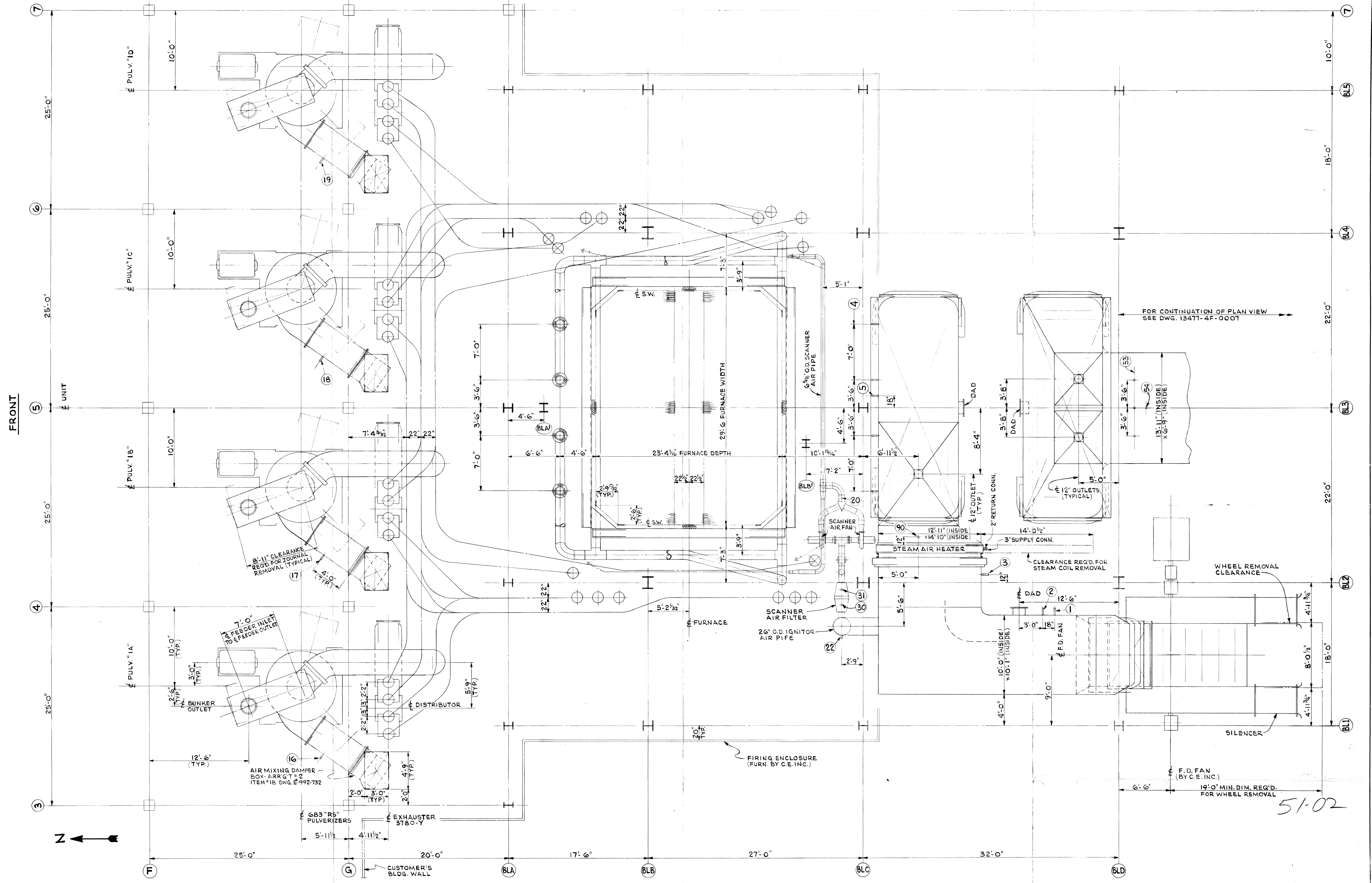


FRONT



| NO. | DATE | DESCRIPTION |
|-----|----------|---|
| 1 | 6-2-78 | REVISED SIZE OF STEAM AIR HEATER BUCKSTAYS & BROUGHT UP TO DATE GAS DUCT TO I.D. FAN F.D. FAN PER CERT. PRINT FROM GREEN FAN CO. LOCATION OF EXHAUSTERS |
| 2 | 8-18-78 | ADDED COLUMN DESIGNATIONS & ORIENTATION NORTH DIRECTION TURNING VANES IN DUCTS PER M.C.D. PRINTS FROM PERF. DESIGN FUEL PIPING DAD'S ON & UNIT IN DUCTS ENTERING & LEAVING A.H. TIE-DOWN DIM'S. FOR HOPPER OUTLET CONNS. PULVERIZER DESIGNATIONS COLUMN E1A1 & E1B1 |
| 3 | 11-18-78 | ADDED REF. DWG. NO. FOR INSTR. CONN. LEGEND INSTRUMENT CONNECTIONS DIM. FROM & FEEDER INLET TO & FEEDER OUTLET |
| 4 | 3-30-79 | ADDED IGNITOR AIR PIPING SCANNER AIR PIPING STEAM COIL SUPPLY & RETURN CONNS. INST. CONNS. #20, 22, 30, 31 & 90 |
| 5 | 11-5-79 | REVISED: FUEL PIPE LOCATION(S) RELOCATED: SCANNER AIR PIPING (L.S. UNIT TO CLEAR RE-FUEL PIPE) |

| | | | |
|---|----------|--------|---|
| 2 | 8-18-78 | J.M.O. | ADDED STEAM COIL REMOVAL CLR. DIM. MIN. DIM. REQ'D. FOR F.D. FAN WHEEL REMOVAL DIM. FOR FIRING ENCLR. |
| 3 | 11-18-78 | J.M.O. | REVISED DWG. NO. FOR AIR MIXING DAMPER BOX ARR'G'T. |

| | | | |
|---|---------|--------|---|
| 4 | 3-30-79 | J.M.O. | ADDED IGNITOR AIR PIPING SCANNER AIR PIPING STEAM COIL SUPPLY & RETURN CONNS. INST. CONNS. #20, 22, 30, 31 & 90 |
| 5 | 11-5-79 | J.M.O. | REVISED: FUEL PIPE LOCATION(S) RELOCATED: SCANNER AIR PIPING (L.S. UNIT TO CLEAR RE-FUEL PIPE) |

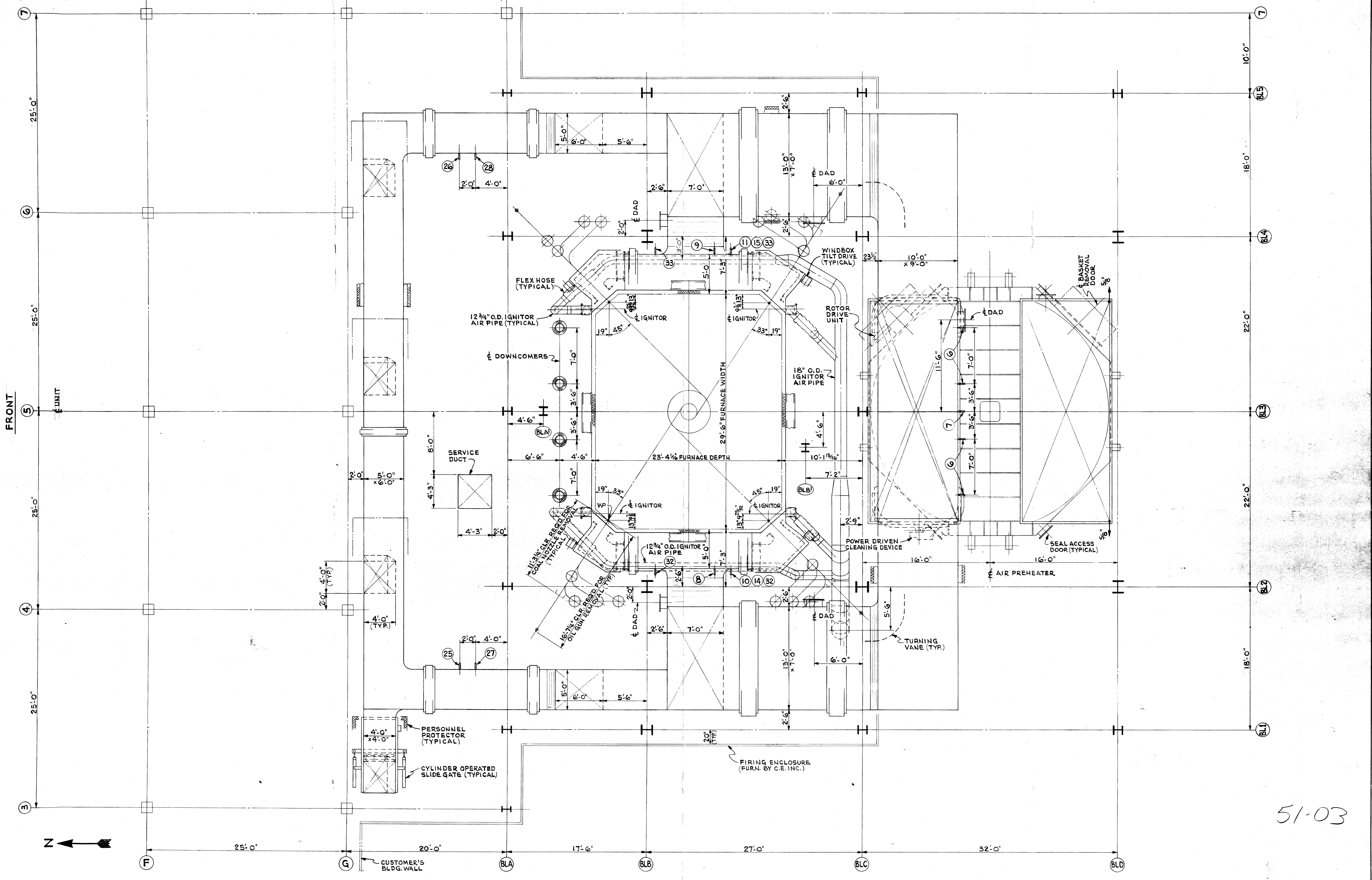
| | | | |
|---|---------|--------|--|
| 6 | 3-21-78 | J.M.O. | ADDED AIR MIXING DAMPER BOX ARR'G'T #2 |
| 7 | 3-21-78 | J.M.O. | ADDED EXHAUSTER 3780-Y |

| | | | |
|---|---------|--------|----------------|
| 8 | 3-21-78 | J.M.O. | ADDED F.D. FAN |
| 9 | 3-21-78 | J.M.O. | ADDED SILENCER |

| REFERENCE DRAWINGS | |
|------------------------|---------------|
| GENERAL ARR'G'T - SIDE | 13477-4F-0001 |
| PLAN "B-B" | 13477-4E-0003 |
| "C-C" | 13477-4E-0004 |
| FRONT | 13477-4F-0005 |
| ELEV. "D-D" | 13477-4E-0006 |
| PARTIAL SIDE | 13477-4F-0007 |
| INSTR. CONN. LEGEND | 13477-4D-0016 |

LUTZ, DAILY & BRAIN - CONT. NO. 77-8-2
GENERAL ARRANGEMENT - PLAN "A-A"
 FOR CITY OF GRAND ISLAND
 PLATTE GENERATING STATION, UNIT #1
 GRAND ISLAND, NEBRASKA
 SCALE 1/4" = 1'-0" DATE 3-21-78
 DRAWN BY ED HOWARD CHECKED BY J.M.O. 3-21-78
 TRACED BY APPROVED
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 COMP. CODE 91-84-0303
 DRAWING NO. 13477-4E-0002-05
 NOV 16 1978

51-02



51-03

| NO. | DATE | BY | DESCRIPTION |
|-----|----------|--------|--|
| 1 | 6-2-78 | E.H. | ADDED COLUMN DESIGNATIONS NORTH DIRECTION SERVICE DUCT TURNING VANES IN DUCTS PER M.C.D. PRINT FROM PERF. DESIGN FUEL PIPING A.H. POWER DRIVEN CLEANING DEVICE A.H. ACCESS DOORS A.H. ROTOR DRIVE UNIT & BASKET REMOVAL DOOR |
| 2 | 8-18-78 | J.N.O. | ADDED COLUMN ORIENTATION COLUMNS BLA & BLB REVISED EL. & LOC. OF H.A. DUCT TO PULV. BUCKSTAYS & BROUGHT UP TO DATE |
| 3 | 11-18-78 | E.H. | ADDED REF. DWG. NO. FOR INSTR. CONN. LEGEND INSTRUMENT CONNECTIONS |
| 4 | 3-30-79 | J.N.O. | ADDED IGNITOR AIR PIPING WINDBOX TILT DRIVES |
| 5 | 11-5-79 | T.A.S. | REVISED: FUEL PIPE LOCATION (L.S. REAR) RELOCATED IGNITOR AIR DUCT (L.S. UNIT) |

REFERENCE DRAWINGS

| | |
|-------------------------------|---------------|
| GENERAL ARR'GT. - SIDE | 13477-4F-0001 |
| " " " " - PLAN "A-A" | 13477-4E-0002 |
| " " " " - " " " " - "C-C" | 13477-4E-0004 |
| " " " " - FRONT "D-D" | 13477-4F-0005 |
| " " " " - ELEV. "D-D" | 13477-4E-0006 |
| " " " " - PARTIAL SIDE | 13477-4F-0007 |
| " " " " - INSTR. CONN. LEGEND | 13477-4D-0016 |

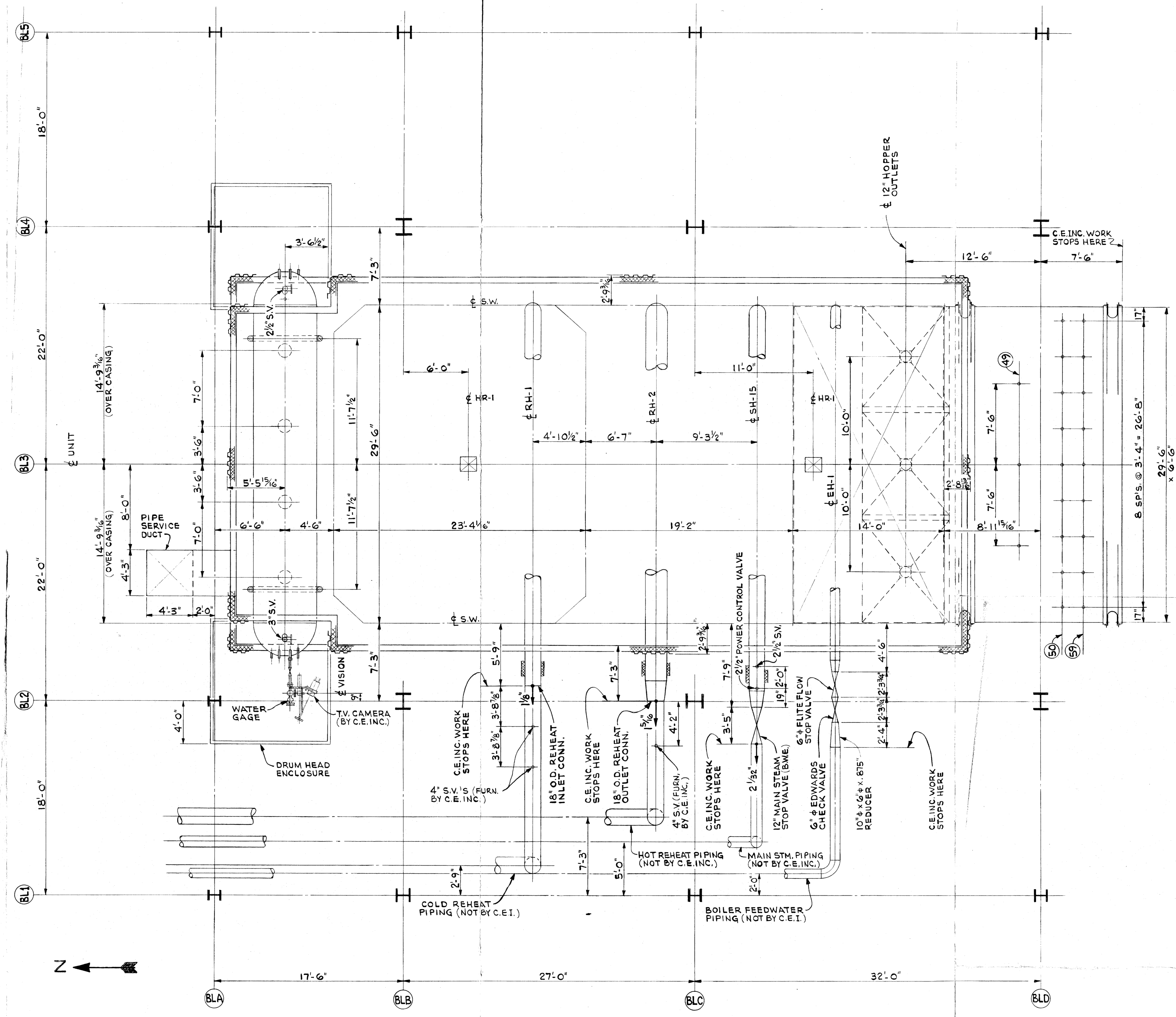
LUTZ, DAILY & BRAIN - CONT. NO. 77-B-2
GENERAL ARRANGEMENT - PLAN "B-B"
 FOR **CITY OF GRAND ISLAND**
PLATTE GENERATING STATION, UNIT #1
 GRAND ISLAND, NEBRASKA

SCALE 1/4" = 1'-0" DATE 3-21-78
 DRAWN BY ED HOWARD CHECKED BY *ADH* 3-21-78
 TRACED BY APPROVED

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COMP. CODE 91-84-0303
 DRAWING NO. 13477-4E-0003-05

FRONT



51.04

| NO. | DATE | DESCRIPTION |
|-----|---------|--|
| 1 | 8-16-78 | REVISED ENCLOSURE IN DRUM AREA CONN. LOC. FOR ECON. INLET, S.H. OUTLET AND R.H. INLET & OUTLET |

| | | |
|---|---------|---|
| 2 | 8-16-78 | ADDED COLUMN DESIGNATIONS & ORIENTATION NORTH DIRECTION SERVICE DUCT DRUM HANGER ROD LOCATION TIE-DOWN DIM'S FOR HOPPER OUTLET CONNS. |
|---|---------|---|

| | | |
|---|----------|---|
| 3 | 11-16-78 | ADDED WATER GAGE REF. DWG. NO. FOR INSTR. CONN. LEGEND INSTRUMENT CONNECTIONS |
|---|----------|---|

| | | |
|---|---------|--|
| 4 | 3-30-79 | ADDED CUST. BLR. FEED, MAIN STM., HOT & COLD RH PIPING SAFETY VALVES FOR MAIN STM., HOT & COLD RH PIPING |
|---|---------|--|

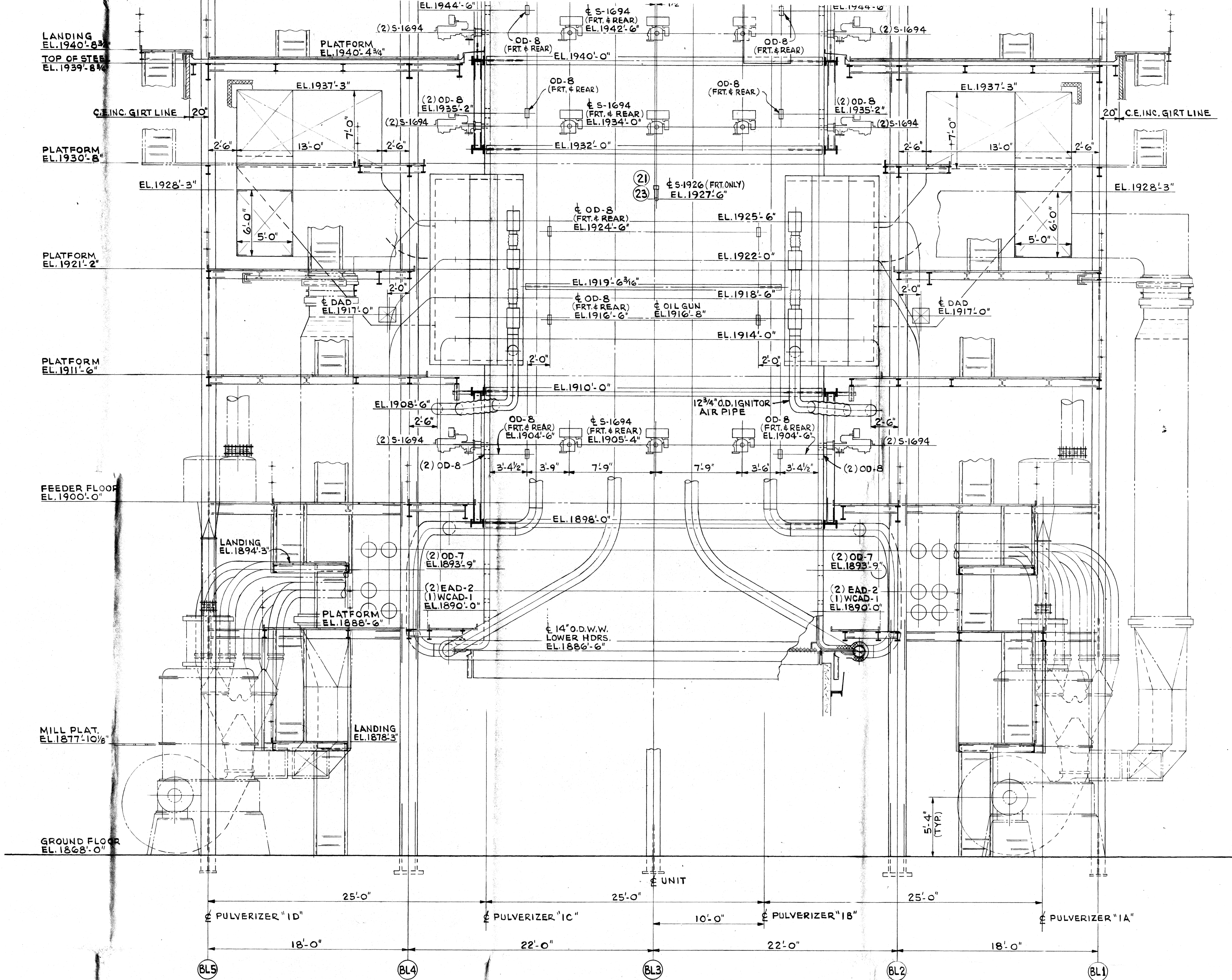
| REFERENCE DRAWINGS | |
|------------------------|---------------|
| GENERAL ARR'GT. - SIDE | 13477-4F-0001 |
| PLAN "A-A" | 13477-4E-0002 |
| "B-B" | 13477-4E-0003 |
| FRONT | 13477-4E-0005 |
| ELEV. "D-D" | 13477-4E-0006 |
| PARTIAL SIDE | 13477-4F-0007 |
| INSTR. CONN. LEGEND | 13477-4D-0016 |

LUTZ, DAILY & BRAIN - CONT. NO. 77-B-2
GENERAL ARRANGEMENT - PLAN "C-C"
 FOR CITY OF GRAND ISLAND
 PLATTE GENERATING STATION UNIT #1
 GRAND ISLAND, NEBRASKA

SCALE 1/4" = 1'-0" DATE 3-21-78
 DRAWN BY ED HOWARD CHECKED BY [Signature] 3-21-78
 TRACED BY [Signature]

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COMP. CODE 91-84-0303
 DRAWING NO. 13477-4E-0004-04
 APR 23 1979



| | | | | | | | | |
|---|--|---|--|---|------------------|---|---|--------------------------|
| 4 | E.H. 3-30-79 REVISED FIRING ENCLOSURE ROOF ADDED IGNITOR AIR PIPING PROTECTIVE COVER ROOF FURNACE GUIDES | J.N.O. <i>gr</i> | 5 | 7-11-80 R.H. CARROLL ADDED: BUCKSTAY LEVELING GUIDES @ EL. 1898'-0", 1932'-0", 1949'-0", & 1961'-0". | J.P.O. <i>gr</i> | 6 | 6-2-78 R.H. C. <i>gr</i> ADDED: RET. SOOT BLOWER SB-24 @ EL. 1922'-0" HALF TRACT SOOT BLOWER SB-24A @ EL. 1905'-0". | E.H. <i>gr</i> 6-2-78 |
| | REVISIONS | REVISED GROUND FLOOR ELEV. FROM 1860'-0" TO 1868'-0" DIM. FROM GROUND TO W.W. LOWER HDRS. & ALL EL. ACCORDINGLY ELEV. & LOC. OF H.A. DUCT TO PULV. BUCKSTAYS & BROUGHT UP TO DATE SETTING N'S FOR DOORS & SOOT BLW'RS. AND BROUGHT UP TO DATE EL. OF S-1694 FROM 1906'-10" TO 1905'-4" EL. OF OD-8 FROM 1906'-0" TO 1904'-6" ENCLOSURE IN DRUM AREA | ADDED COLUMN DESIGNATIONS ADDITIONAL OD-8'S IN UPPER FURNACE AREA TURNING VANES IN DUCTS PER MK'D PRINTS FROM PERF. DESIGN MILL PLATFORM @ EL. 1877'-10 1/8" FEEDERS FUEL PIPING PULVERIZER DESIGNATIONS DUCT TO PULVERIZERS | | | | | |

| | | | | | |
|---|---|--|---|--|----------------------------|
| 2 | E.H. 8-18-78 REVISED EL. OF ROOF ENCLR. FLOOR BUCKSTAY EL. FROM 1985'-0" TO 1985'-6" BUCKSTAY EL. FROM 1920'-11 3/16" TO 1919'-6 3/16" DUCT @ PULVERIZER INLET | J.N.O. <i>gr</i> | 3 | E.H. 11-17-78 ADDED PIPE DUCT DRUM HANGER RODS PRESS. PARTS SUPPORT LEVEL IGNITORS PLATFORM @ EL. 2013'-0" | E.H. <i>gr</i> 11-17-78 |
| | ADDED ADDITIONAL OD-8'S IN UPPER FURNACE AREA TURNING VANES IN DUCTS PER MK'D PRINTS FROM PERF. DESIGN MILL PLATFORM @ EL. 1877'-10 1/8" FEEDERS FUEL PIPING PULVERIZER DESIGNATIONS DUCT TO PULVERIZERS | ADDED COLUMN DESIGNATIONS ADDITIONAL OD-8'S IN UPPER FURNACE AREA TURNING VANES IN DUCTS PER MK'D PRINTS FROM PERF. DESIGN MILL PLATFORM @ EL. 1877'-10 1/8" FEEDERS FUEL PIPING PULVERIZER DESIGNATIONS DUCT TO PULVERIZERS | | | |

| | | |
|---|--|----------------------------|
| 3 | E.H. 11-17-78 ADDED BUCKSTAY LEVELING GUIDES FURNACE BOTTOM SEALS & SHIELDS WATER GAGE REF. DWG. NO. FOR INSTR. CONN. LEGEND INSTRUMENT CONNECTIONS STEEL | E.H. <i>gr</i> 11-17-78 |
| | ADDED BUCKSTAY LEVELING GUIDES FURNACE BOTTOM SEALS & SHIELDS WATER GAGE REF. DWG. NO. FOR INSTR. CONN. LEGEND INSTRUMENT CONNECTIONS STEEL | |

| REFERENCE DRAWINGS | |
|---------------------------|---------------|
| GENERAL ARR'GT. - SIDE | 13477-4F-0001 |
| " " - PLAN "A-A" | 13477-4E-0002 |
| " " - " "B-B" | 13477-4E-0003 |
| " " - " "C-C" | 13477-4E-0004 |
| " " - ELEV. "D-D" | 13477-4E-0006 |
| " " - PARTIAL SIDE | 13477-4F-0007 |
| " " - INSTR. CONN. LEGEND | 13477-4D-0016 |

LUTZ, DAILY & BRAIN - CONT. No. 77-6-2

GENERAL ARRANGEMENT - FRONT

CITY OF GRAND ISLAND

PLATTE GENERATING STATION, UNIT #1

GRAND ISLAND, NEBRASKA

SCALE 1/4" = 1'-0" DATE 3-21-78

DRAWN BY ED HOWARD CHECKED BY *EDH* 3-21-78

APPROVED

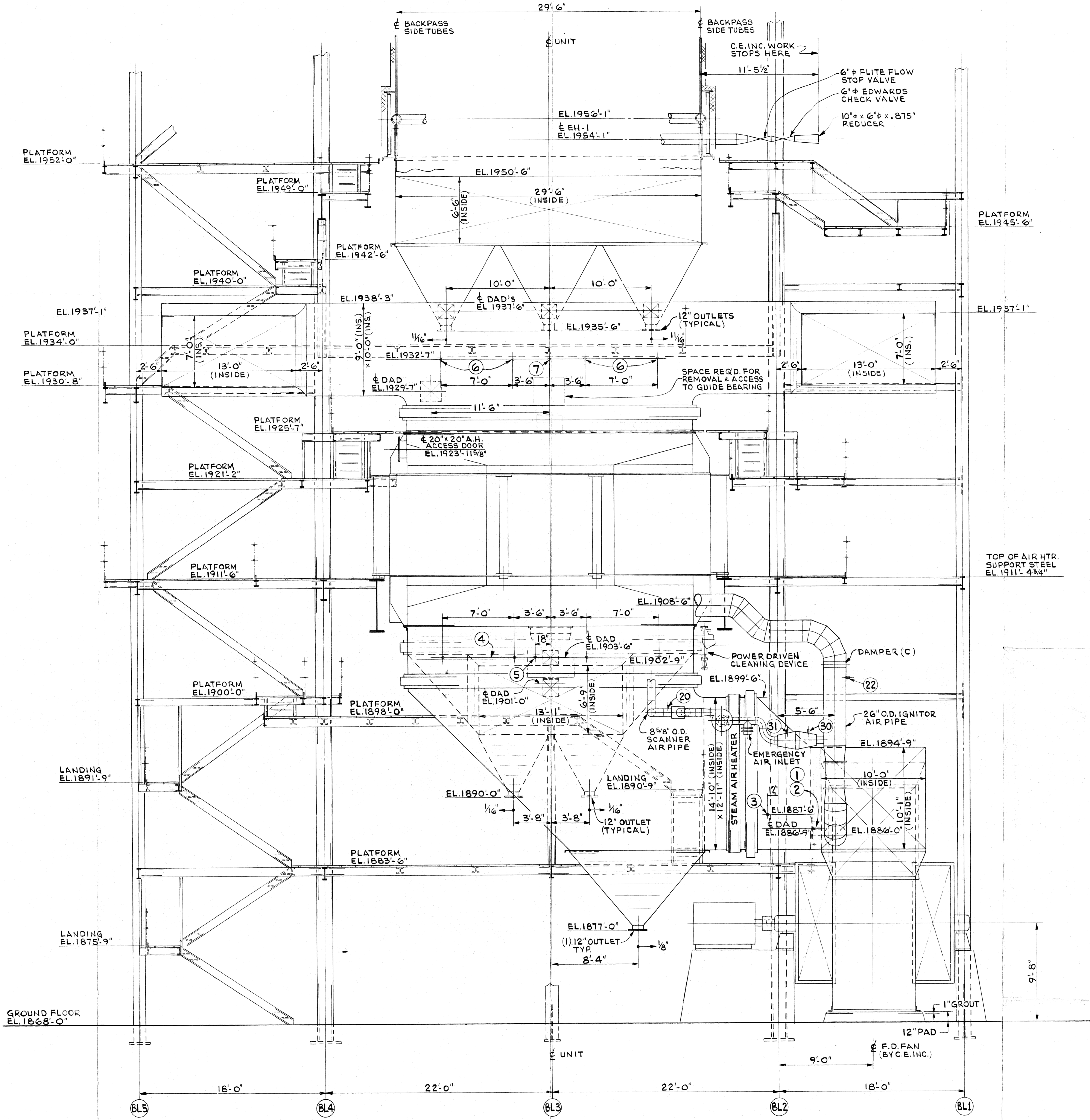
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COMP. CODE 91-84-0303

DWG. NO. 13477-4F-0005-06

LUTZ, DAILY & BRAIN
 544 W. MAIN ST.
 WINDSOR, CONN. 06095
 PHONE (203) 541-1111
 FAX (203) 541-1112

1719/150



51-06

| NO. | DATE | BY | DESCRIPTION |
|-----|--------|------|---|
| 1 | 6-2-78 | E.H. | REVISED GROUND FLOOR ELEV. FROM 1860'-0" TO 1868'-0" ALL ELEVATIONS SIZE OF STEAM AIR HEATER GAS DUCT TO T.D. FAN P.D. FAN PER CERT. PRINT FROM GREEN FAN CO. CONN. LOC. FOR ECON INLET |

| | | | |
|---|---------|--------|---|
| 2 | 8-16-78 | J.N.O. | ADDED COLUMN DESIGNATIONS A.H. POWER DRIVEN CLEANING DEVICE A.H. ACCESS DOORS DAD'S @ EL. 1903'-6" & 1901'-0" TIE DOWN DIM'S FOR HOPPER OUTLET CONNS. |
|---|---------|--------|---|

| | | | |
|---|----------|--------|--|
| 3 | 11-18-78 | J.N.O. | ADDED REF. DWG. N'S FOR INSTR. CONN. LEGEND INSTRUMENT CONNECTIONS STEEL |
|---|----------|--------|--|

| | | | |
|---|---------|--------|---|
| 4 | 3-30-79 | J.N.O. | ADDED IGNITOR AIR PIPING SCANNER AIR FANS & PIPING INST. CONNS. # 20, 22, 30 & 31 |
|---|---------|--------|---|

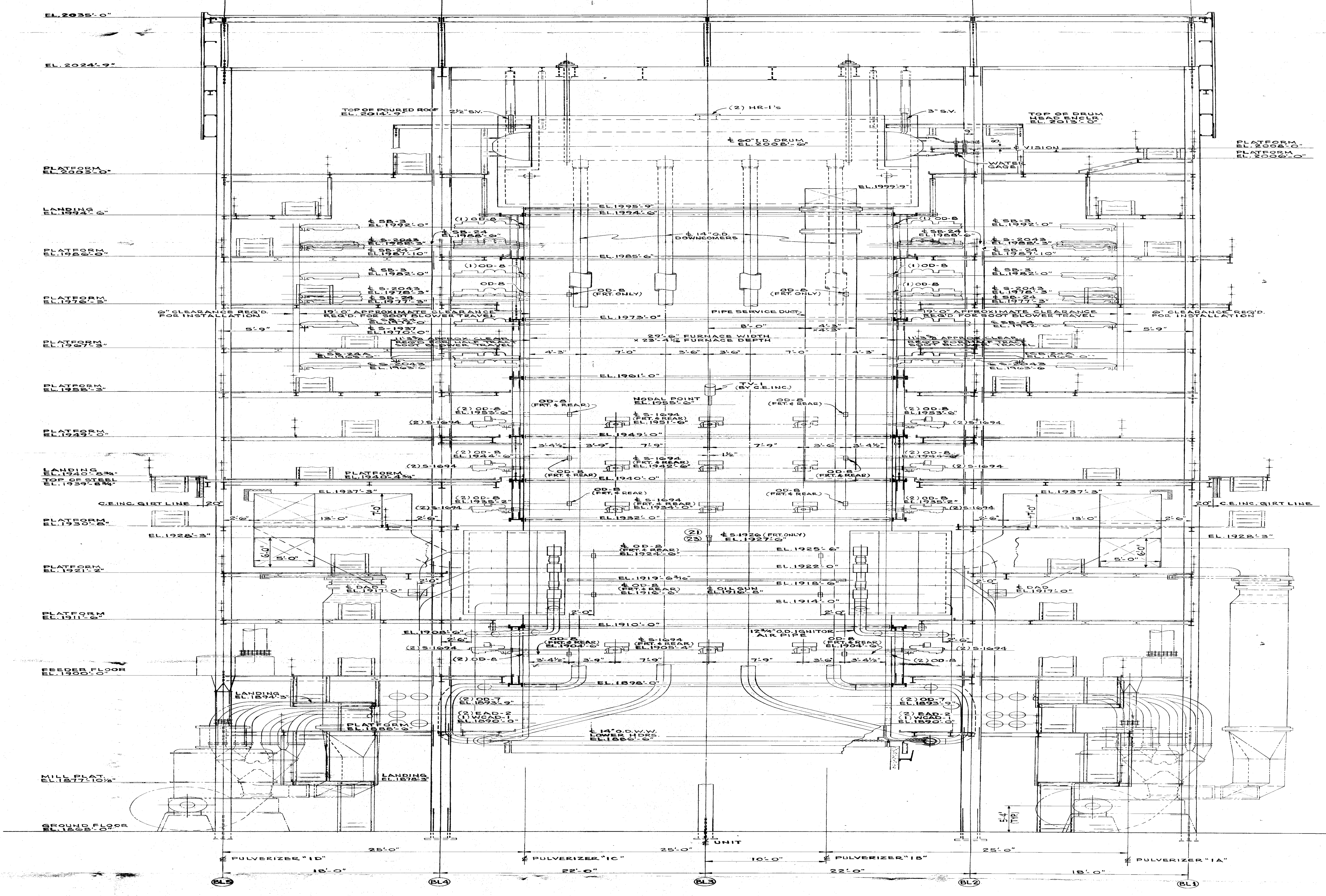
| | | | |
|---|---------|--------|--|
| 5 | 5-21-78 | J.N.O. | REVISED ECON. INLET FEED STOP & CHECK VALVES |
|---|---------|--------|--|

| REFERENCE DRAWINGS | | |
|---------------------------|---------------|--|
| GENERAL ARR'GT. - SIDE | 13477-4E-0001 | |
| " " - PLAN "A-A" | 13477-4E-0002 | |
| " " - "B-B" | 13477-4E-0003 | |
| " " - "C-C" | 13477-4E-0004 | |
| " " - FRONT | 13477-4E-0005 | |
| " " - PART. SIDE | 13477-4E-0007 | |
| " " - INSTR. CONN. LEGEND | 13477-4D-0016 | |

LUTZ, DAILY & BRAIN - CONT. N° 77-8-2
 GENERAL ARRANGEMENT - ELEV. 'D-D'
 FOR CITY OF GRAND ISLAND
 PLATTE GENERATING STATION, UNIT #1
 GRAND ISLAND, NEBRASKA
 SCALE 1/4" = 1'-0" DATE 3-21-78
 DRAWN BY ED HOWARD CHECKED BY [Signature] 5-21-78
 TRACED BY [Signature] APPROVED

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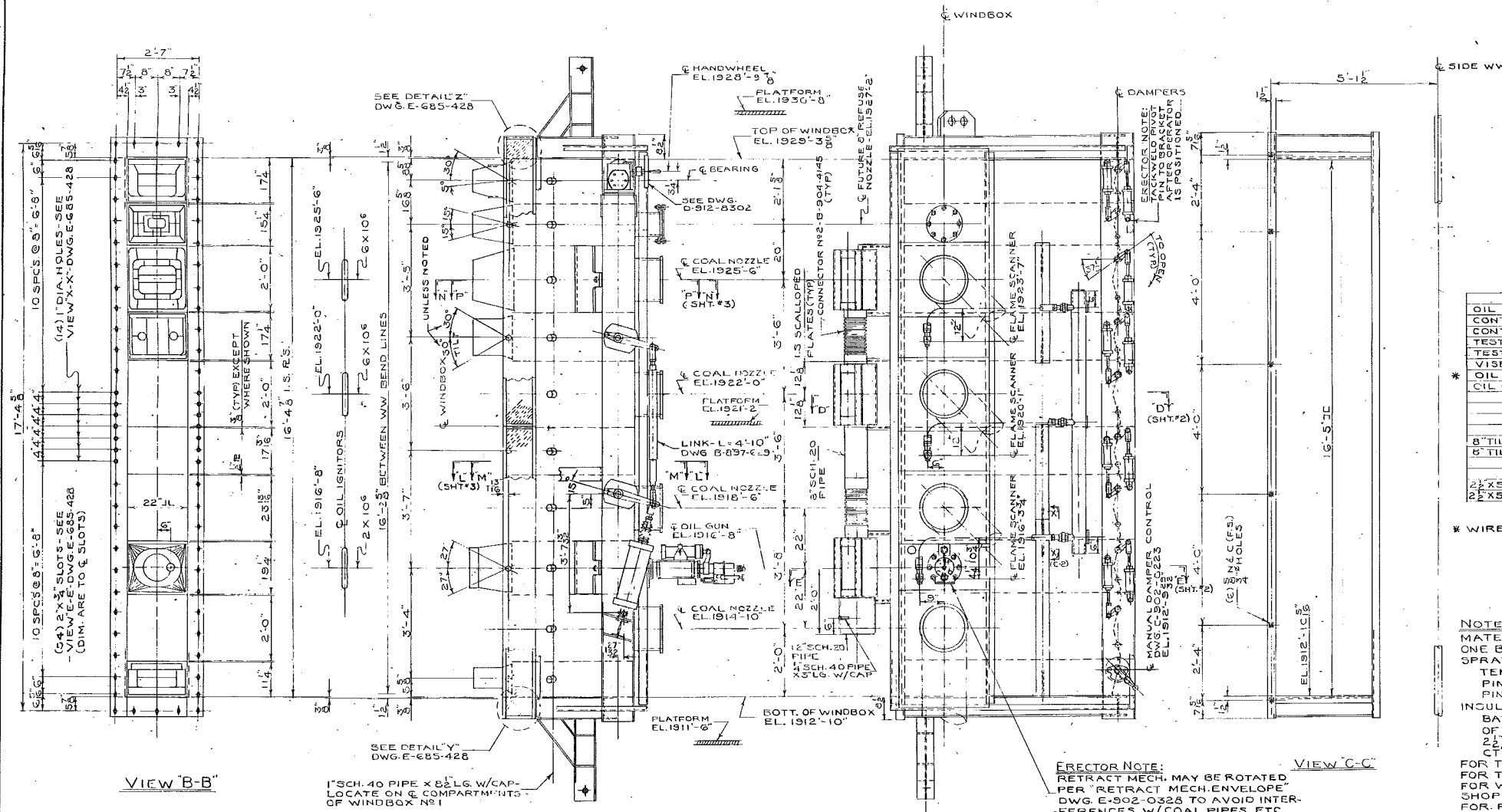
COMP. CODE 91-84-0303
 DRAWING NO. 13477-4E-0006-04



13477, 4F-0008
1008

| <p>1. GENERAL NOTES</p> <p>ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.</p> <p>CONCRETE SHALL BE 3000 PSI COMPRESSIVE STRENGTH.</p> <p>STEEL SHALL BE A36.</p> <p>WELDS SHALL BE AS SHOWN.</p> <p>PROTECT ALL EXPOSED SURFACES.</p> <p>REFER TO DRAWING 13477, 4F-0008 FOR GENERAL NOTES.</p> | <p>2. REVISIONS</p> <table border="1"> <tr> <th>NO.</th> <th>DESCRIPTION</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>ISSUED FOR PERMIT</td> <td>11/15/68</td> </tr> <tr> <td>2</td> <td>REVISIONS TO MEZANINE LEVEL</td> <td>12/10/68</td> </tr> <tr> <td>3</td> <td>REVISIONS TO PULVERIZER UNITS</td> <td>1/15/69</td> </tr> </table> | NO. | DESCRIPTION | DATE | 1 | ISSUED FOR PERMIT | 11/15/68 | 2 | REVISIONS TO MEZANINE LEVEL | 12/10/68 | 3 | REVISIONS TO PULVERIZER UNITS | 1/15/69 | <p>3. MATERIALS</p> <p>CONCRETE: 3000 PSI</p> <p>STEEL: A36</p> <p>WELDS: AS SHOWN</p> | <p>4. CONTRACTOR'S NOTES</p> <p>ALL WORK SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS.</p> <p>PROTECT ALL EXISTING UTILITIES.</p> <p>REFER TO DRAWING 13477, 4F-0008 FOR GENERAL NOTES.</p> | <p>5. GENERAL NOTES</p> <p>ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.</p> <p>CONCRETE SHALL BE 3000 PSI COMPRESSIVE STRENGTH.</p> <p>STEEL SHALL BE A36.</p> <p>WELDS SHALL BE AS SHOWN.</p> <p>PROTECT ALL EXPOSED SURFACES.</p> <p>REFER TO DRAWING 13477, 4F-0008 FOR GENERAL NOTES.</p> | <p>6. GENERAL NOTES</p> <p>ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.</p> <p>CONCRETE SHALL BE 3000 PSI COMPRESSIVE STRENGTH.</p> <p>STEEL SHALL BE A36.</p> <p>WELDS SHALL BE AS SHOWN.</p> <p>PROTECT ALL EXPOSED SURFACES.</p> <p>REFER TO DRAWING 13477, 4F-0008 FOR GENERAL NOTES.</p> | <p>7. GENERAL NOTES</p> <p>ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.</p> <p>CONCRETE SHALL BE 3000 PSI COMPRESSIVE STRENGTH.</p> <p>STEEL SHALL BE A36.</p> <p>WELDS SHALL BE AS SHOWN.</p> <p>PROTECT ALL EXPOSED SURFACES.</p> <p>REFER TO DRAWING 13477, 4F-0008 FOR GENERAL NOTES.</p> | <p>8. GENERAL NOTES</p> <p>ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.</p> <p>CONCRETE SHALL BE 3000 PSI COMPRESSIVE STRENGTH.</p> <p>STEEL SHALL BE A36.</p> <p>WELDS SHALL BE AS SHOWN.</p> <p>PROTECT ALL EXPOSED SURFACES.</p> <p>REFER TO DRAWING 13477, 4F-0008 FOR GENERAL NOTES.</p> | <p>9. GENERAL NOTES</p> <p>ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND INCHES.</p> <p>CONCRETE SHALL BE 3000 PSI COMPRESSIVE STRENGTH.</p> <p>STEEL SHALL BE A36.</p> <p>WELDS SHALL BE AS SHOWN.</p> <p>PROTECT ALL EXPOSED SURFACES.</p> <p>REFER TO DRAWING 13477, 4F-0008 FOR GENERAL NOTES.</p> |
|--|--|----------|-------------|------|---|-------------------|----------|---|-----------------------------|----------|---|-------------------------------|---------|--|--|--|--|--|--|--|
| NO. | DESCRIPTION | DATE | | | | | | | | | | | | | | | | | | |
| 1 | ISSUED FOR PERMIT | 11/15/68 | | | | | | | | | | | | | | | | | | |
| 2 | REVISIONS TO MEZANINE LEVEL | 12/10/68 | | | | | | | | | | | | | | | | | | |
| 3 | REVISIONS TO PULVERIZER UNITS | 1/15/69 | | | | | | | | | | | | | | | | | | |

| REFERENCE DRAWINGS | |
|-----------------------------|----------------|
| GENERAL ARCHT. PLAN | 13477, 4F-0001 |
| GENERAL ARCHT. SECTION | 13477, 4F-0002 |
| GENERAL ARCHT. ELEVATION | 13477, 4F-0003 |
| GENERAL ARCHT. FOUNDATION | 13477, 4F-0004 |
| GENERAL ARCHT. ROOF | 13477, 4F-0005 |
| GENERAL ARCHT. MEZANINE | 13477, 4F-0006 |
| GENERAL ARCHT. PULVERIZER | 13477, 4F-0007 |
| GENERAL ARCHT. AIR HANDLING | 13477, 4F-0008 |
| GENERAL ARCHT. ELECTRICAL | 13477, 4F-0009 |
| GENERAL ARCHT. MECHANICAL | 13477, 4F-0010 |
| GENERAL ARCHT. STRUCTURAL | 13477, 4F-0011 |



| REV | ZONE | DESCRIPTION | DATE | APP'D |
|-----|------|--|--------|----------|
| 1 | | ADDED HOLE SPAC. & NOZZLES IN VIEW B-B; ADDED WINDBOX TIES & LIFTING LUGS IN VIEW A-A; FRONT ELEV. REVISED VIEW C-C" G. GRANT | 7-6-78 | F.H. GRL |
| 2 | | CHGD (1) PART. R2 TO 1/2" IN VIEW B-B; CHGD. RELATED DIMS; DESIGNATED ORIGIN OF SECTS. "L-L", "M-M", "N-N" & "P-P" IN VIEW "A-A". G. GRANT | 3-5-79 | F.H. GRL |
| 3 | | ADDED REF. TO SHEET NO 3 IN NOTES G. GRANT | 2-1-80 | F.H. GRL |

AUXILIARY MATERIAL

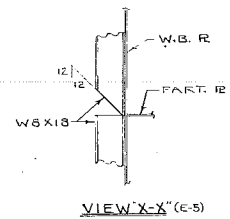
| DESCRIPTION | DWG. NO. | NO. REQ'D |
|--|------------|-----------|
| OIL GUN - TYPE WRITE KF7-7 (1G5726) | D-902-0168 | 4 |
| CONTROL CABINET (6X10") OIL -1G 5350 | E-997-450 | 8 |
| CONTROL CABINET (2X10") OIL-1G 5348 | E-997-450 | 4 |
| TEST BOX ASSY (1G 5344) | D-997-917 | ONE |
| TEST EQUIPMENT ASSY. 1,3,4,5,7 & 8 | E-997-426 | ONE |
| WISE ASSY. "KF" 7-7-75 | B-902-0063 | ONE |
| OIL GUN RETRACT MECH. ARRG. NO 2A | E-902-0328 | 4 |
| OIL GUN FLEX HOSE ASSY. | E-903-4142 | 4 |
| 8" TILT DRIVE CYLINDER ARRG. NO 1-R.H. | D-982-0102 | 2 |
| 8" TILT DRIVE CYLINDER ARRG. NO 1-L.H. | D-982-0102 | 2 |
| 2" X5" HAGAN POWER POSITIONER -CLEVIS UP | A-997-214 | 20 |
| 2" X5" HAGAN POWER POSITIONER -CLEVIS DOWN | A-997-214 | 16 |

* WIRE PER DWG. B-960-222

NOTES:
 MATERIAL LISTED FOR ONE BOILER
 ONE BOILER ON CONTRACT
 SPRAY ONE COAT OF CERAC FORMULA SP-110 (HIGH TEMP. LUBRICANT SPRAY) ON ALL AIR DUCT FINOT PINS, BEARING SURFACES, PLUGS & RETAINING PINS IN THE NOZZLES
 INSULATION: MINERAL FIBER BATTS - C.E. SPEC. 55-32-65
 BATTS TO BE IMPELLED ON #10 GA. PINS W/A LAYER OF #20 GA. 1" HEX METAL MESH SECURED W/PIN CLIPS 2" SQ. - ALL #10 GA. PINS TO BE LOCATED ON 12" X 18" CTRS. - INSULATION TO BE 5" THICK
 FOR TOLERANCES ON DIMENSIONS SEE DWG E-992-734
 FOR TURNING VANE DIMENSIONS SEE DWG. D-992-593
 FOR WELDING SEE DWG. E-693-960
 SHOP TO PAINT WEIGHT ON WINDBOX
 FOR FUEL PIPE SUPPORTS SEE DWG. 13477-4E-4006 & 4007
 FOR WINDBOX BILL OF MATERIAL SEE DWG. 13477-4B-4102
 FOR SHEET NO 2 OF 3 SEE DWG. 13477-4E-4101
 PAINT IN ACCORDANCE WITH DWG. C-997-686 ITEM 9-2
 FOR SHEET 3 OF 3 SEE DWG. 13477-4D-4115

ESTIMATED WEIGHT (W/TUBE PANEL) 23 KIPS

SHEET 1 OF 3



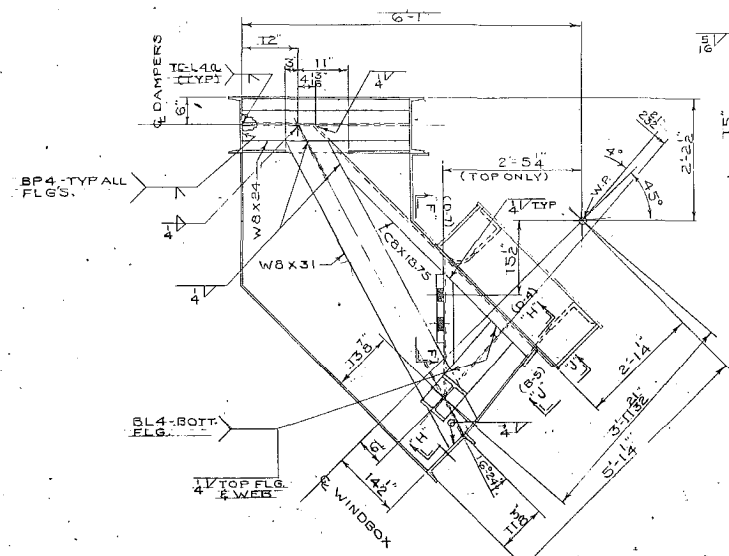
LUTZ, DAILY & BRAIN - CONT 77-B-2
 22" T.N.P. COAL OIL WINDBOX ARRG.
 FOR CITY OF GRAND ISLAND
 PLATTE GENERATING STA. UNIT #1
 GRAND ISLAND, NEBRASKA

SCALE 3/4" = 1'-0" DATE 12-20-77
 DRAWN BY G. GRANT CHECKED BY WOLFGANG
 TRACED BY APPROVED BY J. J. G. 7-14-78

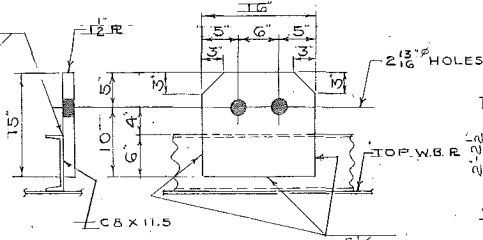
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COMP. CODE -18-31-0111
 DRAWING NO. 13477-4E-4100-07

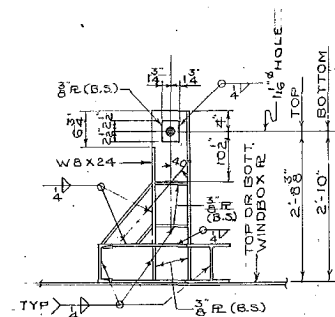
| REV. | ZONE | DESCRIPTION | DATE | APP'D. |
|------|------|---|---------|-----------|
| 1 | | COMPLETED TOP & BOTT. VIEWS & RELATED SECTIONS. G. GRANT | 7-6-78 | FLM: G.L. |
| 2 | | 19" DIM. IN TOP & BOTT. VIEWS W.B. 2 & 4 WAS 20" G. GRANT | 10-8-79 | FLM: G.L. |



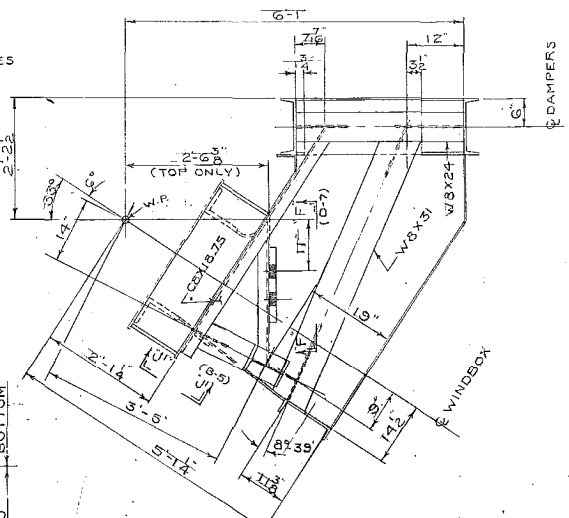
TOP VIEW-WINDBOX 1 & 3-AS SHOWN
BOTT. VIEW-WINDBOX 1 & 3 OPP. HAND & NOTED



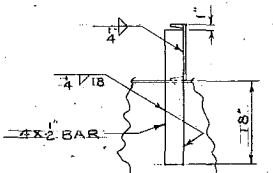
VIEW F-F (B-7 & E-7) (TOP ONLY)



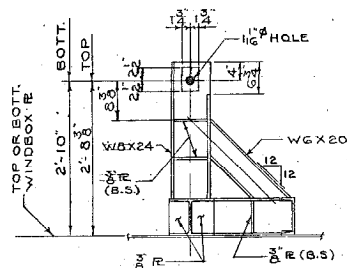
VIEW G-G (E-7) (TOP WINDBOX 2 & 4-AS SHOWN) (BOTT. WINDBOX 2 & 4-OPP. HAND)



TOP VIEW-WINDBOX 2 & 4-AS SHOWN
BOTT. VIEW-WINDBOX 2 & 4-OPP. HAND & NOTED (FOR WELDING SEE WINDBOX 1 & 3)

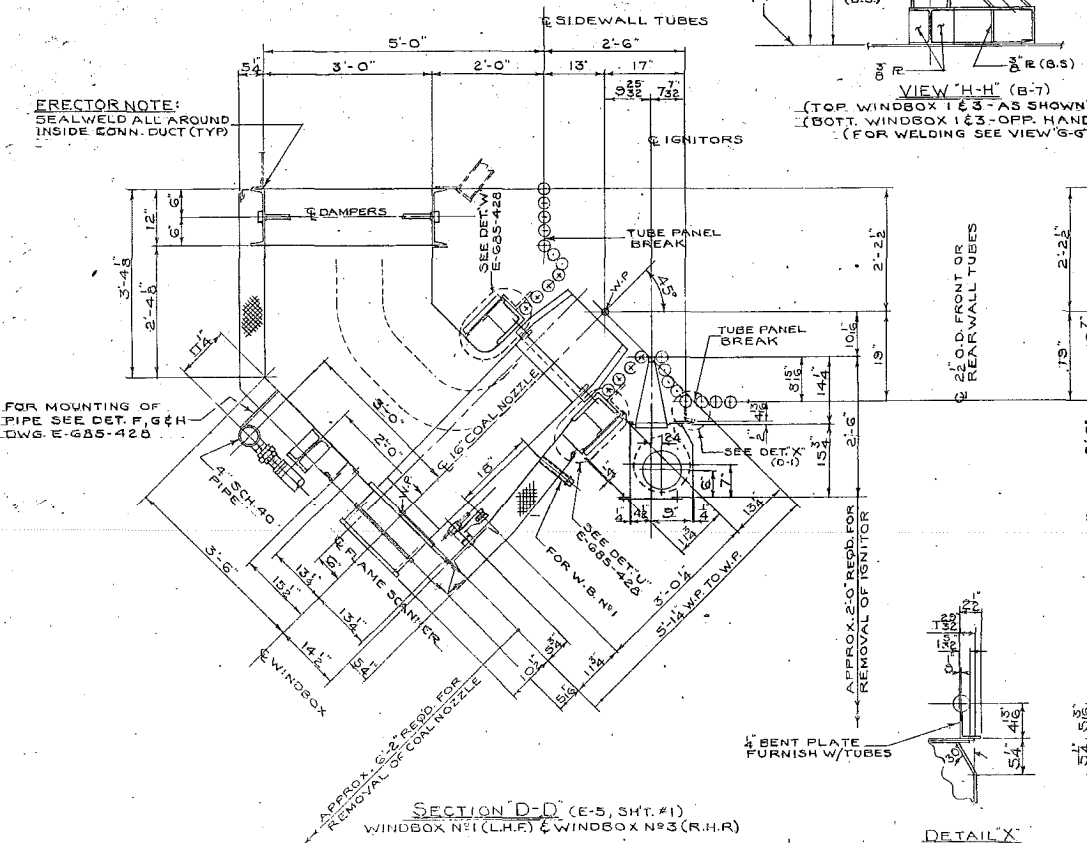


VIEW J-J-AS SHOWN (C-7)
VIEW J-J-OPP. HAND (E-7)

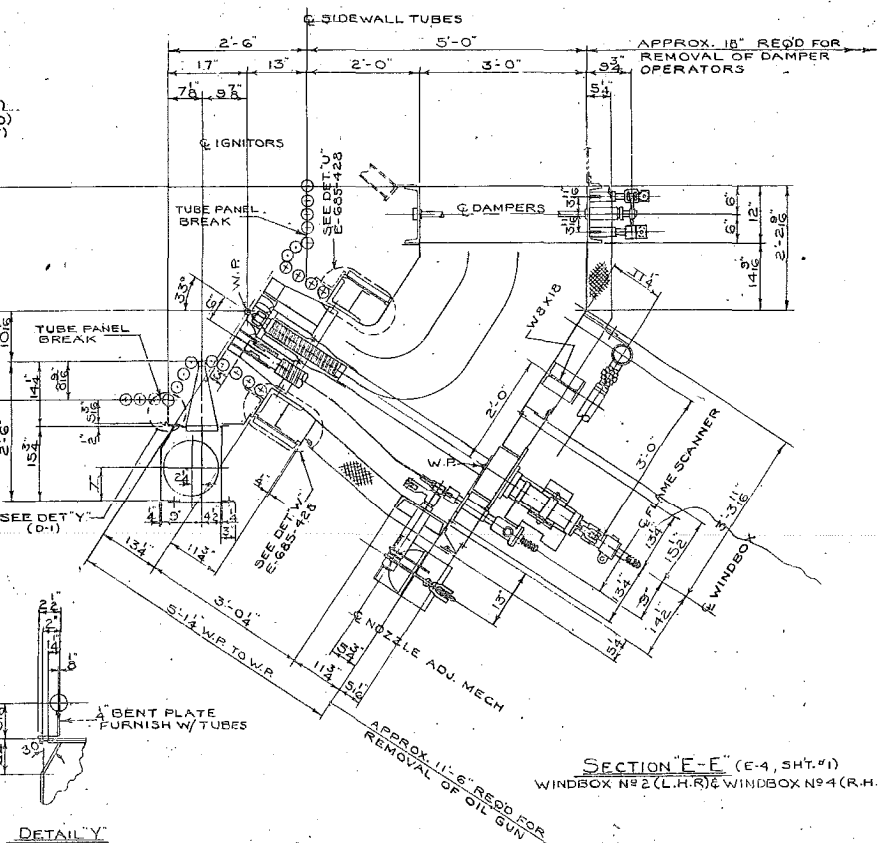


VIEW H-H (B-7) (TOP WINDBOX 1 & 3-AS SHOWN) (BOTT. WINDBOX 1 & 3-OPP. HAND) (FOR WELDING SEE VIEW G-G)

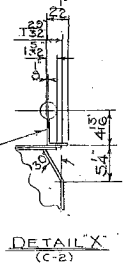
FRECTOR NOTE:
SEALWELD ALL AROUND INSIDE CONN. DUCT (TYP)



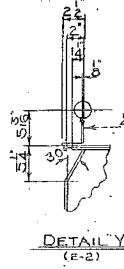
SECTION D-D (E-5, SHT. #1)
WINDBOX #1 (L.H.R.) & WINDBOX #3 (R.H.R.)



SECTION E-E (E-4, SHT. #1)
WINDBOX #2 (L.H.R.) & WINDBOX #4 (R.H.R.)



DETAIL X (C-2)



DETAIL Y (E-2)

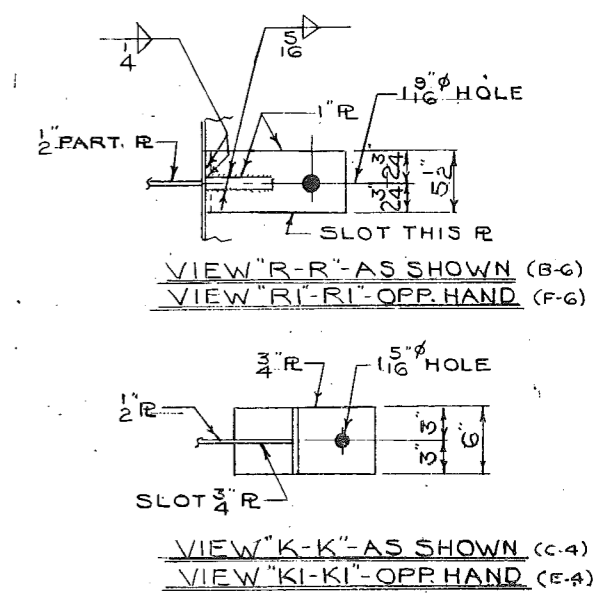
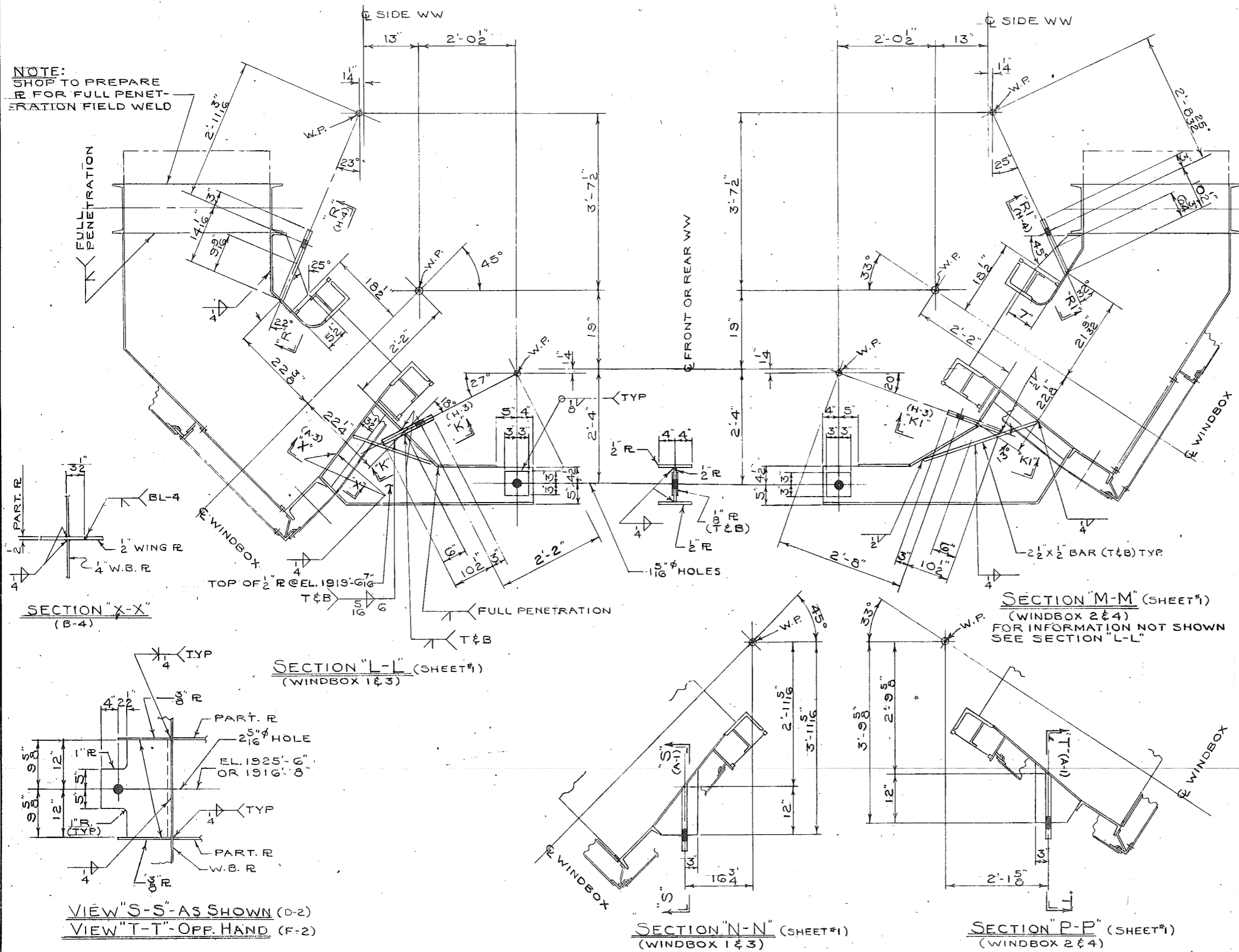
SHEET 2 OF 3

NOTE:
FOR GENERAL NOTES SEE SHEET #1
DWG. 13477-4E-4100

LUTZ, DAILY & BRAIN-CONT. 77-8-2
2211 N. COAL & OIL WINDBOX ARRANGEMENT
FOR CITY OF GRAND ISLAND
PLATTE GENERATING STA. UNIT #1
GRAND ISLAND, NEBRASKA
SCALE 1" = 1'-0" DATE 12-19-77
DRAWN BY G. GRANT CHECKED BY WOLFGANG APPROVED BY G. GRANT
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C.M.P. CODE 48-31-0111
DRAWING NO. 13477-4E-4101-C2

| REV | ZONE | DESCRIPTION | DATE | APP'D. |
|-----|------|--|--------|--------|
| 1 | | CHGD. ELEV. OF WING R IN SECT. L-L; CHGD. LOCATION OF 3/4" LUG IN SECT. L-L. G. GRANT | 3/3/78 | |
| 2 | | CHGD. PART. R & WING R TO 1" R IN SECTS. L-L & M-M; CHGD. ALL RELATED DIMS.; ADDED SECT. X-X. G. GRANT | 3-5-79 | |

NOTE:
SHOP TO PREPARE R FOR FULL PENETRATION FIELD WELD



NOTES:
FOR GENERAL NOTES SEE SHEET N#1
DWG. 13477-4E-4100.

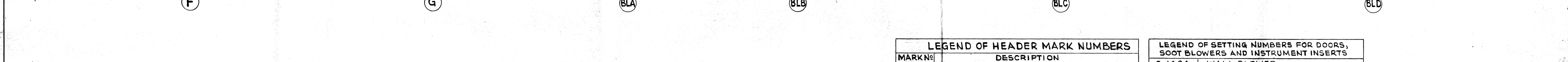
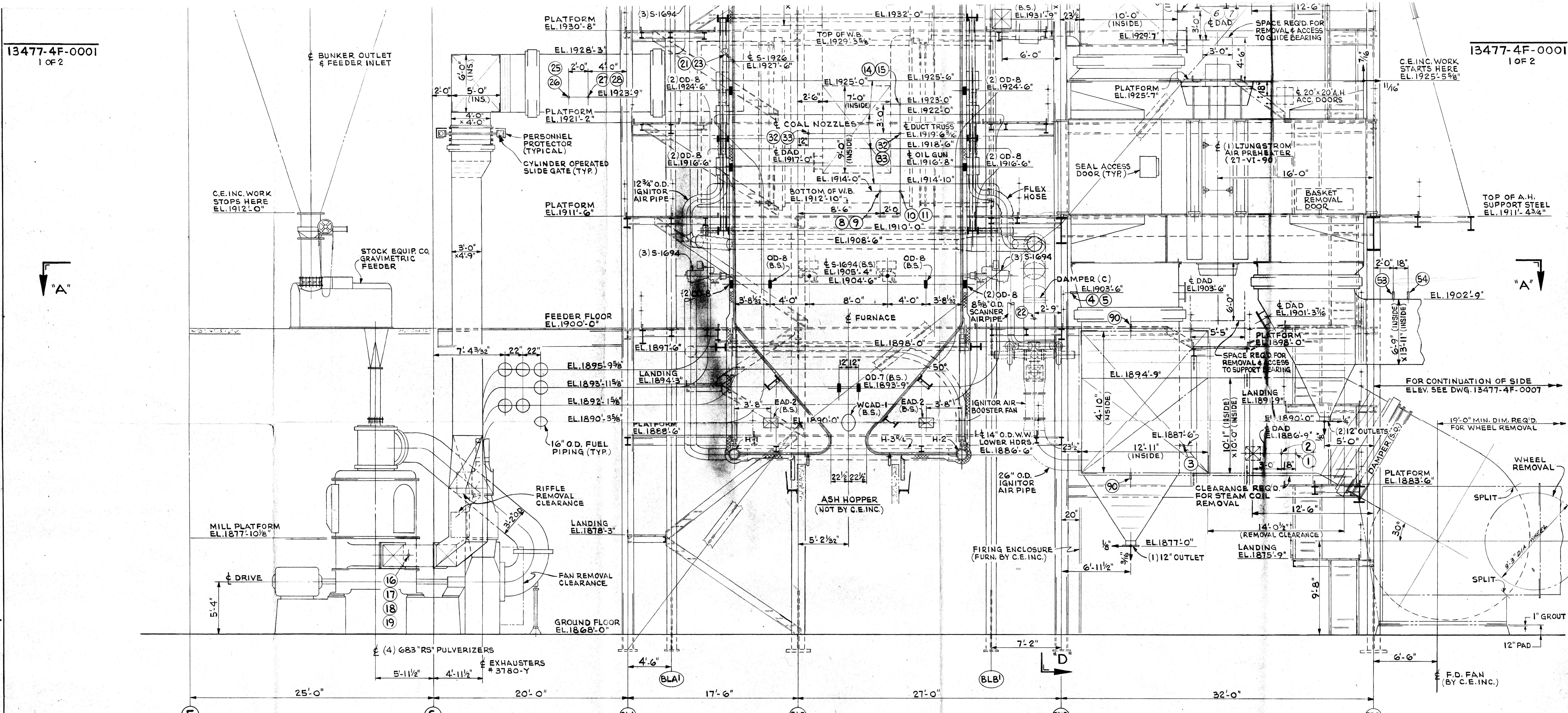
SHEET 3 OF 3

22" T.T.N.R. CEO WINDBOX ARRGT
FOR CITY OF GRAND ISLAND
PLATTE GENERATING STA. UNIT #1
GRAND ISLAND, NEBRASKA

SCALE 1"=1'-0" DATE 6-21-78
DRAWN BY G. GRANT CHECKED BY HOLSONBACK
TRACED BY APPROVED BY [Signature] 7-1-78

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COMP. CODE 48-31-0111
DRAWING NO. 13477-4D-4115-02



| MARKING | DESCRIPTION |
|---------|---|
| EH-1 | 12 3/4\" O.D. ECON. INLET HDR. |
| EH-2 | 10 3/4\" O.D. ECON. OUTLET HDR. |
| H-1 | 4\" O.D. FURN. LOWER FRONT HDR. |
| H-2 | 4\" O.D. FURN. LOWER REAR HDR. |
| H-3/4 | 4\" O.D. FURN. LOWER SIDE HDRS. |
| H-4/4 | 6 3/8\" O.D. FURN. EXT. SIDE INLET HDRS. |
| H-5 | 7 3/8\" O.D. FURN. UPPER FRONT HDR. |
| H-6/4 | 10 3/4\" O.D. FURN. UPPER SIDE HDRS. |
| H-7 | 10 3/4\" O.D. FURN. REAR OUTLET HDR. |
| SH-1 | 10 3/4\" O.D. BACKPASS @ ROOF INLET HDR. |
| SH-2 | 10 3/4\" O.D. BACKPASS @ ROOF OUTLET HDR. |
| SH-3/4 | 10 3/4\" O.D. BACKPASS SIDE INLET HDRS. |
| SH-4/4 | 10 3/4\" O.D. BACKPASS SIDE OUTLET HDRS. |
| SH-5 | 10 3/4\" O.D. BACKPASS FRONT INLET HDR. |
| SH-6 | 10 3/4\" O.D. BACKPASS EXT. FLOOR INLET HDR. |
| SH-7/4 | 10 3/4\" O.D. BACKPASS EXT. SIDE OUTLET HDR. |
| SH-8 | 10 3/4\" O.D. BACKPASS FRONT JUNCTION HDR. |
| SH-9 | 10 3/4\" O.D. BACKPASS REAR OUTLET HDR. |
| SH-10 | 10 3/4\" O.D. SH. HORIZ. SPCD. INLET HDR. |
| SH-11 | 12 3/4\" O.D. S.H. VERT. SPCD. REAR OUTLET HDR. |
| SH-12 | 10 3/4\" O.D. S.H. VERT. PLATEN INLET HDR. |
| SH-13 | 12 3/4\" O.D. S.H. VERT. PLATEN OUTLET HDR. |
| SH-14 | 12 3/4\" O.D. S.H. VERT. SPCD. FRONT INLET HDR. |
| SH-15 | 18\" O.D. S.H. VERT. SPCD. FRONT OUTLET HDR. |
| RH-1 | 18\" O.D. R.H. VERT. SPCD. INLET HDR. |
| RH-2 | 24\" O.D. R.H. VERT. SPCD. OUTLET HDR. |

| MARKING | DESCRIPTION |
|------------|--|
| S-1694 | WALL BLOWER |
| S-2043 | RETRACT. SOOT BLOWER |
| SB-3&24 | HALF TRACT SOOT BLOWER |
| SB-24A | TEMPERATURE PROBE |
| S-1937 | |
| WCAD-1 | 16\" x 23 1/2\" WATER COOLED ACCESS DOOR |
| OD-7&8 | 4\" x 10\" OBSERVATION DOOR |
| OD-16 | |
| EAD-1,2&3 | 18\" x 16\" ENCLOSURE ACCESS DOOR |
| AD-23,2&30 | 18\" x 16\" ACCESS DOOR |
| AD-26A | \" \" w/ INSTR. INSERT |
| DAD | DUCT ACCESS DOOR |
| HR-1 | HEAT REMOVAL DOOR |
| TV-1 | TV. CAMERA |
| S-1926 | INSTRUMENT INSERT |
| II-1&2 | |

UNIT DESCRIPTION
 ONE (1) 100 MW RADIANT REHEAT, BALANCED DRAFT OUTDOOR UTILITY UNIT. FUSION WELDED FURNACE WALLS (2 1/2\" O.D. TUBES ON 3\" CENTERS). FIN WELDED FURNACE EXT. SIDE TUBES (2 1/2\" O.D. TUBES ON 5\" CENTERS). FIN WELDED BACKPASS SIDE TUBES (1 3/4\" O.D. TUBES ON 4\" CENTERS). FIN WELDED BACKPASS REAR TUBES (1 3/4\" O.D. TUBES ON 4\" CENTERS). RIBBED ALUMINUM OUTER CASING STRUCTURAL STEEL BY C.E. INC. FUEL: PULVERIZED COAL. SEISMIC DESIGN: U.B.C. ZONE #1. WIND LOAD: U.B.C. 30 P.S.F. ZONE.

| | | |
|---|---|--|
| <p>5 7-11-80 R.H. CARROLL J.P.O. G.W. ADDED: BUCKSTAY LEVELING GUIDES @ EL. 1910'-0\", 1919'-6 3/16\", 1961'-0\" & 1967'-8\". ADDED: RET. SOOT BLOWER SB-24E @ 1972'-0\". HALF TRACT SOOT BLOWER SB-24A @ 1969'-0\". NOTE TO SHIELD ACC. TUBES IN ECON. & S. BLOC. REVISED: LOC. OF INST. CONNS 45 & 47 @ 1971'-9\". REMOVED: ACC. DOOR AD-23 @ 1964'-9\".</p> | <p>2 (CONT'D.) ADDED: STEAM COIL REMOVAL CLR. DIM. COAL BUNKER (NOT BY C.E. INC.) RIFFLE REMOVAL CLR. EXHAUSTER FAN REMOVAL CLR. MIN. DIM. REQ'D. FOR F.D. FAN WHEEL REMOVAL. DAD @ EL. 1929'-7\" IN H.A. CROSSOVER PLATFORM @ EL. 1925'-7\" AD-9 @ EL. 1970'-7 3/16\".</p> | <p>3 E.H. 11-17-78 G.L. N.O.L. REVISED: DIM. FROM FRONT WALL TO EAD-1 LOC. OF AD-9 @ EL. 1970'-7 3/16\". ECON. INLET FEED STOP & CHECK VALVES AD-9 TO EAD-3 @ EL. 1970'-7 3/16\". INSIDE RADIUS FOR GAS DUCT LEAVING ECON. DOOR @ EL. 1954'-0\" FROM DAD TO AD-30. TYPICAL DUCT CLEARANCE DETAILS.</p> |
| <p>REVISIONS REVISED: GROUND FLOOR ELEV. FROM 1860'-0\" TO 1868'-0\" DIM. FROM GROUND TO & W.W. LOWER HDRS. & ALL ELEV. ACCORDINGLY. SIZE OF STEAM AIR HEATER. ELEV. & LOC. OF H.A. DUCT TO PULV. BUCKSTAYS & BROUGHT UP TO DATE. PRESS. PARTS & BROUGHT UP TO DATE. ELEV. OF EXT. ARCH FLOOR. SETTING N'S FOR DOORS & SOOT BL'W'RS AND BROUGHT UP TO DATE.</p> | <p>ADDED: PIPE DUCT DRUM HANGER RODS. PRESS. PARTS SUPPORT LEVEL DIM. FOR FIRING ENCL. IGNITORS. EXHAUSTERS. LOC. OF ALL HOPPER OUTLETS. COUTANT BOTTOM SUPPORTS.</p> | <p>ADDED: COLUMN DESIGNATIONS. ADDITIONAL OD-8'S IN UPPER FURN. AREA. OD-16 @ EL. 1988'-2\" TURNING VANES IN DUCTS PER MK'D PRINTS FROM P&ID DESIGN. MILL PLATFORM @ EL. 1877'-10 3/8\" FEEDERS. FUEL PIPING. A.H. ACCESS DOORS.</p> |

| | |
|---|---|
| <p>4 E.H. 3-30-79 J.M.O. G.W.H.A.L. REVISED: EL. OF DAD FROM 1901'-0\" TO 1901'-3 3/8\". FIRING ENCLOSURE ROOF. ADDED: IGNITOR AND SCANNER AIR FANS & PIPING. INST. CONNS #20, 22, 30, 31 & 90. PROTECTIVE COVER ROOF. FURNACE GUIDES. CUST. BLR. FEED, MAIN STM, HOT & COLD RH PIPING.</p> | <p>2 E.H. 6-18-78 J.M.O. REVISED: EL. OF DAD FROM 1929'-9\" TO 1931'-9\". DOOR & S.B. LOCATIONS IN EXT. & B.P. SIDEWALLS. EL. OF ROOF ENCL. FLOOR. BUCKSTAY EL. FROM 1985'-0\" TO 1985'-6\". BUCKSTAY EL. FROM 1920'-11 3/16\" TO 1919'-6 3/16\". EL. OF RH-2 & SH-15. DUCT @ PULVERIZER INLET.</p> |
|---|---|

| REFERENCE DRAWINGS | |
|--|---------------|
| GENERAL ARR'G'T. - PLAN "A-A" | 13477-4E-0002 |
| " " " " " " " " " " | 13477-4E-0003 |
| " " " " " " " " " " | 13477-4E-0004 |
| " " " " " " " " " " | 13477-4F-0004 |
| " " " " " " " " " " | 13477-4E-0006 |
| " " " " " " " " " " | 13477-4F-0007 |
| " " " " " " " " " " | 13477-4D-0016 |
| PRESS. PARTS ARR'G'T. - UPPER SIDE ELEV. | 13477-4F-0100 |
| " " " " " " " " " " | 13477-4E-0101 |
| VALVE LIST | 13477-4D-0300 |
| P.P. CONN. LOC. & EXP. DIAGRAM (SH.#1) | 13477-4E-0303 |
| " " " " " " " " " " | 13477-4E-0304 |

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

SCALE: 1/4\" = 1'-0\" DATE: 3-21-78
 DRAWN BY: ED HOWARD CHECKED BY: J.M.O. 3-21-78
 TRACED BY: APPROVED

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COMP. CODE: 91-84-0303
 NO. 13477-4F-0001-06

**CITY OF GRAND ISLAND, NEBRASKA
PLATTE GENERATING STATION**

**Unit No. 1
C-E Contract 13477 RR**

| PREDICTED PERFORMANCE | | | |
|---------------------------------------|-------|--------------------------|--------------------------|
| Load | | MCR | C.L. |
| Fuel | | Wyoming Sub-Bit. Coal | Wyoming Sub-Bit. Coal |
| Evaporation | lb/hr | 765,000 | 497,200 |
| Feedwater Temperature | F | 472 | 430 |
| Superheater Outlet Temperature | F | 1005 | 1005 |
| Superheater Outlet Pressure | psig | 1990 | 1851 |
| Superheater Pressure Drop | psi | 130 | 61 |
| Reheater Flow | lb/hr | 659,900 | 428,900 |
| Reheater Inlet Temperature | F | 697 | 630 |
| Reheater Inlet Pressure | psig | 521 | 341 |
| Reheater Outlet Temperature | F | 1005 | 1005 |
| Reheater Outlet Pressure | psig | 504 | 330 |
| Reheater Pressure Drop | psi | 17 | 11 |
| Economizer Pressure Drop | psi | 9 | 3.6 |
| Gas Drop, Furnace to Econ. Outlet | "wg | 3.40 | 1.70 |
| Gas Drop, Econ. Outlet to A.H. Outlet | "wg | 9.85 | 4.95 |
| Gas Temp. Entering Air Heater | F | 768 | 689 |
| Gas Temp. Leaving Air Heater, Uncorr. | F | 280 | 254 |
| Gas Temp. Leaving Air Heater, Corr. | F | 268 | 244 |
| Air Temp. Entering Air Heater | F | 87 | 105 |
| Air Temp. Leaving Air Heater | F | 704 | 636 |
| Air Press Entering Air Heater | "wg | 11.05 | 7.95 |
| Ambient Air Temperature | F | 80 | 80 |
| Excess Air Leaving Economizer | % | 20 | 23 |
| Fuel Fired | lb/hr | 129,000 | 89,800 |
| Efficiency | % | 85.51 | 86.45 |

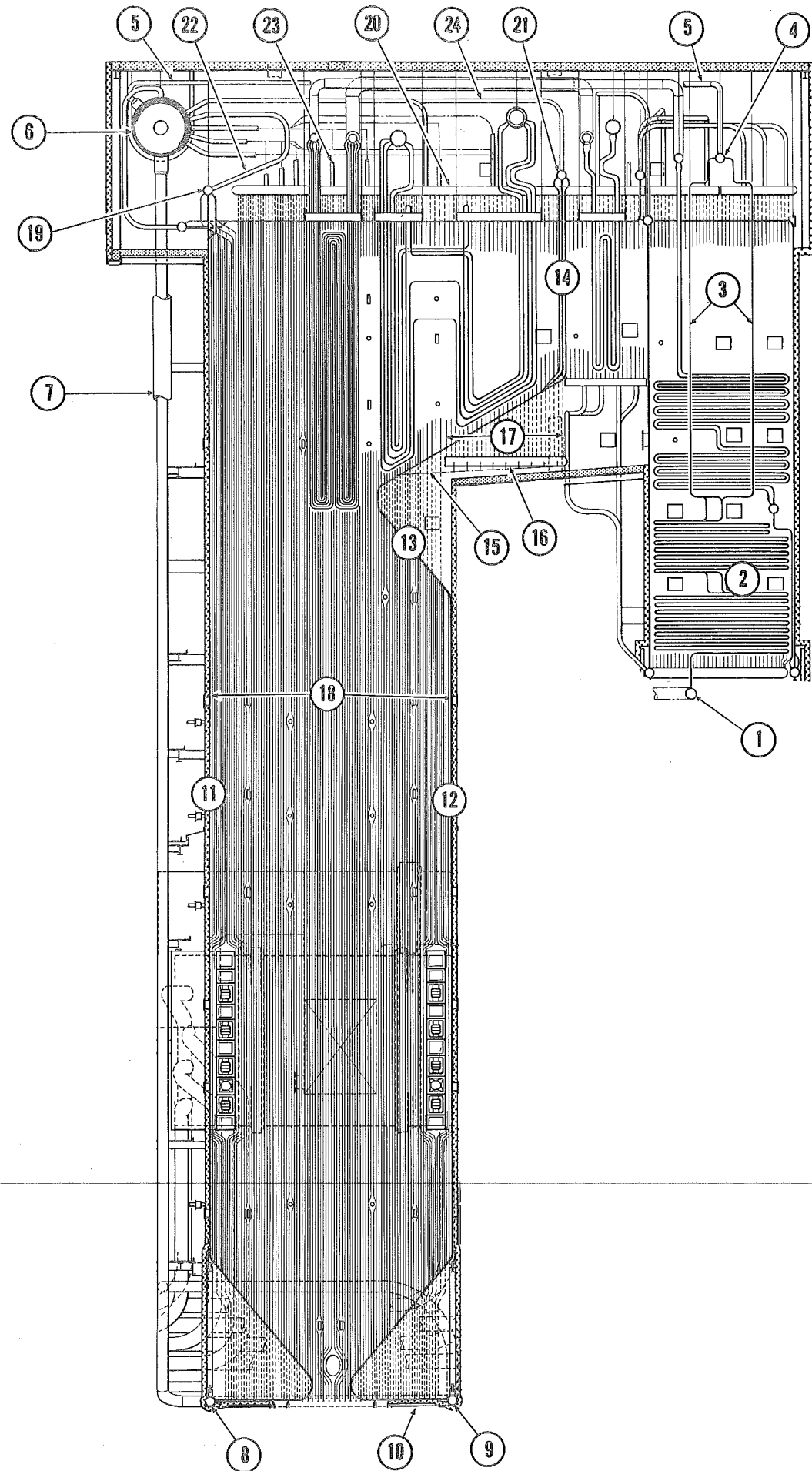
*NOTES: These performance figures are predicted only and are not to be construed as being guaranteed except where the points coincide with the guarantees.

Operation of this unit in excess of the above specified Maximum Continuous Rating (MCR) may result in damage to the equipment and/or increased maintenance.

Superheat steam temperature control range is from 497,200 to 765,000 lb/hr.

Reheat steam temperature control range is from 428,900 to 659,900 lb/hr.

The Fuel specifications on which the guarantees are based are as follows:
HHV 8125, Moist 30%, VM=32.10%, FC=32.10%, Ash 5.8%



WATER CIRCUITS

| MK NO. | QUANT. | SIZE | DESCRIPTION |
|--------|--------|--------------|---|
| 1 | 1 | 12-3/4" O.D. | Economizer Inlet Header |
| 2 | 86 | 2" O.D. | Bare Tube Economizer Elements (Upper and Lower Banks) on 4" Ctrs. |
| 3 | 86 | 2" O.D. | Economizer Terminal Tubes on 8" Ctrs. |
| 4 | 1 | 10-3/4" O.D. | Economizer Outlet Header |
| 5 | 2 | 6-5/8" O.D. | Economizer Outlet Links |
| 6 | 1 | 60" I.D. | Steam Drum |
| 7 | 4 | 14" O.D. | Furnace Downcomers |
| 8 | 1 | 14" O.D. | Furnace Lower Front Header |
| 9 | 1 | 14" O.D. | Furnace Lower Rear Header |
| 10 | 2 | 14" O.D. | Furnace Lower Side Headers, One Per Side |
| 11 | 117 | 2-1/2" O.D. | Furnace Front Wall Tubes, Fusion Welded on 3" Ctrs. |
| 12 | 117 | 2-1/2" O.D. | Furnace Rear Wall Tubes, Fusion Welded on 3" Ctrs. |
| 13 | 117 | 2-1/2" O.D. | Furnace Rear Arch Tubes on 3" Ctrs, Fin Welded at Each Side in Vicinity of Extended Side Supply Tubes, Remainder Fusion Welded. |
| 14 | 99 | 2-1/2" O.D. | Furnace Rear Screen Tubes on 9" Ctrs. |
| 15 | 18 | 2-1/2" O.D. | Furnace Extended Side Supply Tubes, 9 Per Side |
| 16 | 2 | 8-5/8" O.D. | Furnace Extended Side Wall Inlet Headers, 1 Per Side |
| 17 | 56 | 2-1/2" O.D. | Furnace Extended Side Wall Tubes, 28 Per Side Fin Welded on 5" Ctrs. |
| 18 | 164 | 2-1/2" O.D. | Furnace Side Wall Tubes, 82 Per Side Fusion Welded on 3" Ctrs. |
| 19 | 1 | 10-3/4" O.D. | Furnace Upper Front Header |
| 20 | 2 | 10-3/4" O.D. | Furnace Upper Side Headers, 1 Per Side |
| 21 | 1 | 10-3/4" O.D. | Furnace Upper Rear Outlet Header |
| 22 | 14 | 6" O.D. | Furnace Upper Front Header Riser Tubes |
| 23 | 16 | 6" O.D. | Furnace Upper Side Header Riser Tubes, 8 Per Side |
| 24 | 10 | 6" O.D. | Furnace Upper Rear Outlet Header Riser Tubes |

**SCHEMATIC ARRANGEMENT
WATER & SATURATED STEAM CIRCUITS**

13477-4B-4102 REVISIONS 1 ADDED ASSY N°3 LINE N°4 1-14-79 G. GRANT

| ITEM N° | N° REQ'D BY CONT | DWG. N° | DESCRIPTION |
|---------|---------------------|---------|--|
| 1 | 21&22 | 7 | 0-902-8012 COMPARTMENT ASSY. (19 1/4" WARM UP OIL) |
| 2 | 23 | 4 | 0-904-4173 COMPARTMENT ASSY. N°2 (11 1/4" BOTT. AIR) |
| 3 | 22&24 | 3 | C-902-8008 COMPARTMENT ASSY. (17 1/4" INTERM. AIR) |
| 4 | 25&26 | 16 | D-702-0745 COMPARTMENT ASSY. N°5 (2'-0" COAL) |
| 5 | 27&28 | 4 | D-902-8011 COMPARTMENT ASSY. (15 1/4" REFUSE) 8" |
| 6 | 14 | 4 | C-902-8207 COMPARTMENT ASSY. (17 1/4" OVERFIRE AIR) |
| 7 | | | |
| 8 | 15 | 2EA | 13477-40-4114 REMOVABLE INNER PANEL ARRG'T. "A" & "B" (OIL) |
| 9 | 15 | 4 | C-105-4129 REMOVABLE INNER PANEL N°23 BOTT. AIR |
| 10 | | | |
| 11 | 15 | 12 | C-958-100 REMOVABLE INNER PANEL N°22 (COAL) |
| 12 | 15 | 4 | 13477-40-4114 REMOVABLE INNER PANEL "C" COAL & REFUSE |
| 13 | 15 | 4 | C-905-4129 REMOVABLE INNER PANEL N°29 (O.F.A.) |
| 14 | 15 | 8 | 13477-40-4114 REMOVABLE INNER PANEL N°"D" (W/SCANNER) INT. AIR |
| 15 | 2 | 12 | B-948-980 SEAL PLATE ASSY. |
| 16 | 16 | 4 | 13477-40-4113 REMOVABLE OUTER PANEL N°1 (O.F.A.) |
| 17 | 16 | 3 | C-958-105 REMOVABLE OUTER PANEL N°22 (COAL) |
| 18 | 2EA | | 13477-40-4113 " " " N°4 ^{RE} TOP COAL & REFUSE |
| 19 | 16 | 2EA | 13477-40-4113 REMOVABLE OUTER PANEL N°5 & 6 (OIL) |
| 20 | 16 | 4 | C-958-105 REMOVABLE OUTER PANEL N°9 COAL & BOTT. AIR |
| 21 | 16 | 2EA | 13477-40-4113 REMOVABLE OUTER PANEL N°2 ^{RE} TOP COAL & LIT USE |
| 22 | 16 | 8 | 13477-40-4113 REMOVABLE OUTER PANEL N°3 (W/SCANNER) INT. AIR |
| 23 | 4 | 12 | D-435-280 NOZZLE ADJ. MECH.-INDIRECT-L.H. |
| 24 | 4 | 12 | D-435-280 NOZZLE ADJ. MECH.-INDIRECT-R.H. |
| 25 | 1&2 | 4 | D-965-153 NOZZLE ADJ. MECH.-DIRECT-L.H. ARRG'T. N°1 |
| 26 | 1&2 | 4 | D-965-153 NOZZLE ADJ. MECH.-DIRECT-R.H. ARRG'T. N°1 |
| 27 | 17&18 | 12 | D-984-0190 FLAME SCANNER GUIDE PIPE ASSY. -22" WINDBOX |
| 28 | 5 | 12 | B-949-739 EXTERNAL COOLING AIR HOSE ASSY. "A" = 5'-0" |
| 29 | 9&11 | 4 | E-197-452 6" EDDY R OIL IGNITOR ASSY. 2D (IFM) |
| 30 | 10&11 | 8 | E-997-452 6" EDDY R OIL IGNITOR ASSY. 6D (IFM) |
| 31 | 3 | | 5" INSUL. FIBER BATT. C.E. SPEC. 55-32-65 INDEX N° G. 8-9. |
| 32 | 3 | | #10 GA. (.134") PINS X 5" LG. W/2" SQ. X 26 GA. CLIPS KSM NELSON |
| 33 | 3 | | #20 GA X 1" HEX METAL MESH |
| 34 | 3 | 176 | 1/2-13 TAPTITE SELF TAPPING SCREW 1 3/4 LG. W/ HEX NUT & WASH |
| 35 | 6 | | B-897-629 LINK ASSY. "L" = 4'-10" |
| 36 | 4 | 4 | B-932-0305 CLEVIS N°3 |
| 37 | | | C-982-0204 MOUNTING BRACKET N°3A (W/W.B.A.D) |
| 38 | 12&13 | 2 | D-912-8302 MANUAL NOZZLE ADJ. MECH. ASSY. N°1 |
| 39 | 12&13 | 2 | D-912-8302 MANUAL NOZZLE ADJ. MECH. ASSY. N°2 |
| 40 | 3 | 10 | 1/2-13 TAPTITE SELF TAPPING SCREW 1 1/4" LG. W/WAS WFR |
| 41 | 5 | 2EA | C-902-0223 MANUAL DAMPER CONTROL ASSY. N°1A & 21 |
| 42 | 3 | 2 | D-900-4198 NOZZLE ADJ. MECH.-INDIRECT-R.H.-ARRGT. #1 (REFUSE) |
| 43 | 3 | 2 | D-900-4198 NOZZLE ADJ. MECH.-INDIRECT-L.H.-ARRGT. #2 (REFUSE) |
| 44 | 4 | 56 | 1/8" X 2 1/2" HIGH STRENGTH BOLT (A-325) W/HEX NUT & WASHER |
| 45 | | 1EA | 13477-40-4103 WINDBOX AIR DUCT N°1 THRU 4 |
| 46 | | 1EA | 13477-40-4109 IGNITOR AIR DUCT N°1 THRU 4 |
| 47 | | 1EA | 13477-40-4107 DAMPER BOX N°1 THRU 4 |
| 48 | | 1EA | 13477-40-4111 CASING N°1 THRU 4 |

(22" WINDBOX)

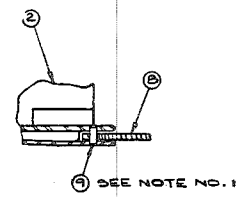
NOTE:
FOR WINDBOX ARRG'T SEE
DWG. 13477-4E-4100 &
13477-4E-4101

WINDBOX ARRG'T BILL OF MATERIAL
FOR CITY OF GRAND ISLAND

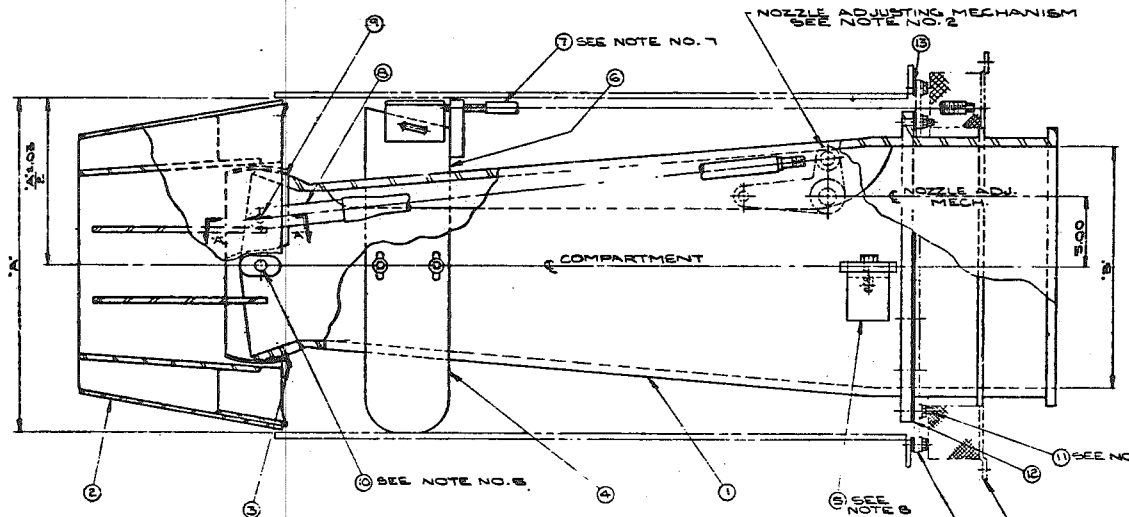


DATE 12-22-77
CHECKED BY HOLSOMACK
APPROVED
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BY AGREEMENT WITH SAID COMPANY.

DRAWING NO. 13477-4B-4102-01
COMP. CODE:



SECTION "A-A"



22.00 WIDE COAL COMPARTMENT ASSEMBLY

| COMP. TYPE | "A" COMP. HEIGHT | COMP. NO. | FUEL PIPE SIZE | "B" | PART NO. COAL NOZZLE | | PART NO. COAL NOZZLE SEAL PLATE | | PART NO. COAL NOZZLE LOCKING DEVICE ASSY. | | PART NO. GASKET | |
|------------|------------------|-----------|----------------|-------|----------------------|------------|---------------------------------|------------|---|------------|-----------------|----------|
| | | | | | DWG. NO. | PATTN. NO. | DWG. NO. | PATTN. NO. | DWG. NO. | PATTN. NO. | | DWG. NO. |
| A | 20.00 | 1 | 12.00 | 12.00 | D902-1014 | 15 | C-439-64 | 1 | 1 | B-374-69 | | |
| | | 2 | 14.00 | 13.25 | " | 16 | C-439-64 | 1 | 3 | B-374-69 | | |
| | | 3 | 14.00 | 15.50 | D-945-342 | 3A5614A | " | 17 | B-081-618 | 1 | 2 | B-374-69 |
| A | 24.00 | 4 | 14.00 | 15.25 | D902-2071 | 3A5612A | " | 18 | C-439-295 | 2 | 1 | B-374-69 |
| | | 5 | 16.25 | 15.50 | D-945-342 | 3A5614A | " | 13 | B-081-618 | 2 | 2 | B-374-69 |
| C | 28.00 | 6 | 18.00 | 17.50 | D-949-049 | 3A5713CA | " | 14 | C-439-496 | 2 | 2 | B-374-69 |
| | | 7 | 18.00 | 17.50 | D-949-049 | 3A5713CA | " | 21 | C-439-496 | 4 | 2 | B-374-69 |

| ITEM NO. | QTY. | DESCRIPTION | UNIT |
|----------|------|---|------|
| 1 | 1 | SEE CHART | |
| 2 | 1 | ADJ. COAL NOZZLE - P. ASSY. | |
| 3 | 1 | COAL NOZZLE SEAL PLATE | |
| 4 | 1 | B-902-068 NOZZLE SUPPORT NO. (SEE CHART) FRONT | |
| 5 | 1 | C-441-016 NOZZLE SUPPORT NO. (SEE CHART) REAR | |
| 6 | 1 | C-902-082 NOZZLE SUPPORT NO. (SEE CHART) FRONT | |
| 7 | 1 | D-902-0871 COAL NOZZLE LOCKING DEVICE ASSY. NO. 4 | |
| 8 | 1 | B-904-6-85 NOZZLE ADJ. LINK ASSY. NO. | |
| 9 | 1 | B-434-0021 P. V. NO. 1 | |
| 10 | 2 | B-956-392 NOZZLE PIVOT PIN | |
| 11 | 12 | B-760-586 STUD NO. 4 - NYLON WASHER | |
| 12 | 1 | SEE CHART GASKET | |
| 13 | AR | 1.00 x .12 THK ASBESTOS TAPE | |

FOR INDEX TO MAT'L SPEC. REFER TO STD. NUMBER
 INDEX NO. 114.2

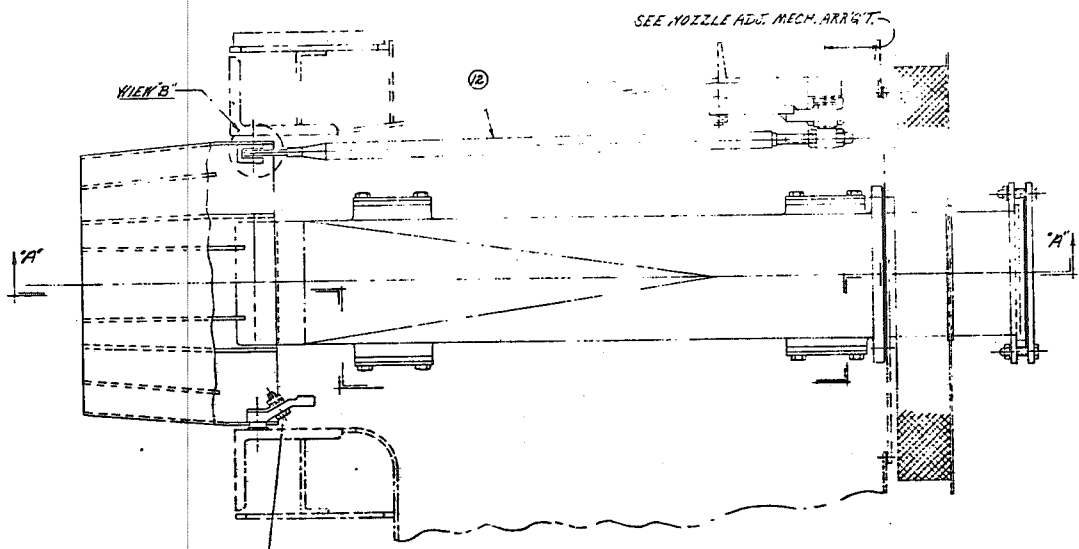
| MAT'L ITEM NO. | SPECIFICATION | QTY. |
|----------------|--|------|
| * | JOHN MANVILLE FIBER GLASS AAA - NY FREE OR EQUAL ASBESTOS TAPE | 1 |

NOTE:
 1. TACK WELD PIN, ITEM NO. 9 TO NOZZLE AT ASSY.
 2. FOR NOZZLE ADJ. MECH., SEE I.B. & P. DUCT DWG.
 3. FOR REMOVABLE INNER & OUTER PANELS, SEE I.N.D. & O.V. DWG.
 4. ALL DIMENSIONS ARE IN INCHES.
 5. AFTER ASSEMBLY, THE DUCT SHALL BE TIGHT TO THE POINT OF CONTACT WITH THE NOZZLE ADJ. MECH. & NOZZLE SUPPORT. THE DUCT SHALL BE TIGHT TO THE POINT OF CONTACT WITH THE NOZZLE ADJ. MECH. & NOZZLE SUPPORT.
 6. AFTER ASSEMBLY, THE NOZZLE SHALL BE TIGHT TO THE POINT OF CONTACT WITH THE NOZZLE ADJ. MECH. & NOZZLE SUPPORT.
 7. LOCATE COAL NOZZLE LOCKING DEVICE PART NO. 4 & NOZZLE ADJ. MECH. PART NO. 2 AT NOZZLE ADJ. MECH. & COAL COMPARTMENT AT NOZZLE ADJ. MECH. & COAL COMPARTMENT.
 8. WELD NOZZLE SUPPORT TO I.B. AT FINAL ASSEMBLY.

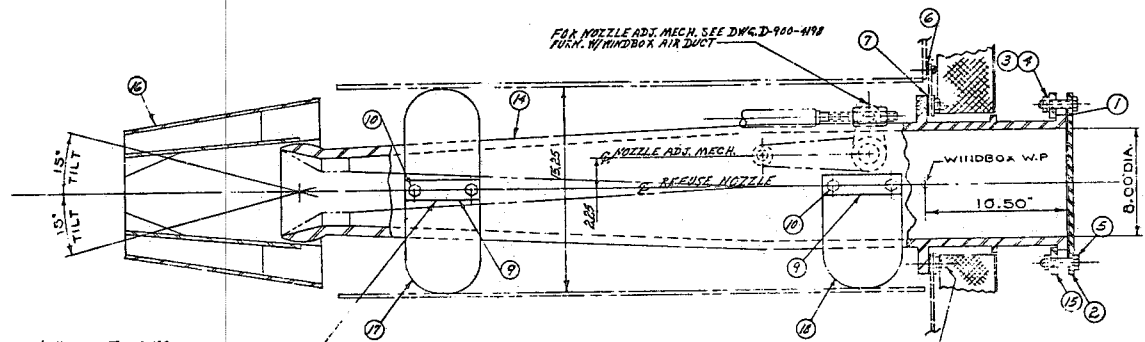
COAL COMPARTMENT ASSEMBLY
 20.00 & 24.00 HIGH COMPARTMENTS
 22.00 WIDE MINIDOX T.F. FIR &

POWER SYSTEMS
 CONSULTING ENGINEERING, INC.
 4177 E. 11th Ave., Denver, Colorado 80202
 Phone: 442-71-4900

D-902-0745 03

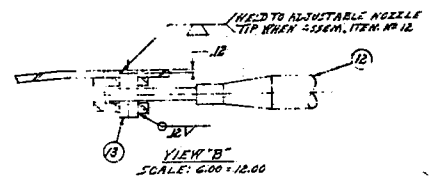


PLAN VIEW



SECTION 'A-A'

| ITEM NO. | QTY | DWG NO. | DESCRIPTION | MATL. ITEM# |
|----------|-----|------------|---|-------------|
| 1 | 1 | B-902-472 | GASKET FOR 8" P.P.E. | |
| 2 | 1 | B-902-470 | COVER PLATE | |
| 3 | 2 | | 1/2" DIA UNC MET. NUT | 295 |
| 4 | 2 | | WASHERS 1/2" DIA. 1/4" THK. 1/4" DIA. 1/4" DIA. | 296 |
| 5 | 1 | | 1/2" DIA. 1/4" DIA. 1/4" DIA. 1/4" DIA. | 297 |
| 6 | 1 | | 1/2" DIA. 1/4" DIA. 1/4" DIA. 1/4" DIA. | 298 |
| 7 | 1 | B-902-470 | GASKET | |
| 8 | 1 | B-902-586 | 2" DIA. 1/4" DIA. 1/4" DIA. 1/4" DIA. | |
| 9 | 1 | B-902-8107 | RESTRAINING PLATE | |
| 10 | 2 | | 1/2" DIA. 1/4" DIA. 1/4" DIA. 1/4" DIA. | 295 |
| 11 | 2 | B-902-140 | 1/2" DIA. 1/4" DIA. 1/4" DIA. 1/4" DIA. | |
| 12 | 1 | B-902-4-57 | NOZZLE ADJ. MECH. ASSY. 1/2" DIA. 1/4" DIA. | 292 |
| 13 | 1 | | 1/2" DIA. 1/4" DIA. 1/4" DIA. 1/4" DIA. | |
| 14 | 1 | B-902-499 | 1/2" DIA. 1/4" DIA. 1/4" DIA. 1/4" DIA. | |
| 15 | 1 | D-902-0105 | 1/2" DIA. 1/4" DIA. 1/4" DIA. 1/4" DIA. | |
| 16 | 1 | B-902-8411 | 1/2" DIA. 1/4" DIA. 1/4" DIA. 1/4" DIA. | |
| 17 | 2 | B-902-8107 | NOZZLE SUPPORT, FRONT | |
| 18 | 2 | B-902-8107 | NOZZLE SUPPORT, REAR | |



NOTES:
"ALL DIMS ARE IN INCHES"

LOCATE & WELD P-TWINING TO NOZZLE SUPPORT & ASSEMBLY (TYP.)

25° V 2.00-3.75

WASHERS ARE TO BE TACK WELDED TO REMOVABLE INNER PANEL AFTER ASSEMBLING & ALIGNING REFUSE NOZZLE IN THE COMPARTMENT. WASHERS ARE TO BE TACK WELDED NECESSARILY TO ALLOW FOR REMOVAL OF INNER PANEL OVER OUTER FLANGE OF REFUSE NOZZLE.

REFUSE COMPARTMENT ASSY. OF WINDBOX-154 HIGH COMPT FOR 8" DIA. REFUSE NOZZLE. C.E. TILTING WINDBOX.

SCALE: 2" = 12" 5/8"

DRWN BY: J.A. CHECKED BY: H.C. LAMBERT

TRACED BY:

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COMP. CODE: 15-21-0100

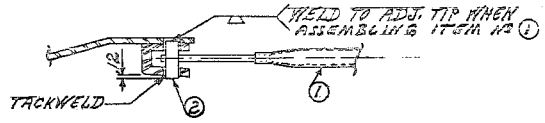
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C-902-8208

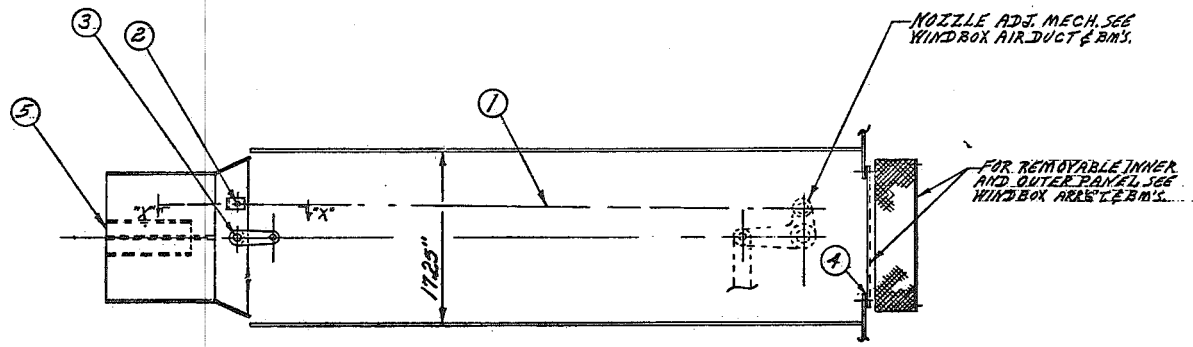
REVISED

BILL OF MATERIAL

| ITEM NO. | QTY. | DRAWING NUMBER | DESCRIPTION | MAT'L. ITEM NO. |
|----------|------|----------------|-------------------------------|-----------------|
| 1 | 1 | B-901-4185 | NOZZLE ADJ. LINK #21 | |
| 2 | 1 | | PIN .500" DIA. X 1.50" LG. | 292 |
| 3 | 2 | B-964-140 | NOZZLE PIVOT PIN ASS'Y. | |
| 4 | | | 100"x.12" TH'K. ASBESTOS TAPE | |
| 5 | 1 | E-902-8414 | ADJ. AIR NOZZLE TIP | |



SECTION "X-X" (B-E)



INT. AIR COMPT. ASS'Y. W/SCANNER
 17.25" HIGH X 22.00" WIDE COMPT.
 FOR
 C.E. WINDBOX - J.T. FIRING

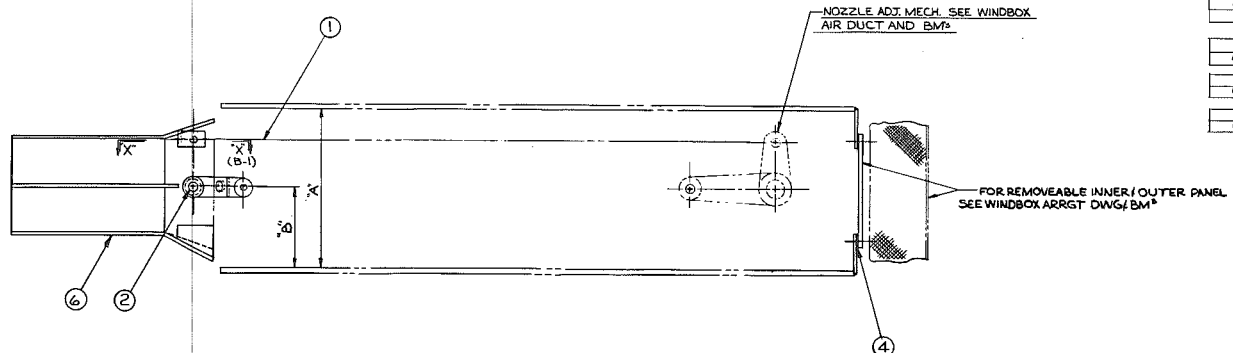
SCALE DRAWN BY H.C. PORTER DATE 6-7-78 CHECKED BY HOLSONBACK
 TRACED BY APPROVED

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COMP. CODE AB-31-4900

DRAWING NO. C-902-8208-00

| BILL OF MATERIALS | | | | |
|---|---------|------------|-----------------------------|---------------|
| PARTS COMMON TO ALL COMPT ASSY | | | | |
| QUANTITIES LISTED FOR ONE COMPT | | | | |
| ITEM N° | N° REQD | DWG N° | DESCRIPTION | MATL. ITEM NR |
| 1. | 1 | B-901-41B5 | NOZZLE ADJ. LINKASSY N° 1 | |
| 2. | 2 | B-901-140 | NOZZLE PIVOT PIN ASSY. | |
| 3. | 1 | | 300#150 LB. | |
| 4. | AS REQD | | 100#12 THK. ASBESTOS TAPE | 113 |
| 5. | | | | |
| PARTS COMMON TO COMPT ASSY N°1 (9.25 HIGH COMPT) | | | | |
| 6 | 1 | E-951-897 | ADJ. AIR NOZZLE TIP NO. A-4 | |
| PARTS COMMON TO COMPT ASSY N°2 (11.25 HIGH COMPT) | | | | |
| 6 | 1 | E-951-896 | ADJ. AIR NOZZLE TIP B-4 | |
| PART COMMON TO COMPT ASSY N°3 (13.25 HIGH COMPT) | | | | |
| 6 | 1 | E-951-895 | ADJ. AIR NOZZLE TIP C-4 | |

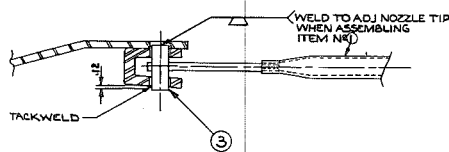


| COMPT HEIGHT "A" | "B" | TOTAL FREE AREA |
|------------------|------|-----------------|
| 9.25 | 4.62 | .65 sq" |
| 11.25 | 5.62 | .85 sq" |
| 13.25 | 6.62 | 1.05 sq" |

FOR INDEX TO MAT'L. SPEC. REFER TO STD. INST. NO. 91-17-64 INDEX 91-14.2.

| B/M MATERIAL SPECIFICATION CHART | | |
|----------------------------------|--|----------------------|
| MATERIAL ITEM N° | SPECIFICATION | PURCHASE INSTRUCTION |
| 113 | JOHNS-MANVILLE #27 GRADE AAA LINT FREE ASBESTOS TAPE OR EQUIV. | |
| | BCR-BNI ST. STL. AISI 304 H.F. | |

NOTES:
 1. ALL DIMS ARE IN INCHES
 2. FOR OIL OR OIL & GAS FIRED UNITS, USE THIS COMPT. ASSY. FOR TOP OR BOT. AIR & TOP OR BOT. O.F.A. FOR COAL FIRED UNITS USE THIS COMPT. ASSY. FOR BOT. AIR ONLY.



SECTION X-X (B-6)
SCALE: 6.00 = 12.00

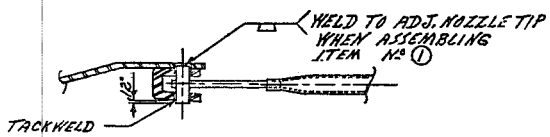
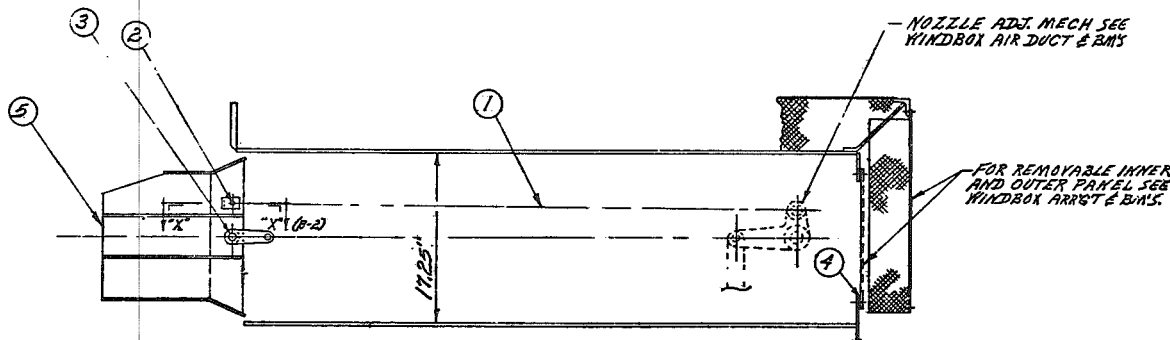
| | |
|--|------------------------|
| AIR COMPT ASSY | |
| FOR 22.00 WIDE WINDBOX | |
| TILTING TANGENTIAL FIRING | |
| SCALE 3.00 = 12.00 | RATE 5-22-75 |
| DRAWN BY RAS | CHECKED BY [Signature] |
| TRACED BY | APPROVED |
| | |
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| COMP. CODE: 45-31-4900 | INTER. DEPT. D-550 |
| DRAWING NO. D-904-4173-01 | FREQ. NO. 123.001 |

C-902-8207

REVISED

BILL OF MATERIAL

| ITEM NO | REQD. | DRAWING NUMBER | DESCRIPTION | MAT'L. ITEM NO |
|---------|-------|----------------|--------------------------------|----------------|
| 1 | 1 | B-901-9-15 | NOZZLE ADJ. LINK 1.01 | |
| 2 | 1 | | PIN .540" DIA. X 1.50" LG. | 293 |
| 3 | 2 | B-964-140 | NOZZLE PILOT PIN ASSY. | |
| 4 | | | 100' X 1/2" THK. ASBESTOS TAPE | |
| 5 | | E-902-8412 | ADJ. O.F.A. NOZZLE TIP ASSY. | |



SECTION 3-X-X (B-B)

THIS DRAWING MADE BY CATTANOOGA

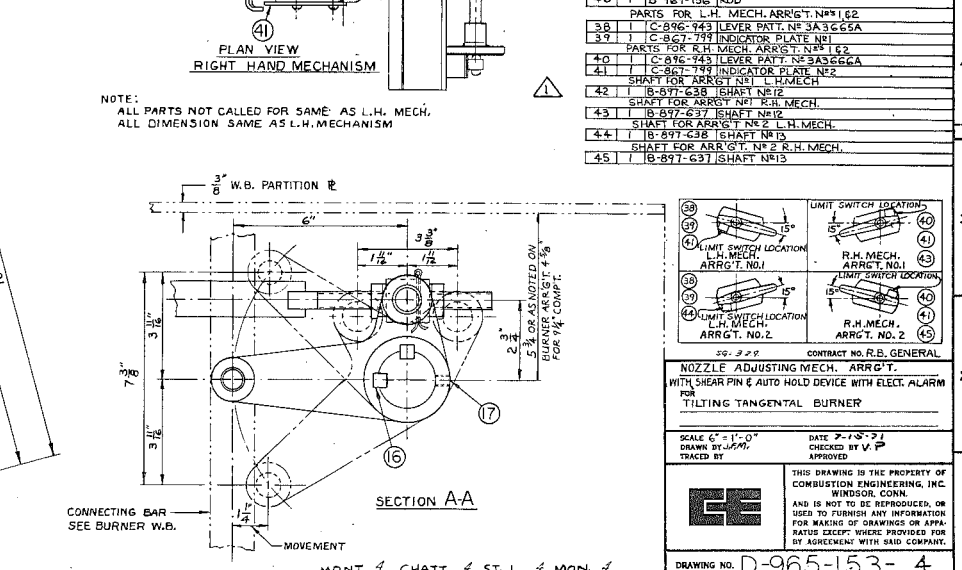
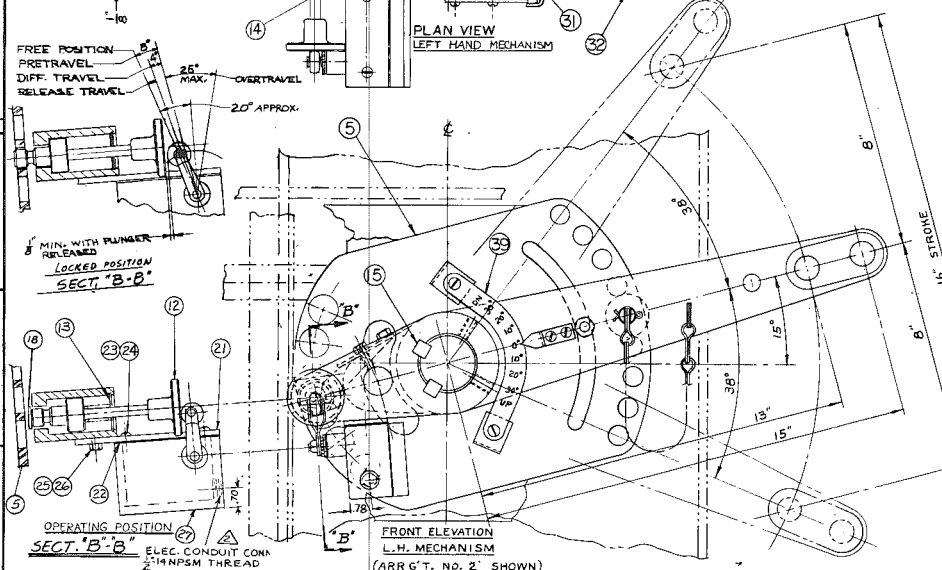
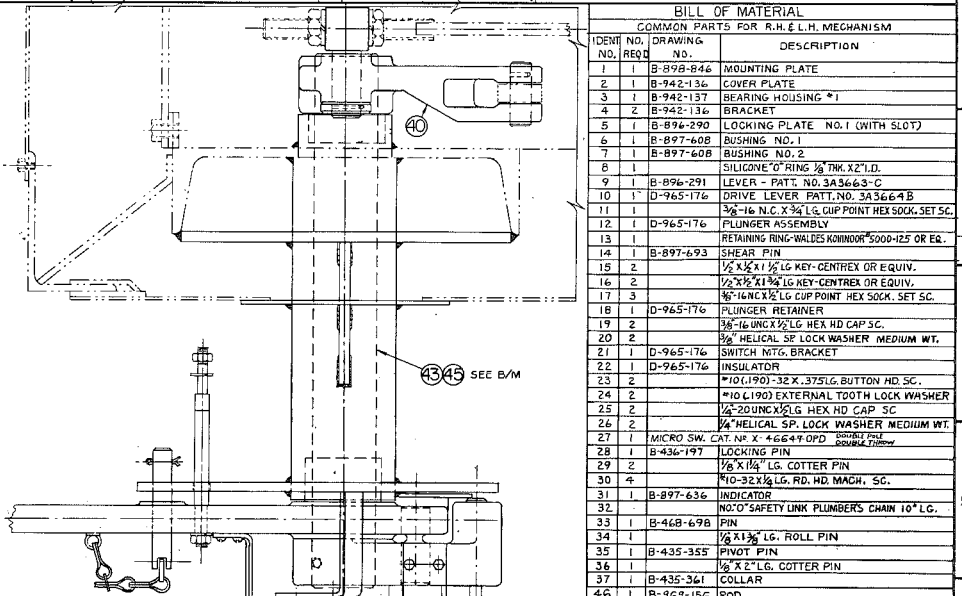
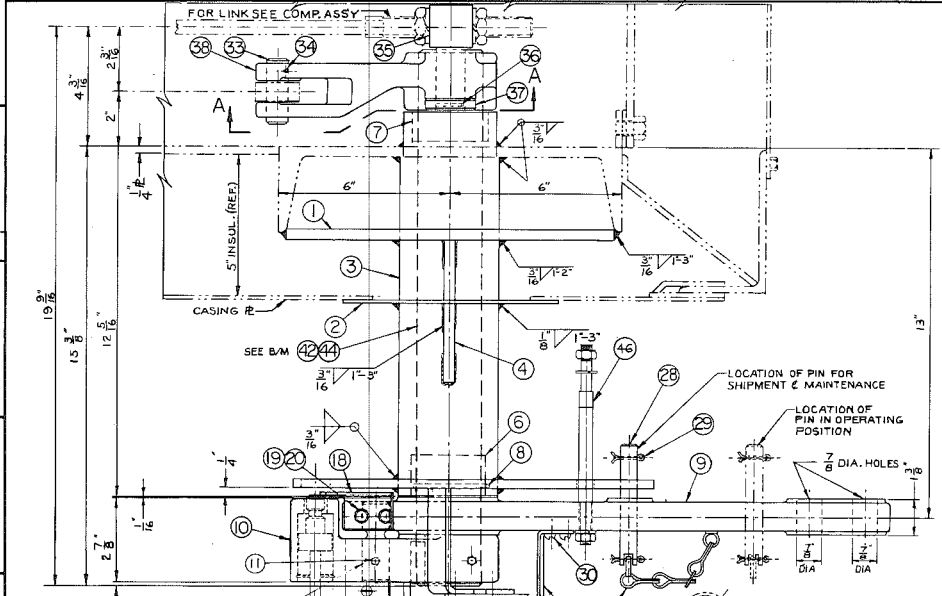
CONTRACT NO.
OVERFIRE AIR COMP. ASSY.
 17.25" HIGH X 22.00 WIDE COMP.
 FOR
C.E. WINDBOX-T.T. FIRING

SCALE TRACED BY
 DATE 6-1-78
 CHECKED BY HOLSONBACK
 APPROVED



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DRAWING NO. C-902-8207-00



BILL OF MATERIAL

COMMON PARTS FOR R.H. & L.H. MECHANISM

| IDENT. NO. | DRAWING NO. | REQD. NO. | DESCRIPTION |
|--------------------------------------|-------------|-----------|---|
| 1 | 1 | 1 | B-898-846 MOUNTING PLATE |
| 2 | 1 | 1 | B-942-136 COVER PLATE |
| 3 | 1 | 1 | B-942-137 BEARING HOUSING *1 |
| 4 | 2 | 1 | B-942-136 BRACKET |
| 5 | 1 | 1 | B-896-290 LOCKING PLATE NO.1 (WITH SLOT) |
| 6 | 1 | 1 | B-897-608 BUSHING NO. 2 |
| 7 | 1 | 1 | B-897-608 BUSHING NO. 2 |
| 8 | 1 | 1 | SILICONE O-RING 1/2 TRK X 2 I.D. |
| 9 | 1 | 1 | B-896-291 LEVER - PATT. NO. 3A3663-C |
| 10 | 1 | 1 | D-965-176 DRIVE LEVER PATT. NO. 3A3664-B |
| 11 | 1 | 1 | 3/8-16 N.C. X 3/4 LG. CUP POINT HEX SOCK. SET SC. |
| 12 | 1 | 1 | D-965-176 PLUNGER ASSEMBLY |
| 13 | 1 | 1 | RETAINING RING-WALDES ROHMCO# 5000-125 OR EQ. |
| 14 | 1 | 1 | B-897-693 SHEAR PIN |
| 15 | 2 | 1 | 1/2 X 3/4 X 1 1/2 LG. KEY-CENTRE OR EQUIV. |
| 16 | 2 | 1 | 1/2 X 3/4 X 1 1/2 LG. KEY-CENTRE OR EQUIV. |
| 17 | 3 | 1 | 1/2-16 N.C. X 1/2 LG. CUP POINT HEX SOCK. SET SC. |
| 18 | 1 | 1 | D-965-176 PLUNGER RETAINER |
| 19 | 2 | 1 | 3/8-16 UNC X 1/2 LG. HEX HD CAP SC. |
| 20 | 2 | 1 | 1/2 HELICAL SP. LOCK WASHER MEDIUM WT. |
| 21 | 1 | 1 | D-965-176 SWITCH NTC. BRACKET |
| 22 | 1 | 1 | D-965-176 INSULATOR |
| 23 | 2 | 1 | *10 (1.90) 32 X .375 LG. BUTTON HD. SC. |
| 24 | 2 | 1 | *10 (1.90) EXTERNAL TOTH LOCK WASHER |
| 25 | 2 | 1 | 1/2-20 UNC X 1/2 LG. HEX HD CAP SC |
| 26 | 2 | 1 | 1/4 HELICAL SP. LOCK WASHER MEDIUM WT. |
| 27 | 1 | 1 | MICRO SW. CAT. NO. X-4664-OPD |
| 28 | 1 | 1 | B-436-197 LOCKING PIN |
| 29 | 2 | 1 | 1/8 X 1 1/4 LG. COTTER PIN |
| 30 | 4 | 1 | 1/2 X 3/4 LG. LD. HD. MACH. SC. |
| 31 | 1 | 1 | B-897-636 INDICATOR |
| 32 | 1 | 1 | NO.0 SAFETY LINK PLUMBERS CHAIN 10" LG. |
| 33 | 1 | 1 | B-468-698 PIN |
| 34 | 1 | 1 | 1/2 X 3/4 LG. ROLL PIN |
| 35 | 1 | 1 | B-435-355 PIVOT PIN |
| 36 | 1 | 1 | 1/2 X 2" LG. COTTER PIN |
| 37 | 1 | 1 | B-435-361 COLLAR |
| 46 | 1 | 1 | B-161-156 ROD |
| PARTS FOR L.H. MECH. ARR'G'T. N°1 62 | | | |
| 38 | 1 | 1 | C-896-943 LEVER PATT. NO. 3A3665A |
| 39 | 1 | 1 | C-867-799 INDICATOR PLATE N°1 |
| PARTS FOR R.H. MECH. ARR'G'T. N°1 62 | | | |
| 40 | 1 | 1 | C-896-943 LEVER PATT. NO. 3A3665A |
| 41 | 1 | 1 | C-867-799 INDICATOR PLATE N°2 |
| SHAFT FOR ARR'G'T. N°1 L.H. MECH. | | | |
| 42 | 1 | 1 | B-897-638 SHAFT N°12 |
| SHAFT FOR ARR'G'T. N°1 R.H. MECH. | | | |
| 43 | 1 | 1 | B-897-637 SHAFT N°12 |
| SHAFT FOR ARR'G'T. N°2 L.H. MECH. | | | |
| 44 | 1 | 1 | B-897-638 SHAFT N°12 |
| SHAFT FOR ARR'G'T. N°2 R.H. MECH. | | | |
| 45 | 1 | 1 | B-897-637 SHAFT N°12 |

NOTE: ALL PARTS NOT CALLED FOR SAME AS L.H. MECH. ALL DIMENSION SAME AS L.H. MECHANISM

| TRAIN_NO | DATE | CARS LISTEARS UNLOA TONNAGE | | | | | | | | | HEAT_VAL | ASH | MOISTURE | SULFUR | SODIUM | | Sulfur | | Sodium | | Mercury | Comments | Sodium Addition |
|---|--|-----------------------------|-------------------|----------------------|----------------|---|-------------------|--------------------|--------------------|--------------------|---|-------------|---------------------------------------|------------|--|---------------|--|--------|---------------|--------------------|----------------------------|----------|-----------------|
| Send yearly to Emily for TRI completion | | COAL QUALITY DATA | | | | | | | | | Ash Contract limits: Min 0.00% Max 8.0% | | Moisture Contract limit: Max 33.0% | | if over .50 notify Environmental Specialist !! | | Higher sodium helps the ash burn. Low sodium effects the opacity readings. CONTRACT: Min 1.0% Max 1.8% | | | | | | |
| Access-Train Analysis | | | | | | | | | | | | | | | | | | | | | | | |
| Train # | Train In Date | Time In | Date of Unloading | Start Unloading Time | Train Out Date | Finished Unloading Time | # of Cars Shipped | # of Cars Unloaded | Shipping Wt (tons) | Unloaded Wt (tons) | Analysis Date | BTU per lb. | % Ash | % Moisture | Sulfur % (if over .50 notify Env Sp) | Lbs per MMBTU | Lbs SO2 per MMBTU | % NA20 | % NA20 in Ash | Lbs NA20 per MMBTU | Mercury Analysis per train | Comments | Sodium Addition |
| 2011 | Contract - Arch Coal -Thunder Basin Coal Company | | | | | MINES: Caballo Rojo Mine(ROGIC), Cordero Mine (CDGIC), Coal Creek (CKGIC) | | | | | | | | | | | | | | | | | |
| CKGIC001 | 01/10/11 | 7:00 PM | 01/11/11 | 7:00 AM | 01/27/11 | 9:45 AM | 124 | 124 | 14,572.10 | 15,549.70 | 01/09/11 | 8337 | 5.67 | 30.53 | 0.31 | | 0.74 | | 1.65 | | 0.092 | | |
| CKGIC002 | 01/31/11 | 7:00 PM | 02/02/11 | 7:00 AM | 02/09/11 | 2:45 PM | 124 | 124 | 14,545.10 | 15,468.80 | 01/31/11 | 8345 | 5.50 | 30.87 | 0.33 | | 0.79 | | 1.20 | Notify Emily | 0.105 | | |
| CKGIC003 | 02/13/11 | 7:00 PM | 02/14/11 | 7:00 AM | 02/18/11 | 11:00 AM | 124 | 124 | 14,496.45 | 15,420.90 | 02/13/11 | 8340 | 5.89 | 30.28 | 0.27 | | 0.65 | | 1.16 | Notify Emily | 0.075 | | |
| CKGIC004 | 02/20/11 | 7:00 PM | 02/21/11 | 7:00 AM | 02/26/11 | 11:00 AM | 124 | 124 | 14,585.45 | 15,481.30 | 02/22/11 | 8359 | 6.20 | 30.34 | 0.32 | | 0.77 | | 1.75 | | 0.067 | | |
| CKGIC005 | 03/20/11 | 7:00 PM | 02/21/11 | 7:00 AM | 03/23/11 | 3:25 PM | 124 | 124 | 14,555.25 | 15,385.90 | 03/18/11 | 8330 | 5.47 | 30.95 | 0.33 | | 0.79 | | 1.65 | | 0.090 | | |
| CKGIC006 | 03/28/11 | 7:00 PM | 03/29/11 | 7:00 AM | 03/31/11 | 12:50 PM | 124 | 124 | 14,559.00 | 15,459.00 | 03/27/11 | 8273 | 5.86 | 30.69 | 0.28 | | 0.68 | | 1.81 | | 0.086 | | |
| CKGIC007 | 04/13/11 | 7:00 PM | 04/14/11 | 7:00 AM | 04/18/11 | 12:50 PM | 125 | 125 | 14,732.80 | 15,692.30 | 04/14/11 | 8344 | 7.07 | 29.56 | 0.30 | | 0.72 | | 1.73 | | 0.067 | | |
| CKGIC008 | 05/01/11 | 7:00 PM | 05/02/11 | 6:00 AM | 05/04/11 | 2:00 PM | 125 | 125 | 14,717.35 | 15,387.90 | 04/30/11 | 8330 | 5.90 | 30.41 | 0.32 | | 0.77 | | 1.74 | | | | |
| CKGIC009 | 05/20/11 | 10:00 AM | 05/20/11 | 10:00 AM | 05/24/11 | 12:00 PM | 124 | 124 | 14,620.85 | 15,487.90 | 05/20/11 | 8329 | 5.63 | 30.72 | 0.31 | | 0.74 | | 1.49 | | 0.070 | | |
| CKGIC010 | 06/08/11 | 7:00 AM | 06/09/11 | 7:00 AM | 06/13/11 | 5:30 PM | 123 | 123 | 14,514.65 | 15,175.20 | 06/09/11 | 8292 | 6.08 | 30.82 | 0.31 | | 0.75 | | 1.33 | | 0.067 | | |
| CKGIC011 | 06/19/11 | 7:00 PM | 06/20/11 | 7:00 AM | 06/22/11 | 4:10 PM | 124 | 124 | 14,598.25 | 15,299.30 | 06/19/11 | 8330 | 5.85 | 30.92 | 0.36 | | 0.86 | | 1.39 | | 0.139 | | |
| CKGIC012 | 06/26/11 | 7:00 PM | 06/29/11 | 12:42 PM | 07/07/11 | 2:45 PM | 124 | 124 | 14,624.75 | 15,169.10 | 06/27/11 | 8341 | 5.79 | 30.71 | 0.34 | | 0.82 | | 1.24 | Notify Emily | | | |
| CKGIC013 | 07/22/11 | 7:00 AM | 07/22/11 | 9:00 AM | 07/26/11 | 2:10 PM | 124 | 124 | 14,620.45 | 15,282.50 | 07/22/11 | 8266 | 6.11 | 30.49 | 0.31 | | 0.75 | | 1.64 | | | | |
| CKGIC014 | 08/09/11 | 10:30 AM | 08/09/11 | 10:04 AM | 08/12/11 | 10:45 AM | 124 | 124 | 14,606.10 | 15,274.00 | 08/08/11 | 8315 | 5.80 | 30.39 | 0.31 | | 0.75 | | 1.53 | | 0.070 | | |
| CKGIC015 | 08/25/11 | 7:00 PM | 08/26/11 | 6:00 AM | 08/31/11 | 11:10 AM | 124 | 124 | 14,572.10 | 15,290.20 | 08/25/11 | 8407 | 6.18 | 29.37 | 0.34 | | 0.81 | | 1.17 | Notify Emily | 0.050 | | |
| CKGIC016 | 09/13/11 | 10:30 AM | 09/13/11 | 10:30 AM | 09/18/11 | 4:00 PM | 119 | 119 | 13,998.70 | 14,710.20 | 09/13/11 | 8224 | 5.88 | 30.77 | 0.32 | | 0.78 | | 1.69 | | | | |

| | | | | |
|---|---|--|---|---|
| TO | CONTRACT DATA SHEET | | | 12/20/79 |
| | CONTRACT NO. 13477 | | File alphabetically. Destroy sheet dated | |
| TAB 15 A | DISTRICT OFFICE CREDITED WITH SALE Kansas City | | CONTRACT DATE 12/77 | |
| PURCHASER City of Grand Island, Grand Island, Nebraska | | | | |
| USER City of Grand Island, Grand Island, Nebraska | | | | |
| PLANT NAME Grand Island | | CONS. ENGR. Lutz, Daily, Brain | | INDUSTRY P.U. |
| BOILER Platte Unit | | SQ. FT. H.S. PER UNIT 15735 | | P R E S S |
| DESIGNATION | | | | |
| 29'-6" 23'-4 1/16" | | 117-2 1/2" 82-2 1/2" RR | | |
| FURNACE | | VOLUME CU. FT. TOTAL 66,909 | TYPE OF BOTTOM Hopper | WIDTH 29'-6" FRONT TO REAR 23'-4 1/16" |
| SUPERHEATER | | TYPE Multistage with Platens | | REHEATER TYPE Multistage |
| ECONOMIZER | | NO. 1 TYPE Plain Tube 86W x 32 H | | |
| AIR HEATER | | NO. 1 TYPE 27-VI-90 | | MAKE Ljungstrom |
| FUEL BURNING EQUIPMENT 4-683 RS Mills | | | | |
| FUEL Wyoming Sub-bituminous Coal | | ASH FUSION TEMP. F | GRIND-ABILITY | HHV |
| 30% Moist | 32.10% VM | 32.10% FC | 5.8% Ash | 2120 52 8,125 |
| OPERATING CONDITIONS | | | | |
| * Denotes Guaranteed Item | | | | |
| | | CONTROL POINT | MCR | |
| LB STEAM PER HOUR ACTUAL | PRIMARY | 497,200 * | 765,000 * | |
| | REHEAT | 428,900 * | 659,900 * | |
| STEAM TEMP. F LEAVING | SUPERHEATER | 1005 * | 1005 * | |
| | REHEATER | 1005 * | 1005 * | |
| REHEAT DATA | ENTERING TEMP. | 630 | 697 | |
| | ENTERING PRESS. | 341 | 521 | |
| FEEDWATER TEMP. F | | 430 | 472 | |
| TEMP. AIR TO AIR HEATER | | 105 | 87 | |
| TEMP. GAS FROM AIR HEATER | | 254 | 280 | (Uncorr) |
| OVERALL EFFICIENCY % *Guaranteed | | 86.45 | 85.51 * | |
| SUPPLEMENTARY DATA | | | | GENERATOR KW MFR. RATING |
| | | | | 100,000 |
| | | | | PLANT ELEV. 1,860 |

FORM NO. 1-2-62

Analysis Report
 Fly Ash

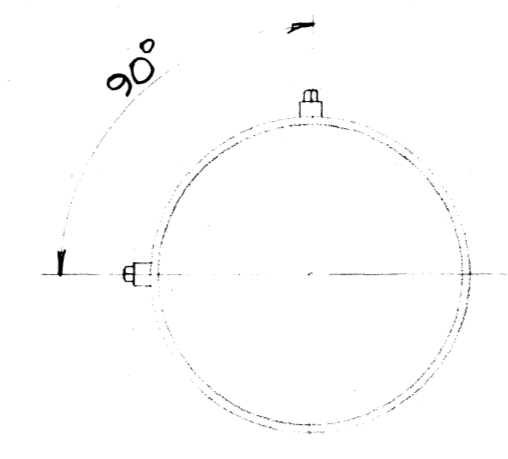
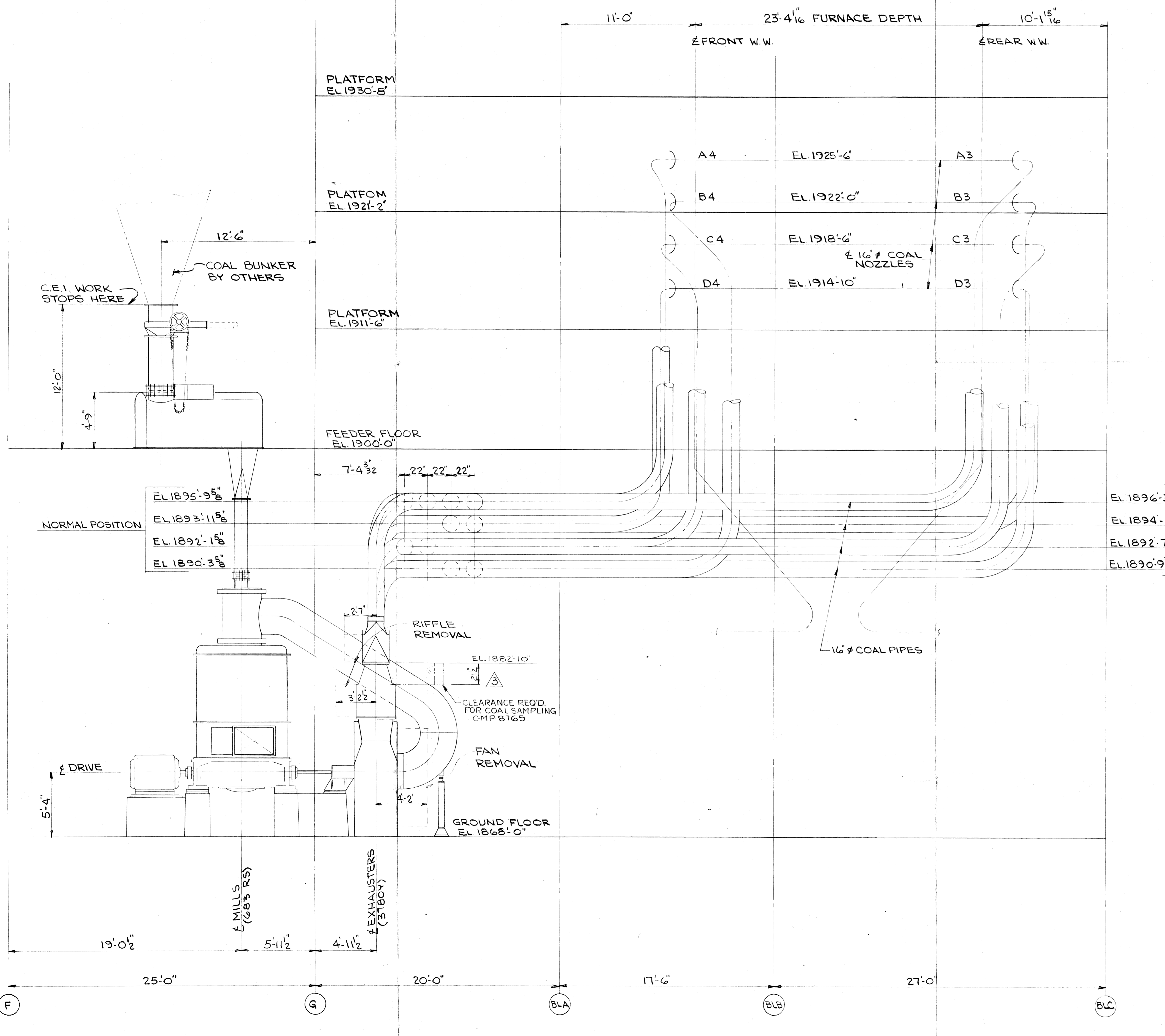
Company: **SGS**
 Matrix: **Fly Ash**
 Sample Type: **-60 Mesh**

| Date | Arsenic - TCLP [mg/L] | Barium - TCLP [mg/L] | Cadmium - TCLP [mg/L] | Chromium - TCLP [mg/L] | Lead - TCLP [mg/L] | Selenium - TCLP [mg/L] | Silver - TCLP [mg/L] | Mercury - TCLP [mg/L] | Loss on Ignition |
|------------|-----------------------------|----------------------------|-----------------------------|------------------------------|--------------------------|------------------------------|-------------------------|-----------------------------|---------------------|
| 5/24/2004 | 0.04 | 18.3 | <0.005 | <0.005 | <0.05 | 0.04 | <0.005 | <0.0002 | 0.48% |
| 8/17/2004 | <0.01 | 0.24 | <0.005 | 0.199 | <0.05 | 0.05 | <0.005 | <0.0002 | 2.83% |
| 11/18/2004 | 0.05 | 0.69 | <0.005 | 0.115 | <0.05 | 0.06 | <0.005 | <0.0002 | 0.39% |
| 2/21/2005 | <0.01 | 1.51 | <0.005 | 0.678 | <0.05 | 0.34 | <0.005 | <0.0002 | 0.42% |
| 5/31/2005 | <0.01 | 6.4 | <0.005 | 0.135 | <0.05 | 0.02 | 0.006 | <0.0002 | 0.26% |
| 9/30/2005 | <0.01 | 18.57 | <0.005 | <0.005 | 0.09 | 0.009 | <0.005 | <0.0002 | 0.31% |
| 1/5/2006 | 0.03 | 0.47 | <0.005 | 0.392 | <0.05 | 0.06 | <0.005 | <0.0002 | 0.33% |
| 4/10/2006 | <0.01 | 0.81 | <0.005 | 0.25 | <0.05 | 0.2 | <0.005 | <0.0002 | 0.37% |
| 1/3/2007 | 0.07 | <0.05 | 0.006 | 0.184 | <0.02 | 0.21 | <0.005 | <0.0002 | 0.36% |
| 12/17/2008 | 0.06 | 3.34 | <0.005 | 0.27 | <0.05 | 0.06 | <0.01 | <0.0002 | 0.14% |
| 4/27/2009 | 0.07 | 1.25 | <0.005 | 0.383 | <0.02 | 0.15 | <0.005 | <0.1 | 0.28% |
| 6/17/2009 | 0.08 | 0.73 | <0.005 | 0.363 | <0.02 | 0.18 | <0.005 | <0.0002 | 0.01% |
| 9/11/2009 | <0.01 | 1.33 | <0.005 | <0.005 | <0.02 | 0.05 | <0.01 | <0.0002 | 0.44% |
| 12/15/2009 | <0.01 | 3.36 | <0.005 | 0.33 | <0.02 | 0.23 | <0.01 | <0.0002 | 0.31% |
| 3/11/2010 | <0.01 | 3.81 | <0.005 | 0.31 | <0.02 | 0.20 | <0.01 | <0.0002 | 0.14% |
| 6/10/2010 | <0.10 | 1.2 | <0.10 | 0.41 | <0.10 | <0.10 | <0.10 | <0.10 | 0.32% |
| 9/27/2010 | 0.1 | 1.1 | <0.1 | 0.2 | <0.1 | <0.1 | <0.1 | <0.1 | 0.33% |
| 12/13/2010 | <0.1 | 1.3 | <0.1 | 0.4 | <0.1 | 0.1 | <0.1 | <0.1 | 0.36% |
| 12/23/2010 | <0.1 | 1.3 | <0.1 | 0.4 | <0.1 | 0.1 | <0.1 | <0.1 | 0.36% |
| 3/8/2011 | 0.1 | 2.7 | <0.1 | 0.3 | <0.1 | 0.1 | <0.1 | <0.1 | 0.24% |
| 6/8/2011 | 0.2 | 1.1 | <0.1 | <0.1 | <0.1 | 0.3 | <0.1 | <0.1 | 0.76% |

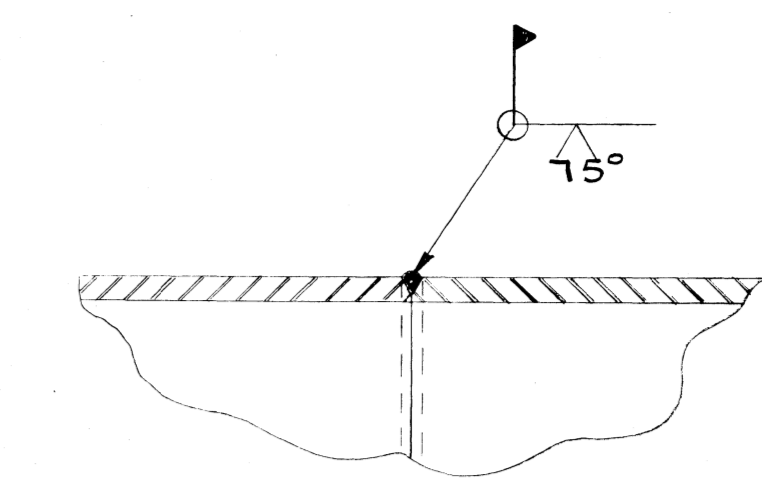
Analysis Report
 Bottom Ash

Company: **SGS**
 Matrix: **Bottom Ash**
 Sample Type: **-4 Mesh Wet**

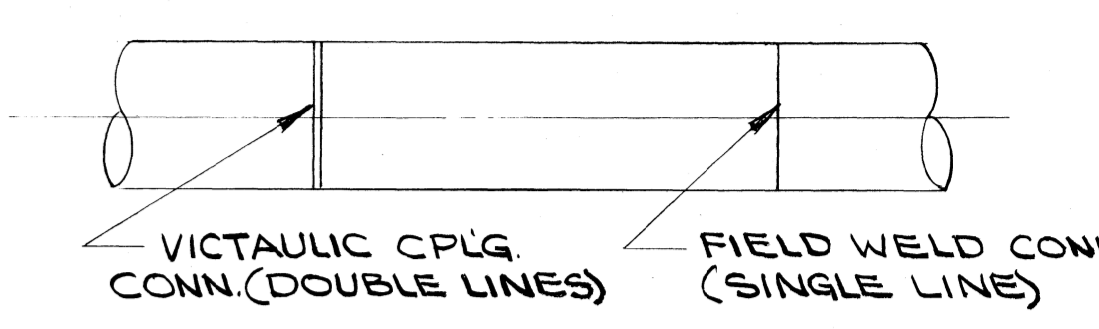
| Date | Arsenic - TCLP [mg/L] | Barium - TCLP [mg/L] | Cadmium - TCLP [mg/L] | Chromium - TCLP [mg/L] | Lead - TCLP [mg/L] | Selenium - TCLP [mg/L] | Silver - TCLP [mg/L] | Mercury - TCLP [mg/L] | Loss on Ignition | Moisture % (As Received) |
|------------|-----------------------------|----------------------------|-----------------------------|------------------------------|--------------------------|------------------------------|-------------------------|-----------------------------|---------------------|-----------------------------|
| 1/5/2006 | 0.04 | 0.89 | <0.005 | 0.092 | 0.21 | 0.03 | <0.005 | <0.0002 | 1.30% | |
| 12/18/2008 | <0.01 | <0.05 | <0.005 | 0.05 | <0.05 | <0.01 | <0.01 | <0.0002 | 2.69% | 19.27 |
| 4/27/2009 | <0.01 | 1.06 | <0.005 | 0.006 | <0.02 | <0.01 | <0.005 | <0.1 | 1.45% | 26.87 |
| 6/17/2009 | <0.01 | 0.97 | <0.005 | <0.005 | <0.02 | <0.01 | 0.026 | <0.0002 | 1.79% | 20.64 |
| 9/11/2009 | <0.01 | 0.76 | <0.005 | <0.005 | <0.02 | <0.01 | <0.01 | <0.0002 | 4.98% | 16.14 |
| 12/15/2009 | <0.01 | 1.11 | <0.005 | 0.006 | <0.02 | <0.01 | <0.01 | <0.0002 | 2.01% | 30.10 |
| 3/11/2010 | <0.01 | 1.1 | <0.005 | <0.005 | <0.02 | <0.01 | <0.1 | <0.0002 | 3.71% | 13.13 |
| 6/10/2010 | <0.10 | 0.65 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | <0.10 | 2.38% | 16.01 |
| 9/27/2010 | <0.1 | 0.4 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 10.51% | 25.86 |
| 12/13/2010 | <0.1 | 0.9 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 10.72% | 27.87 |
| 12/23/2010 | <0.1 | 0.9 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 10.72% | 27.87 |
| 3/8/2011 | <0.1 | 0.7 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 2.90% | 10.76 |
| 6/8/2011 | <0.1 | 1.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 2.45% | 14.78 |



ERECTOR'S NOTE #1
TWO 1/2 PIPE TAPS & PLUGS SHALL BE INSTALLED IN EACH FUEL LINE. LOCATION TO BE DETERMINED BY SERVICE ENGINEER.

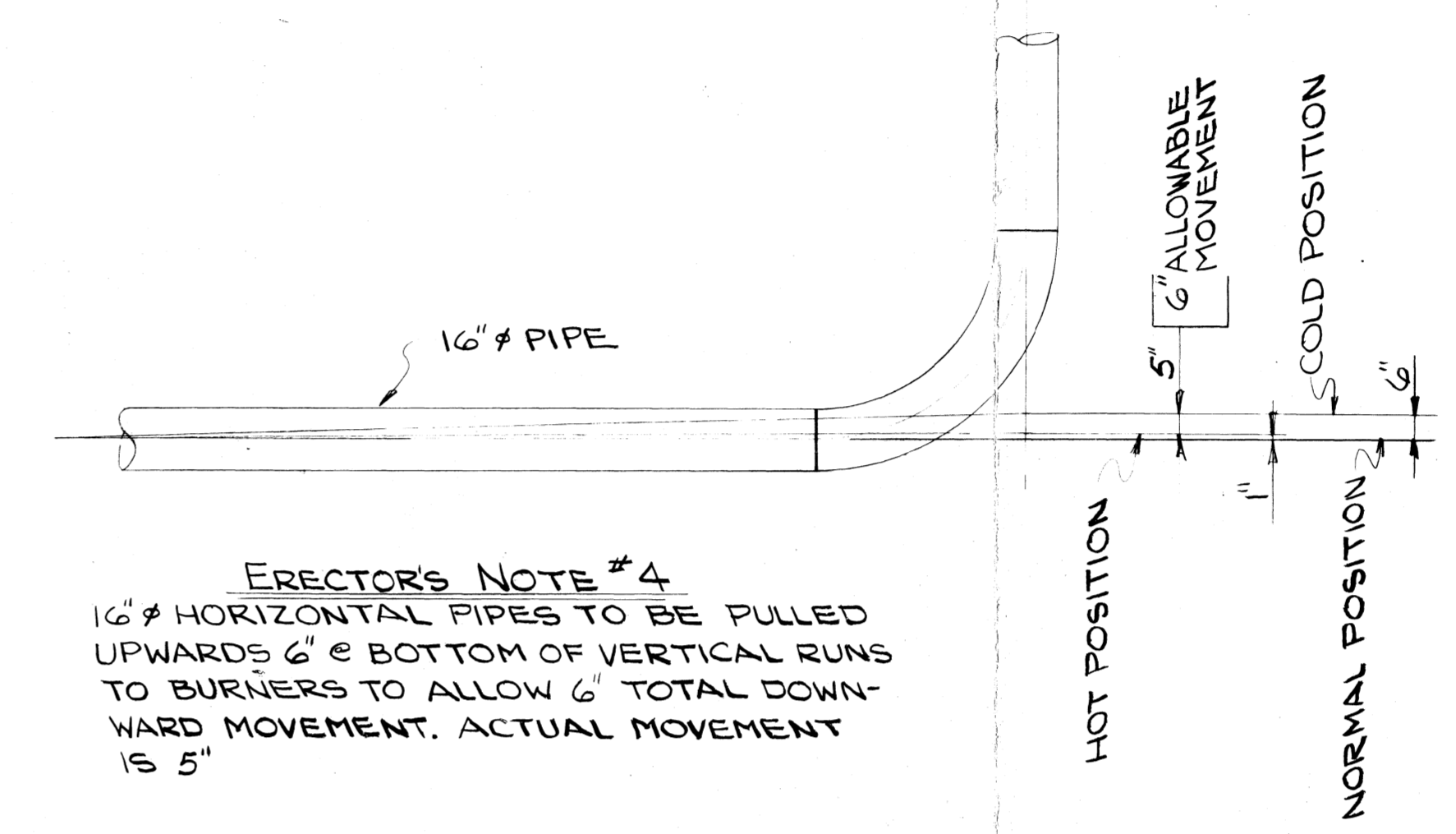


TYPICAL FIELD WELD

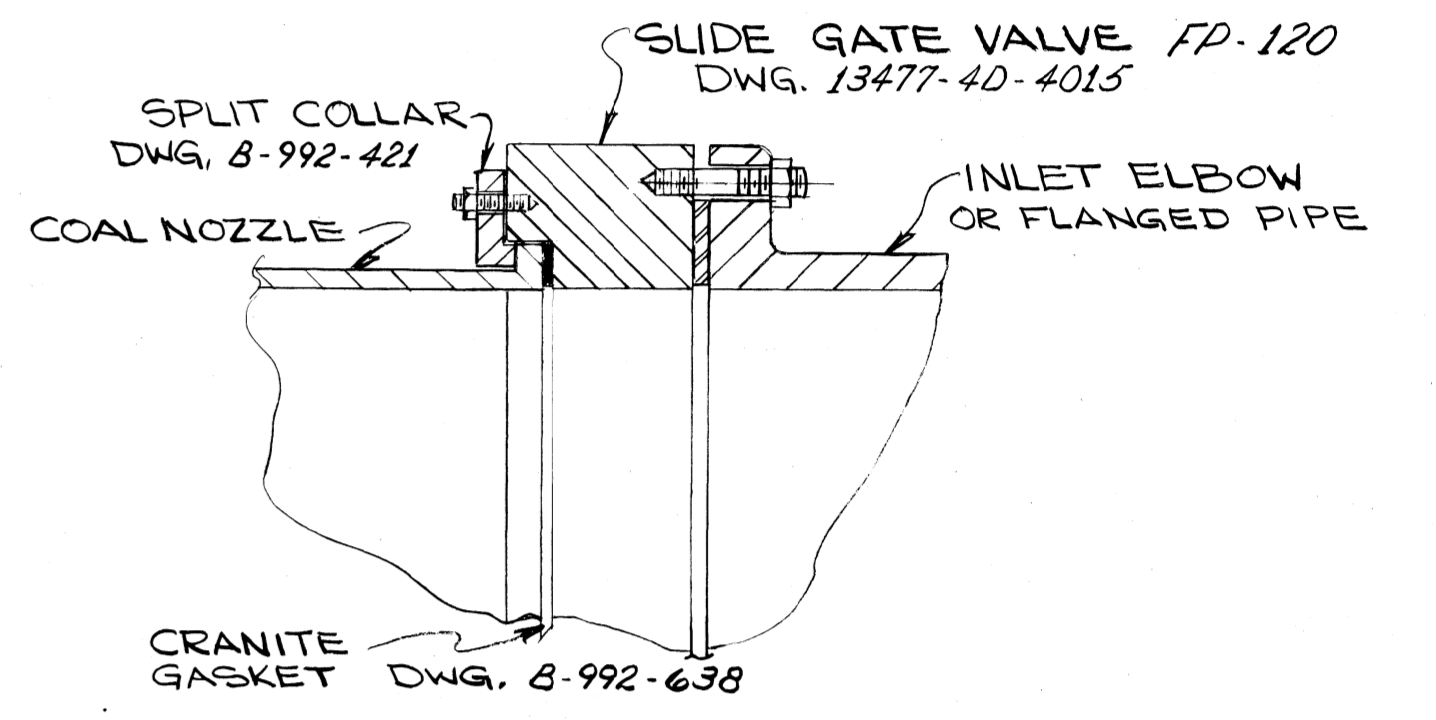


ERECTOR'S NOTE #3

ERECTOR'S NOTE #2
BEFORE WELDING MAKE SURE PIPES ARE IN CORRECT POSITION. ALL PIPE ENDS & BEND ENDS FOR FIELD WELDING SHALL CONFORM TO APPLICABLE PORTIONS OF A.N.S.I. B-16.25.



ERECTOR'S NOTE #4
16\"/>



ERECTOR'S NOTE #5

NOTE: FOR GENERAL NOTES & REFERENCE DWGS. SEE 13477-4E-4000 SH 1 OF 3

51-316

SH 3 OF 3

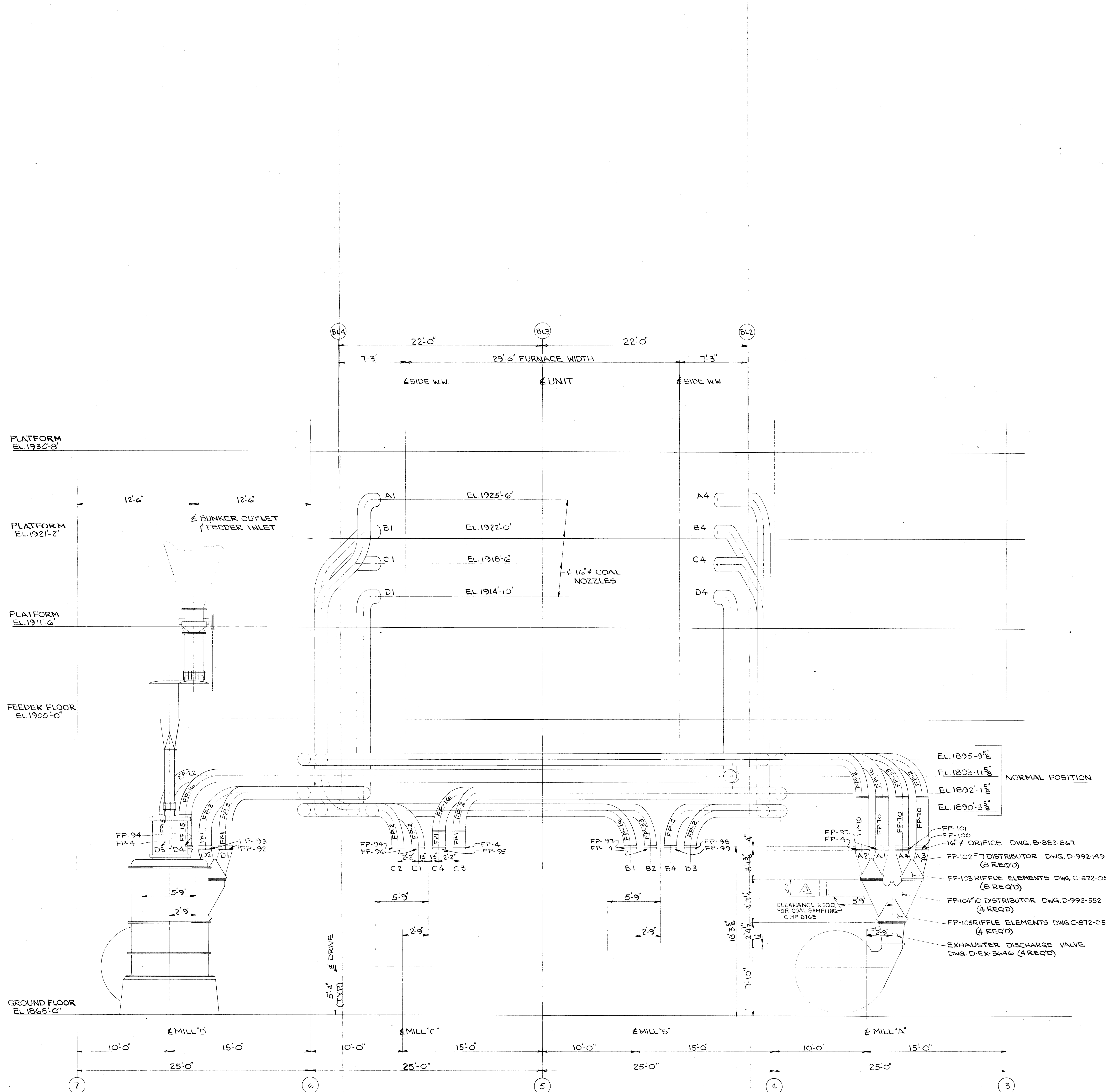
SIDE ELEVATION

LUTZ, DAILY & BRAUN - CONT. NO. 77-8-2
MILL & FUEL PIPING ARRGT. (SIDE)
FOR CITY OF GRAND ISLAND
PLATTE GENERATING STATION, UNIT #1
GRAND ISLAND, NEBRASKA

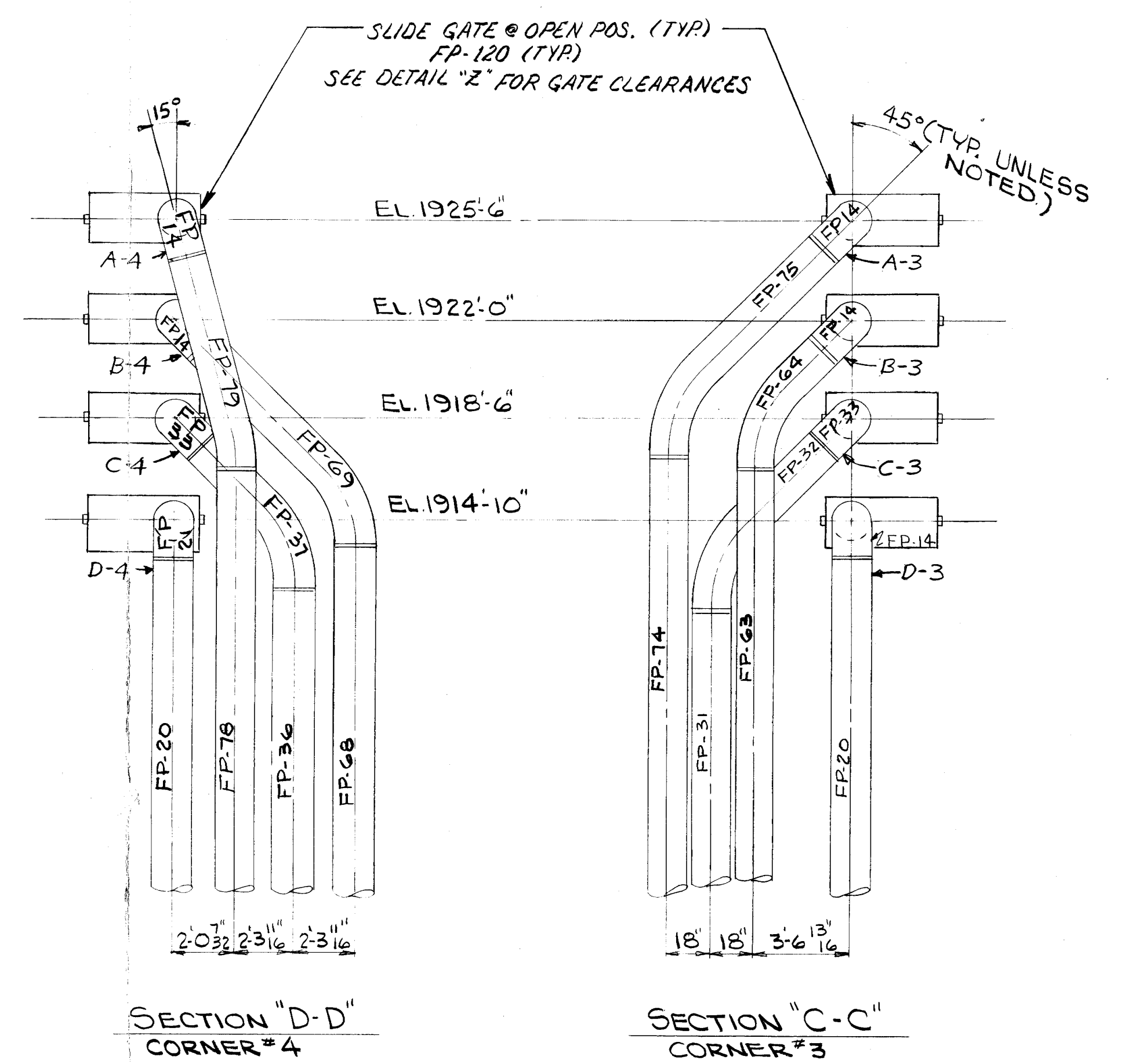
SCALE 1/4" = 1'-0"
DATE 3-6-78
DRAWN BY FAIRBANKS
CHECKED BY K.H. 3-30-78
APPROVED [Signature]
TRACED BY [Signature]

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COMP. CODE 42 84 6103
DRAWING NO. 13477-4E-4002-03

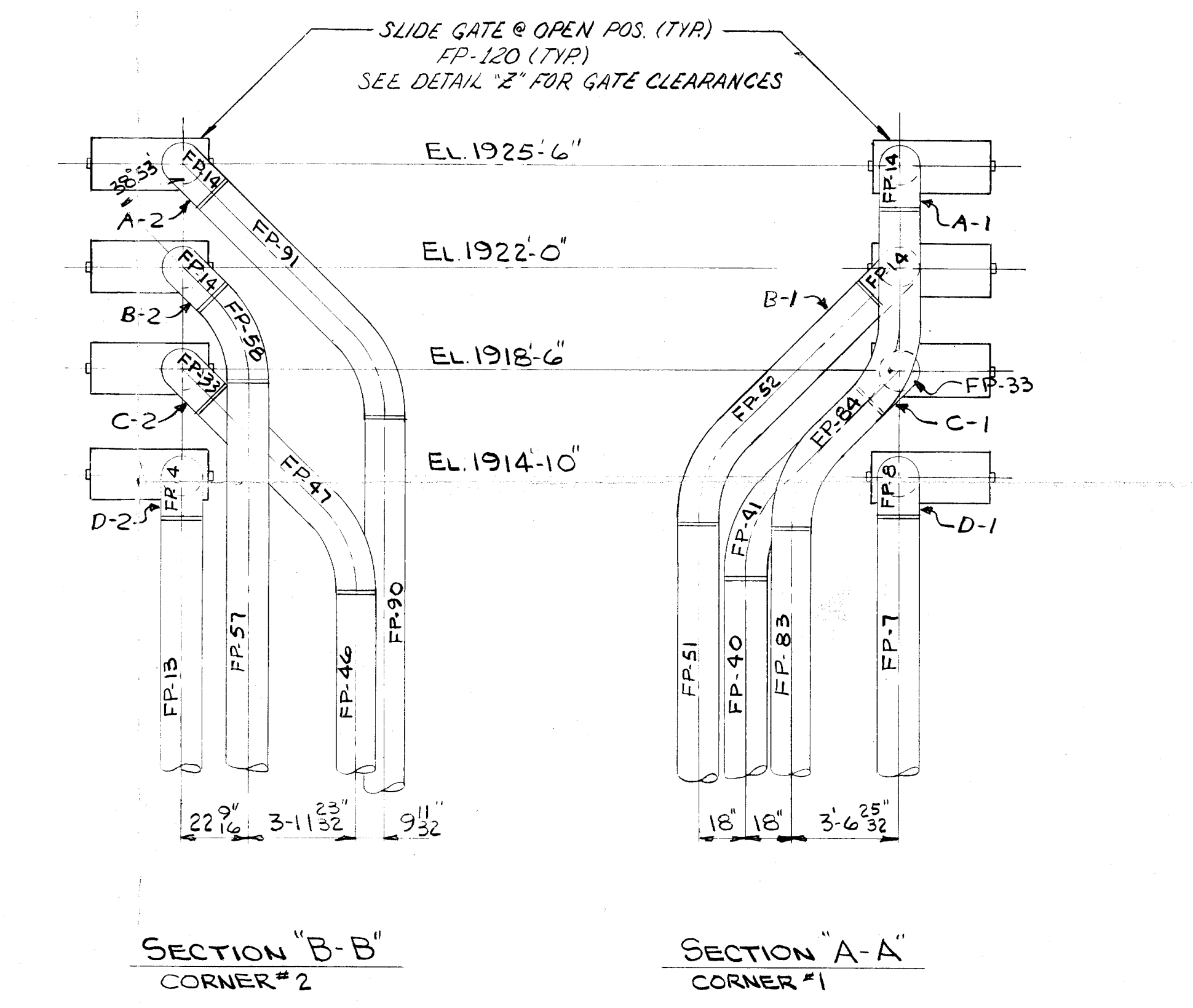


FRONT ELEVATION



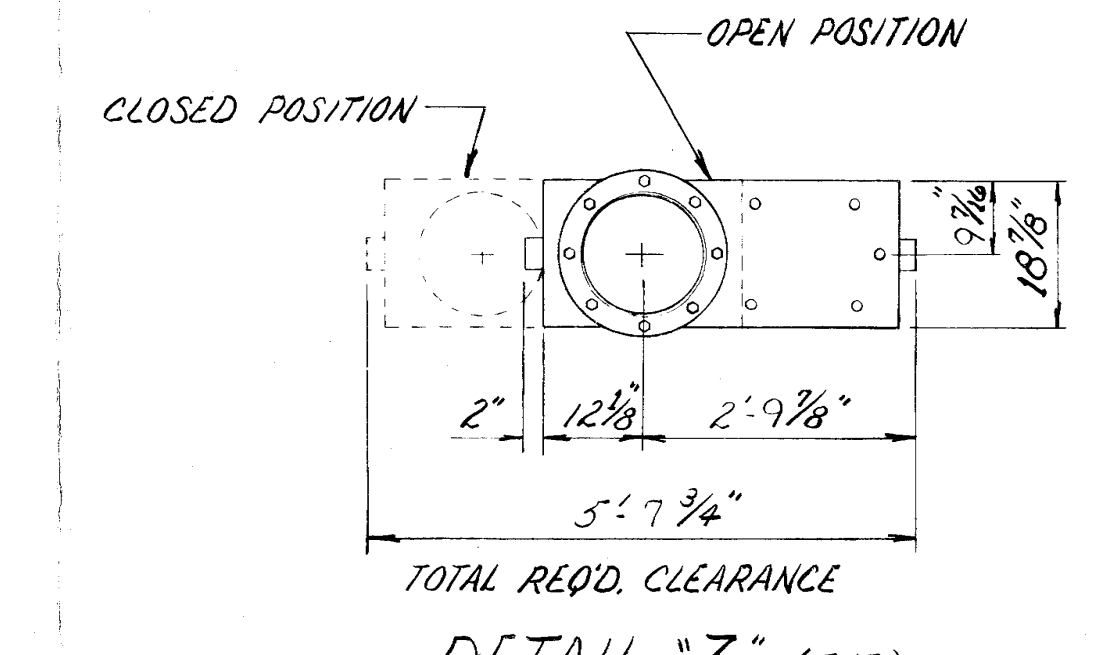
SECTION "D-D" CORNER #4

SECTION "C-C" CORNER #3



SECTION "B-B" CORNER #2

SECTION "A-A" CORNER #1



DETAIL "Z" (TYP)

SCALE: 1/4" = 1'-0"

NOTE: FOR GENERAL NOTES & REFERENCE DWG'S. SEE 13477-4E-4000 SH 10F3

51.3/15

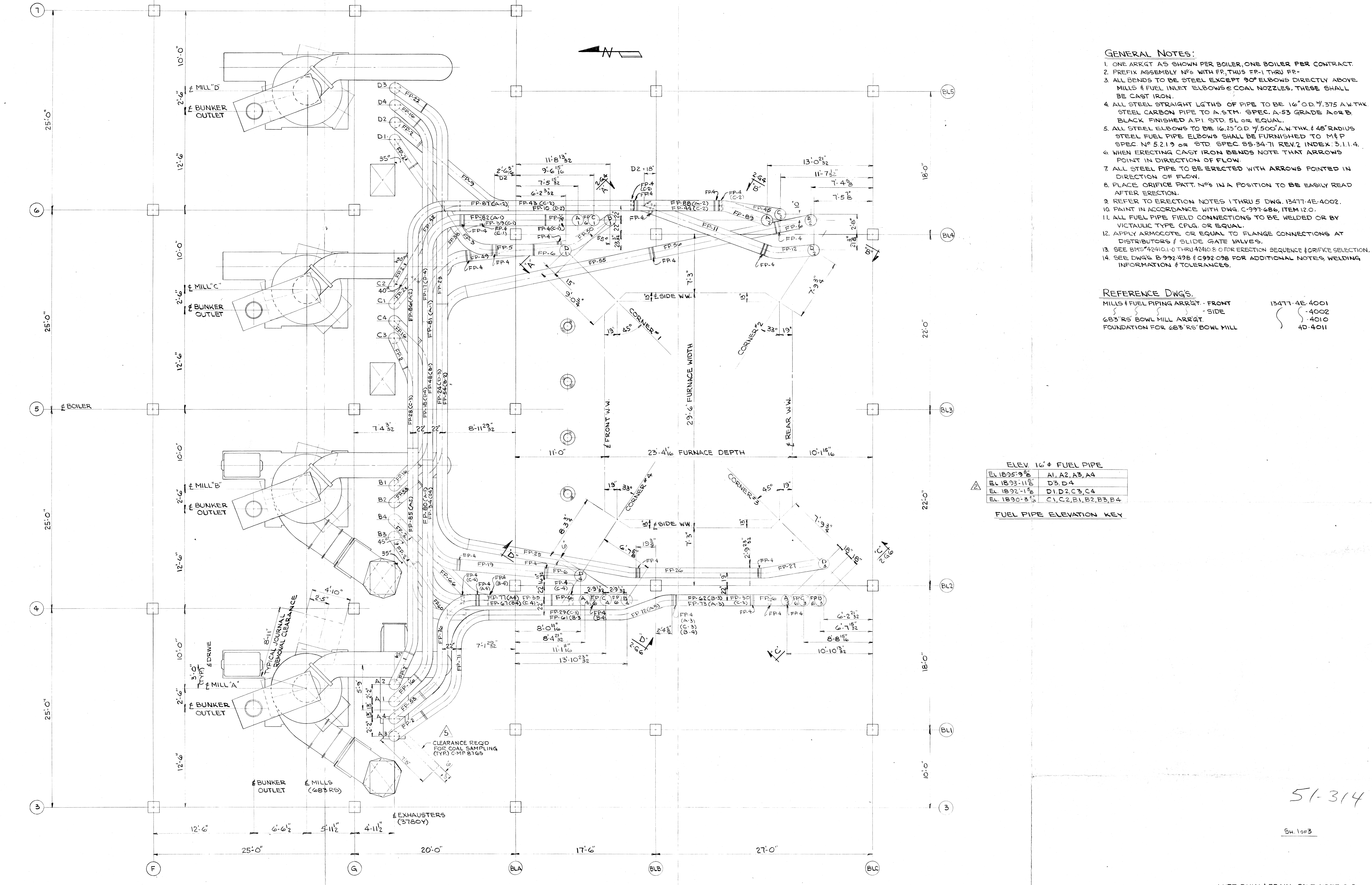
SH 20F3

LUTZ, DAILY & BRAIN - CONT. N° 77-8-2 MILL & FUEL PIPING ARRGT (FRONT) FOR CITY OF GRAND ISLAND PLATE GENERATING STATION, UNIT #1 GRAND ISLAND, NEBRASKA

SCALE: 1/4" = 1'-0" DATE 3-6-78 DRAWN BY R. FAIRBANKS CHECKED BY K.H. 3-30-78 TRACED BY APPROVED

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COMP. CODE 42 84 6103 DRAWING NO. 13477-4E-4001-C3



- GENERAL NOTES:**
- ONE ARRGT AS SHOWN PER BOILER, ONE BOILER PER CONTRACT.
 - PREFIX ASSEMBLY NOS WITH FP, THUS FP-1 THRU FP-
 - ALL BENDS TO BE STEEL EXCEPT 90° ELBOWS DIRECTLY ABOVE MILLS & FUEL INLET ELBOWS & COAL NOZZLES. THESE SHALL BE CAST IRON.
 - ALL STEEL STRAIGHT LGTHS OF PIPE TO BE 16" O.D. 1/32" A.W. THK. STEEL CARBON PIPE TO A. 5.T.M. SPEC. A-53 GRADE A OR B. BLACK FINISHED A.P.I. STD. 5L OR EQUAL.
 - ALL STEEL ELBOWS TO BE 16.25" O.D. 1/32" A.W. THK. & 48" RADIUS. STEEL FUEL PIPE ELBOWS SHALL BE FURNISHED TO MFP SPEC NO 5219 OR STD SPEC 65-34-71 REV.2 INDEX 3.1.1.4.
 - WHEN ERECTING CAST IRON BENDS NOTE THAT ARROWS POINT IN DIRECTION OF FLOW.
 - ALL STEEL PIPE TO BE ERECTED WITH ARROWS POINTED IN DIRECTION OF FLOW.
 - PLACE ORIFICE PATT. NOS IN A POSITION TO BE EASILY READ AFTER ERECTION.
 - REFER TO ERECTION NOTES 1 THRU 5 DWG. 13477-4E-4002.
 - PAINT IN ACCORDANCE WITH DWG. C-997-68B, ITEM 12.0.
 - ALL FUEL PIPE FIELD CONNECTIONS TO BE WELDED OR BY VICTAULIC TYPE C.F.L.G. OR EQUAL.
 - APPLY ARMOCOTE OR EQUAL TO FLANGE CONNECTIONS AT DISTRIBUTORS & SLIDE GATE VALVES.
 - SEE BMS-424101-0 THRU 424108-0 FOR ERECTION SEQUENCE & ORIFICE SELECTION.
 - SEE DWGS B-992-498 & C-992-038 FOR ADDITIONAL NOTES, WELDING INFORMATION & TOLERANCES.
- REFERENCE DWGS.**
- MILLS & FUEL PIPING ARRGT. - FRONT SIDE 13477-4E-4001
 685 RS BOWL MILL ARRGT. - SIDE 4002
 FOUNDATION FOR 685 RS BOWL MILL 4010
 4D-4011

ELEV. 16" FUEL PIPE

| | |
|------------------|------------------------|
| EL 1835'-9 3/8" | A1, A2, A3, A4 |
| EL 1833'-11 1/8" | D3, D4 |
| EL 1832'-1 1/8" | D1, D2, C3, C4 |
| EL 1830'-3 1/8" | C1, C2, B1, B2, B3, B4 |

FUEL PIPE ELEVATION KEY

PLAN

51-314
Sh. 1 of 3

LUTZ, DAILY & BRAIN-CONT. No 77-B-2
MILL & FUEL PIPING ARRGT. (PLAN)
 FOR CITY OF GRAND ISLAND
 PLATTE GENERATING STATION UNIT #1
 GRAND ISLAND, NEBRASKA

SCALE: 1/8"=1'-0" DATE: 12-18-78
 DRAWN BY: R. FAIRBANKS CHECKED BY: K.H. 3-30-78
 TRACED BY: APPROVED BY: [Signature]

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COMP. CODE: 42 84 6103
 DRAWING NO.: 13477-4E-4000-05

THICKNESS READINGS TAKEN 1/4/2011

| A MILL | ASSY NO (FP-) | PART NO (FP-) | PC. TYPE | LENGTH/ ANGLE | RADIUS | WT / PC | ASSY RUN WT. | EXT. | UT READING 12/2010 |
|--------|---------------|---------------|----------|---------------|--------|---------|--------------|-------|--------------------|
| A3 | 100 | | ORIFICE | 13.250 | | | | | |
| A3 | 70 | 94 | PIPE | 66.000 | 0.000 | 343.820 | 343.820 | 0.000 | |
| A3 | 2 | 2 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 0.000 | .138 |
| A3 | 71 | 95 | PIPE | 36.310 | 0.000 | 189.130 | 189.130 | 0.000 | |
| A3 | 71 | 96 | ELBOW | 55.000 | 48.000 | 317.480 | 506.610 | 0.000 | .421 |
| A3 | 71 | 97 | PIPE | 44.770 | 0.000 | 233.240 | 739.850 | 0.000 | |
| A3 | 71 | 39 | ELBOW | 90.000 | 48.000 | 519.520 | 1259.370 | 0.000 | .363 |
| A3 | 72 | 98 | PIPE | 196.160 | 0.000 | ##### | 1021.860 | 0.000 | |
| A3 | 72 | 41 | ELBOW | 20.000 | 48.000 | 115.450 | 1137.310 | 0.000 | .483 |
| A3 | 72 | 42 | PIE | 47.390 | 0.000 | 246.890 | 1384.190 | 0.000 | |
| A3 | 72 | 13 | ELBOW | 20.000 | 48.000 | 115.450 | 1499.640 | 0.000 | .521 |
| A3 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| A3 | 73 | 99 | PIPE | 105.210 | 0.000 | 548.080 | 548.080 | 0.000 | |
| A3 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| A3 | 6 | 7 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | .308 |
| A3 | 74 | 100 | PIPE | 196.940 | 0.000 | ##### | 1025.920 | 0.000 | |
| A3 | 75 | 45 | ELBOW | 45.000 | 48.000 | 259.760 | 259.760 | 0.000 | .468 |
| A3 | 75 | 101 | PIPE | 75.570 | 0.000 | 393.700 | 653.460 | 0.000 | |
| A3 | 14 | 18 | F.I. EL. | 90.000 | 16.000 | 379.790 | 379.790 | 0.000 | .244 |

replace

| A4 | 101 | | ORIFICE | 12.625 | | | | | |
|----|-----|-----|----------|---------|--------|---------|----------|-------|------|
| A4 | 70 | 64 | PIPE | 66.000 | 0.000 | 543.620 | 543.620 | 0.000 | |
| A4 | 53 | 73 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | ##### | .138 |
| A4 | 76 | 74 | ELBOW | 50.000 | 48.000 | 288.620 | 288.620 | 0.000 | .480 |
| A4 | 76 | 102 | PIPE | 48.710 | 0.000 | 253.740 | 253.740 | 0.000 | |
| A4 | 76 | 16 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | .510 |
| A4 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| A4 | 77 | 103 | PIPE | 102.180 | 0.000 | 532.300 | 532.300 | 0.000 | |
| A4 | 6 | 7 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | .397 |
| A4 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| A4 | 78 | 104 | PIPE | 154.550 | 0.000 | ##### | 1013.490 | 0.000 | |
| A4 | 79 | 105 | ELBOW | 15.000 | 48.000 | 86.590 | 86.590 | 0.000 | .481 |
| A4 | 79 | 106 | PIPE | 71.250 | 0.000 | 371.140 | 371.140 | 0.000 | |
| A4 | 14 | 18 | F.I. EL. | 90.000 | 16.000 | 379.790 | 379.790 | 0.000 | .361 |
| A4 | 69 | 88 | PIPE | 36.000 | 0.000 | 187.540 | 187.540 | 0.000 | |

replace

PATCH SPOOL

| A1 | 97 | | ORIFICE | 13.875 | | | | | |
|----|----|-----|----------|---------|--------|---------|----------|-------|------|
| A1 | 70 | 64 | PIPE | 66.000 | 0.000 | 343.820 | 343.820 | 0.000 | |
| A1 | 16 | 20 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 4.000 | .117 |
| A1 | 80 | 21 | ELBOW | 40.000 | 48.000 | 230.900 | 230.900 | 0.000 | .491 |
| A1 | 80 | 107 | PIPE | 315.380 | 0.000 | ##### | 1873.830 | 0.000 | |
| A1 | 81 | 16 | ELBOW | 90.000 | 48.000 | 519.520 | 2003.420 | 0.000 | .380 |
| A1 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| A1 | 82 | 109 | PIPE | 112.800 | 0.000 | 587.620 | 587.620 | 0.000 | |
| A1 | 6 | 7 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | .471 |
| A1 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| A1 | 83 | 110 | PIPE | 143.370 | 0.000 | 746.860 | 746.860 | 0.000 | |
| A1 | 84 | 45 | ELBOW | 45.000 | 48.000 | 259.760 | 259.760 | 0.000 | .470 |
| A1 | 84 | 111 | PIPE | 20.740 | 0.000 | 108.020 | 367.780 | 0.000 | |
| A1 | 84 | 112 | ELBOW | 45.000 | 48.000 | 259.760 | 627.540 | 0.000 | .508 |
| A1 | 84 | 113 | PIPE | 49.350 | 0.000 | 257.070 | 884.610 | 0.000 | |
| A1 | 16 | 18 | F.I. EL. | 90.000 | 16.000 | 379.790 | 379.790 | 0.000 | .283 |
| A1 | 85 | 88 | PIPE | 36.000 | 0.000 | 187.540 | 187.540 | 0.000 | |

replace

| A2 | 4 | | ORIFICE | 15.500 | | | | | |
|----|----|-----|----------|---------|--------|---------|----------|-------|------|
| A2 | 70 | 84 | PIPE | 66.000 | 0.000 | 343.820 | 343.820 | 0.000 | |
| A2 | 2 | 2 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 0.000 | .115 |
| A2 | 85 | 15 | ELBOW | 25.000 | 48.000 | 144.310 | 144.310 | 0.000 | .487 |
| A2 | 85 | 114 | PIPE | 319.700 | 0.000 | ##### | 1809.750 | 0.000 | |
| A2 | 86 | 115 | PIPE | 282.340 | 0.000 | ##### | 1470.820 | 0.000 | |
| A2 | 86 | 39 | ELBOW | 90.000 | 48.000 | 519.520 | 1990.340 | 0.000 | .384 |
| A2 | 87 | 116 | PIPE | 267.140 | 0.000 | ##### | 1391.640 | 0.000 | |
| A2 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| A2 | 88 | 117 | PIPE | 139.620 | 0.000 | 727.340 | 727.340 | 0.000 | |
| A2 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| A2 | 89 | 118 | ELBOW | 22.500 | 48.000 | 129.880 | 129.880 | 0.000 | .493 |
| A2 | 89 | 16 | ELBOW | 90.000 | 48.000 | 519.520 | 649.400 | 0.000 | .493 |
| A2 | 90 | 119 | PIPE | 196.490 | 0.000 | ##### | 1023.610 | 0.000 | |
| A2 | 91 | 45 | ELBOW | 45.000 | 48.000 | 259.760 | 259.760 | 0.000 | .492 |
| A2 | 91 | 93 | PIPE | 76.730 | 0.000 | 399.700 | 659.460 | 0.000 | |
| A2 | 14 | 18 | F.I. EL. | 90.000 | 16.000 | 379.790 | 379.790 | 0.000 | .261 |

replace

| B MILL | ASSY NO (FP-) | PART NO (FP-) | PC. TYPE | LENGTH/ ANGLE | RADIUS | WT / PC | ASSY RUN WT. | EXT. | UT READING 12/2010 |
|--------|------------------|------------------|----------|------------------|--------|----------|--------------|-------|-----------------------|
| B1 | 97 | | ORIFICE | 13.875 | | | | | |
| B1 | 16 | 20 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 4.000 | .196 |
| B1 | 48 | 21 | ELBOW | 40.000 | 48.000 | 230.900 | 230.900 | 0.000 | |
| B1 | 48 | 65 | PIPE | 207.990 | 0.000 | 1083.500 | 1314.390 | 0.000 | |
| B1 | 48 | 66 | ELBOW | 48.000 | 48.000 | 277.080 | 1591.470 | 0.000 | .365 |
| B1 | 48 | 67 | PIPE | 20.030 | 0.000 | 104.360 | 1695.830 | 0.000 | |
| B1 | 48 | 68 | ELBOW | 36.000 | 48.000 | 207.810 | 1903.640 | 0.000 | .461 |
| B1 | 4 | 5 | CAST ORF | 18.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| B1 | 49 | 69 | PIPE | 136.490 | 0.000 | 711.030 | 711.030 | 0.000 | |
| B1 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| B1 | 50 | 70 | ELBOW | 30.100 | 48.000 | 173.750 | 173.750 | 0.000 | .407 |
| B1 | 50 | 16 | ELBOW | 90.000 | 48.000 | 519.520 | 693.270 | 0.000 | .441 |
| B1 | 51 | 71 | PIPE | 220.910 | 0.000 | 1150.750 | 1150.750 | 0.000 | |
| B1 | 52 | 45 | ELBOW | 45.000 | 48.000 | 259.760 | 259.760 | 0.000 | .342 |
| B1 | 52 | 72 | PIPE | 75.530 | 0.000 | 393.480 | 653.240 | 0.000 | |
| B1 | 14 | 18 | F.I. EL. | 90.000 | 16.000 | 379.790 | 379.790 | 0.000 | .14 |

replace

| | | | | | | | | | |
|----|----|----|----------|---------|--------|----------|----------|-------|------|
| B2 | 4 | | ORIFICE | 15.500 | | | | | |
| B2 | 53 | 73 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | ##### | .167 |
| B2 | 54 | 74 | ELBOW | 50.000 | 48.000 | 288.620 | 288.620 | 0.000 | .489 |
| B2 | 54 | 75 | PIPE | 186.230 | 0.000 | 970.140 | 1258.760 | 0.000 | |
| B2 | 54 | 76 | ELBOW | 78.000 | 48.000 | 450.250 | 1709.000 | 0.000 | .409 |
| B2 | 55 | 77 | PIPE | 299.000 | 0.000 | 1557.610 | 1557.610 | 0.000 | |
| B2 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| B2 | 56 | 78 | PIPE | 168.010 | 0.000 | 875.230 | 875.230 | 0.000 | |
| B2 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| B2 | 6 | 7 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | .402 |
| B2 | 57 | 79 | PIPE | 274.700 | 0.000 | 1431.020 | 1431.020 | 0.000 | |
| B2 | 58 | 80 | ELBOW | 38.900 | 48.000 | 224.430 | 224.430 | 0.000 | .120 |
| B2 | 14 | 18 | F.I. EL. | 90.000 | 16.000 | 379.790 | 379.790 | 0.000 | .287 |
| B2 | 59 | 81 | PIPE | 37.060 | 0.000 | 193.060 | 193.060 | 0.000 | |

replace

replace

PATCH replace

| | | | | | | | | | |
|----|----|----|----------|---------|--------|----------|----------|-------|-------|
| B3 | 96 | | ORIFICE | 14.000 | | | | | |
| B3 | 2 | 2 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 0.000 | 1.398 |
| B3 | 60 | 82 | PIPE | 62.440 | 0.000 | 325.250 | 325.250 | 0.000 | |
| B3 | 60 | 83 | ELBOW | 55.000 | 48.000 | 317.480 | 642.730 | 0.000 | .350 |
| B3 | 61 | 84 | PIPE | 232.540 | 0.000 | 1211.390 | 1211.390 | 0.000 | |
| B3 | 61 | 41 | ELBOW | 20.000 | 48.000 | 115.450 | 1326.840 | 0.000 | .521 |
| B3 | 61 | 42 | PIPE | 47.390 | 0.000 | 246.890 | 1573.730 | 0.000 | |
| B3 | 61 | 13 | ELBOW | 20.000 | 48.000 | 115.450 | 1689.170 | 0.000 | .521 |
| B3 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| B3 | 62 | 85 | PIPE | 156.150 | 0.000 | 813.450 | 813.450 | 0.000 | |
| B3 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| B3 | 6 | 7 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | .216 |
| B3 | 63 | 86 | PIPE | 256.930 | 0.000 | 1338.440 | 1338.440 | 0.000 | |
| B3 | 64 | 45 | ELBOW | 45.000 | 48.000 | 259.760 | 259.760 | 0.000 | .308 |
| B3 | 64 | 87 | PIPE | 24.660 | 0.000 | 128.460 | 388.220 | 0.000 | |
| B3 | 14 | 18 | F.I. EL. | 90.000 | 16.000 | 379.780 | 379.780 | 0.000 | .254 |
| B3 | 65 | 88 | PIPE | 36.000 | 0.000 | 187.540 | 187.540 | 0.000 | |

new

PATCH replace

PATCH replace

| | | | | | | | | | |
|----|----|----|----------|---------|--------|----------|----------|-------|------|
| B4 | 99 | | ORIFICE | 13.125 | | | | | |
| B4 | 2 | 2 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 0.000 | .169 |
| B4 | 66 | 89 | PIPE | 25.640 | 0.000 | 498.230 | 498.230 | 0.000 | |
| B4 | 66 | 90 | ELBOW | 45.000 | 48.000 | 259.760 | 757.990 | 0.000 | .405 |
| B4 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| B4 | 67 | 91 | PIPE | 144.580 | 0.000 | 753.180 | 753.180 | 0.000 | |
| B4 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| B4 | 6 | 7 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | .180 |
| B4 | 68 | 92 | PIPE | 228.150 | 0.000 | 1146.850 | 1146.850 | 0.000 | |
| B4 | 69 | 45 | ELBOW | 45.000 | 48.000 | 259.760 | 259.760 | 0.000 | .447 |
| B4 | 69 | 93 | PIPE | 76.730 | 0.000 | 399.700 | 399.700 | 0.000 | |
| B4 | 14 | 18 | F.I. EL. | 90.000 | 16.000 | 379.790 | 379.790 | 0.000 | .331 |

replace

PATCH replace

| C MILL | ASSY NO (FP-) | PART NO (FP-) | PC. TYPE | LENGTH/ ANGLE | RADIUS | WT / PC | ASSY RUN WT. | EXT. | UT READING 12/2010 |
|--------|---------------|---------------|----------|---------------|--------|----------|--------------|-------|--------------------|
| C3 | 4 | | ORIFICE | 15.500 | | | | | |
| C3 | 1 | 1 | PIPE | 22.000 | 0.000 | 114.610 | 114.610 | 0.000 | |
| C3 | 2 | 2 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 0.000 | .176 |
| C3 | 28 | 15 | ELBOW | 25.000 | 48.000 | 144.310 | 144.310 | 0.000 | .490 |
| C3 | 28 | 38 | PIPE | 256.040 | 0.000 | 1542.190 | 1686.500 | 0.000 | |
| C3 | 28 | 39 | ELBOW | 90.000 | 48.000 | 519.520 | 2206.010 | 0.000 | |
| C3 | 29 | 40 | PIPE | 262.170 | 0.000 | 1365.730 | 1365.730 | 0.000 | |
| C3 | 29 | 41 | ELBOW | 20.000 | 48.000 | 115.450 | 1481.180 | 0.000 | 420 |
| C3 | 29 | 42 | PIPE | 47.390 | 0.000 | 246.890 | 1728.070 | 0.000 | |
| C3 | 29 | 13 | ELBOW | 20.000 | 48.000 | 115.450 | 1843.510 | 0.000 | .542 |
| C3 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| C3 | 30 | 43 | PIPE | 130.680 | 0.000 | 680.770 | 680.770 | 0.000 | |
| C3 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| C3 | 6 | 7 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | 1339 |
| C3 | 31 | 44 | PIPE | 174.930 | 0.000 | 911.270 | 911.270 | 0.000 | |
| C3 | 32 | 45 | ELBOW | 45.000 | 48.000 | 259.760 | 259.760 | 0.000 | .385 |
| C3 | 32 | 46 | PIPE | 50.120 | 0.000 | 261.080 | 528.840 | 0.000 | |
| C3 | 33 | 47 | F.I. EL. | 90.000 | 16.000 | 622.790 | 622.790 | ##### | 1.3 |

replace

part

| | | | | | | | | | |
|----|----|----|----------|---------|--------|----------|----------|-------|------|
| C4 | 95 | | ORIFICE | 13.625 | | | | | |
| C4 | 1 | 1 | PIPE | 90.000 | 0.000 | 114.610 | 114.610 | 0.000 | |
| C4 | 2 | 20 | CAST EL. | 40.000 | 48.000 | 0.000 | 0.000 | 4.000 | .278 |
| C4 | 34 | 21 | ELBOW | 254.230 | 48.000 | 230.900 | 230.900 | 0.000 | .480 |
| C4 | 34 | 48 | PIPE | 90.000 | 0.000 | 1532.760 | 1763.660 | 0.000 | |
| C4 | 34 | 16 | ELBOW | 15.250 | 48.000 | 519.520 | 2283.170 | 0.000 | .256 |
| C4 | 4 | 5 | CAST ORF | 152.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| C4 | 35 | 49 | PIPE | 152.830 | 0.000 | 796.150 | 796.150 | 0.000 | |
| C4 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| C4 | 6 | 7 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | .316 |
| C4 | 36 | 50 | PIPE | 183.640 | 0.000 | 357.690 | 357.690 | 0.000 | |
| C4 | 37 | 45 | ELBOW | 45.000 | 48.000 | 259.760 | 259.760 | 0.000 | .402 |
| C4 | 37 | 51 | PIPE | 37.540 | 0.000 | 195.580 | 455.340 | 0.000 | |
| C4 | 33 | 47 | F.I. EL. | 90.000 | 16.000 | 622.750 | 622.790 | ##### | 264 |

| | | | | | | | | | |
|----|----|----|----------|---------|--------|----------|----------|-------|-------|
| C1 | 96 | | ORIFICE | 12.875 | | | | | |
| C1 | 2 | 2 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 0.000 | 1.178 |
| C1 | 38 | 52 | PIPE | 87.910 | 0.000 | 457.960 | 457.960 | 0.000 | |
| C1 | 38 | 53 | ELBOW | 50.000 | 48.000 | 288.620 | 746.580 | 0.000 | .342 |
| C1 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| C1 | 39 | 54 | PIPE | 104.600 | 0.000 | 544.900 | 544.900 | 0.000 | |
| C1 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| C1 | 6 | 7 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | .380 |
| C1 | 40 | 55 | PIPE | 196.970 | 0.000 | 1026.080 | 1026.080 | 0.000 | |
| C1 | 41 | 45 | ELBOW | 45.000 | 48.000 | 259.760 | 259.760 | 0.000 | .470 |
| C1 | 41 | 56 | PIPE | 50.080 | 0.000 | 260.860 | 520.620 | 0.000 | |
| C1 | 33 | 47 | F.I. EL. | 90.000 | 16.000 | 622.790 | 622.790 | ##### | 1.3 |

new

| | | | | | | | | | |
|---------------|---------------|---------------|------------------|--------------------|------------------|--------------------|--------------------|------------------|-------------|
| C2 | 94 | | ORIFICE | 13.500 | | | | | |
| C2 | 2 | 2 | CAST EL. | 50.000 | 48.000 | 0.000 | 0.000 | 0.000 | .156 |
| C2 | 42 | 57 | PIPE | 58.970 | 0.000 | 307.200 | 307.200 | 0.000 | |
| C2 | 42 | 58 | ELBOW | 60.000 | 48.000 | 346.340 | 653.540 | 0.000 | .440 |
| C2 | 43 | 59 | PIPE | 241.590 | 0.000 | 1258.530 | 1258.530 | 0.000 | |
| C2 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| C2 | 44 | 60 | ELBOW | 139.240 | 0.000 | 701.520 | 701.520 | 0.000 | |
| C2 | 4 | 5 | PIPE | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| C2 | 45 | 61 | ELBOW | 8.000 | 48.000 | 46.180 | 46.180 | 0.000 | .543 |
| C2 | 45 | 62 | PIPE | 34.860 | 0.000 | 181.620 | 227.800 | 0.000 | |
| C2 | 45 | 16 | ELBOW | 90.000 | 48.000 | 519.520 | 747.310 | 0.000 | .363 |
| C2 | 46 | 63 | PIPE | 187.460 | 0.000 | 976.540 | 976.540 | 0.000 | |
| C2 | 47 | 45 | ELBOW | 45.000 | 48.000 | 259.760 | 259.760 | 0.000 | .478 |
| C2 | 47 | 64 | PIPE | 63.510 | 0.000 | 330.850 | 590.610 | 0.000 | |
| C2 | 33 | 47 | F.I. EL. | 90.000 | 16.000 | 622.790 | 622.790 | ##### | .250 |

replace

assess?

D MILL

| | ASSY NO (FP-) | PART NO (FP-) | PC. TYPE | LENGTH/ ANGLE | RADIUS | WT / PC | ASSY RUN WT. | EXT. | UT READING 12/2010 |
|----|------------------|------------------|----------|------------------|--------|----------|--------------|--------|-----------------------|
| D1 | 92 | | ORIFICE | 12.375 | | | | | |
| D1 | 1 | 1 | PIPE | 22.000 | 0.000 | 114.610 | 114.610 | 0.000 | |
| D1 | 2 | 2 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 0.000 | .134 |
| D1 | 3 | 3 | PIPE | 124.800 | 0.000 | 650.150 | 650.150 | 0.000 | |
| D1 | 3 | 4 | ELBOW | 55.000 | 48.000 | 317.480 | 967.630 | 0.000 | .435 |
| D1 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| D1 | 5 | 6 | PIPE | 54.030 | 0.000 | 281.460 | 281.460 | 0.000 | |
| D1 | 6 | 7 | ELBOW | 90.000 | 48.000 | 519.520 | 519.520 | 0.000 | .391 |
| D1 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| D1 | 7 | 8 | PIPE | 194.630 | 0.000 | 1013.880 | 1013.880 | 0.000 | |
| D1 | 8 | 9 | F.I. EL. | 90.000 | 16.000 | 582.290 | 582.290 | 15.000 | .221 |

replace

| | | | | | | | | | |
|----|----|----|----------|---------|--------|----------|----------|-------|------|
| D2 | 93 | | ORIFICE | 13.000 | | | | | |
| D2 | 1 | 1 | PIPE | 22.000 | 0.000 | 114.610 | 114.610 | 0.000 | |
| D2 | 2 | 2 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 0.000 | .120 |
| D2 | 9 | 10 | PIPE | 124.360 | 0.000 | 647.840 | 647.840 | 0.000 | |
| D2 | 9 | 11 | ELBOW | 40.000 | 48.000 | 230.900 | 878.740 | 0.000 | .425 |
| D2 | 10 | 12 | PIPE | 196.440 | 0.000 | 1023.310 | 1023.310 | 0.000 | |
| D2 | 10 | 13 | ELBOW | 20.000 | 48.000 | 115.450 | 1138.760 | 0.000 | .512 |
| D2 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| D2 | 11 | 14 | PIPE | 172.230 | 0.000 | 897.220 | 897.220 | 0.000 | |
| D2 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| D2 | 12 | 15 | ELBOW | 25.000 | 48.000 | 144.310 | 144.310 | 0.000 | .513 |
| D2 | 12 | 16 | ELBOW | 90.000 | 48.000 | 519.520 | 663.830 | 0.000 | .449 |
| D2 | 13 | 17 | PIPE | 199.000 | 0.000 | 1036.670 | 1036.670 | 0.000 | |
| D2 | 14 | 18 | F.I. EL. | 90.000 | 16.000 | 379.790 | 379.790 | 0.000 | .263 |

replace

| | | | | | | | | | |
|----|----|----|----------|---------|--------|----------|----------|-------|------|
| D4 | 94 | | ORIFICE | 13.500 | | | | | |
| D4 | 15 | 19 | PIPE | 44.000 | 0.000 | 229.210 | 229.210 | 0.000 | |
| D4 | 16 | 20 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 4.000 | .150 |
| D4 | 17 | 21 | ELBOW | 48.000 | 48.000 | 230.900 | 230.900 | 0.000 | .487 |
| D4 | 17 | 22 | PIPE | 296.300 | 0.000 | 1543.540 | 1774.440 | 0.000 | |
| D4 | 18 | 23 | PIPE | 269.790 | 0.000 | 1405.420 | 1405.420 | 0.000 | |
| D4 | 18 | 24 | ELBOW | 85.000 | 48.000 | 490.650 | 1896.080 | 0.000 | .416 |
| D4 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| D4 | 19 | 25 | PIPE | 128.720 | 0.000 | 628.880 | 628.880 | 0.000 | |
| D4 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| D4 | 6 | 7 | ELBOW | 98.000 | 48.000 | 519.520 | 519.520 | 0.000 | .391 |
| D4 | 20 | 26 | PIPE | 177.000 | 0.000 | 922.070 | 922.070 | 0.000 | |
| D4 | 21 | 27 | F.I. EL. | 90.000 | 16.000 | 460.790 | 460.790 | 6.000 | .215 |

replace

| | | | | | | | | | |
|----|----|----|----------|---------|--------|----------|----------|-------|------|
| D3 | | | ORIFICE | 15.500 | | | | | |
| D3 | 15 | 19 | PIPE | 44.000 | 0.000 | 229.100 | 229.210 | 0.000 | |
| D3 | 22 | 28 | CAST EL. | 90.000 | 48.000 | 0.000 | 0.000 | 6.500 | .165 |
| D3 | 23 | 29 | ELBOW | 55.000 | 48.000 | 317.480 | 317.480 | 0.000 | .503 |
| D3 | 23 | 30 | PIPE | 289.450 | 0.000 | 1507.880 | 1825.360 | 0.000 | |
| D3 | 24 | 31 | PIPE | 274.160 | 0.000 | 1428.230 | 1428.230 | 0.000 | |
| D3 | 24 | 32 | ELBOW | 80.000 | 48.000 | 461.790 | 1890.020 | 0.000 | .435 |
| D3 | 25 | 33 | PIPE | 250.920 | 0.000 | 1307.160 | 1307.160 | 0.000 | |
| D3 | 25 | 34 | ELBOW | 10.000 | 48.000 | 57.720 | 1364.880 | 0.000 | .541 |
| D3 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| D3 | 26 | 35 | PIPE | 169.710 | 0.000 | 884.090 | 884.090 | 0.000 | |
| D3 | 4 | 5 | CAST ORF | 15.250 | 0.000 | 90.000 | 90.000 | 0.000 | |
| D3 | 27 | 36 | ELBOW | 10.000 | 48.000 | 57.720 | 57.720 | 0.000 | .519 |
| D3 | 27 | 37 | PIPE | 32.560 | 0.000 | 165.620 | 227.340 | 0.000 | |
| D3 | 27 | 16 | ELBOW | 90.000 | 48.000 | 519.520 | 746.860 | 0.000 | .283 |
| D3 | 20 | 26 | PIPE | 177.000 | 0.000 | 922.070 | 922.070 | 0.000 | |
| D3 | 14 | 18 | F.I. EL. | 90.000 | 16.000 | 379.790 | 379.790 | 0.000 | .244 |

replace