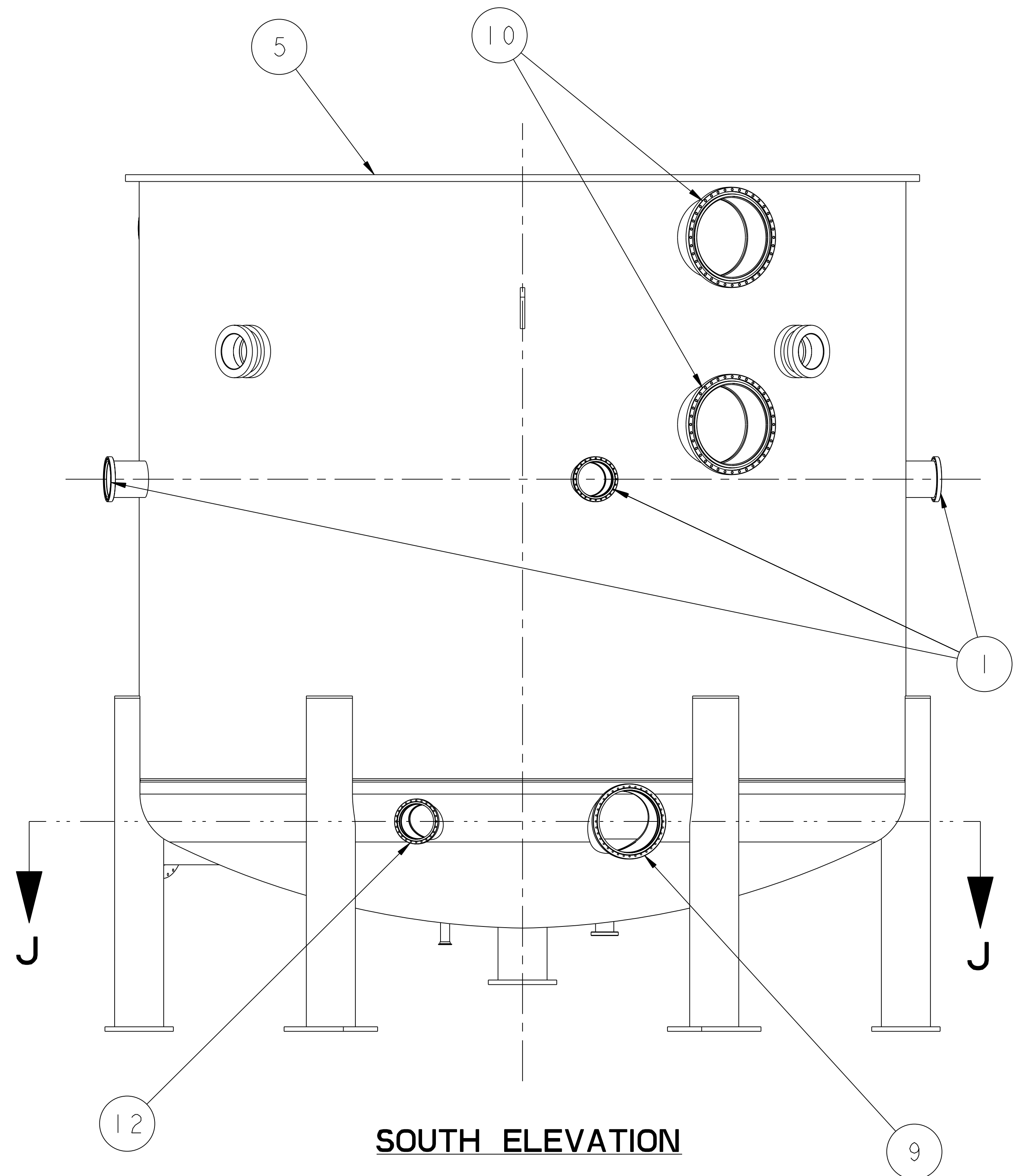
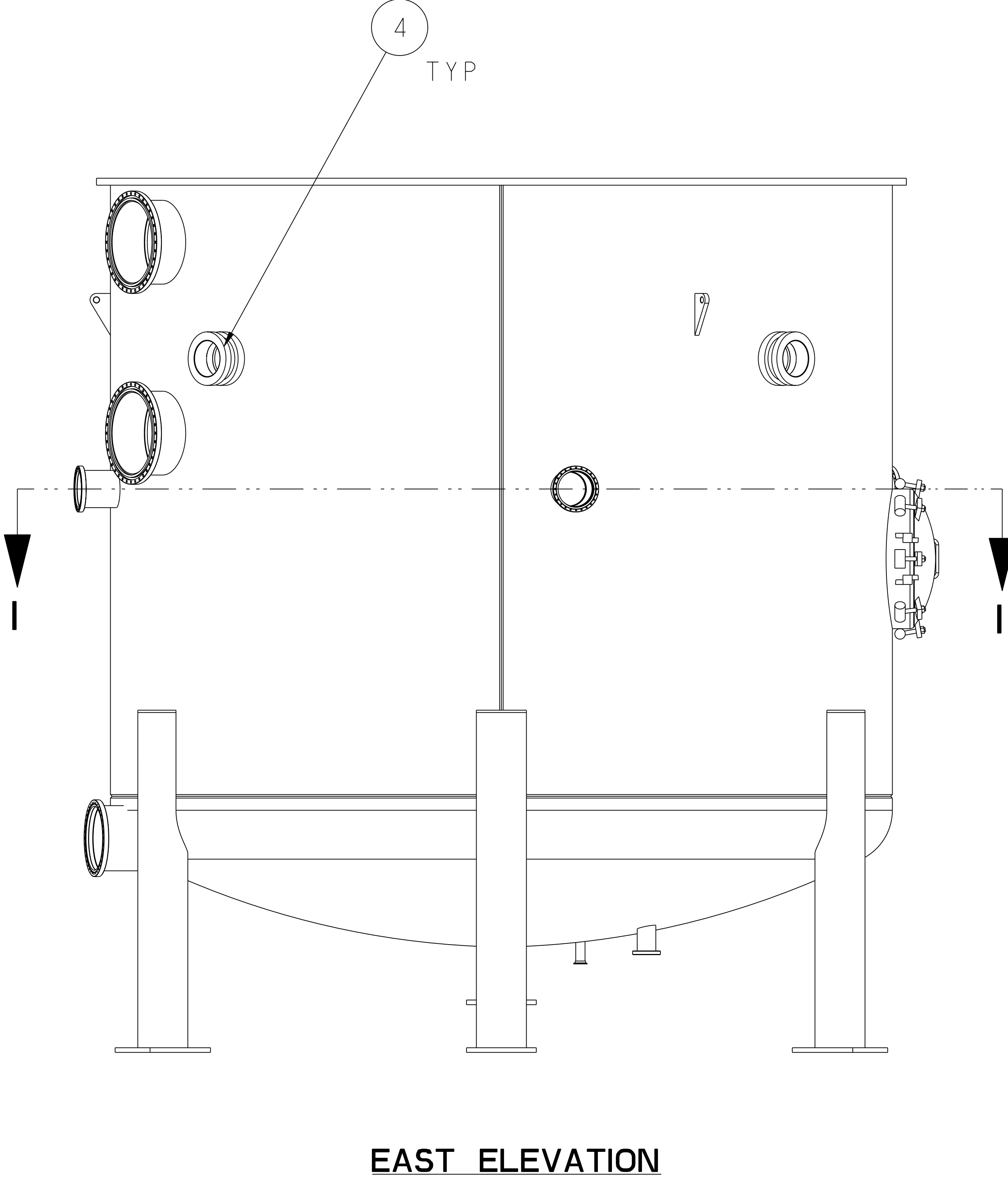


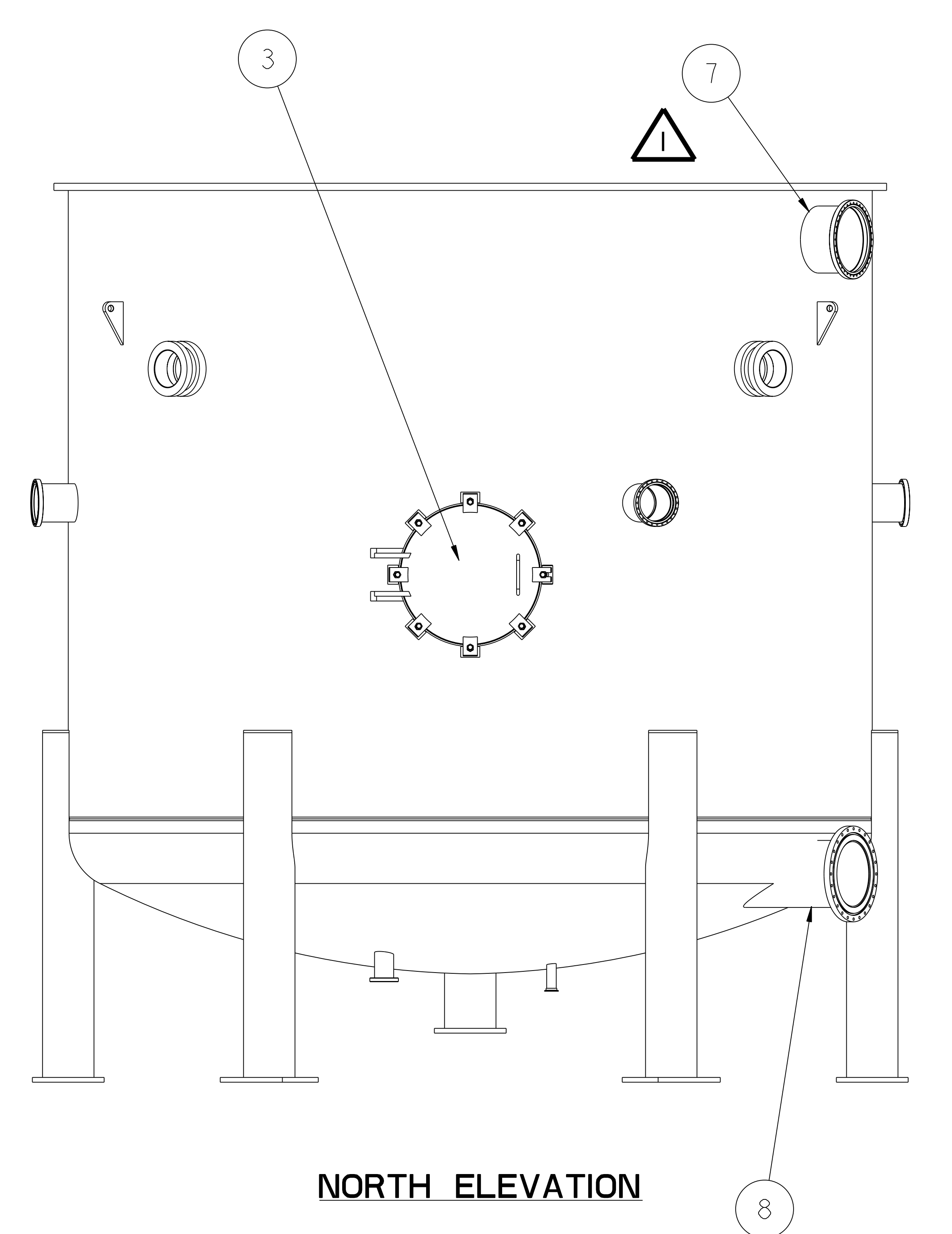
NO.	REVISION	BY	CH	SUP	APPROVED	DATE
1	REVISED PER ECN #4852	JDR	JC	JS	S. RAFTOPOULOS	5/04/04



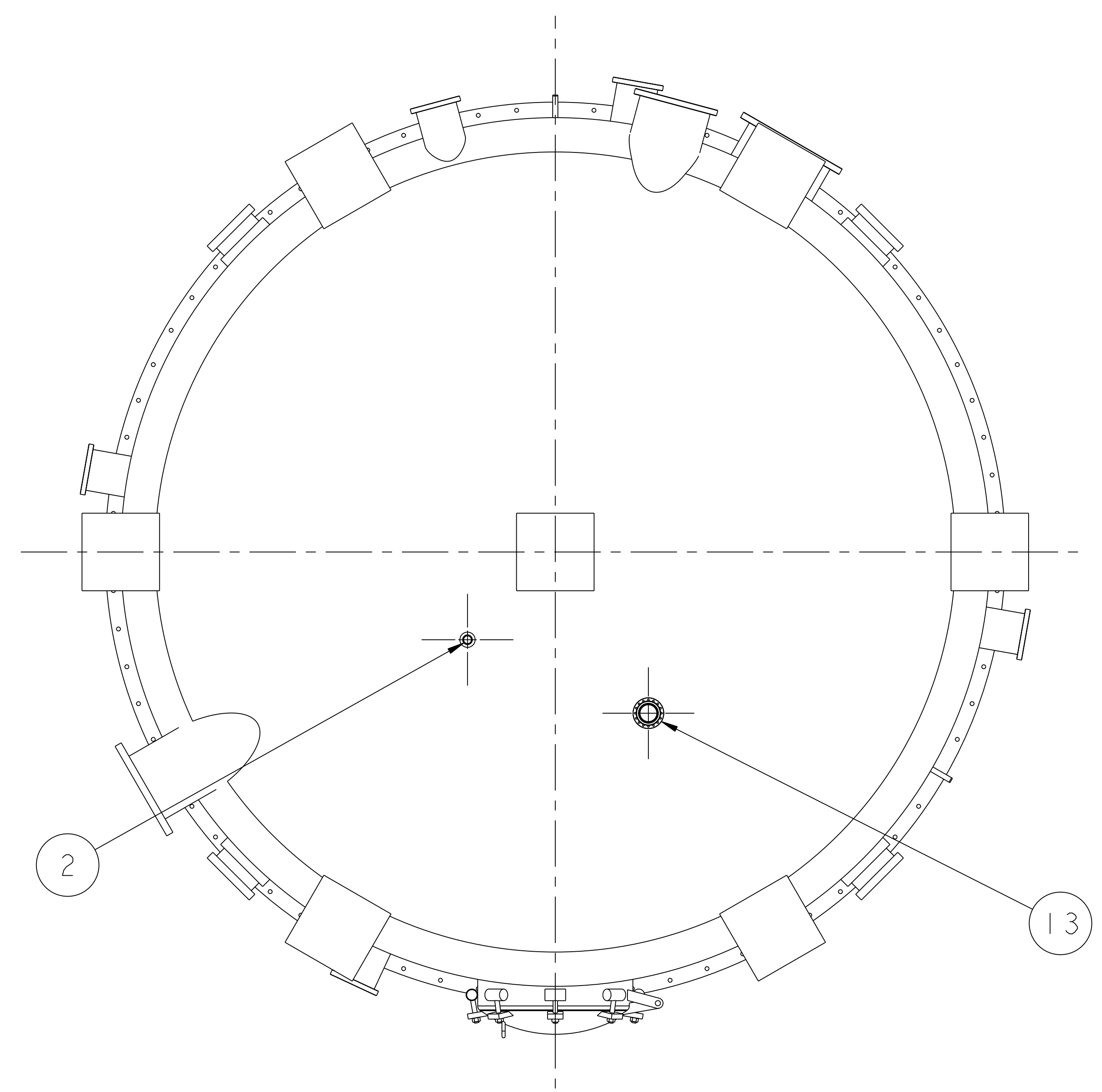
**SOUTH ELEVATION**



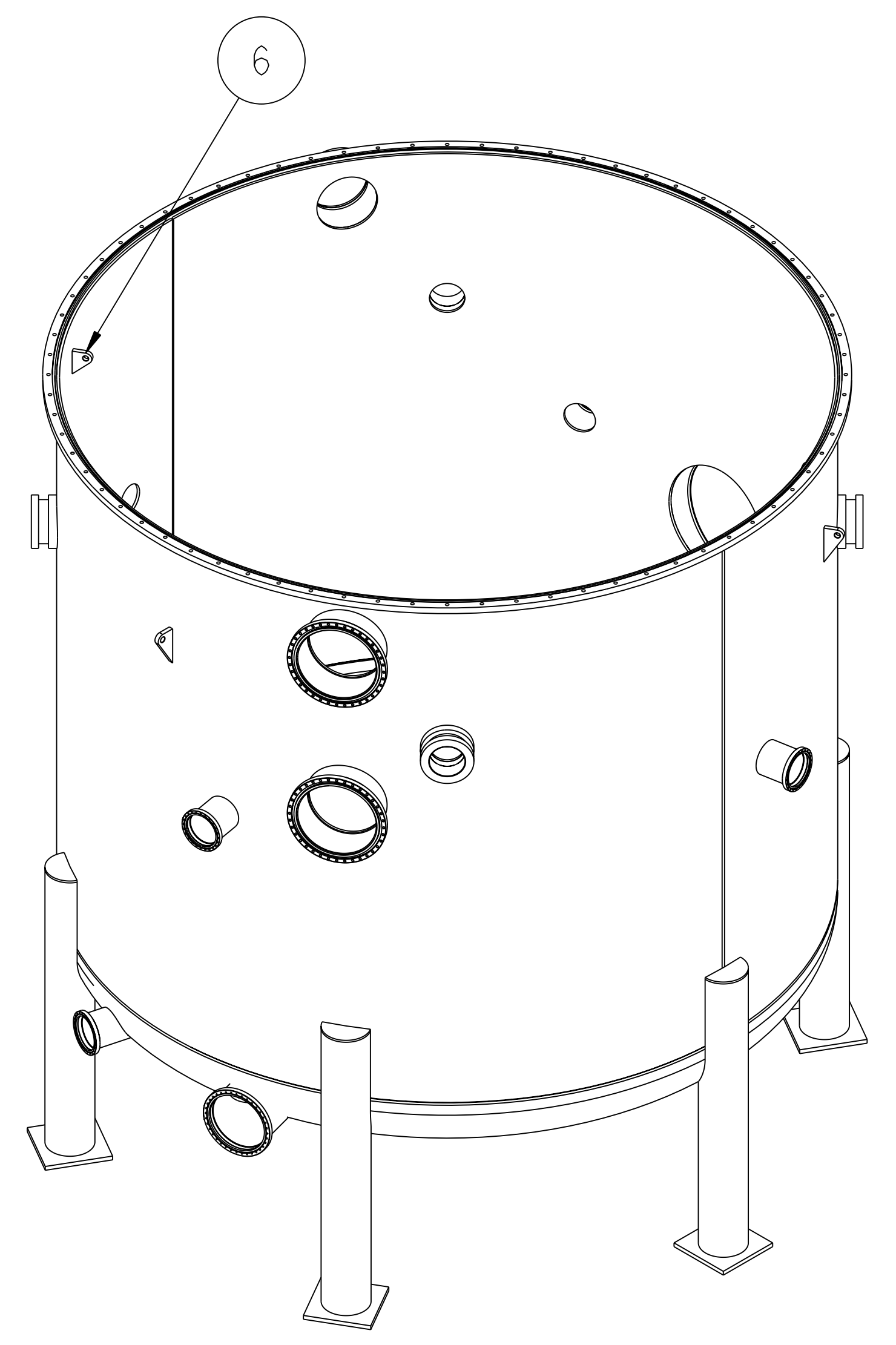
**EAST ELEVATION**



**NORTH ELEVATION**



**BOTTOM VIEW**



**RELEASED FOR  
FABRICATION / INSTALLATION**  
PPPL Drafting:

PART NO.	DRAWING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY	REQD
13	SE144-344	VACUUM PUMP OUT PORT ASSEMBLY	STN STL	1	
12	SE144-363	THERMOCOUPLE FEED THRU PORT ASSEMBLY	STN STL	1	
11	SE144-SUPPORT_CAP	SUPPORT LEG DETAIL	STN STL	6	
10	SE144-340	SPRUE FEED THRU PORT ASSEMBLY	STN STL	2	
9	SE144-335	POWER & LIGHTING FEED THRU PORT ASSEMBLY	STN STL	1	
8	SE144-350	HEATING SUPPLY PORT ASSEMBLY	STN STL	1	
7	SE144-346	HEATING RETURN PORT ASSEMBLY	STN STL	1	
6	SE144-378	COIL TIE LUG	STN STL	4	
5	SE144-315	AUTOCLAVE TANK ASSEMBLY (REV-1)	STN STL	1	
4	SE144ROUND_SIGHT_PORT.	8" SIGHT PORT PRESSURE PRODUCTS MODEL "L"	STN STL	4	
3	SE144MANHOLE_PORT_ASSEMBLY.	30" MANWAY PRESSURE PRODUCTS MODEL CL-75	STN STL	1	
2	SE144-386	2" KWIK FLANGE & TUBE PORT	STN STL	1	
1	SE144-341	SPARE PORT ASSEMBLY	STN STL	4	

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED		CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY <b>NATIONAL COMPACT STELLARATOR EXPERIMENT</b>	
Pro E	DIMENSIONS ARE IN INCHES MACHINE SURFACES	BREAK SHARP EDGES .005/ .020	STELLARATOR CORE MODULAR COIL WINDING FACILITY PORT ASSEMBLY/WELDING TO VESSEL	
SCALE 0.062	TOLERANCES NON-CUMULATIVE	DECIMAL-INCH FRACTIONS	DSN: J. RUSHINSKI	DRAWING NO:
NEXT ASSEMBLY	XX .01-.100 0°-12° ±.1/16	XX .1-.300 12°-30° ±.1/8	ENGR: S. RAFTOPOULOS	<b>SE144-308</b>
	XXX .3-.500 12°-30° ±.1/4	ANGULAR ±.0°-15' OVER 120° ±.1/2	SUPV: J. SIEGEL	SHEET 1 OF 5 REV 1

**RELEASE LEVEL: As Built**  
**DWG VERSION NO: 01**

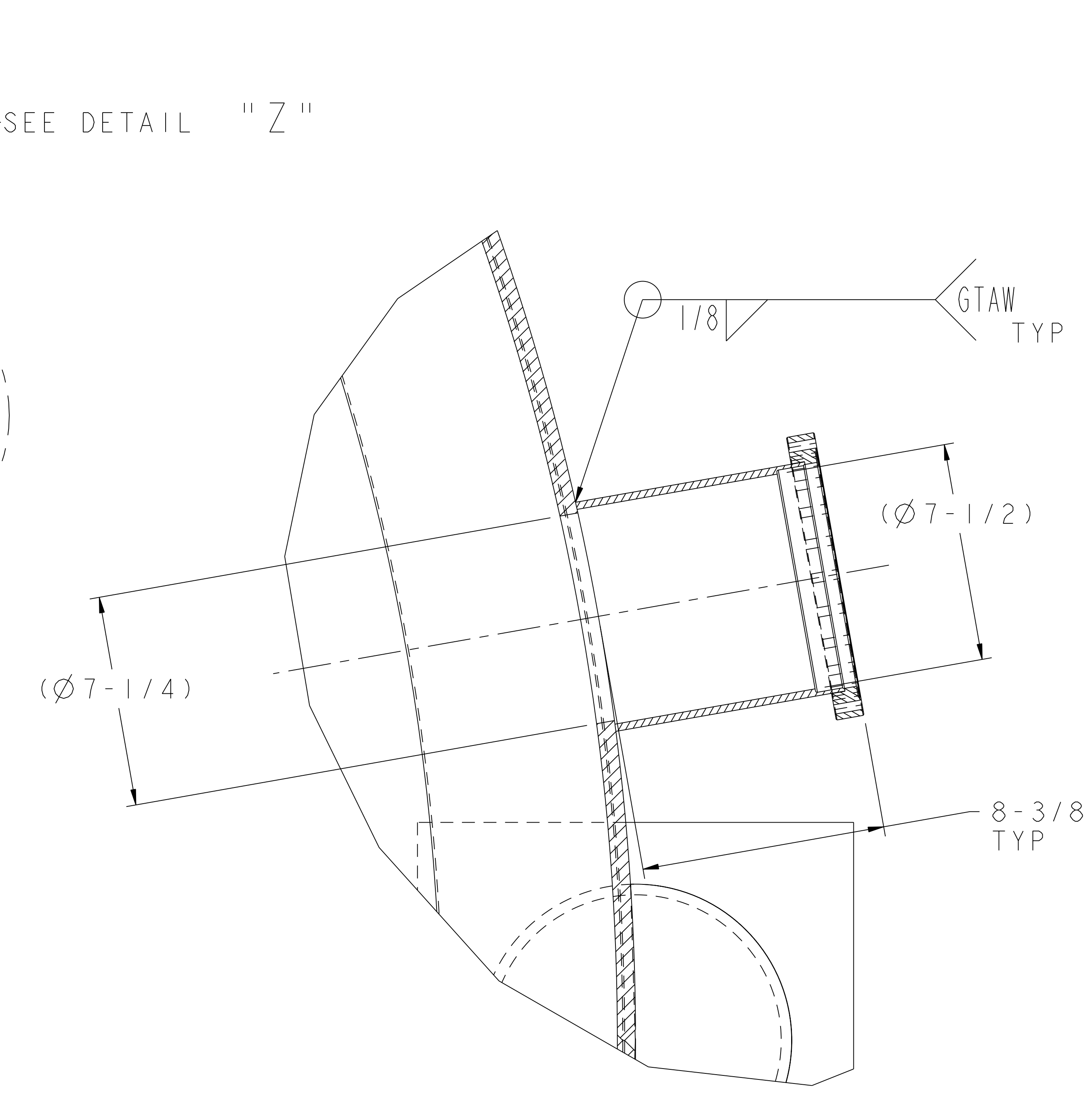
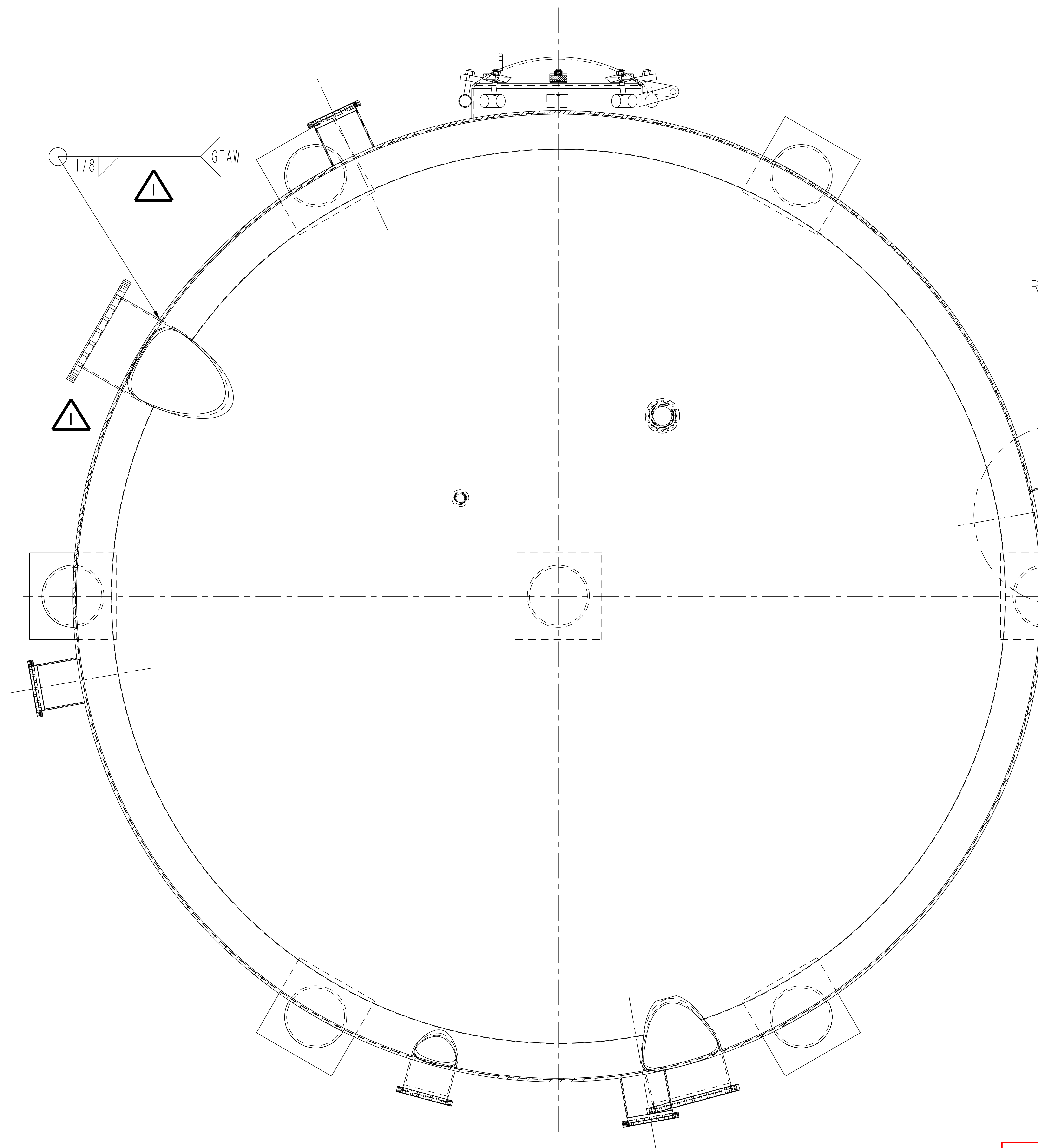
WEIGHT	28135.2 lbs
MODEL NAME	SE144-308
WELDING ENGINEER	

NCSX-SE144-308

NO.	REVISION	BY	CH	SUP	APPROVED	DATE
1	REVISED PER ECN #4852	JDR	JC	JS	S. RAFTOPOULOS	5/04/04

NOTE

1. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH PPPL PROCEDURE EM-002.
2. VISUAL WELD INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH ACCEPTANCE CRITERIA OF ASME B31.3 CATEGORY "D".
3. NOTE ORIENTATION OF ALL PARTS BEFORE WELDING.
4. LEAK RATE SHALL NOT EXCEED  $1 \times 10^{-5}$  torr-1/sec



**DETAIL "Z"**  
SCALE 0.375  
TYP ALL PORTS

**SECTION I-I**  
SCALE 0.125

**RELEASED FOR FABRICATION / INSTALLATION**

PPPL Drafting:

RELEASE LEVEL: As Built  
DWG VERSION NO: 01

WEIGHT	28135.2 lbs
MODEL NAME	SE144-308

PART NO.	DRAWING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY	RECD
1	SE144-SUPPORT_CAP	SUPPORT LEG DETAIL	STN STL	6	

PARTS LIST	
COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED	CENTRAL FILES: UNLESS OTHERWISE SPECIFIED
Pro E	DIMENSIONS ARE IN INCHES MACHINE SURFACES
DO NOT VERIFY INFORMATION BY SCALING DRAWING	BREAK SHARP EDGES .005/ .020
TOLERANCES NON-CUMULATIVE	
DECIMAL-INCH FRACTIONS	
.X +/- .100 0°-12° +/- .1/16	
.XX +/- .030 12°-32° +/- .1/8	
.XXX +/- .005 32°-120° +/- .1/4	
ANGULAR +/- .0°-15° OVER 120° +/- .1/2	

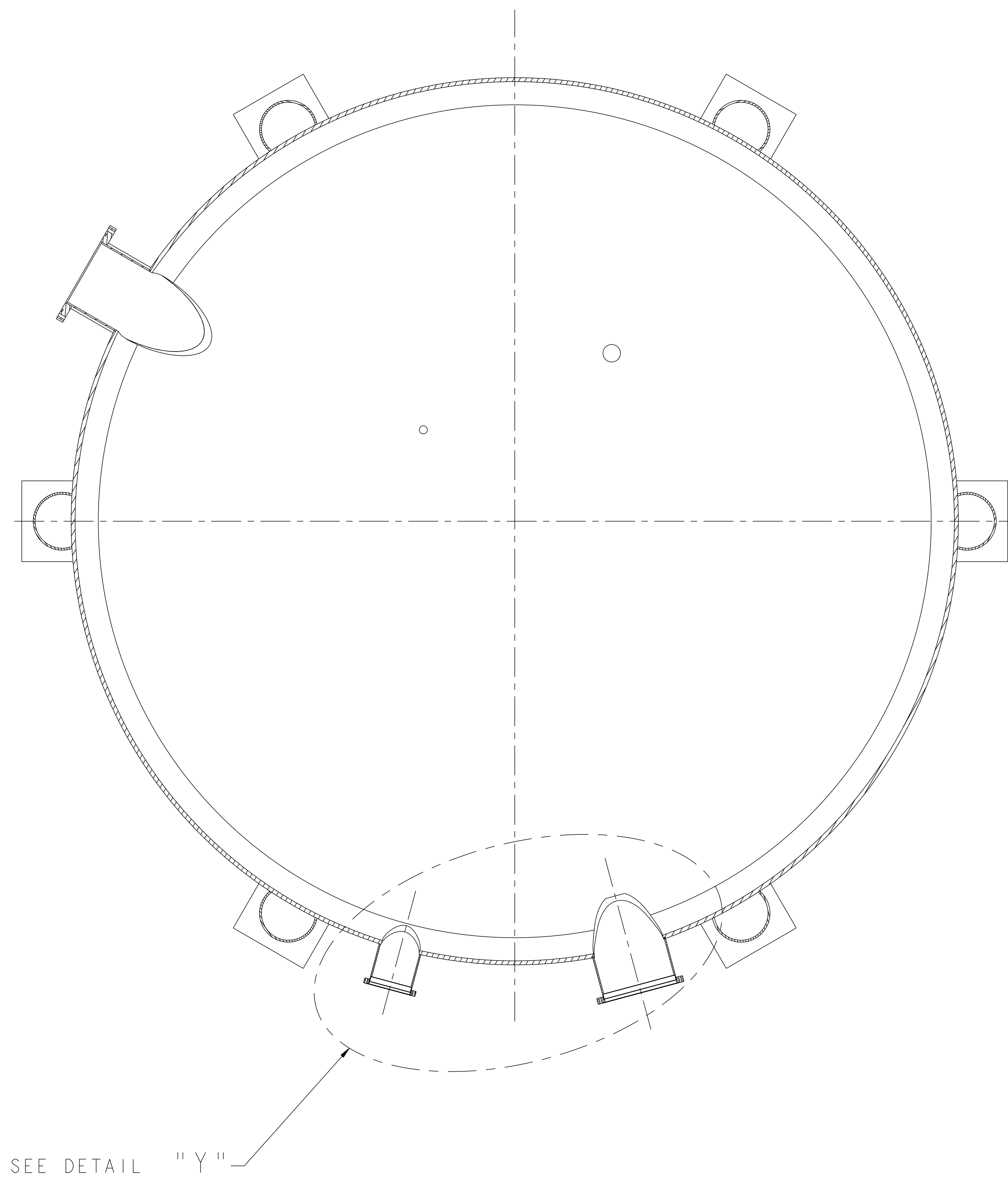
PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY <b>NATIONAL COMPACT STELLARATOR EXPERIMENT</b>	
STELLARATOR CORE MODULAR COIL WINDING FACILITY WELDING OF HORIZONTAL PORT TUBES TO VESSEL	
DSN: J. RUSHINSKI	DRAWING NO:
CHK: J. CHRZANOWSKI	<b>SE144-308</b>
ENGR: S. RAFTOPOULOS	SHEET 2 OF 5
SUPV: J. SIEGEL	REV 1

NCSX-SE144-308

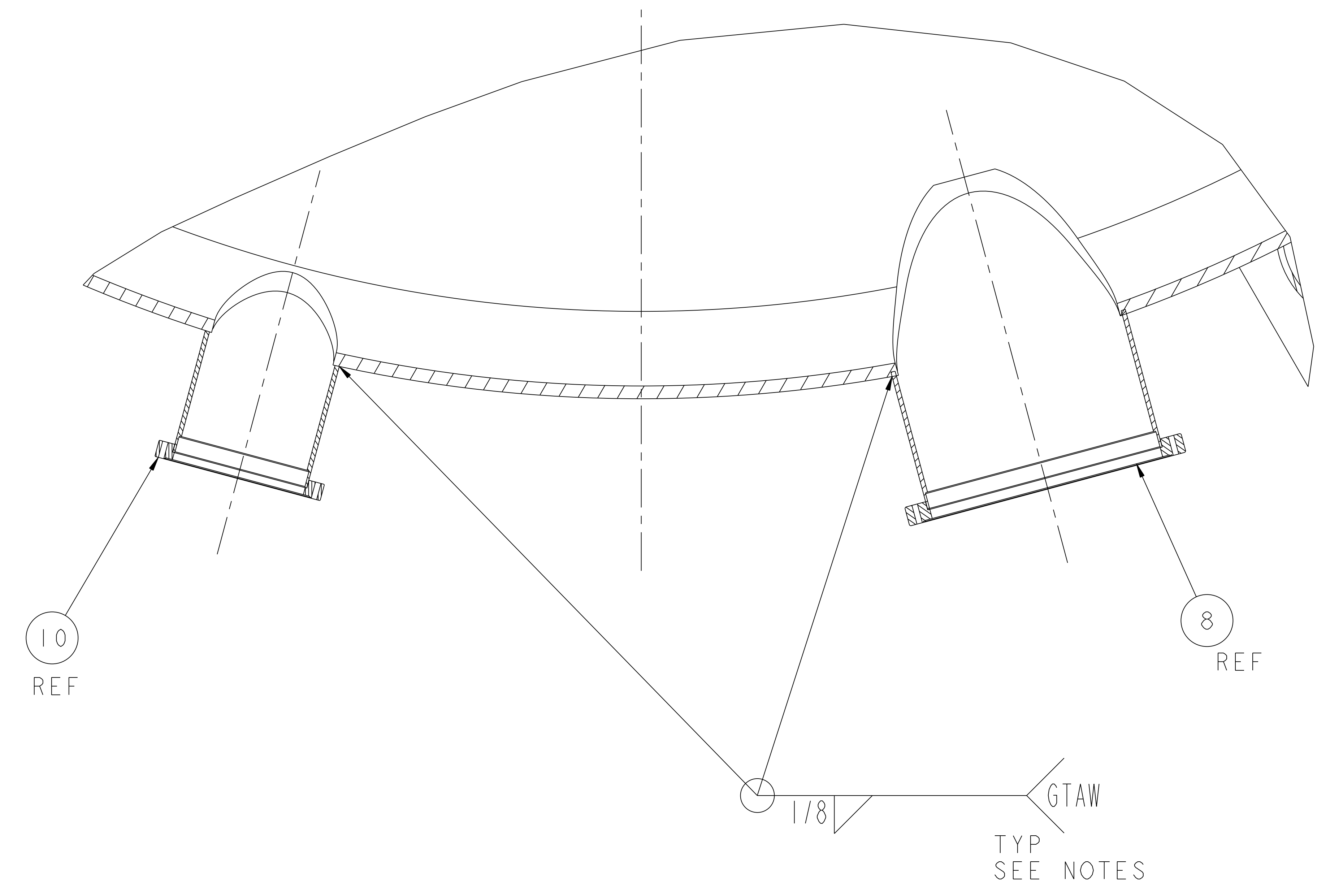
NO.	REVISION	BY	CH	SUP	APPROVED	DATE

NOTE

1. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH PPPL PROCEDURE EM-002.
2. VISUAL WELD INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH ACCEPTANCE CRITERIA OF ASME B31.3 CATEGORY "D".
3. NOTE ORIENTATION OF ALL PARTS BEFORE WELDING.
4. LEAK RATE SHALL NOT EXCEED  $1 \times 10^{-5}$  torr-1/sec



**SECTION J-J**  
SCALE 0.100



**DETAIL "Y"**  
SCALE 0.250

**RELEASED FOR FABRICATION / INSTALLATION**  
PPPL Drafting:

PART NO.	DRAWING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY	RECD
3	SE144-SUPPORT_CAP	SUPPORT LEG DETAIL	STN STL	6	
2	SE144-350	HEATING SUPPLY PORT ASSEMBLY	STN STL	1	
1	SE144-346	HEATING RETURN PORT ASSEMBLY	STN STL	1	

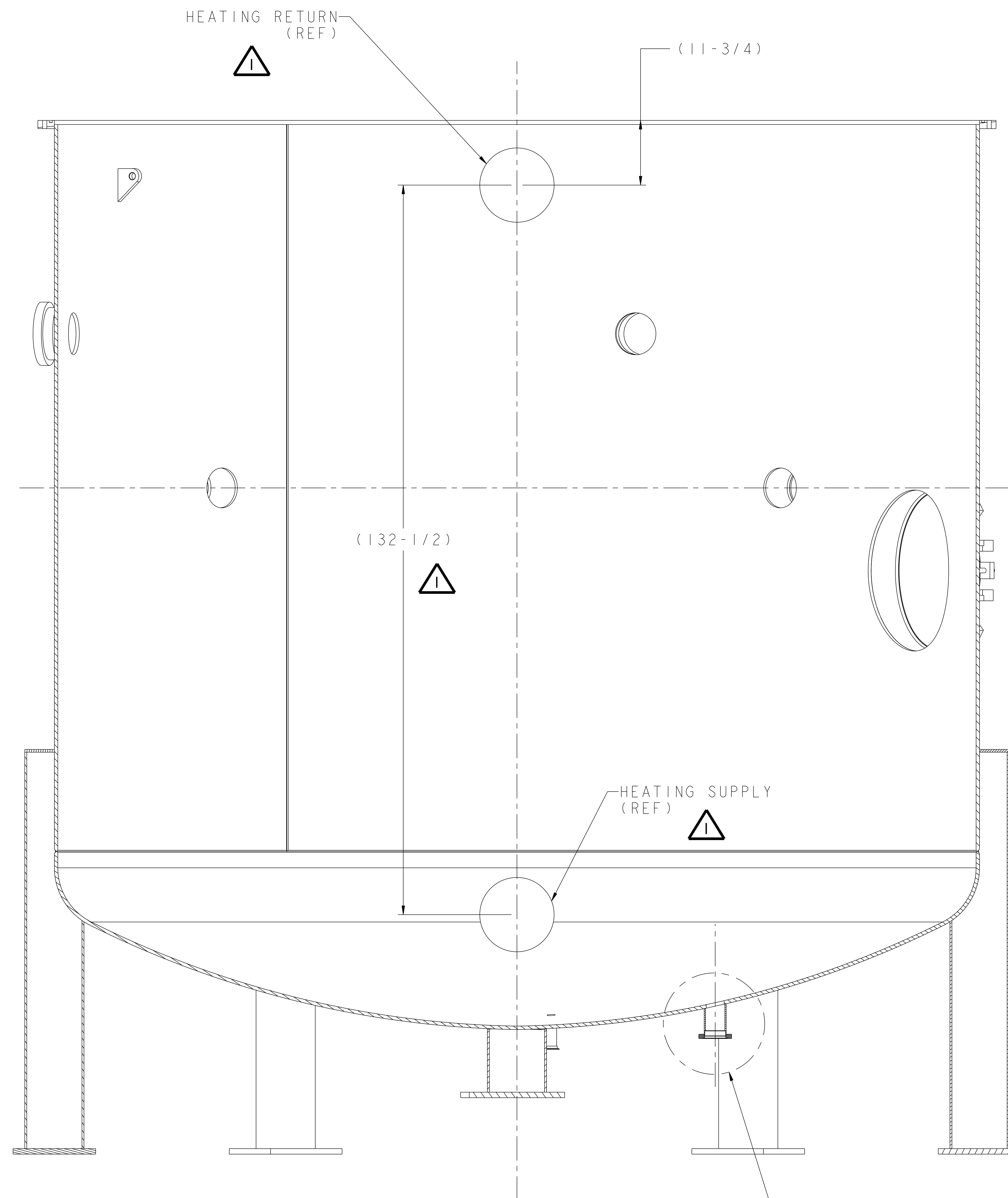
COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED		CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY <b>NATIONAL COMPACT STELLARATOR EXPERIMENT</b>	
Pro E	DIMENSIONS ARE IN INCHES MACHINE SURFACES	BREAK SHARP EDGES .005/.020	STELLARATOR CORE MODULAR COIL WINDING FACILITY WELDING OF HORIZONTAL PORTS TO LOWER DOME	
DO NOT VERIFY INFORMATION BY SCALING DRAWING	TOLERANCES NON-CUMULATIVE	DECIMAL-INCH FRACTIONS	DSN: J. RUSHINSKI	DRAWING NO: <b>SE144-308</b>
NEXT ASSEMBLY		.X +/- .100 0°-12° +/- .1/16 .XX +/- .030 12°-32° +/- .1/8 XXX +/- .005 32°-120° +/- .1/4 ANGULAR +/- .0°-15° OVER 120° +/- .1/2	CHK: ENGR: S. RAFTOPOULOS	SHEET 3 OF 5 REV 0

WEIGHT	28135.2 lbs
MODEL NAME	SE144-308
WELDING ENGINEER	

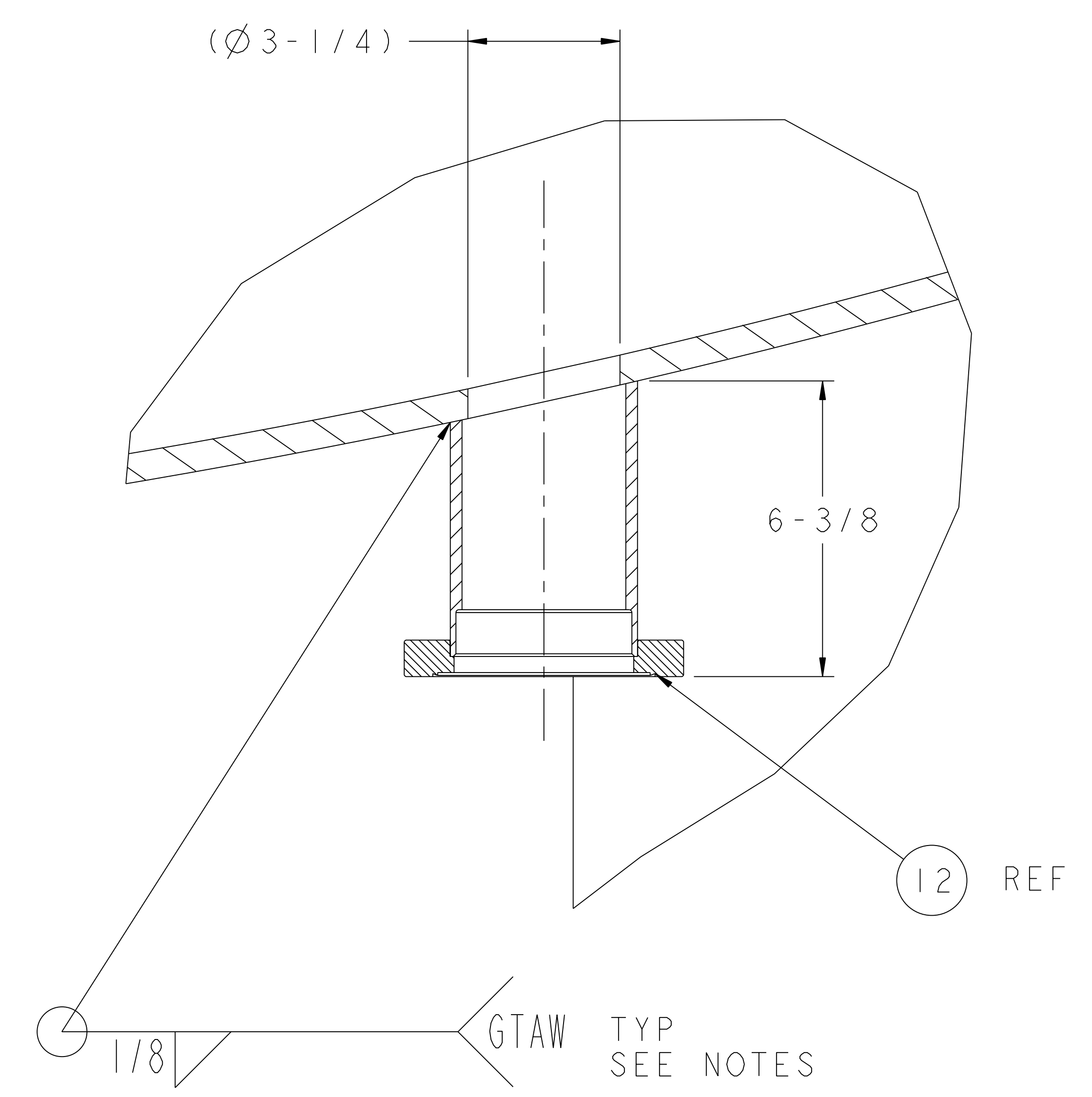
RELEASE LEVEL: As Built  
DWG VERSION NO: 0

NCSX-SE144-308

NO.	REVISION	BY	CH	SUP	APPROVED	DATE
1	REVISED PER ECN #4852	JDR	JC	JS	S. RAFTOPOULOS	5/04/04



- NOTE
1. WELDING SHALL BE PERFORMED IN ACCORDANCE WITH PPPL PROCEDURE EM-002.
  2. VISUAL WELD INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH ACCEPTANCE CRITERIA OF ASME B31.3 CATEGORY "D".
  3. NOTE ORIENTATION OF ALL PARTS BEFORE WELDING.
  4. LEAK RATE SHALL NOT EXCEED  $1 \times 10^{-5}$  torr-1/sec



**DETAIL "X"**  
SCALE 0.500

**RELEASED FOR FABRICATION / INSTALLATION**  
PPPL Drafting:

**SECTION K-K**  
SCALE 0.125

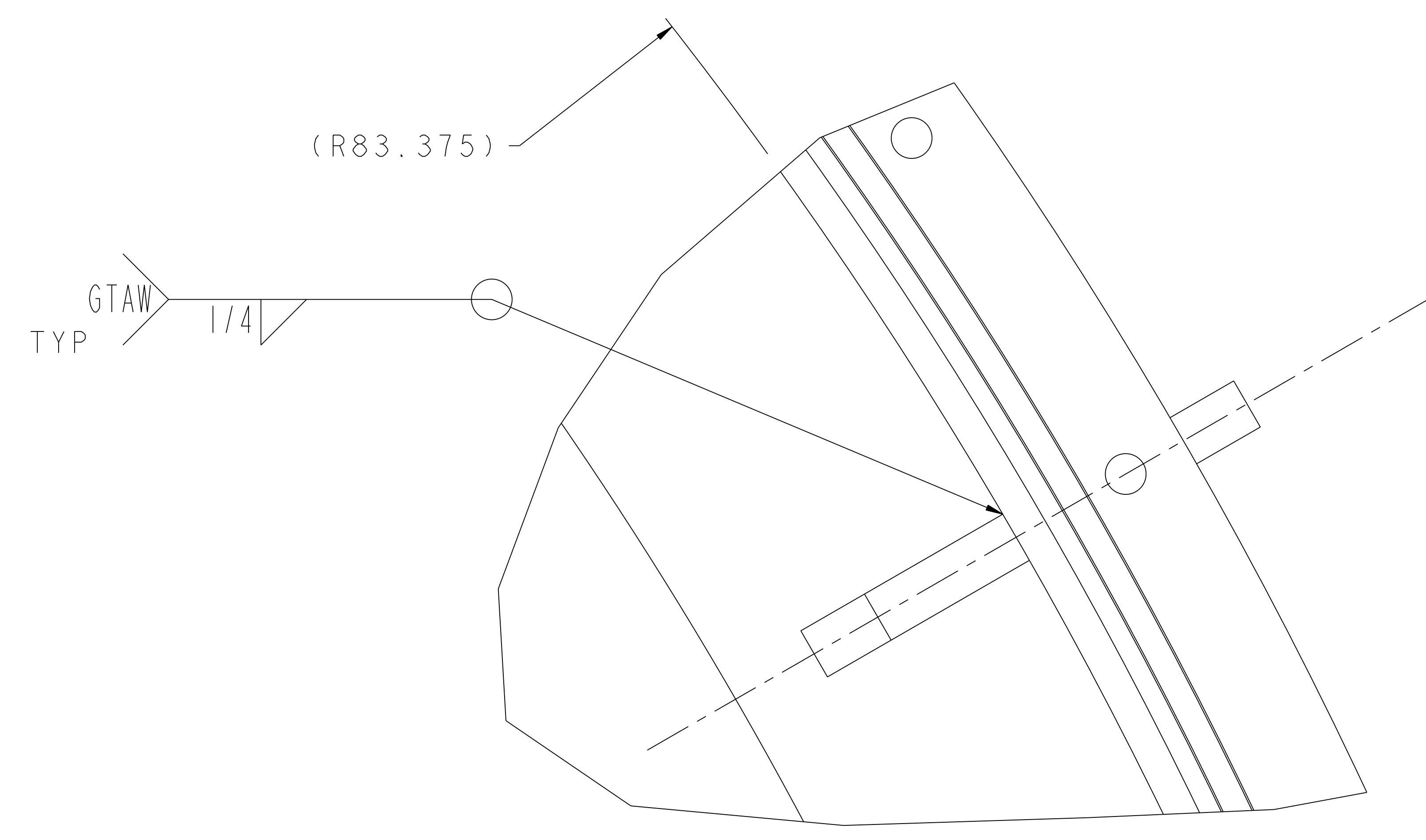
RELEASE LEVEL: As Built  
DWG VERSION NO: 0

WEIGHT	28135.2 lbs
MODEL NAME	SE144-308
WELDING ENGINEER	

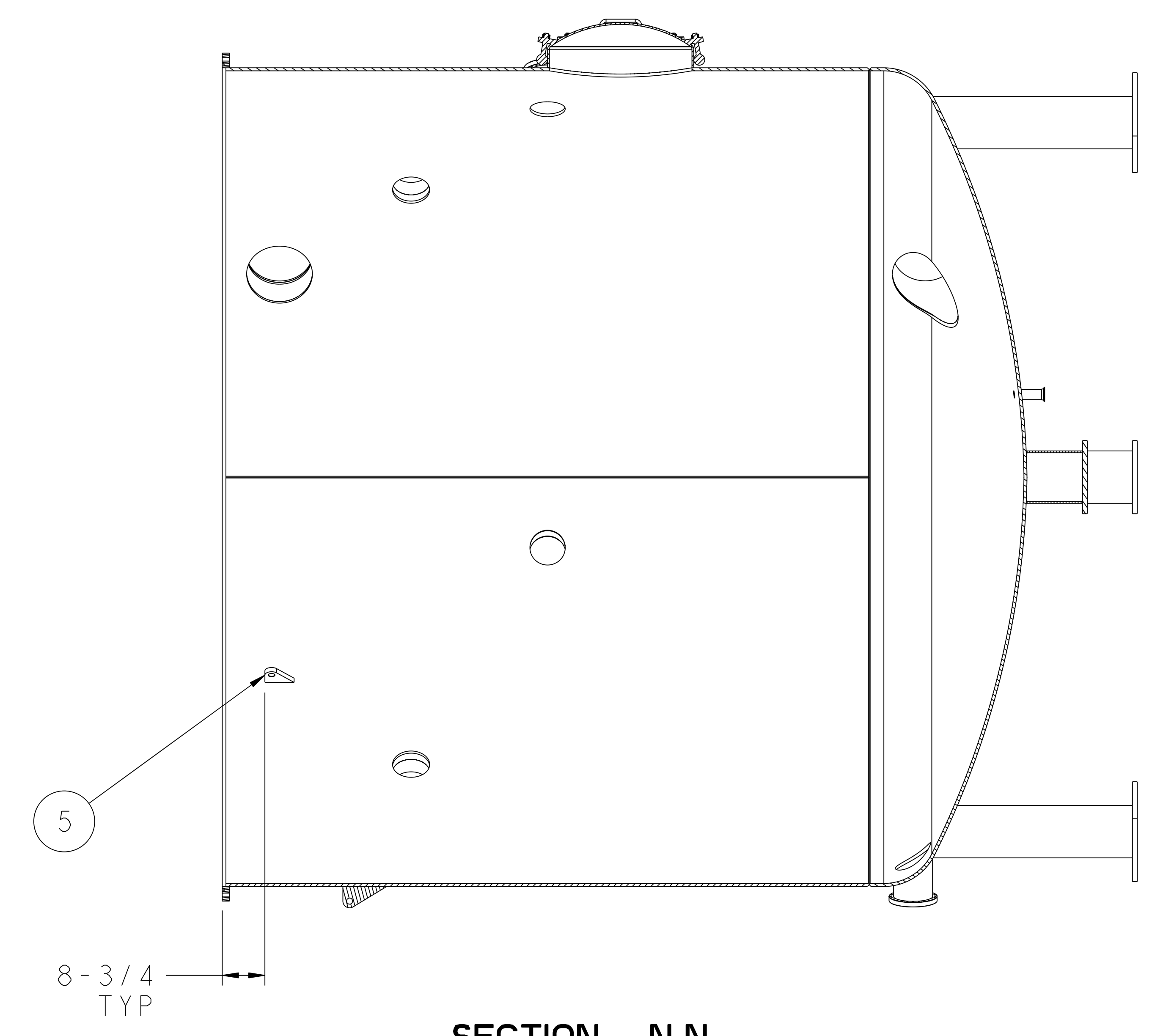
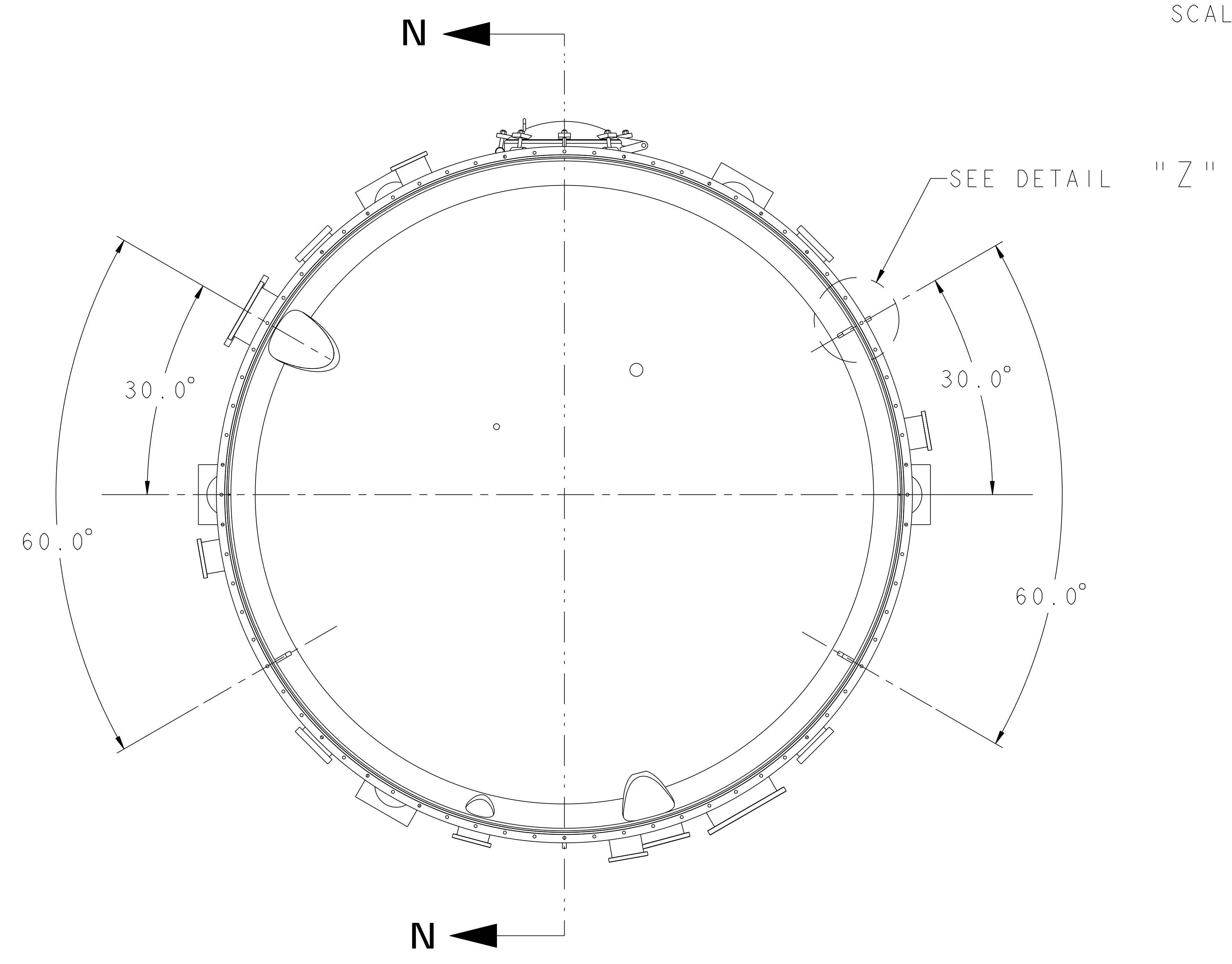
PART NO.	DRAWING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY	REV
1	SE144-SUPPORT_CAP	SUPPORT LEG DETAIL	STN STL	6	
PARTS LIST					
PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY <b>NATIONAL COMPACT STELLARATOR EXPERIMENT</b>					
STELLARATOR CORE MODULAR COIL WINDING FACILITY WELDING OF VERTICAL PORTS TO LOWER DOME					
COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED		CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	DSN: J. RUSHINSKI		
Pro E		DIMENSIONS ARE IN INCHES MACHINE SURFACES	CHK: J. CHRZANOWSKI		
DO NOT VERIFY INFORMATION BY SCALING DRAWING		BREAK SHARP EDGES .005/ .020	ENGR: S. RAFTOPOULOS		
NEXT ASSEMBLY		DECIMAL-INCH FRACTIONS	SUPV: J. SIEGEL		
		.X +/- .100 0°-12° +/- .1/16	DRAWING NO: <b>SE144-308</b>		
		.EX +/- .030 12°-32° +/- .1/8			
		XXX +/- .005 32°-120° +/- .1/4 ANGULAR +/- .5°-15° OVER 120° +/- .1/2			
				SHEET 4 OF 5	
REV   1					

NCSX-SE144-308

NO.	REVISION	BY	CH	SUP	APPROVED	DATE



**DETAIL "Z"**  
SCALE 0.625



**SECTION N-N**  
SCALE 0.060

**RELEASED FOR  
FABRICATION / INSTALLATION**  
PPPL Drafting:

PART NO.	DRAWING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	QTY	RECD
3	SE144-SUPPORT_CAP	SUPPORT LEG DETAIL	STN STL	6	
2	SE144-350	HEATING SUPPLY PORT ASSEMBLY	STN STL	1	
1	SE144-346	HEATING RETURN PORT ASSEMBLY	STN STL	1	

COMPUTER GENERATED DRAWING MANUAL CHANGES NOT PERMITTED		CENTRAL FILES: UNLESS OTHERWISE SPECIFIED	PRINCETON PLASMA PHYSICS LABORATORY PRINCETON UNIVERSITY <b>NATIONAL COMPACT STELLARATOR EXPERIMENT</b>	
Pro E	DIMENSIONS ARE IN INCHES MACHINE SURFACES	BREAK SHARP EDGES .005/.020	STELLARATOR CORE MODULAR COIL WINDING FACILITY COIL TIE LUGS ASSEMBLY/WELDING	
DO NOT VERIFY INFORMATION BY SCALING DRAWING	SCALE 0.060	TOLERANCES NON-CUMULATIVE	DSN: J. RUSHINSKI	DRAWING NO:
NEXT ASSEMBLY	DECIMAL-INCH FRACTIONS	CHK:	ENGR: S. RAFTOPOULOS	<b>SE144-308</b>
	XXX +/- .005 120°-120° +/- .114 ANGULAR +/- .05 15° OVER 120° +/- .112	SUPV:		SHEET 5 OF 5 REV 0

WEIGHT  
28135.2 lbs

MODEL NAME  
SE144-308

WELDING ENGINEER

RELEASE LEVEL: As Built  
DWG VERSION NO: 0