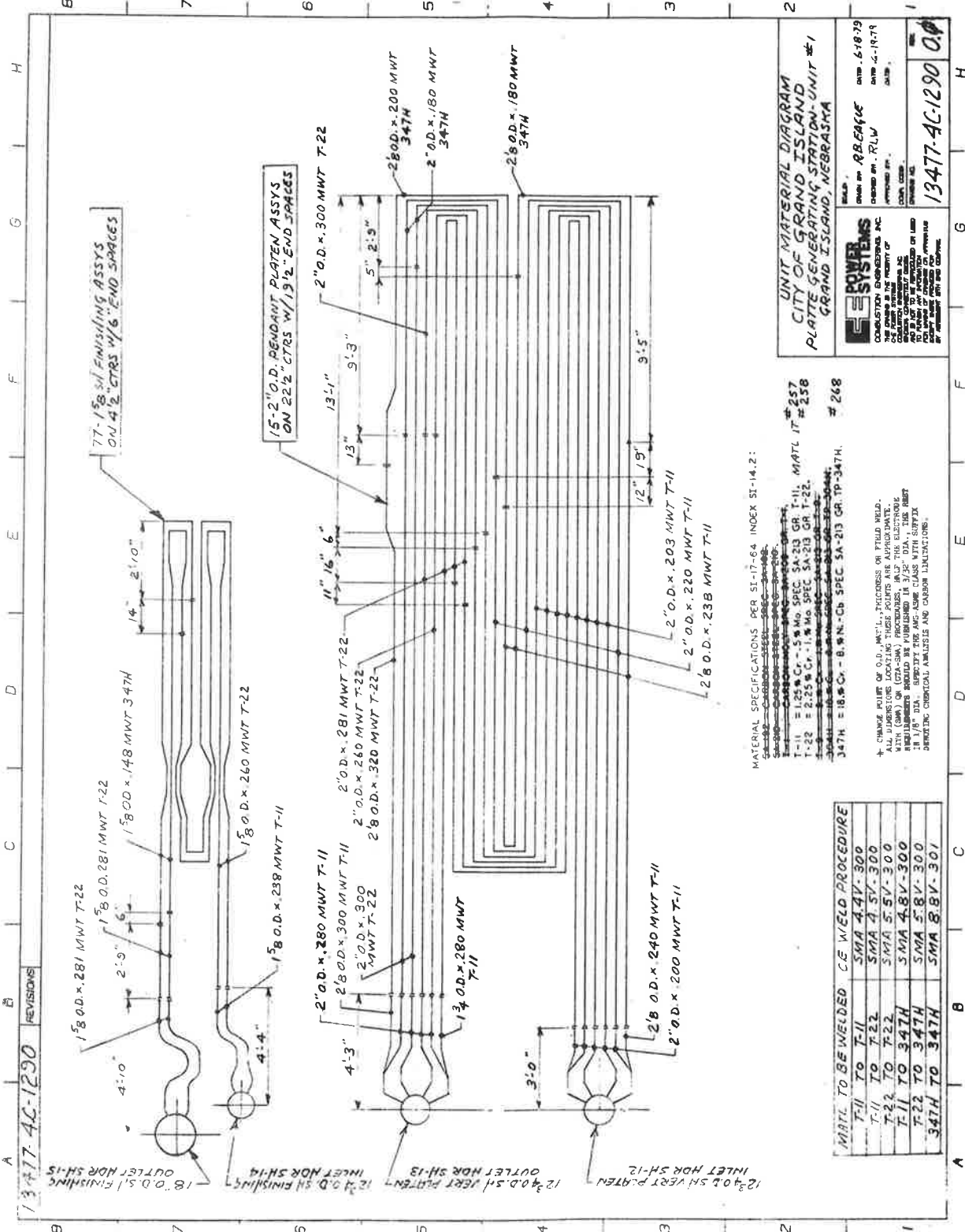
MAT'L TO BE WELDED	CE WELD PROCEDURE
SA-210 TO SA-210	SMA J1V-300
SA-210 TO T-11	SMA J4V-300
T-11 TO T-11	SMA J4V-300
T-11 TO T-22	SMA J5V-300
T-22 TO T-22	SMA J5V-300
T-11 TO 304H	SMA J8V-300
T-22 TO 304H	SMA J8V-300
304H TO 304H	SMA J8V-300

MATERIAL SPECIFICATIONS PER ST-17-84 INDEX ST-14.2:
 SA-210 = CARBON STEEL SPEC SA-210 MAR 71 # 247
 T-11 = 1.25% Cr - 1.5 Mo SPEC SA-213 GR T-11 # 257
 T-22 = 2.25% Cr - 1.5 Mo SPEC SA-213 GR T-22 # 258
 304H = 18% Cr - 10% Ni SPEC SA-213 GR TP-304H # 266
 304H = 18% Cr - 10% Ni SPEC SA-213 GR TP-304H

* DIMENSIONS OF O.D., MAT'L., THICKNESS OR FIELD WELD.
 ALL DIMENSIONS LOCATING THESE POINTS ARE APPROXIMATE.
 WITH (SMA) OR (SMA) WELDING PROCEDURE.
 1/8" DIA. SPECIFY THE ANGLE CLASS WITH SURFACE
 DETERMINING CHEMICAL ANALYSIS AND CARBON LIMITATIONS.

UNIT MATERIAL DIAGRAM
 CITY OF GRAND ISLAND
 PLATE GENERATING STATION UNIT #1
 GRAND ISLAND, NEBRASKA

POWER SYSTEMS
 COMBUSTION ENGINEERING, INC.
 13477-4C-1291 09
 SCALE: DATE: 6-18-79
 DRAWN BY: RLW
 CHECKED BY: JWB
 APPROVED: [Signature]
 COMPONENT CODE: [Blank]
 DRAWING NO: 13477-4C-1291 09
 SHEET NO: [Blank]



13477-AC-1290 REVISIONS

UNIT MATERIAL DIAGRAM
 CITY OF GRAND ISLAND
 PLATE GENERATING STATION-UNIT #1
 GRAND ISLAND, NEBRASKA

SCALE: DRAWN BY: RBE/CKE DATE: 6-18-79
 CHECKED BY: R.L.M. DATE: 6-18-79
 DESIGNED BY: R.L.M. DATE: 6-18-79
 PROJECT NO.: 13477-AC-1290

MATERIAL SPECIFICATIONS PER SI-17-64 INDEX SI-14.2:
 SA-105 - CARBON STEEL - 50,000 PSI
 SA-213 - STAINLESS STEEL - 100,000 PSI
 SA-312 - STAINLESS STEEL - 100,000 PSI
 T-22 = 2.25% C, 1% Mn, SPEC SA-213 GR T-22
 T-11 = 2.25% C, 1% Mn, SPEC SA-213 GR T-11
 347H = 18% Cr - B, 0.04% N, SPEC SA-213 GR TP-347H

MATERIAL TO BE WELDED	CE WELD PROCEDURE
T-11 TO T-11	SMA A 4V-300
T-11 TO T-22	SMA A 5V-300
T-22 TO T-22	SMA 5.5V-300
T-11 TO 347H	SMA 4.8V-300
T-22 TO 347H	SMA 5.8V-300
347H TO 347H	SMA 8.8V-301

* CHANGE POINT OF O.D., MATERIAL, PROCESS OR FIELD WELD.
 ALL DIMENSIONS LOCATING THESE POINTS ARE FROM CENTERLINE UNLESS OTHERWISE SPECIFIED.
 DIMENSIONS SHOULD BE PUBLISHED IN 3/16" DIA., THIS DRAWING.
 1/8" DIA. SHOULD BE ANGULAR CLASS WITH SURF.
 DETAILING CHEMICAL ANALYSIS AND CARBON LIMITATIONS.