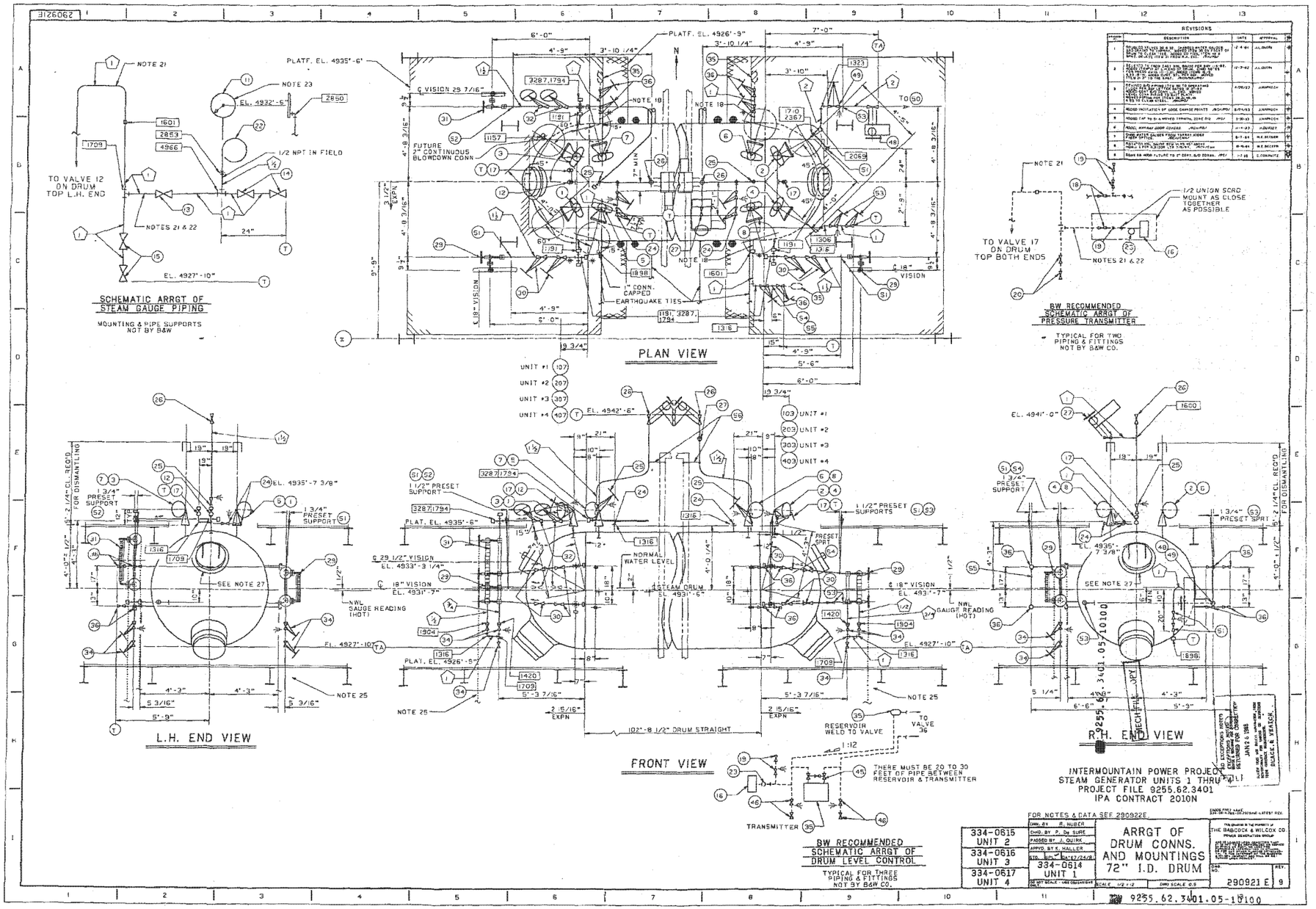
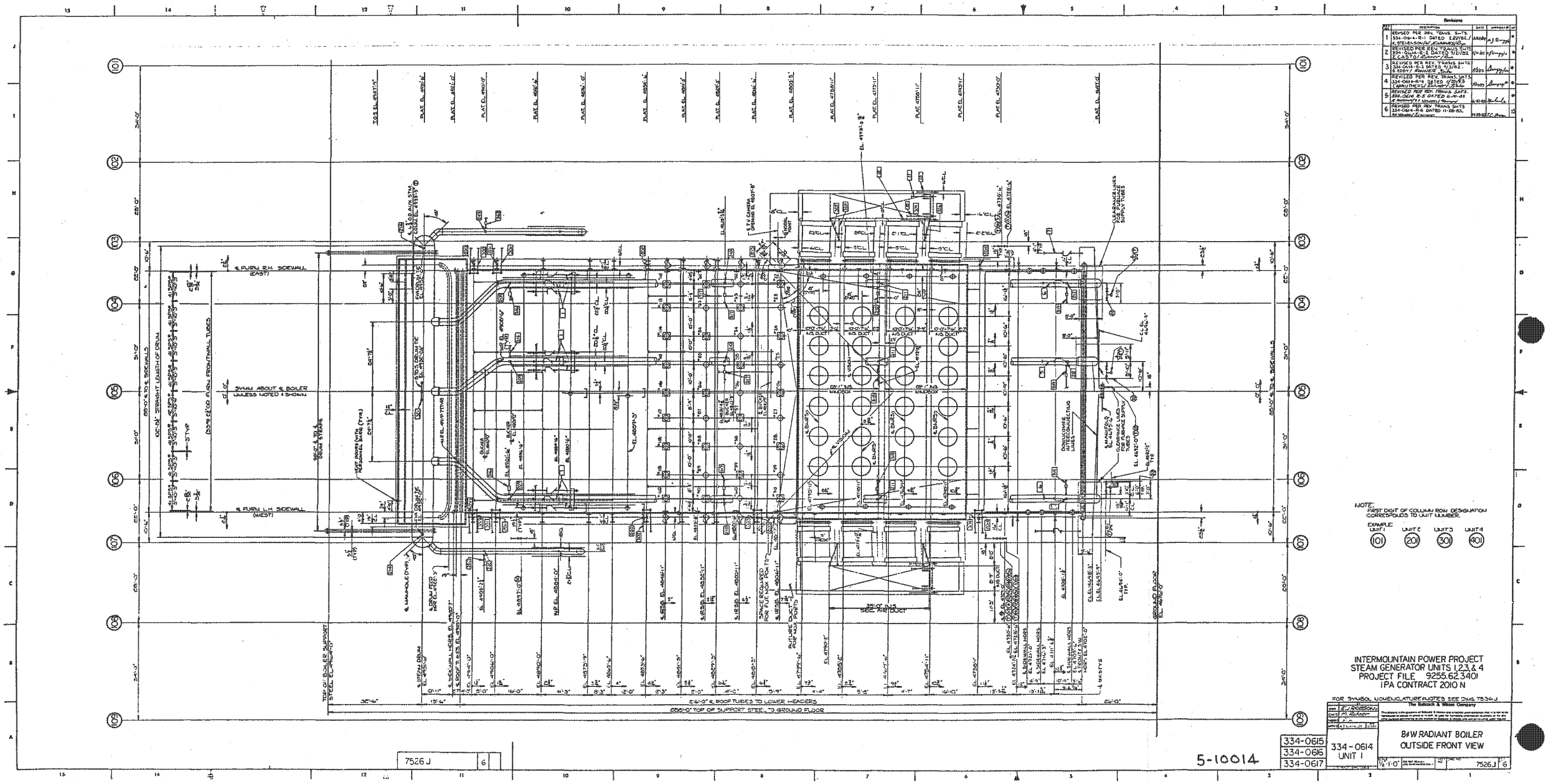

SCHEMATIC ARRGT OF STEAM GAUGE PIPING
MOUNTING & PIPE SUPPORTS NOT BY B&W
TO VALVE 12 ON DRUM TOP L.H. END
NOTE 21
NOTE 23
PLATF. EL. 4935'-6"
EL. 4932'-6"
1/2 NPT IN FIELD
NOTES 21 & 22
EL. 4927'-10"
PLAN VIEW
PLATF. EL. 4926'-9"
FUTURE 2" CONTINUOUS BLOWDOWN CONN.
1" CONN. CAPPED
EARTHQUAKE TIES
NOTE 18
TO VALVE 17 ON DRUM TOP BOTH ENDS
1/2 UNION SCRD MOUNT AS CLOSE TOGETHER AS POSSIBLE
B.W. RECOMMENDED SCHEMATIC ARRGT OF PRESSURE TRANSMITTER
TYPICAL FOR TWO PIPING & FITTINGS NOT BY B&W CO.
UNIT #1 107
UNIT #2 207
UNIT #3 307
UNIT #4 407
EL. 4942'-6"
UNIT #1 103
UNIT #2 203
UNIT #3 303
UNIT #4 403
EL. 4941'-0"
L.H. END VIEW
FRONT VIEW
R.H. END VIEW
SEE NOTE 27
NOTE 25
NORMAL WATER LEVEL
STEAM DRUM
102'-8 1/2" DRUM STRAIGHT
RESERVOIR WELD TO VALVE
TO VALVE 36
THERE MUST BE 20 TO 30 FEET OF PIPE BETWEEN RESERVOIR & TRANSMITTER
TRANSMITTER
B.W. RECOMMENDED SCHEMATIC ARRGT OF DRUM LEVEL CONTROL
TYPICAL FOR THREE PIPING & FITTINGS NOT BY B&W CO.
REVISIONS
INTERMOUNTAIN POWER PROJECT
STEAM GENERATOR UNITS 1 THRU 4
PROJECT FILE 9255.62.3401
IPA CONTRACT 2010N
334-0615 UNIT 2
334-0616 UNIT 3
334-0617 UNIT 4
334-0614 UNIT 1
ARRGT OF DRUM CONNS. AND MOUNTINGS 72" I.D. DRUM
THE BABCOCK & WILCOX CO.
290921 E
9255.62.3401.05-10100

IP7010015


Revisions
1 REVISED PER REV. TRANS. SHTS. 334-0614-R-1 DATED 2.27.82.
2 REVISED PER REV. TRANS SHTS 334-0614-R-2 DATED 3/3/82
3 REVISED PER REV. TRANS. SHTS. 334-0614-R-3 DATED 7/3/82.
4 REVISED PER REV. TRANS. SHTS. 334-0614-R-4 DATED 1/28/83
5 REVISED PER REV. TRANS. SHTS. 334-0614-R-5 DATED 6-10-83
6 REVISED PER REV. TRANS SHTS 334-0614-R-6 DATED 11-28-83.
NOTE: FIRST DIGIT OF COLUMN ROW DESIGNATION CORRESPONDS TO UNIT NUMBER.
EXAMPLE: UNIT 1 101 UNIT 2 201 UNIT 3 301 UNIT 4 401
INTERMOUNTAIN POWER PROJECT
STEAM GENERATOR UNITS 1,2,3,& 4
PROJECT FILE 9255.62.3401
IPA CONTRACT 2010 N
FOR SYMBOL NOMENCLATURE NOTES SEE DWG. 7536J
The Babcock & Wilcox Company
334-0614 UNIT 1
B&W RADIANT BOILER
OUTSIDE FRONT VIEW
334-0615
334-0616
334-0617
5-10014
7526 J
6

IP7010016

DEAERATOR

TRAY DEAERATING FEEDWATER HEATER

CONSTRUCTION DATA

CHICAGO HEATER JOB NO. 4122/23/24/25 CUSTOMER JOB NO. 9255.62.1205

DESIGN/OPERATING/TEST PRESSURE PSI: 160 PSIG / 125.3PSIA / 240 PSIG /

DESIGN/OPERATING TEMPERATURE F: 650 /750STM Head/344 MODEL: HH Tray 8.5

STORAGE CAPACITY:

At Normal Water Level: 60,000 GAL. At Overflow: ----- GAL.

APPLICABLE CODE: ASME SEC.VIII DIV.I SEISMIC Design .3 Horizontal/ .2 Vertical

	DIAMETER (OUTSIDE)	LENGTH (STRAIGHT)	HEAD (THICKNESS)	SHELL (THICKNESS)	VESSEL (MAT'L)	JOINT EFF	CORROSION ALLOWANCE
Heater:	10 ft.	52'6"	3/4"/11/16"	11/16"	SA-516-70	1.0	1/8"
Storage:	12 ft.	76'0"	13/16"	13/16"	SA-516-70	1.0	1/8"

DRY WEIGHT: 195,915 LB. OPERATING WEIGHT: 668,380 LB. FLOODED WEIGHT: 1,042,100 LB.

VALVES: Valve Model No. A-2500/A-101 Total Valve Quantity: 228/6

TRAYS:

Tray Size	No. Tray Assemblies	Size Tray Stack	Tray Gauge
37"	1152	9W X 16L X 8D	16 Ga.

ACCESSORY OPENINGS: Heater: 2 - 18" X 24" Storage Tank: 2 - 18" X 24"

DEAERATOR CONNECTIONS

NOZZLE	NOMINAL DIA.	RATING**
LP Condensate	1 - 24"	Sch.20
Relief Valve	1 - 6"	Flg.300# R.F
Air Pre Heat & Flue Gas Reheat	1 - 18"	Std.Wt.
HP Drains	2 - 10"	Std.Wt.
Steam Inlet	1 - 34"	Std.Wt.
Vent Pipe	7 - 2"	SW-3000#
Vent Orifice	-----	-----
Downcomer	4 - 30"	37½° Bevel
Equalizer	2 - 36"	37½° Bevel
H.P. Heater Vents	6 - 2"	SW-3000#

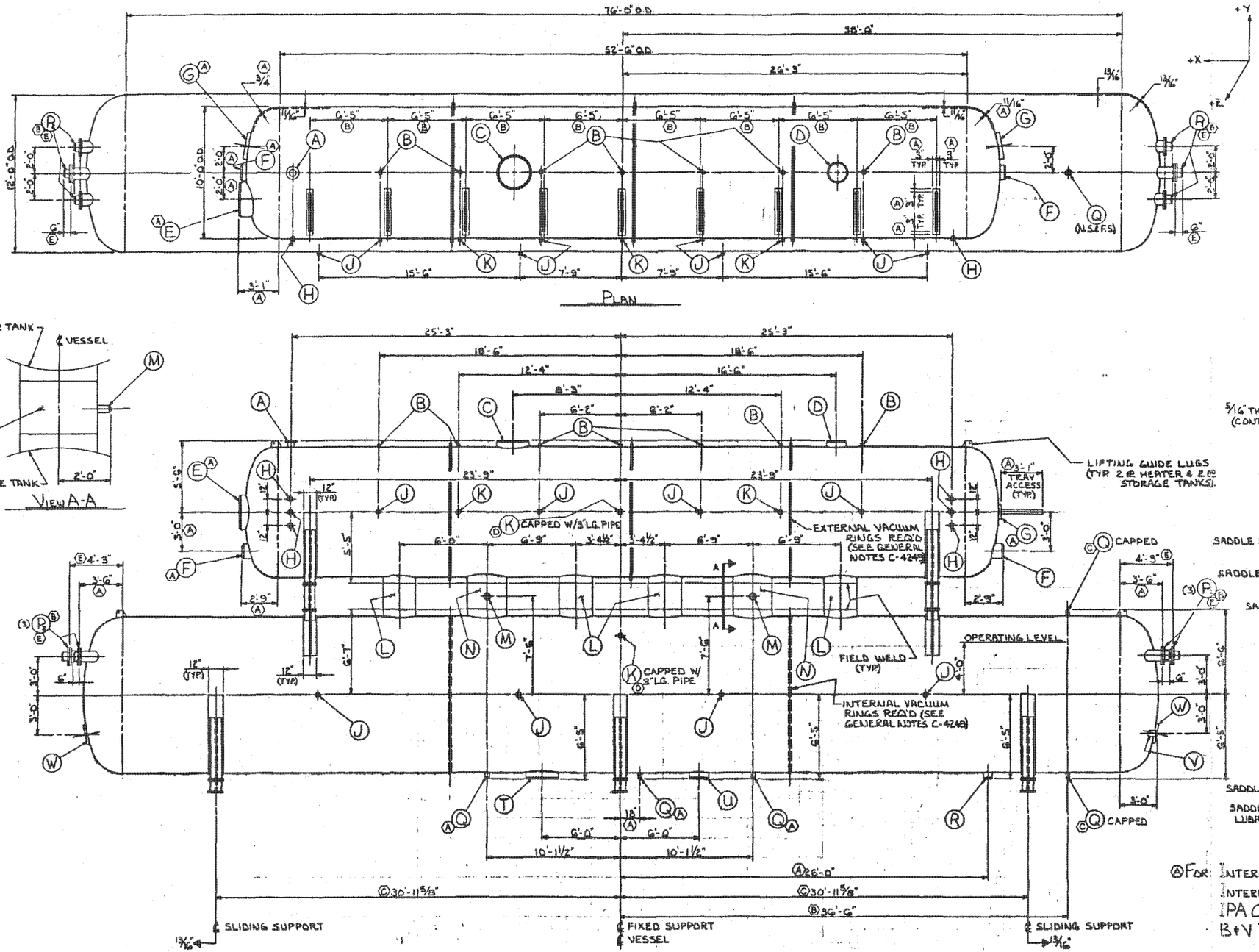
STORAGE CONNECTIONS

NOZZLE	NOMINAL DIA.	RATING**
Feedwater Outlet	1 - 30"	Std. Wt.
Main Pump Recirc.	3 - 10"	Sch. 40
Booster Pump Recirc.	3 - 10"	Sch. 40
Storage Drain	1 - 8"	Sch. 40
Gauge Glass	5 - 2½"	Sch. 40
Air Preheat & Flue Gas	1 - 18"	Std. Wt.
Level Control	2 - 3"	Sch. 40
Downcomer	4 - 30"	37½° Bevel
Equalizer	3 - 36"	37½° Bevel

* DESIGN TEMPERATURE AT STEAM INLET IF DIFFERENT FROM HEATER 750 °F.

** INDICATE PRESSURE RATING IF FLANGED OR WELD END SCHEDULE.

IP7010017



Ⓑ SADDLE REACTION		1	2	3
SEISMIC OPERATING	F_x	0#	±200,042#	0#
SEISMIC OPERATING	F_y	-205,597#	-389,360#	-205,597#
SEISMIC OPERATING	F_z	± 15,482#	± 169,172#	± 15,482#
DEAD WT. FLOODED	F_y	-325,056#	-391,958#	-325,056#
OVERTURNING SEIS. MIC. MOMENT X (IN-LB)		± 3,459,310	± 11,093,890	± 3,459,310

Ⓐ APPROXIMATE WEIGHTS

SHIPPING - HEATER	71,830
STORAGE	124,085
OPERATING	668,380
FLOODED	1,042,100

Ⓐ FOR: INTERMOUNTAIN POWER PROJECT
INTERMOUNTAIN GENERATING STATION UNITS 1-4
IPA CONTRACT 9255.62.1205
B+V TAG: DEAERATING HEATER S

FOR GENERAL NOTES & NOZZLE SCHEDULE SEE C-4249

NO.	DATE	REVISION	BY	CHKD	APPR
E	1-24-93	EXTEND NOZZLE S"	MSL	LK	
D	7-23-92	CAPPED CONN'S K	MSL		
C	6-3-92	CHG. DIM & ADD CAPPED	MSL		
B	5-4-92	CHANGES PER CUSTOMER	MSL		
A	3-30-92	CHANGES PER CUSTOMER	MSL		

DO NOT SCALE THIS DRAWING USE DIMENSIONS ONLY

JOB# 4122 4123 4124 4125

GENERAL ARRANGEMENT
DEAERATOR
CHICAGO HEATER COMPANY, INC.

SCALE NONE	DRAWN LAFFEY	D-5757	E
DATE 12-30-91	CHECKED		

THIS DRAWING CERTIFIES CORRECT WHEN SIGNED

IP7010018

HW cap calcs

					lbm/in
For level	45 – 38"	vol lost	=	205.3 ft^3/in	12,68
	38 – 37"	" "	=	203.9 ft^3/in	12,59
	37 – 36"	" "	=	201.6 ft^3/in	12,457
	36 – 35"	" "	=	200.2 ft^3/in	12,370

@ design H.W T_{sat} = 115.06
3.0 "Hg

$v \cong 0.016184\ ft^3/lbm$

* for levels below 35" the remainder of the drain line C to B (10") & riser distribution lines start uncovering

IP7010019

Cycle Loss Calculation Sheet

Unit	1
Date	5/13/91

Test Data

Start of Test Level	44.6	inches
End of Test Level	35.7	inches
Hotwell temperature	115.2	F
Test Start	11:30	
Test End	14:00	

Calculated Values

Total Drop	8.92	inches
Total Volume Lost	1824.546	cuft
Condensate Density	61.79	lbm/cuft
Total Condensate Lost	112,731	lbm
Test Duration	2:30	
Loss per hour	45,092	lbm/hr

HWCALC.XLS 6/1/91

IP7010020