

**GENERAL NOTES:**

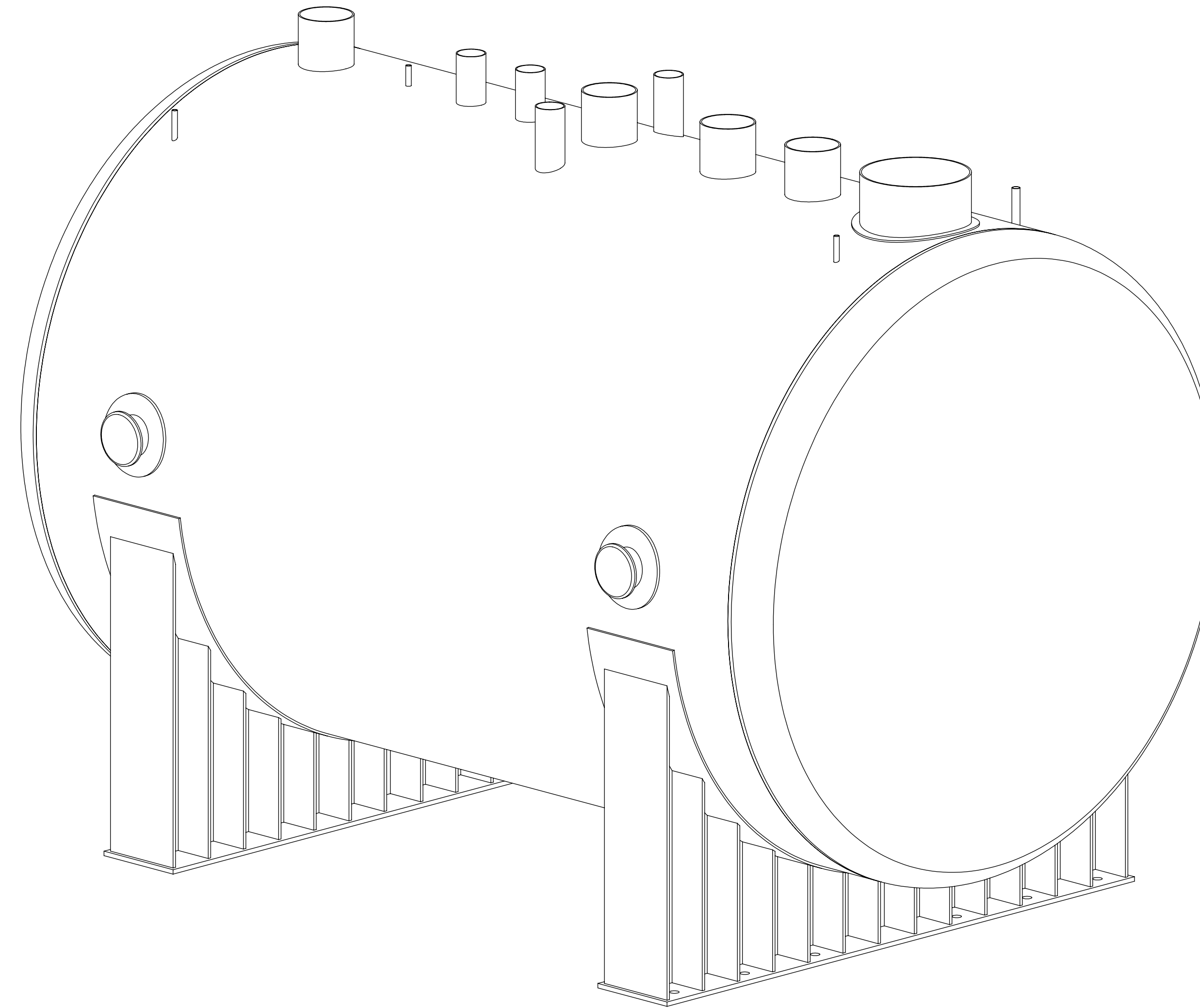
- DIMENSIONS ARE IN FEET AND INCHES  
TOLERANCES: ANGULAR ±1° FRACTIONS ±1/16 DECIMAL ±0.03
  - BREAK ALL SHARP EDGES, REMOVE ALL BURRS. ROUND ALL EDGES.
  - ALL WELDS SHALL BE NEAT IN APPEARANCE, FREE OF SLAG AND OTHER DEFECTS.
  - VESSEL TO BE CLEANED OF SCALE, OIL, WELD SPLATTER AND ALL FOREIGN MATERIAL PRIOR TO HYDROSTATIC TEST.
  - DESIGN CODE: ASME BOILER AND PRESSURE VESSEL CODE SECTION VIII, DIVISION 1, 2023 EDITION, NOT STAMPED
  - ALL MATERIALS AND EQUIPMENT USED, THAT ARE SUPPLIED BY THE MANUFACTURER, ARE SUBJECT TO APPROVAL BY THE CLIENT, BOTH RAW MATERIALS THAT WILL BE PART OF THE VESSEL AND ALL OTHER MATERIALS AND EQUIPMENT USED IN THE MANUFACTURING PROCESS.
  - SUPPLIER SHALL VERIFY THE DESIGN BASED ON THE VESSEL SPECIFICATIONS (RPP-SPEC-67201). ANY MODIFICATIONS TO THE ORIGINAL DESIGN REQUIRES BUYER APPROVAL. AFTER APPROVAL, FABRICATION DRAWINGS SHALL BE RE-SUBMITTED FOR FINAL APPROVAL.
  - THE MANUFACTURER IS RESPONSIBLE FOR COORDINATING ANY ADDITIONAL INSTALLATION DETAILS AND SEQUENCING REQUIRED BUT NOT SPECIFIED IN THIS DRAWING.
  - FABRICATOR TO LOCATE SEAM AND INDICATE ON FINAL SHOP DRAWINGS.
  - WELD AND INSPECT STRUCTURAL WELDS PER AWS D1.1. WELD PROCEDURES AND QUALIFICATIONS PER ASME SECTION IX ARE ACCEPTABLE. ALL WELDS SHALL BE EXAMINED BY AWS QC-1 CERTIFIED WELD INSPECTOR.
  - SURFACE FINISHES OF PLATE AND PIPING SHALL BE 250 RMS OR BETTER.
  - FOR VESSEL OPERATING CONDITIONS AND NOZZLE ALLOWABLE LOADS, SEE THE PWST VESSEL SPECIFICATION (RPP-SPEC-67201). FOR ALL OTHER DESIGN CALCULATIONS AND REQUIREMENTS, SEE PWST VESSEL AND STRUCTURAL CALCULATION (RPP-CALC-67147).
  - FABRICATED VESSEL NOZZLES TO BE STUBBED TO SUPPORT INSTALLATION OF RISER NOZZLES AFTER TRANSPORTATION TO THE SITE AND PLACEMENT INTO CONCRETE VAULT. REFER TO VESSEL SPECIFICATIONS (RPP-SPEC-67201) FOR MORE INSTALLATION REQUIREMENTS.
- 14 REFER TO CONCRETE VAULT FOUNDATION DRAWING (H-14-113527-1) FOR VESSEL BOLTING INTERFACES AND DETAILS.
- 15 REFER TO H-14-113517 FOR DETAILS ON THE RISER ASSEMBLIES.
- 16 INTEGRITY ASSESSMENTS OF THE VESSEL INSIDE THE CONCRETE VAULT ARE PLANNED TO BE PERFORMED USING REMOTE TANK CRAWLERS. THE INSPECTION PATH OF THE TANK CRAWLERS SHALL BE PAINTED WITH HIGH VISIBILITY COLOR AS SHOWN.
- 17 VESSEL SLOPE TO BE REFLECTED IN FINAL DESIGN REVISIONS.
- 18 LIFTING LUG WELDMENT DETAILS TO BE DETERMINED IN FINAL DESIGN STAGE.
- 19 WITH THE EXCEPTION OF NOZZLE A, ATTACH ALL NOZZLES TO SHELL AS PER ASME SECTION VIII-1 FIGURE UW-16.1(C) WITH INTERNAL PROJECTION. THE WELDS SHALL BE COMPLETE JOINT PENETRATION WELDS.
- 20 REQUIRES NOZZLE REINFORCEMENT AS PER ASME SECTION VIII-1 UG-36(B). ATTACH NOZZLE TO SHELL AS PER FIGURE UW-16.1(S) WITH INTERNAL PROJECTION. WELD SIZES TO BE VERIFIED VIA DETAILED NOZZLE ANALYSIS IN FINAL DESIGN STAGE.
- PERSONNEL PERFORMING NON-DESTRUCTIVE EXAMINATION SHALL BE CERTIFIED IN ACCORDANCE WITH THE SELLER'S WRITTEN PRACTICE, WHICH SHALL MEET THE REQUIREMENTS OF ASNT SNT-TC-1A 2024. LEVEL II OR III PERSONNEL SHALL BE USED TO INTERPRET TEST RESULTS.
  - CARBON STEEL (SA-516 GR 70) IS UTILIZED AS THE VESSEL MATERIALS OF CONSTRUCTION. SEE RPP-CALC-67147 FOR ASSUMPTIONS MADE WITH REGARDS TO CORROSION AND MATERIAL DEGRADATION.
  - VESSEL WEIGHT, APPROX. DRY: 187,400 LBS (85.0 METRIC TONS)  
VESSEL WEIGHT, APPROX. TEST: 1,313,700 LBS (595.9 METRIC TONS)  
VESSEL MAXIMUM WEIGHT WITH WASTE SOLUTION: 1,571,700 LBS (712.9 METRIC TONS)
  - VESSEL CAPACITY: 134,799 GALLONS  
VESSEL CAPACITY, MAX OPERATING: 103,818 GALLONS
  - REFERENCE DOCUMENTS:  
SY PWST SYSTEM LAYOUT: H-14-113515  
SY PWST PIPING AND INSTRUMENTATION DIAGRAM: H-14-020831-13 TO -15  
SY PWST RISER ASSEMBLIES: H-14-113517  
SY PWST CONCRETE VAULT FOUNDATION PLAN: H-14-113527-1  
PWST VESSEL AND STRUCTURAL CALCULATION: RPP-CALC-67147  
PWST VESSEL RISER ANALYSIS: RPP-CALC-67556  
PWST DESIGN STUDY REPORT: RPP-RPT-65822  
PWST VESSEL SPECIFICATION: RPP-SPEC-67201  
2023 ASME BOILER AND PRESSURE VESSEL CODE SECTION VIII, DIVISION 1

**NOZZLE SCHEDULE**

MARK	QTY	SERVICE	SIZE	RATING	TYPE	WELD LEG41	WELD LEG42	WELD LEG43
A	1	TRANSFER PUMPS	NPS 48	N/A	STUB	3/4"	1/2"	3/4"
B	1	MIXER PUMP SPARE	NPS 24	N/A	STUB	1/2"	-	1/2"
C	1	TREATED WASTE INLET	NPS 24	N/A	STUB	1/2"	-	1/2"
D	1	RECIRCULATION INLET	NPS 2	N/A	STUB	1/4"	-	1/4"
E1	1	VENTILATION INLET	NPS 2	N/A	STUB	1/4"	-	1/4"
E2	1	VENTILATION OUTLET	NPS 2	N/A	STUB	1/4"	-	1/4"
F	1	INSPECTION RISER	NPS 24	N/A	STUB	1/2"	-	1/2"
G	1	LEVEL INDICATION	NPS 12	N/A	STUB	1/2"	-	1/2"
H	1	TEMPERATURE	NPS 12	N/A	STUB	1/2"	-	1/2"
J	1	PRESSURE	NPS 12	N/A	STUB	1/2"	-	1/2"
K	1	SPARE	NPS 12	N/A	STUB	1/2"	-	1/2"
L	1	PIT DRAIN	NPS 3	N/A	STUB	5/16"	-	5/16"
M	1	SLUICING	NPS 24	N/A	STUB	1/2"	-	1/2"

**PARTS/MATERIAL LIST**

QTY-010	PART/DASH NUMBER	NOMENCLATURE/DESCRIPTION	MATERIAL/REFERENCE	SHT	ITEM NO.
1	-010	PWST VESSEL ASSEMBLY		2	1
1		SHELL, 3/4" ROLLED PLATE, 24' OD	ASME SA-516 GR 70		2
2		HEAD, TORISPHERICAL, ASME SECTION VIII-1 UG-32(D), 3/4" MTA	ASME SA-516 GR 70		3
4		PIPE, 24 SCH 40, LENGTH AS REQUIRED	ASME SA-106 GR B		4
1		ROLLED PLATE, Ø48", 3/4" THK	ASME SA-516 GR 70		5
3		PIPE, 2 SCH 80, LENGTH AS REQUIRED	ASME SA-106 GR B		6
1		PIPE, 3 SCH 80, LENGTH AS REQUIRED	ASME SA-106 GR B		7
4		PIPE, 12 SCH 80, LENGTH AS REQUIRED	ASME SA-106 GR B		8
4		LIFTING LUG WELDMENT	ASTM A36		9
2	-001	WEAR PLATE, 1" THK, 52" WIDTH	ASTM A516 GR 70	4	10
4		SADDLE RIB, PLATE, 1.5" THK, 38" WIDTH	ASTM A516 GR 70		11
8		SADDLE RIB, PLATE, 1.5" THK, 38" WIDTH	ASTM A516 GR 70		12
8		SADDLE RIB, PLATE, 1.5" THK, 38" WIDTH	ASTM A516 GR 70		13
8		SADDLE RIB, PLATE, 1.5" THK, 38" WIDTH	ASTM A516 GR 70		14
8		SADDLE RIB, PLATE, 1.5" THK, 38" WIDTH	ASTM A516 GR 70		15
8		SADDLE RIB, PLATE, 1.5" THK, 38" WIDTH	ASTM A516 GR 70		16
8		SADDLE RIB, PLATE, 1.5" THK, 38" WIDTH	ASTM A516 GR 70		17
2		SADDLE WEB, PLATE, 1.5" THK	ASTM A516 GR 70		18
2		BASEPLATE, PLATE, 2" THK	ASTM A516 GR 70		19



**DESIGN DATA**

- DESIGN CODE: CALCULATIONS PER ASME BOILER AND PRESSURE VESSEL CODE SECTION VIII, DIVISION 1, 2023 EDITION, NOT DESIGNATED AS PRESSURE VESSEL
- DESIGN PRESSURE INTERNAL: 12 PSIG @ 115°F
- DESIGN PRESSURE EXTERNAL: 3 PSIG @ 115°F
- IMPACT TEST: EXEMPT PER UG-20(F)
- CORROSION ALLOWANCE, SHELL: 1/8 INCH
- CORROSION ALLOWANCE, NOZZLE: 1/16 INCH
- FLUID DESIGN SPECIFIC GRAVITY: 1.2
- HYDROSTATIC TEST PRESSURE: PER CODE
- HYDROSTATIC TEST: PER CODE
- RADIOGRAPHY: 100%
- JOINT EFFICIENCY: 100%
- POST WELD HEAT TREATMENT: TBD
- INSULATION: NONE
- PAINTING: PARTIAL, PER SHEET 3

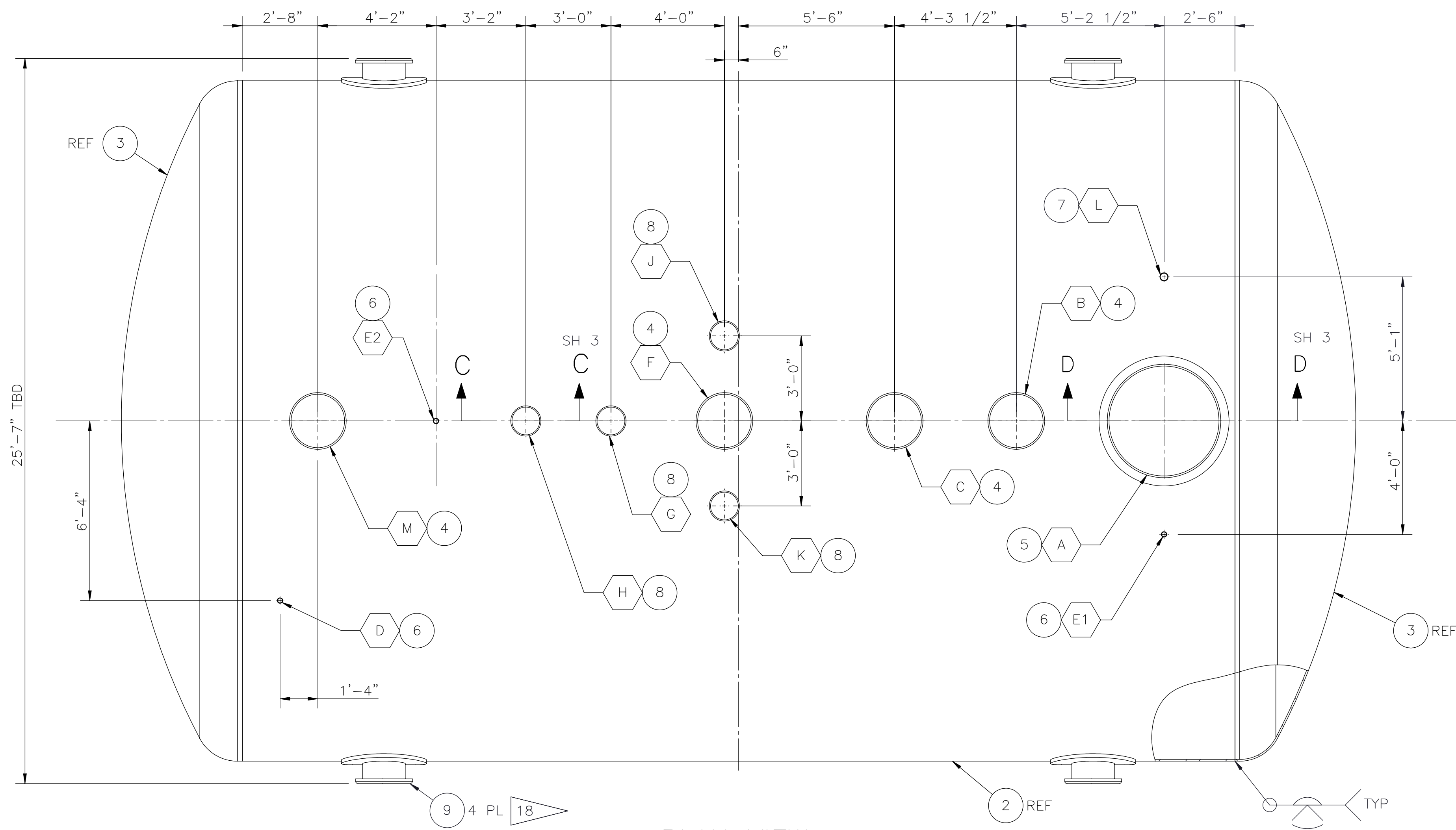
SY-304, PRETREATED WASTE STORAGE TANK (PWST)

PRELIMINARY  
NOT FOR CONSTRUCTION

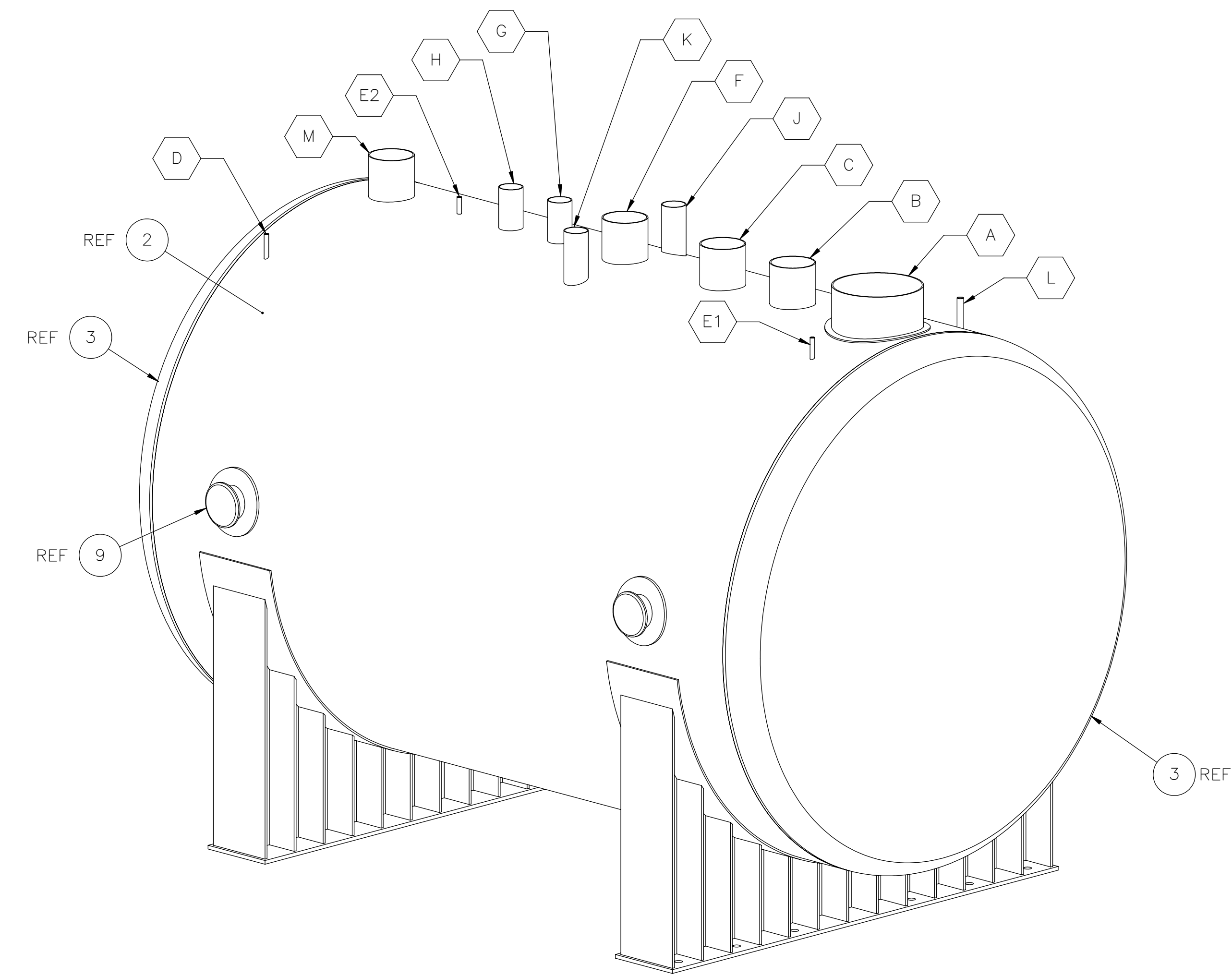
H-17-121300	DRAWING INDEX	B	RELEASED PER EDT-TBD
DWG NUMBER	TITLE	REV NO	DESCRIPTION
DRAWING TRACEABILITY LIST		REVISIONS	
REF NUMBER	TITLE	REV NO	DESCRIPTION
NEXT USED ON		REVISIONS	

BLDG NO 241-SY-304	CAUTION: NOT COMPLETE WITHOUT CURRENT CHANGE DOCUMENTS FROM DATABASE		U.S. DEPARTMENT OF ENERGY Hanford Field Office	
DRAWER NAME K. SONG	DATE	COMPANY	MECHANICAL SY PWST VESSEL NOTES AND PARTS LIST	
DRAFTING CHECKER	DATE	COMPANY	SIZE F	DRAWING NUMBER H-14-113516
DRAFTING CHECKER	DATE	COMPANY	SHEET 1	REV B
DESIGN AUTHORITY	DATE	COMPANY	SCALE SCALE SHOWN	

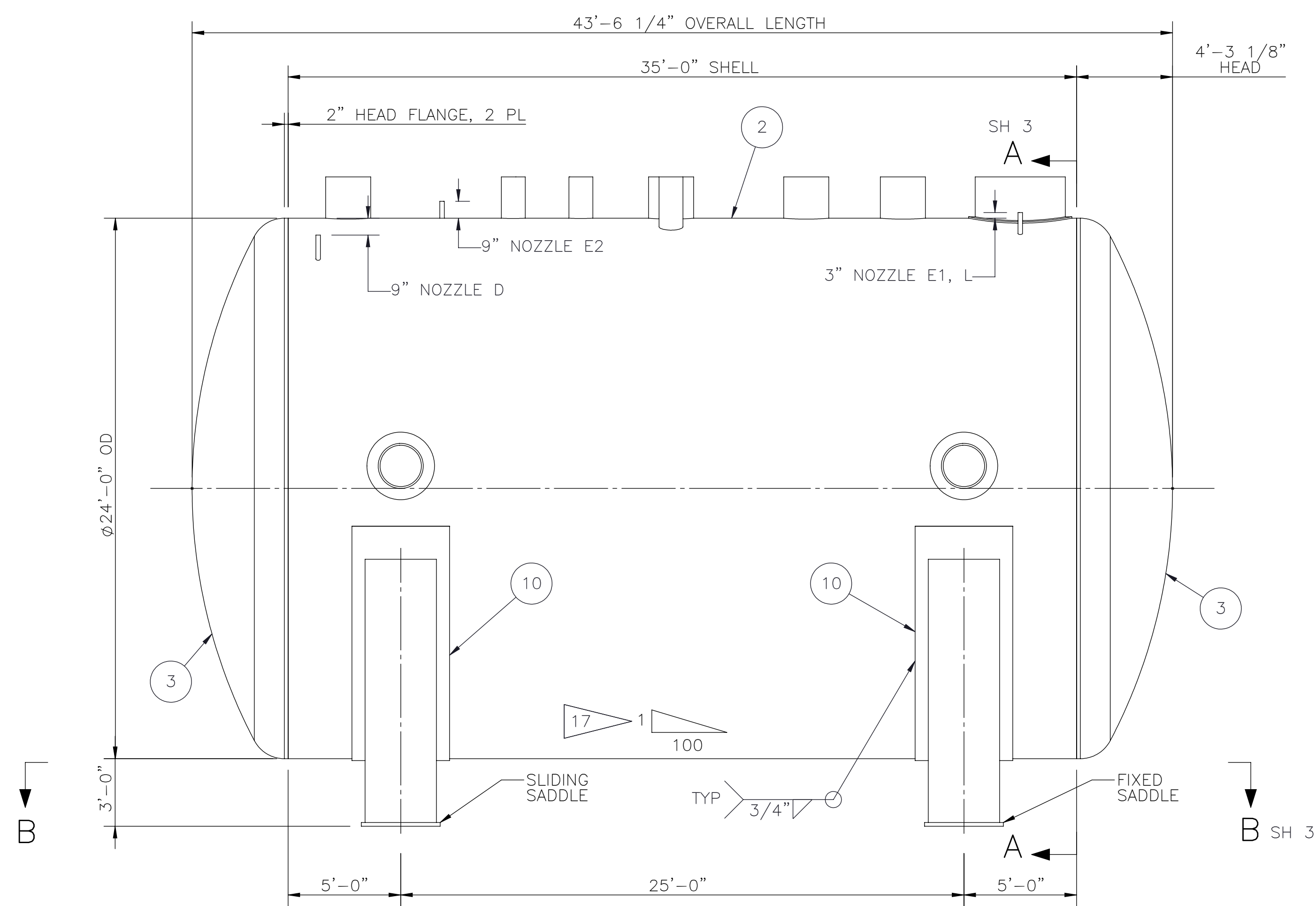
NOTES:  
1. SEE SHEET 1 FOR GENERAL NOTES.



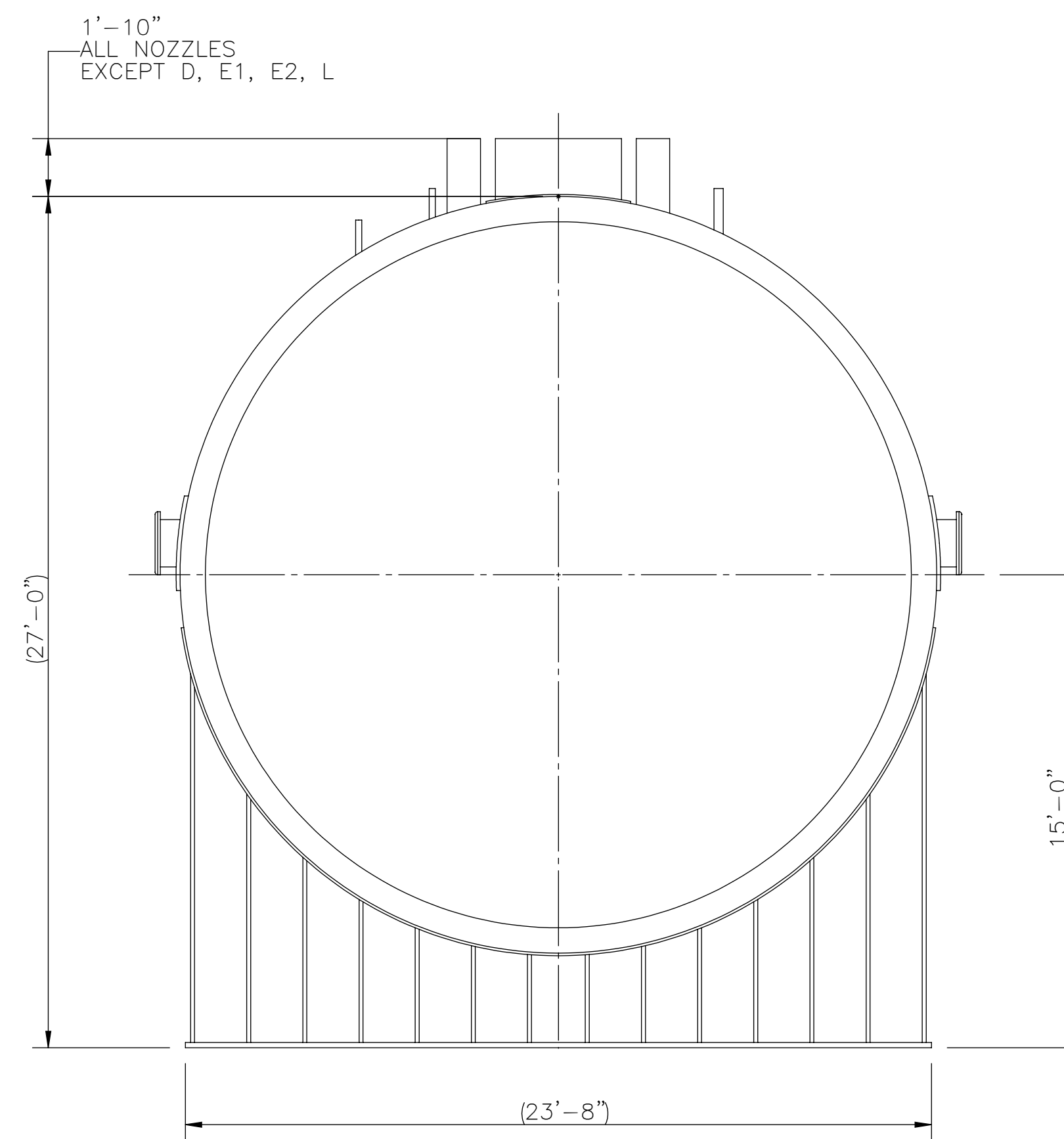
PLAN VIEW  
SCALE: 3/8" = 1'-0"



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



1 PWST VESSEL ASSEMBLY  
SCALE: 1/4" = 1'-0"  
FRONT VIEW



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

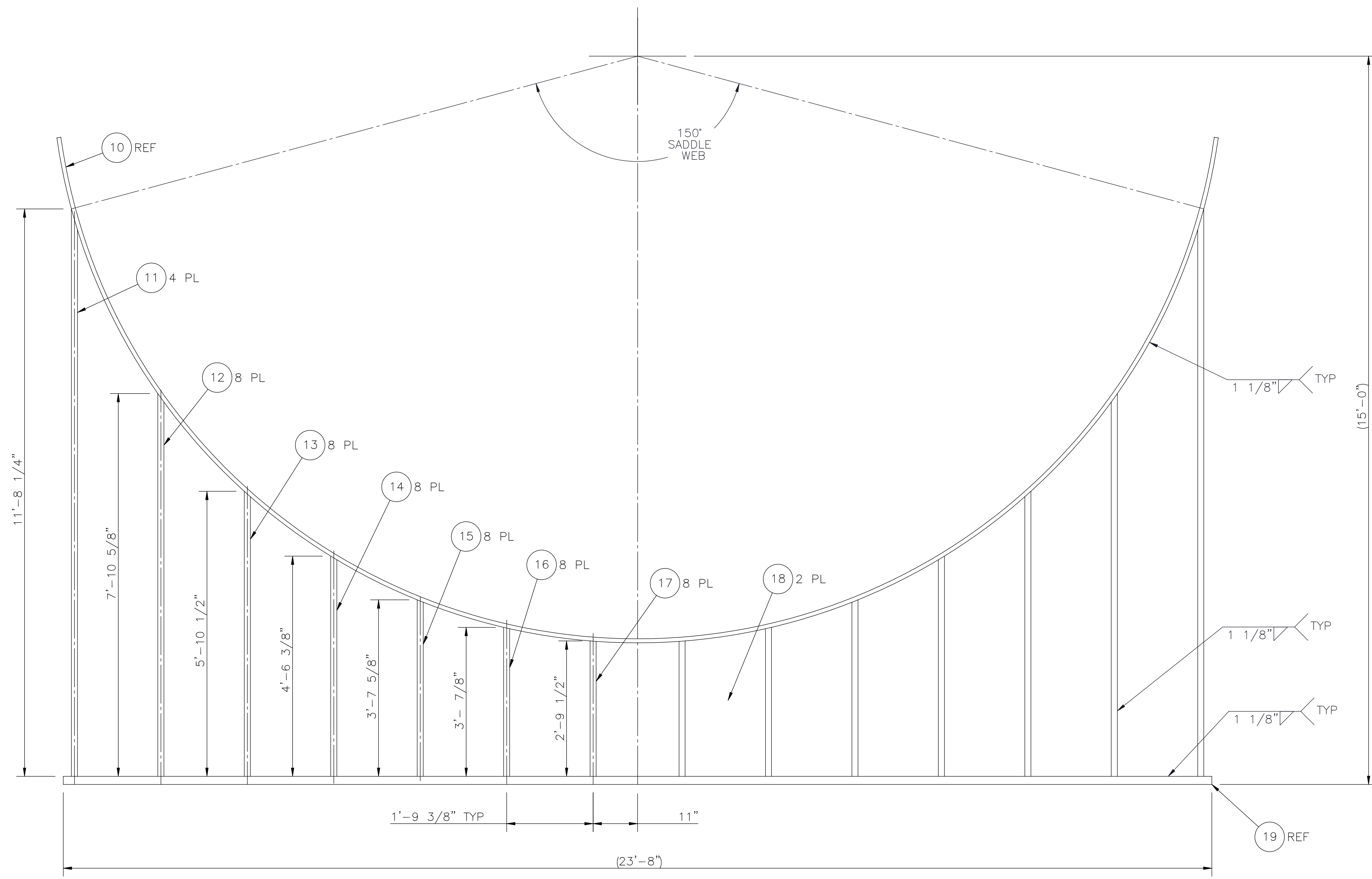
PRELIMINARY  
NOT FOR CONSTRUCTION

BLDG NO 241-SY-304	CAUTION: NOT COMPLETE WITHOUT CURRENT CHANGE DOCUMENTS FROM DATABASE		U.S. DEPARTMENT OF ENERGY Hanford Field Office
DRAWER K. SONG	NAME	DATE	MECHANICAL SY PWST VESSEL GENERAL ARRANGEMENT
DRAFTING CHECKER	DESIGNER	DATE	
INDEX NO	DESIGN AUTHORITY	SCALE: SHOWN	F H-14-113516
			2 B

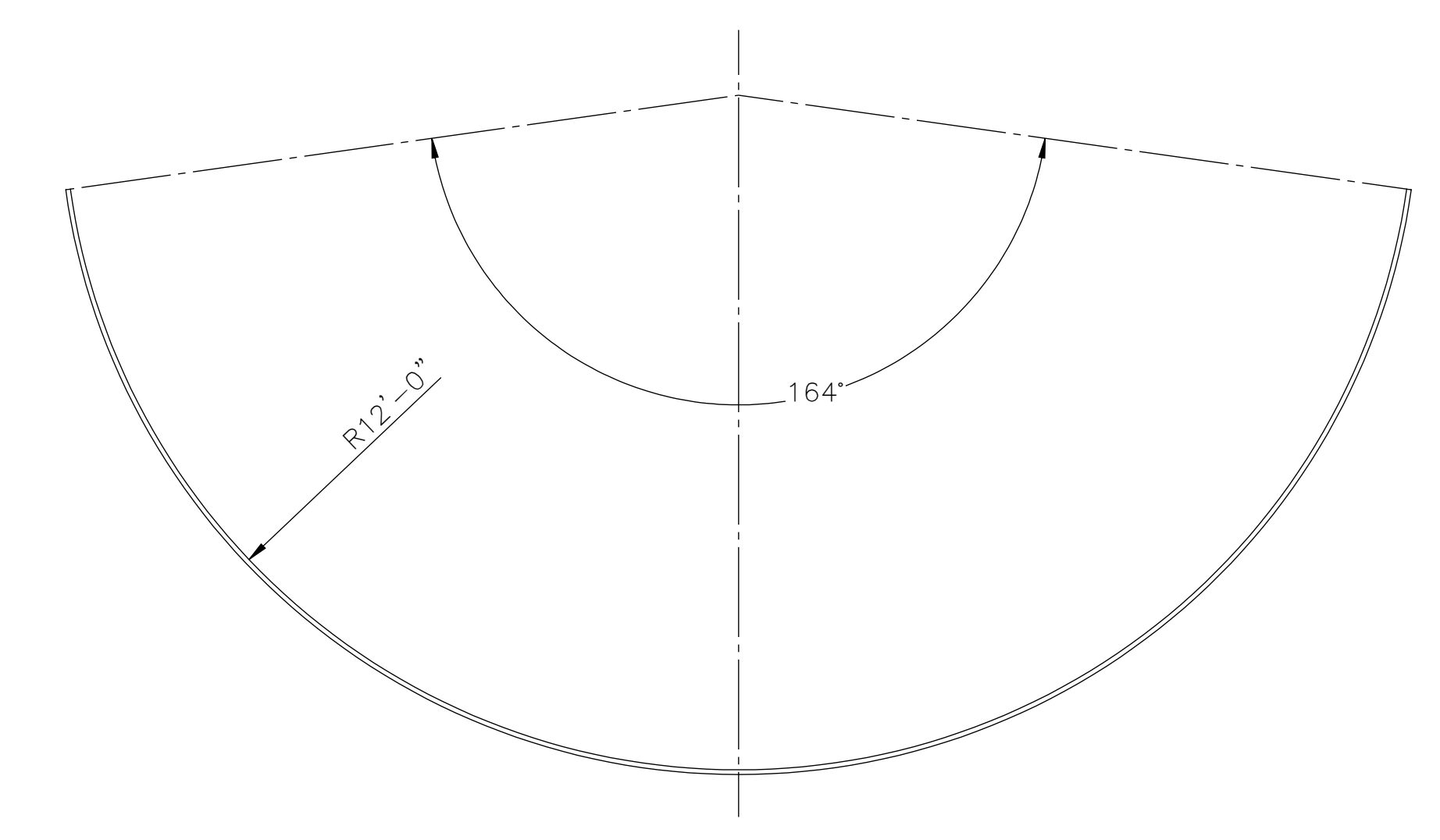
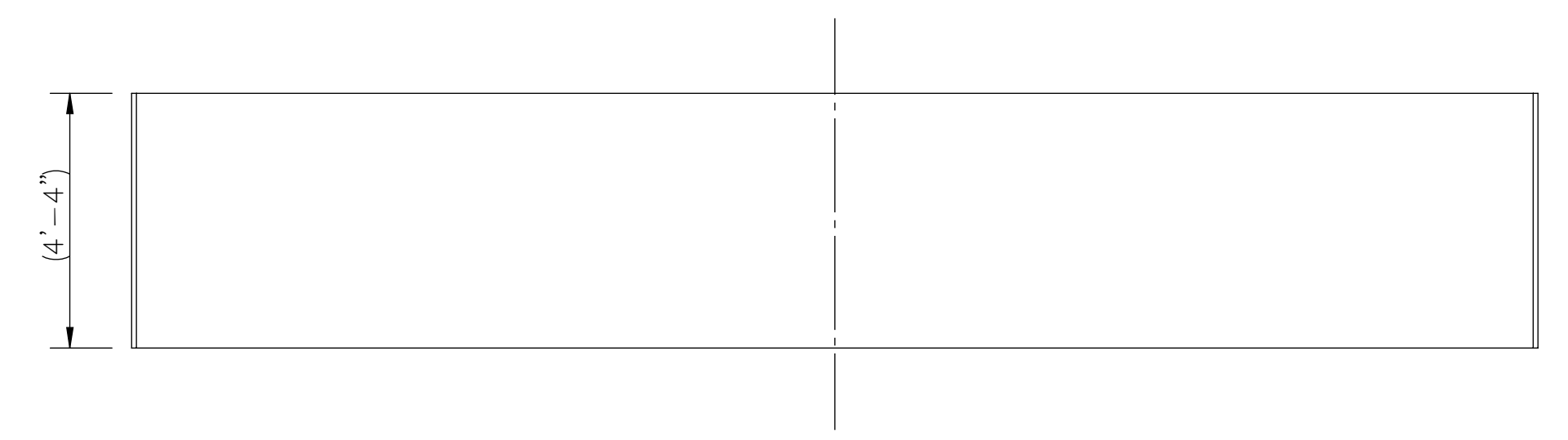
H-17-121300	DRAWING INDEX	B	RELEASED PER EDT-TBD
DWG NUMBER	TITLE	REF NUMBER	TITLE
DRAWING TRACEABILITY LIST		REFERENCES	
	NEXT USED ON	REV NO	DESCRIPTION
			REVISIONS



NOTES:  
 1. SEE SHEET 1 FOR GENERAL NOTES.



**SADDLE DETAIL**  
 SCALE: 3/4" = 1'-0"  
 DIMENSIONS MIRRORED ABOUT THE CENTERLINE



**10 WEAR PLATE**  
 SCALE: 3/8" = 1'-0"

PRELIMINARY  
 NOT FOR CONSTRUCTION

H-17-121300 DRAWING INDEX		B	RELEASED PER EDT-TBD
DWG NUMBER	TITLE	REV NO.	DESCRIPTION
DRAWING TRACEABILITY LIST		REVISIONS	
REF NUMBER	TITLE	REV NO.	DESCRIPTION
NEXT USED ON			

BLDG NO 241-SY-304				CAUTION: NOT COMPLETE WITHOUT CURRENT CHANGE DOCUMENTS FROM DATABASE			
DRAWN BY K. SONG	NAME	DATE	COMPANY	U.S. DEPARTMENT OF ENERGY Hanford Field Office			
DRAFTING CHECKER			ENERCON	MECHANICAL SY PWST VESSEL SADDLE DETAILS			
DESIGN AUTHORITY			ENERCON	SIZE F	DRAWING NUMBER H-14-113516	SHEET 4	REV B
				SCALE SCALE SHOWN			