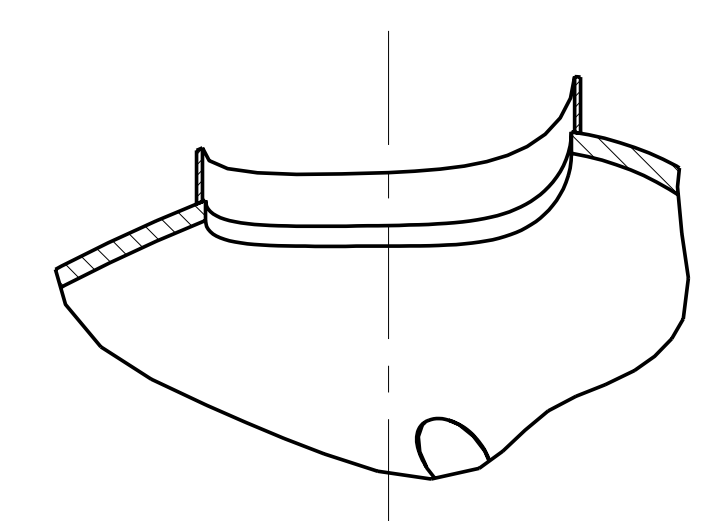
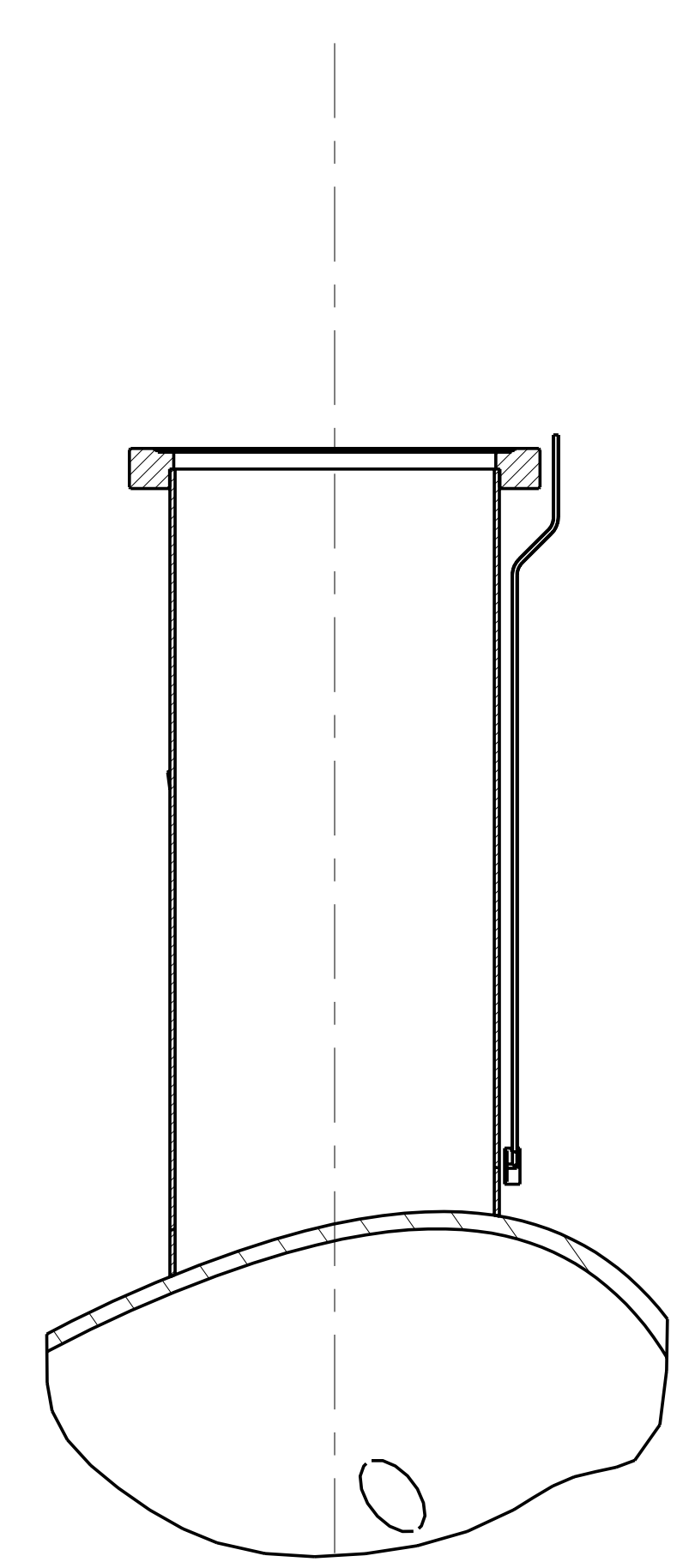
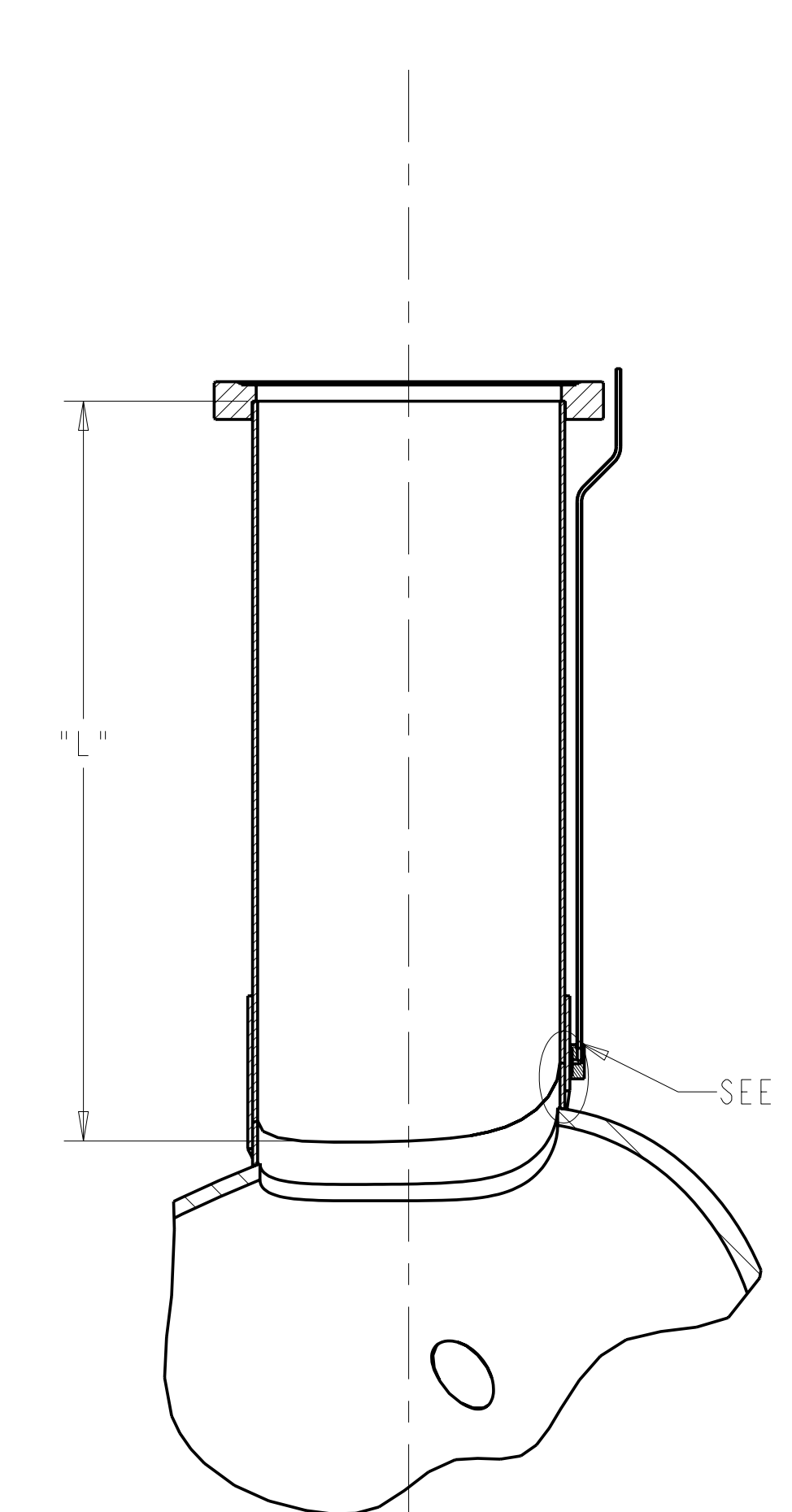


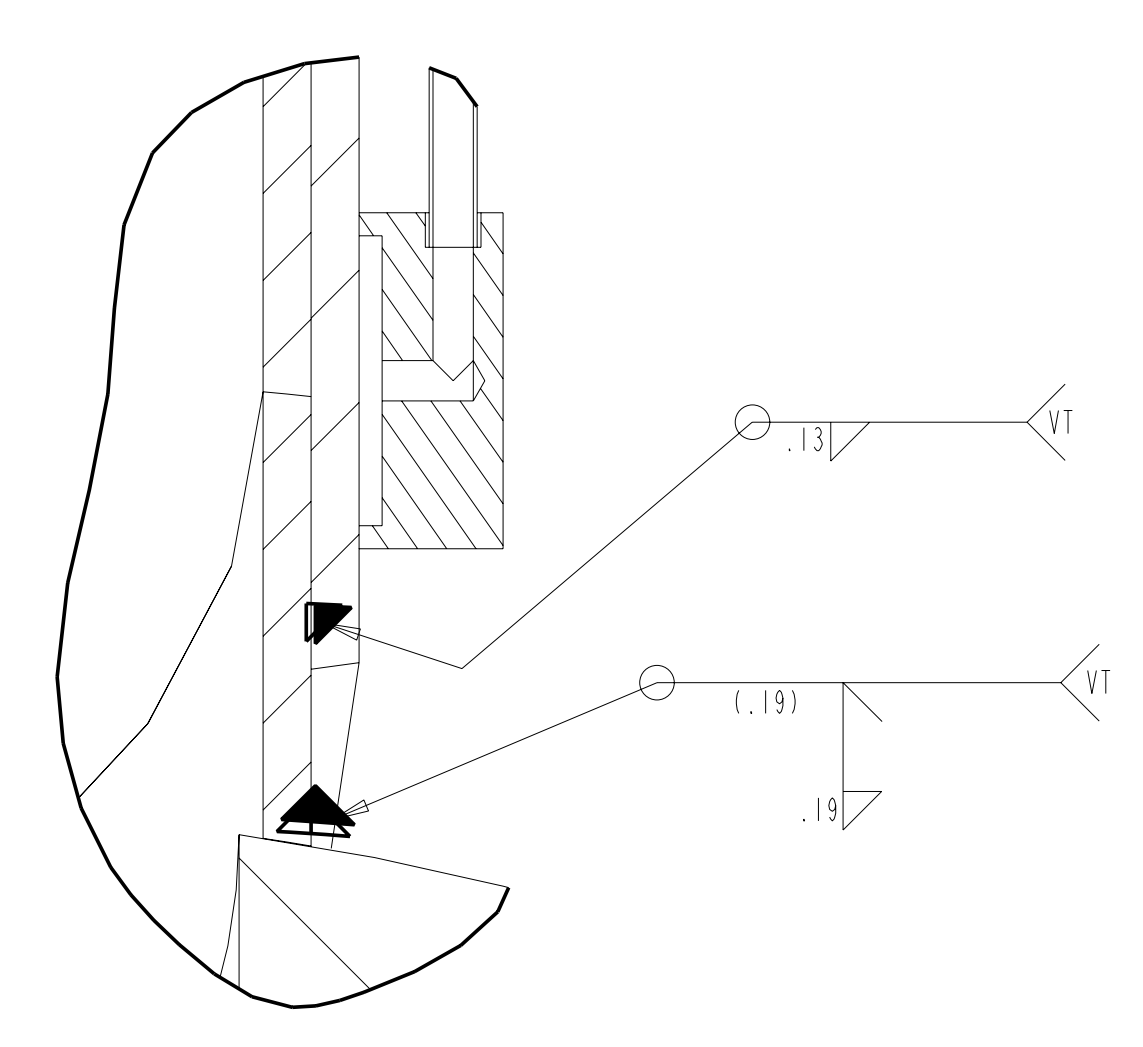
TYPICAL VACUUM VESSEL FLANGE CONFIGURATION
SCALE: 1.00



TYPICAL PORT CONFIGURATION
SCALE: .25



SEE DETAIL X



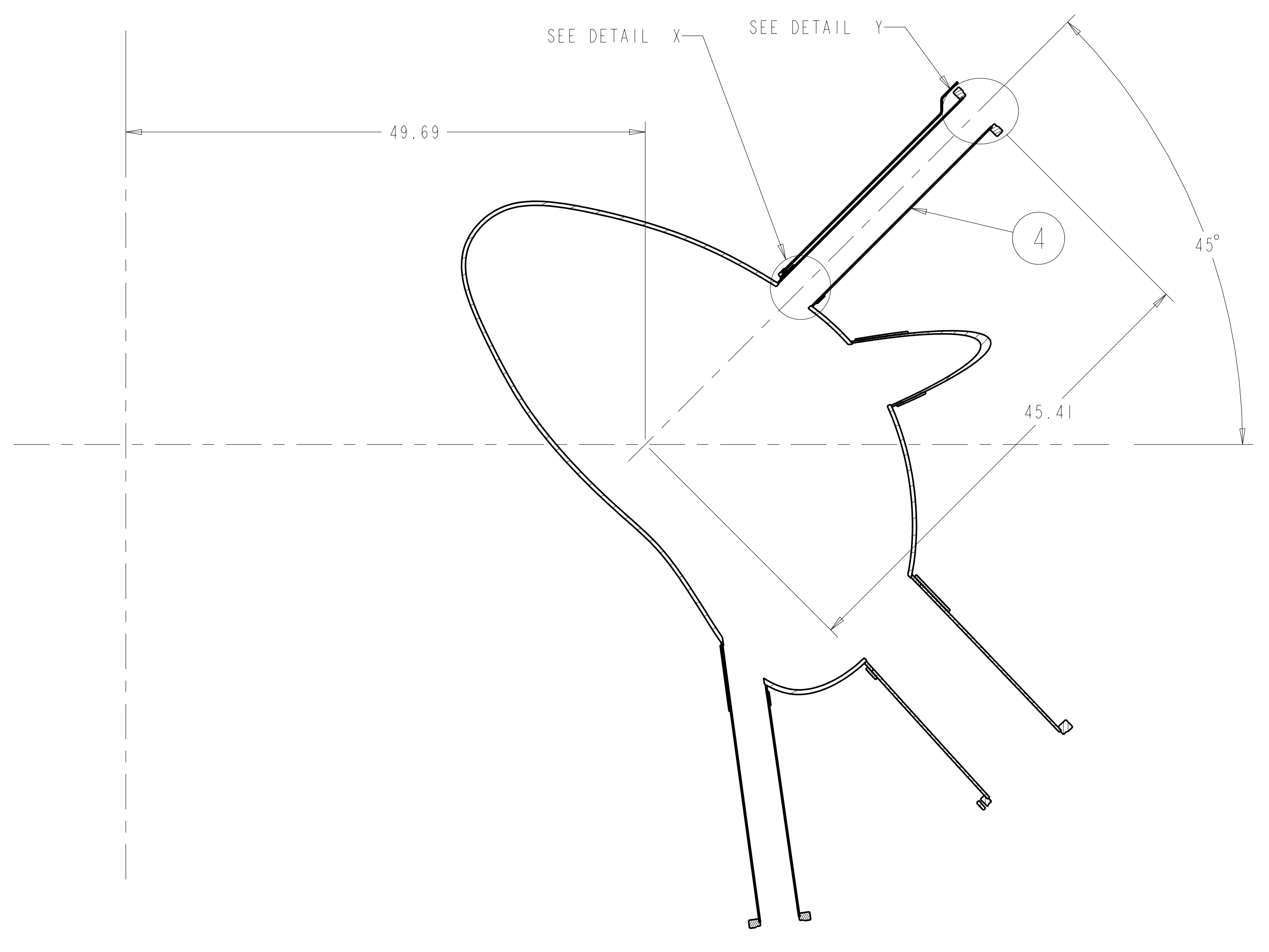
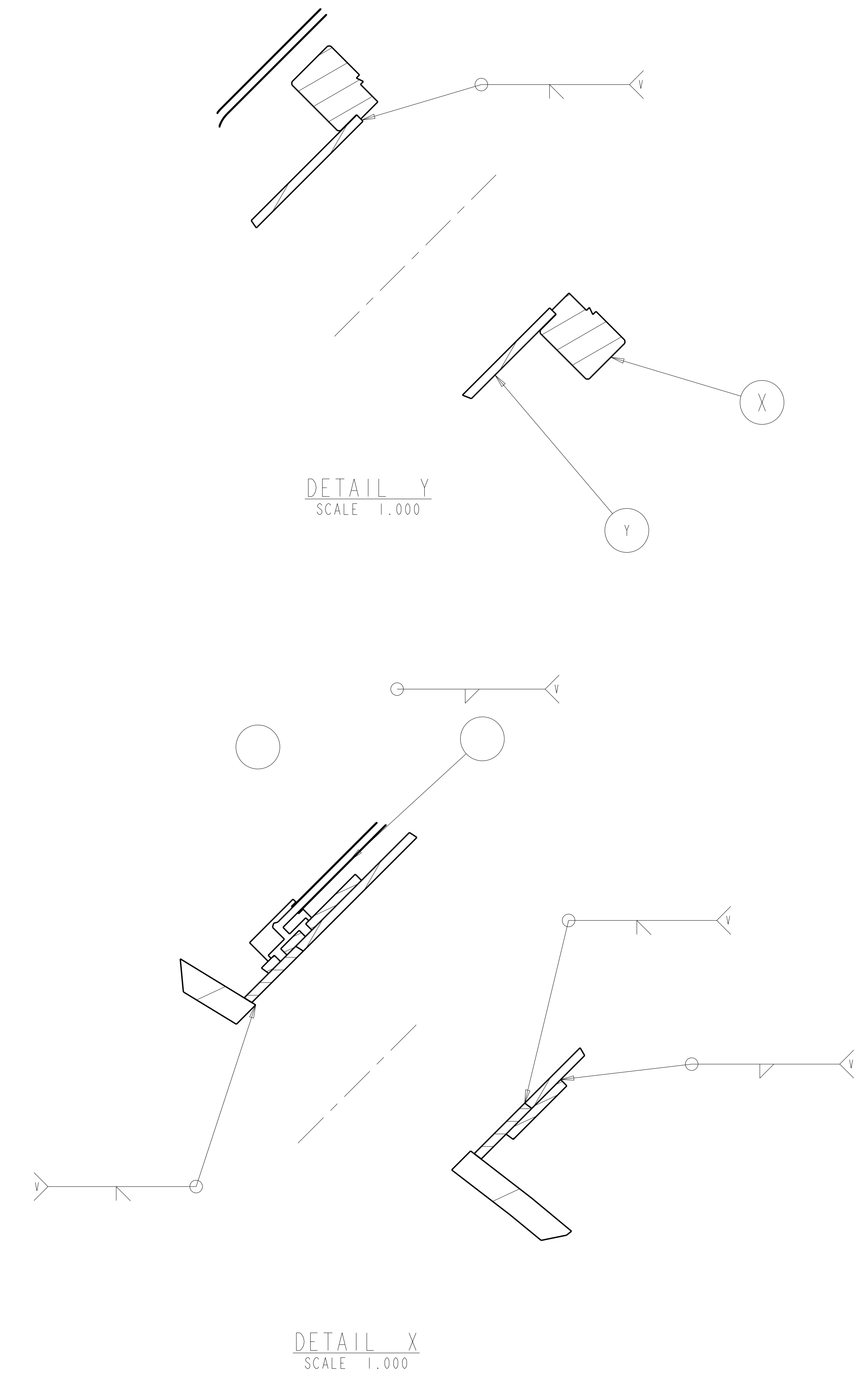
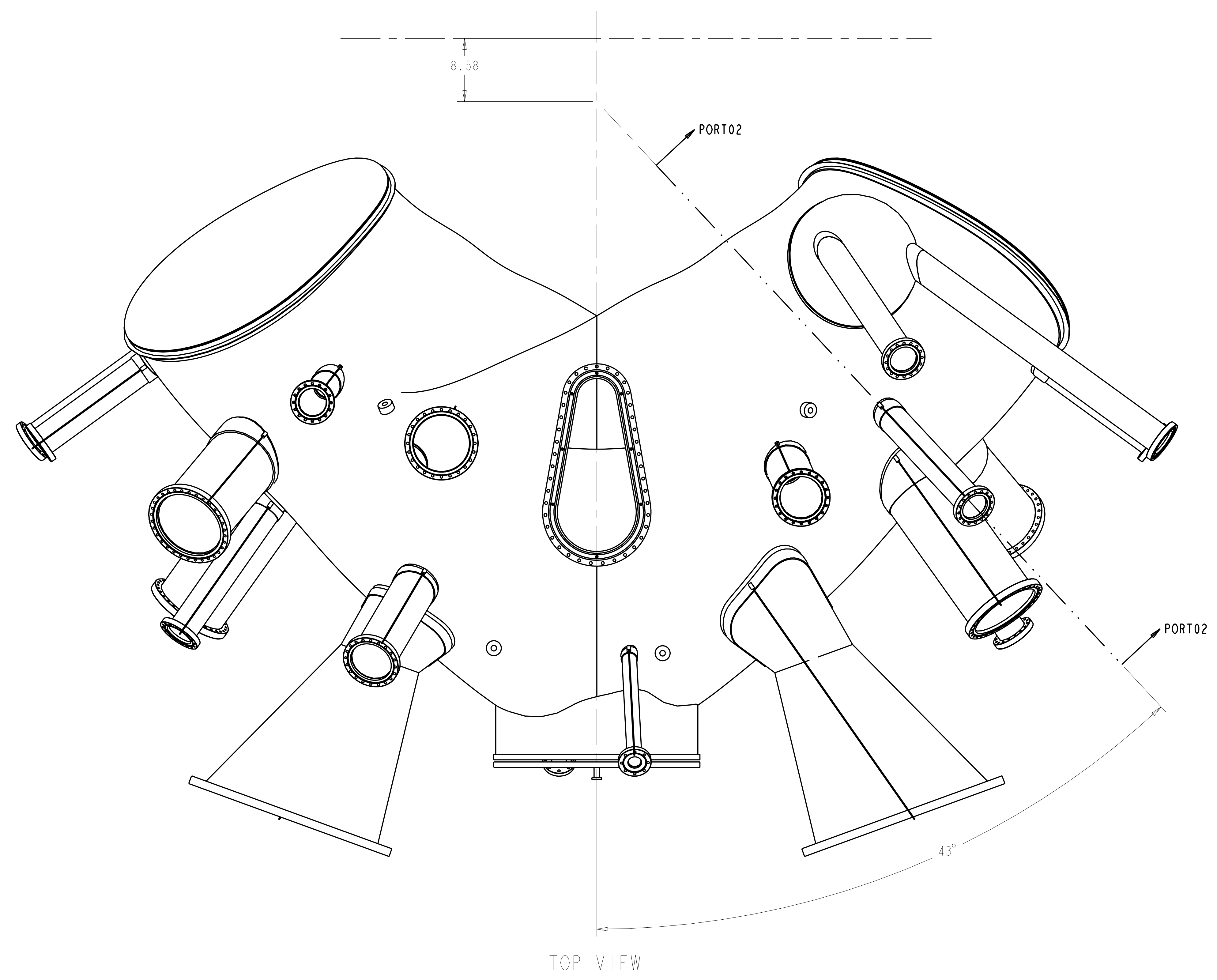
DETAIL X
SCALE: 2.00

PRELIMINARY
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Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee						
UT-BATTELLE NATIONAL COMPACT STELLERATOR EXPERIMENT						
VACUUM VESSEL PERIOD ASSEMBLY						
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
54+	XX	XX	XX	2 17	XX	U
RELEASE LEVEL						REV
WIP	SE120-002					A

SE120-002

FOR PARTS LIST AND NOTES SEE SHEET 1.



DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS.

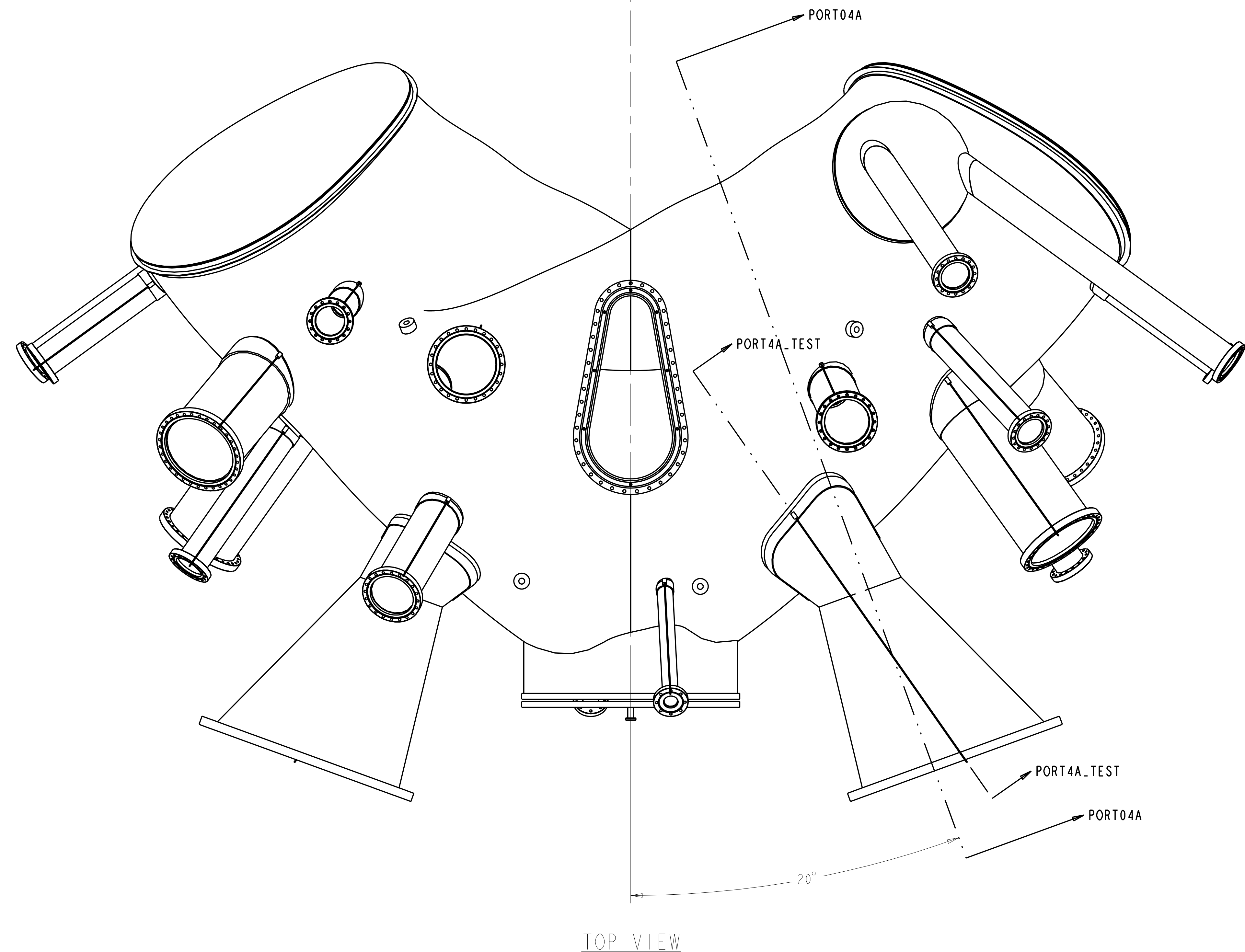
PRELIMINARY
FOR INFORMATION ONLY

Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee						
UT-BATTELLE						
NATIONAL COMPACT STELLARATOR EXPERIMENT						
VACUUM VESSEL PERIOD ASSEMBLY						
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
54+	XX	XX	XX	3 17	XX	U
RELEASE LEVEL	SEI20-002					REV
WIP						A

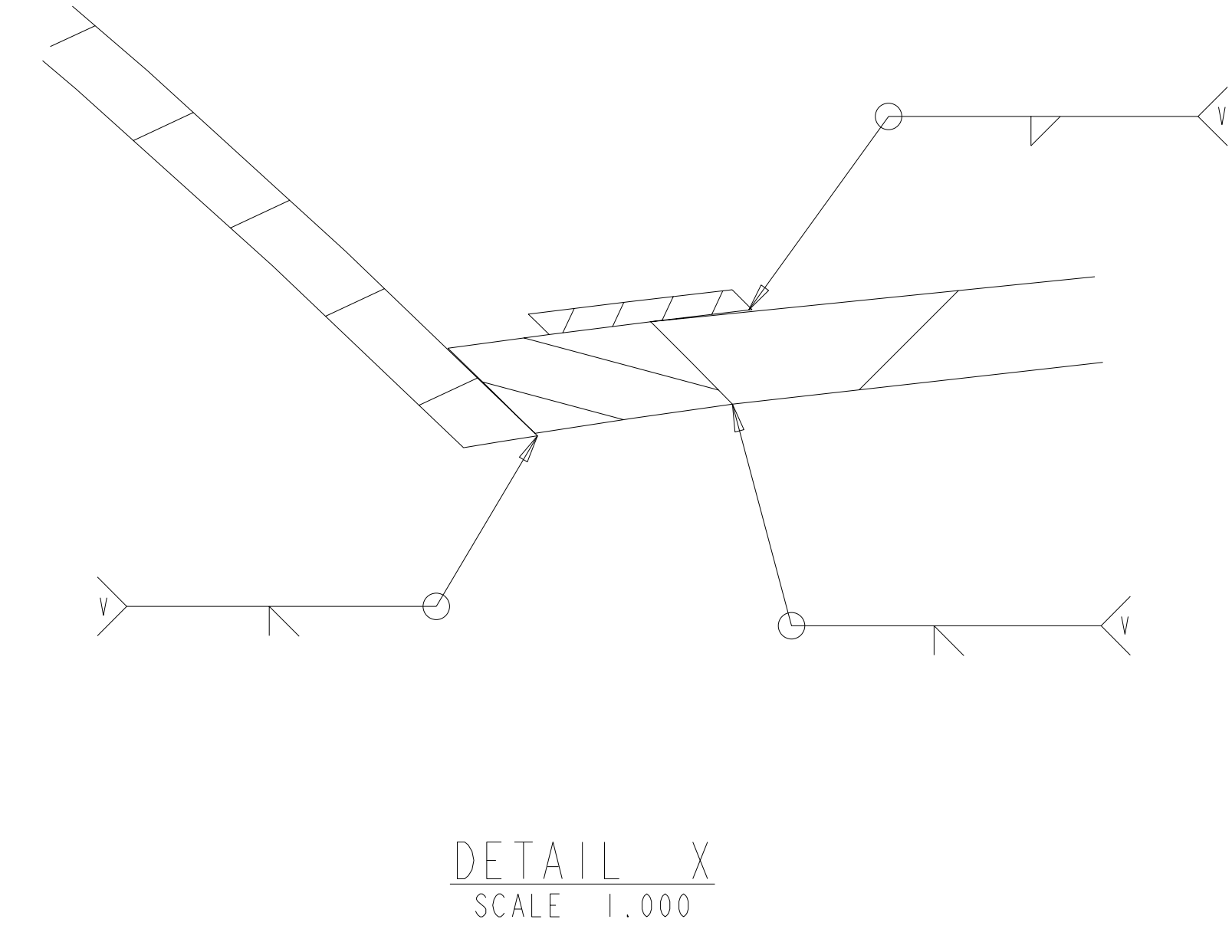
SEI20-002

A

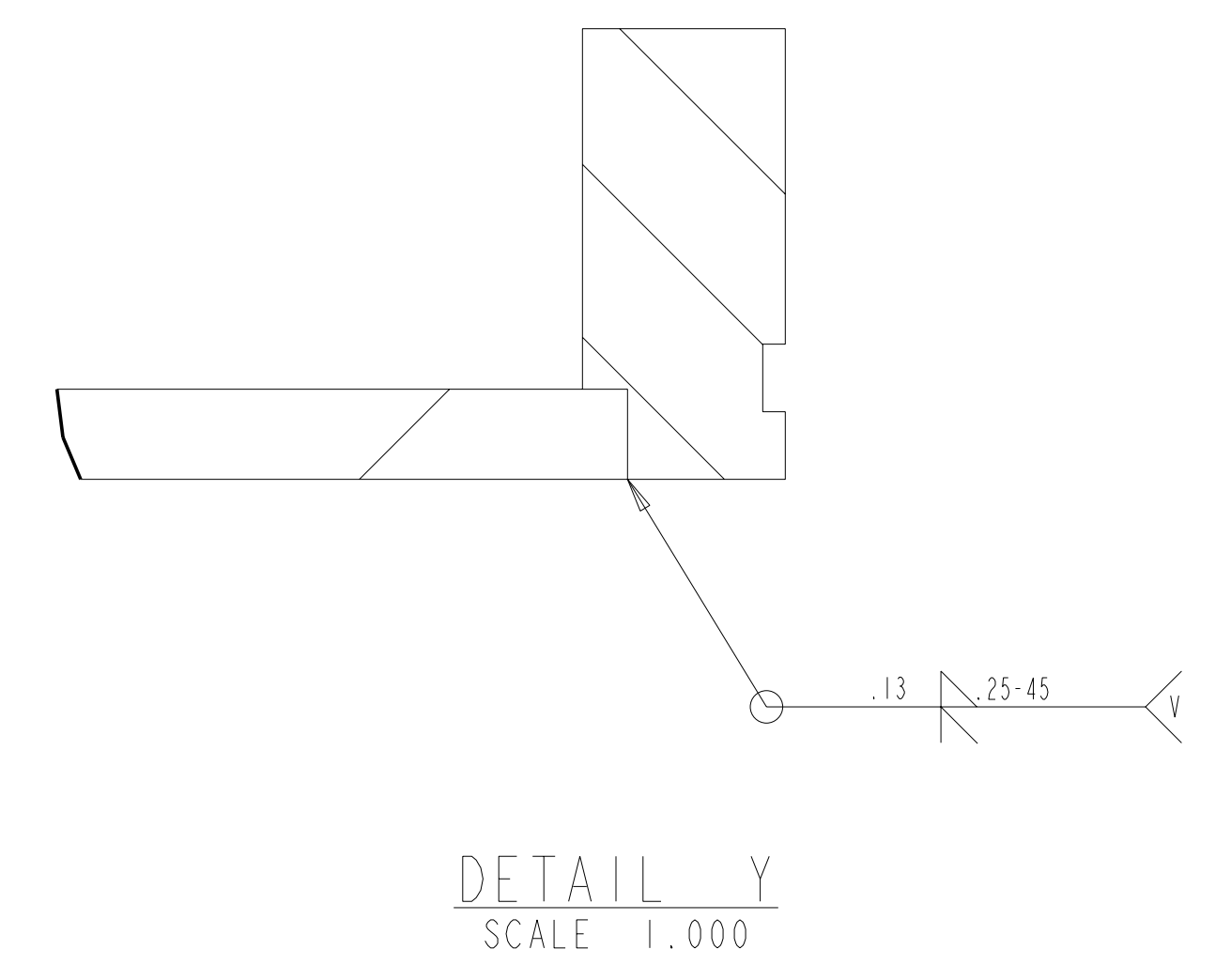
FOR PARTS LIST AND NOTES SEE SHEET 1.



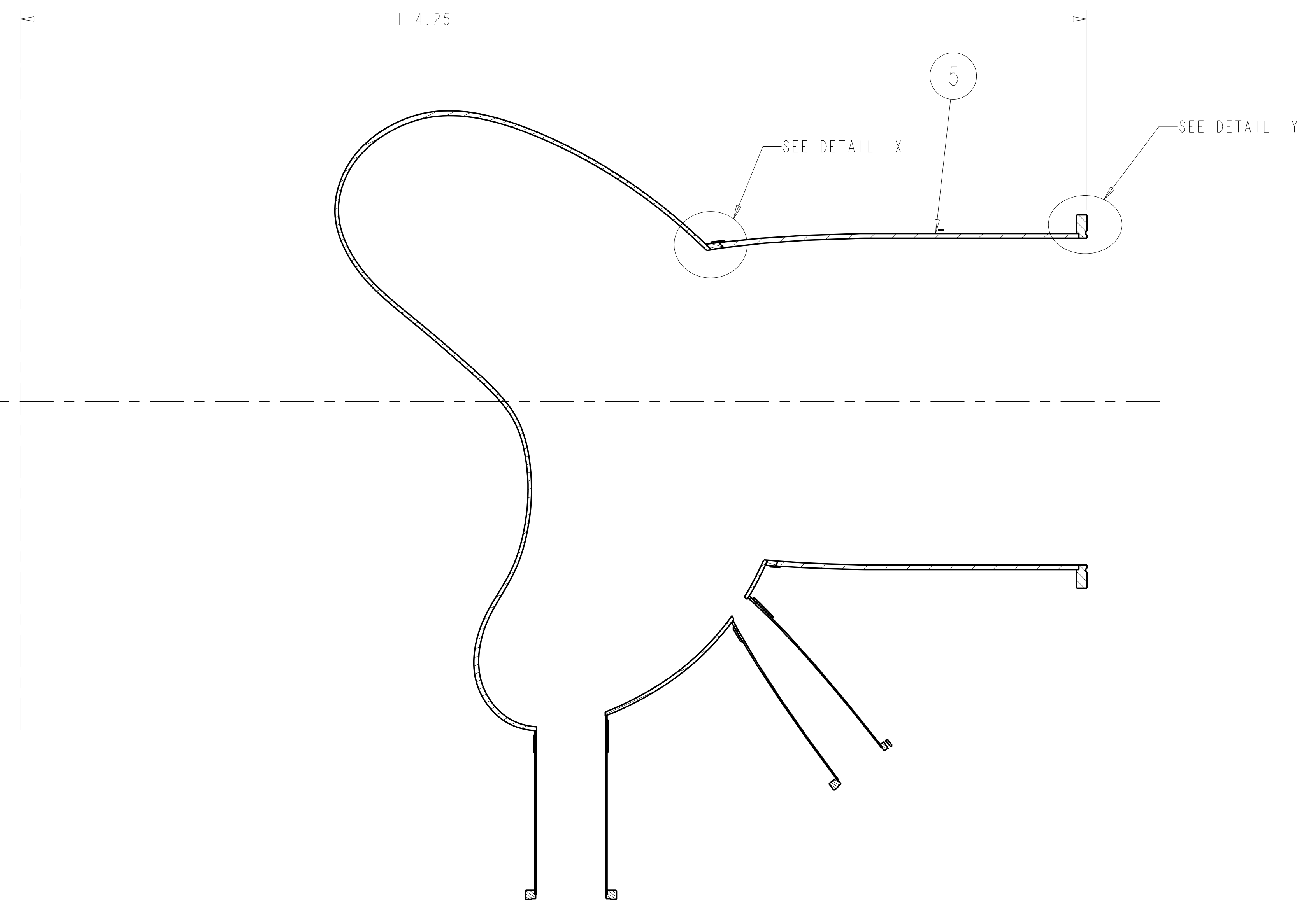
TOP VIEW



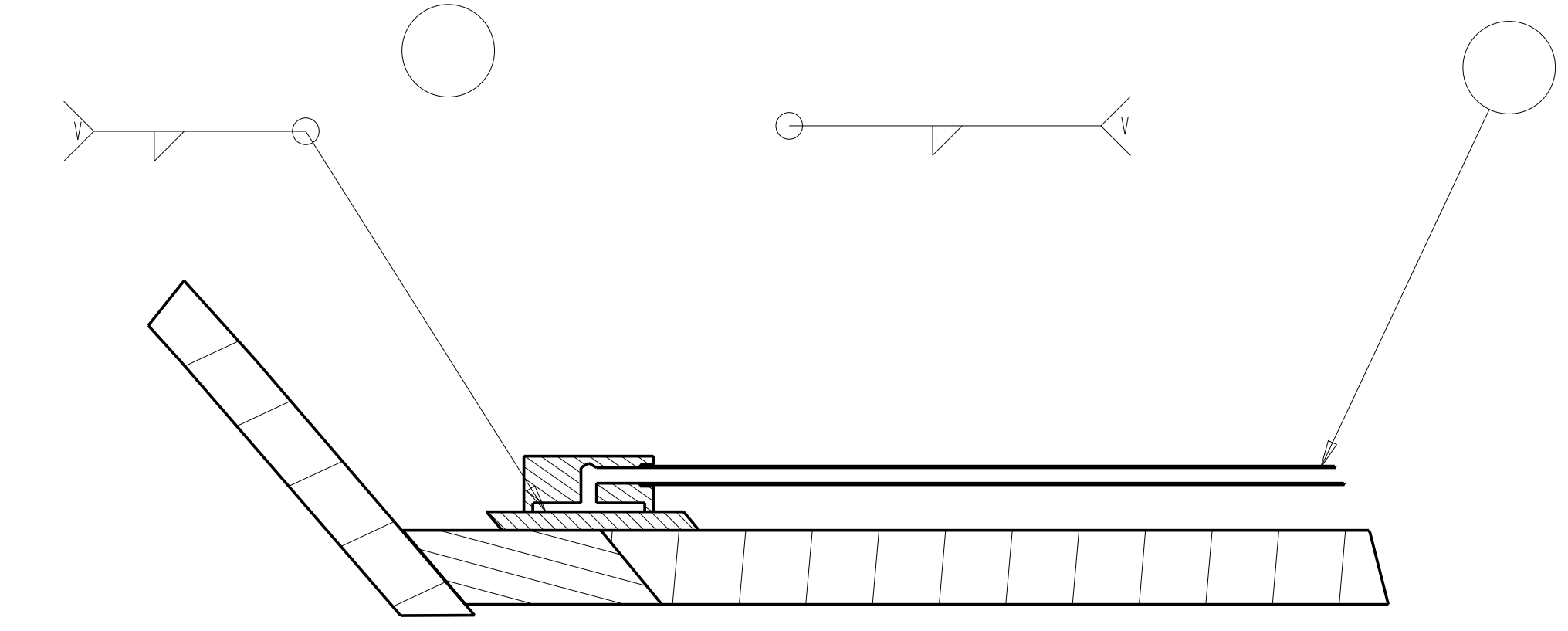
DETAIL X
SCALE 1.000



DETAIL Y
SCALE 1.000



SECTION PORT04A-PORT04A



SECTION PORT4A_TEST-PORT4A_TEST
SCALE 1.000

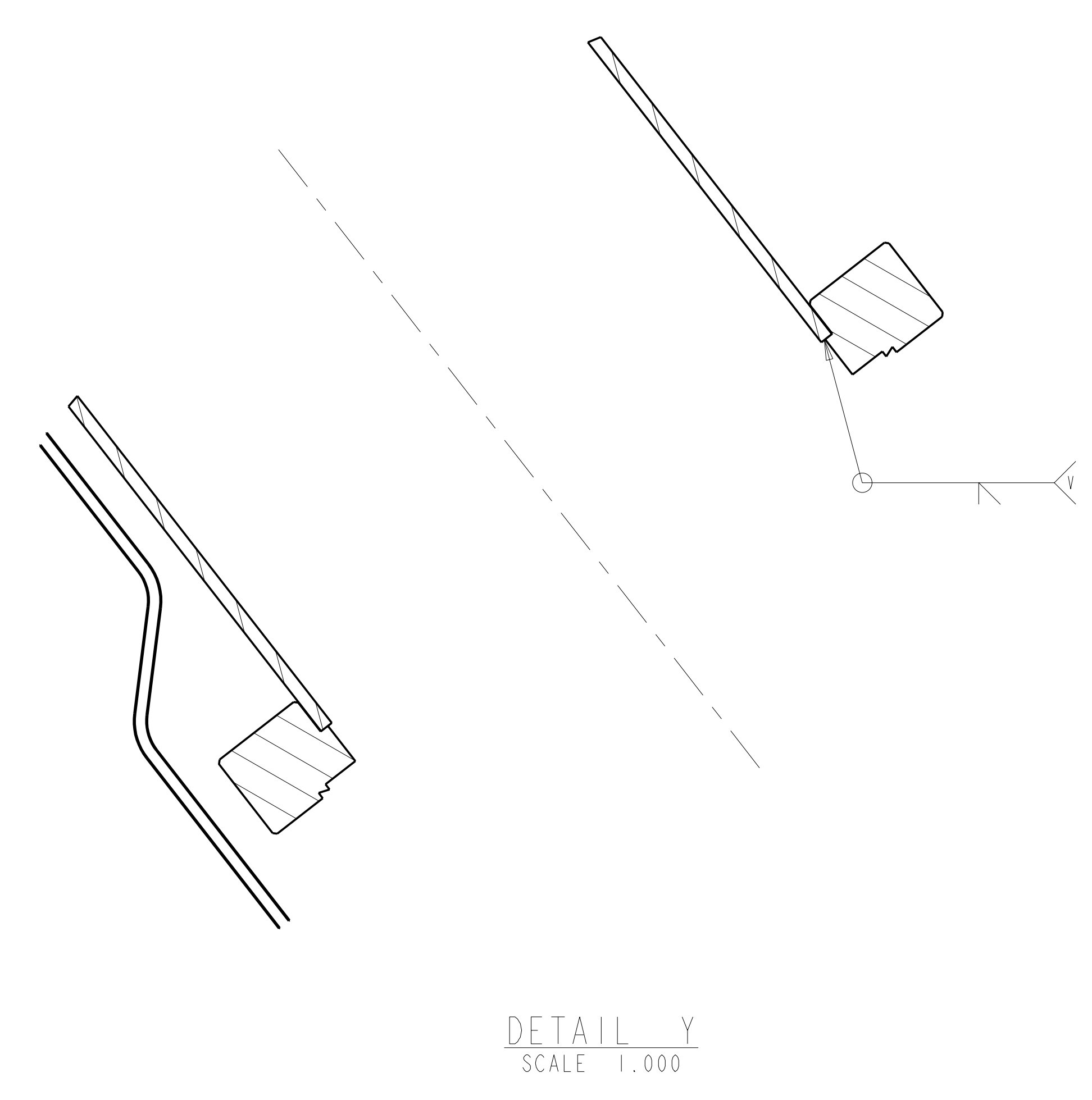
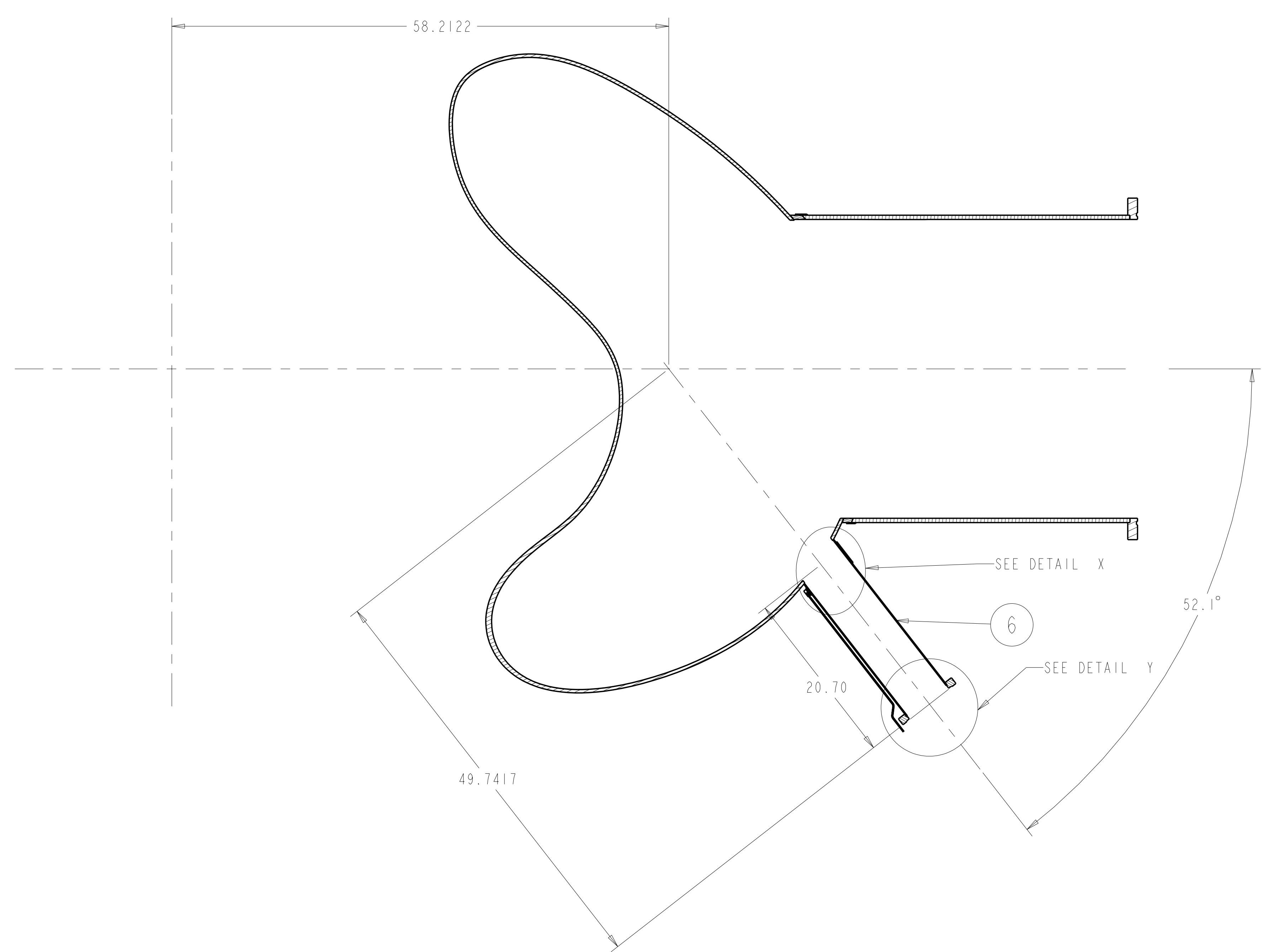
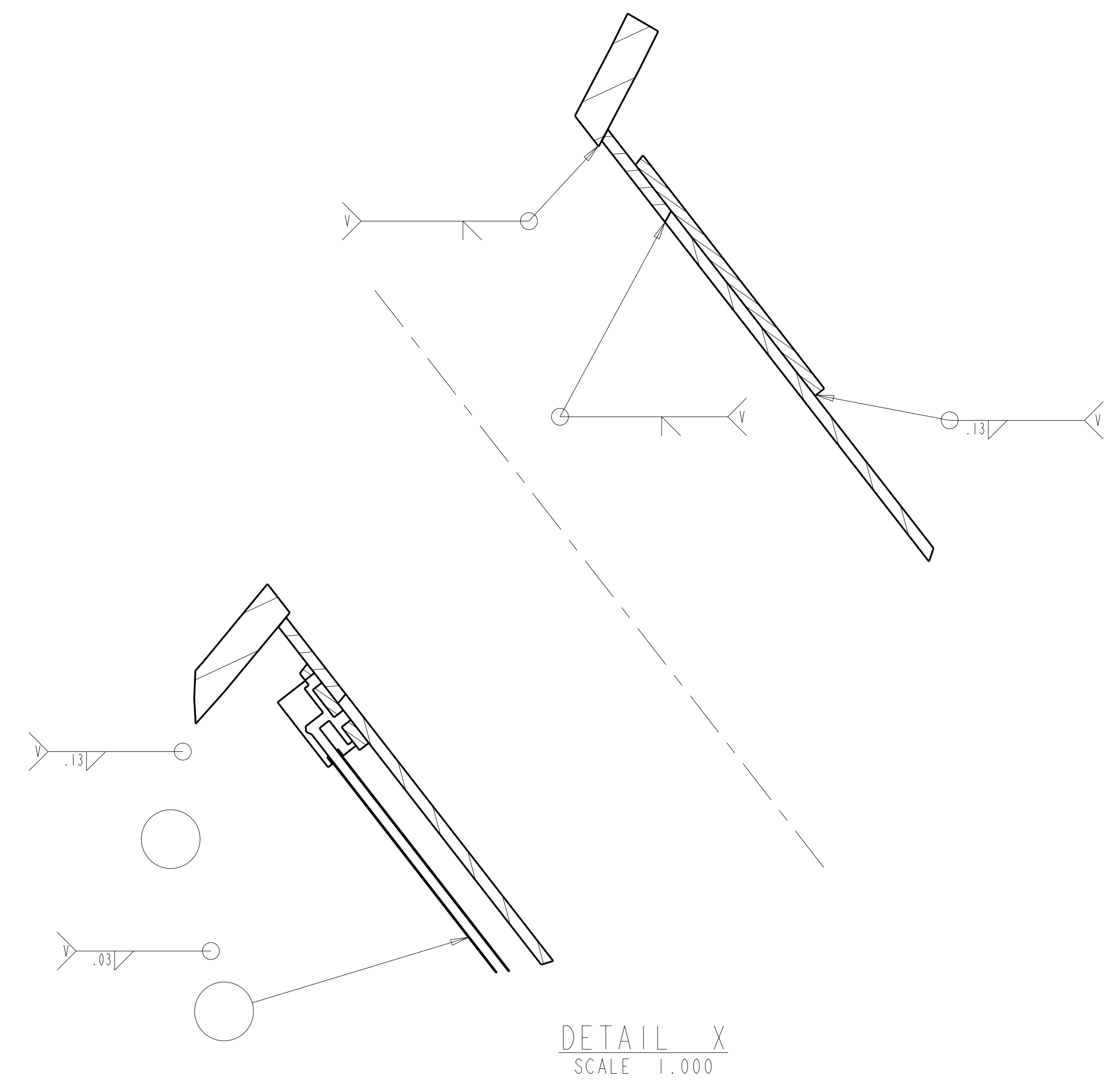
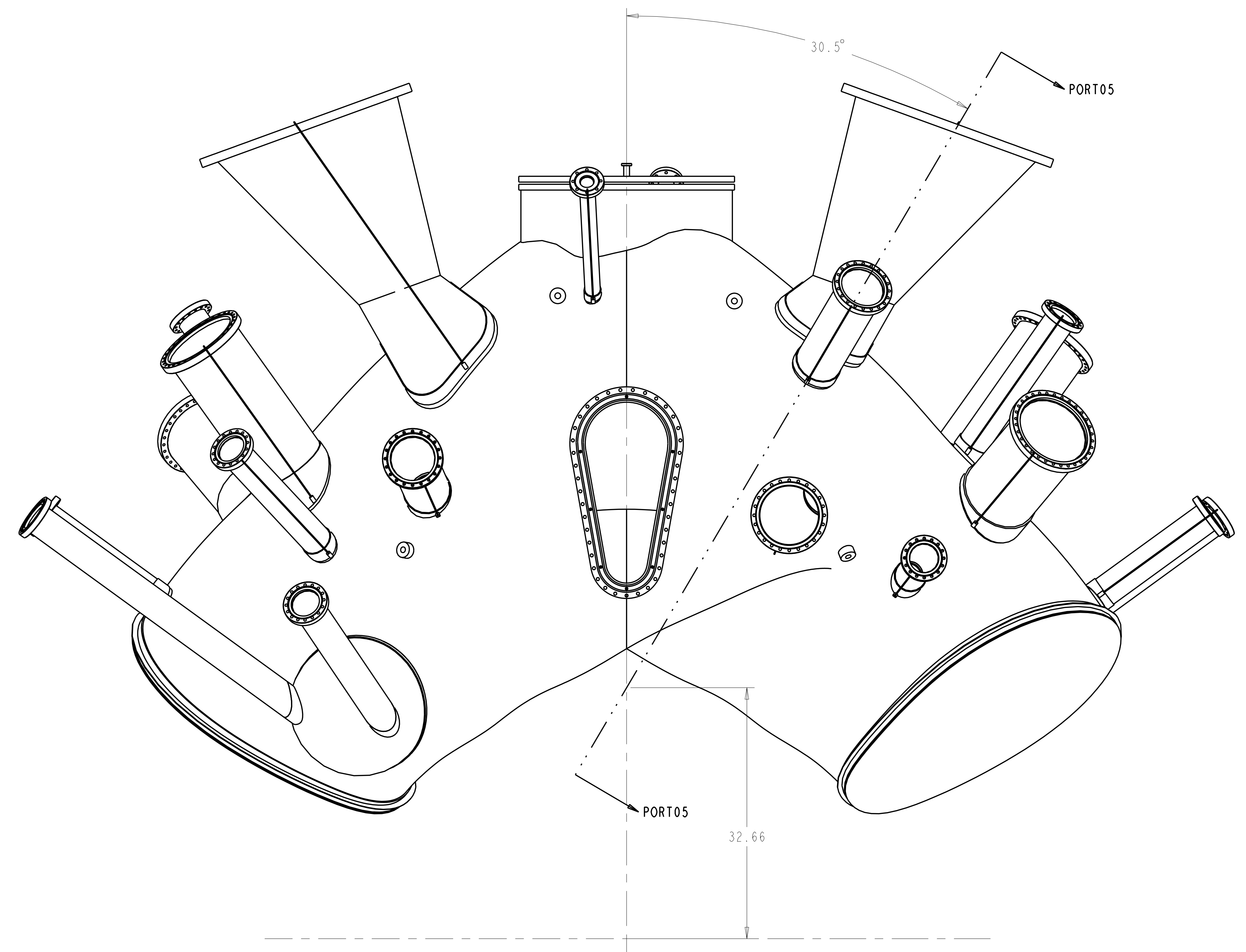
DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS.

PRELIMINARY
FOR INFORMATION ONLY

Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee						
PROJECT NAME NATIONAL COMPACT STELLERATOR EXPERIMENT						
VACUUM VESSEL PERIOD ASSEMBLY						
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
54+	XX	XX	XX	4	17	XX
RELEASE LEVEL		WIP			REV	
		SEI20-002			A	

SEI20-002

FOR PARTS LIST AND NOTES SEE SHEET 1.



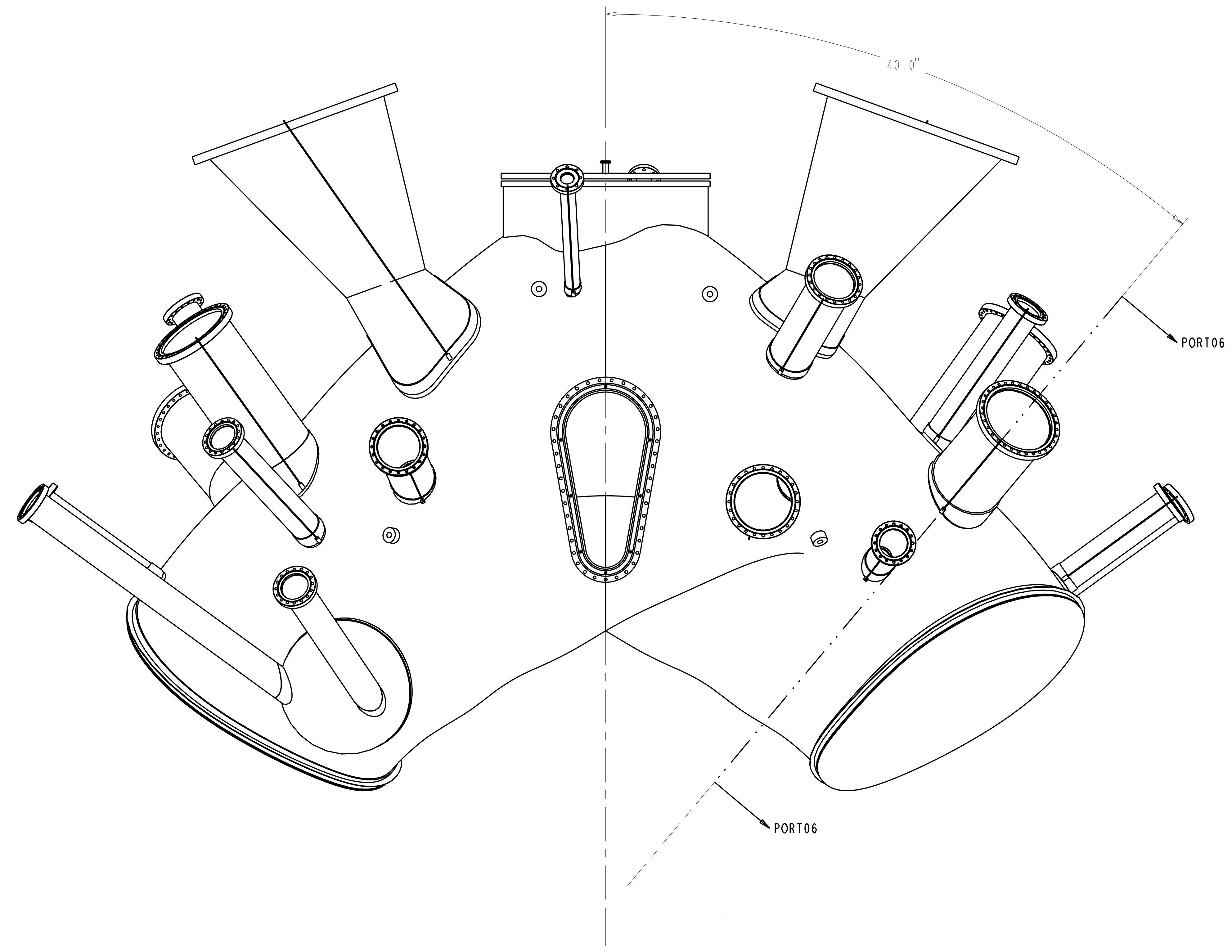
DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS.

PRELIMINARY
FOR INFORMATION ONLY

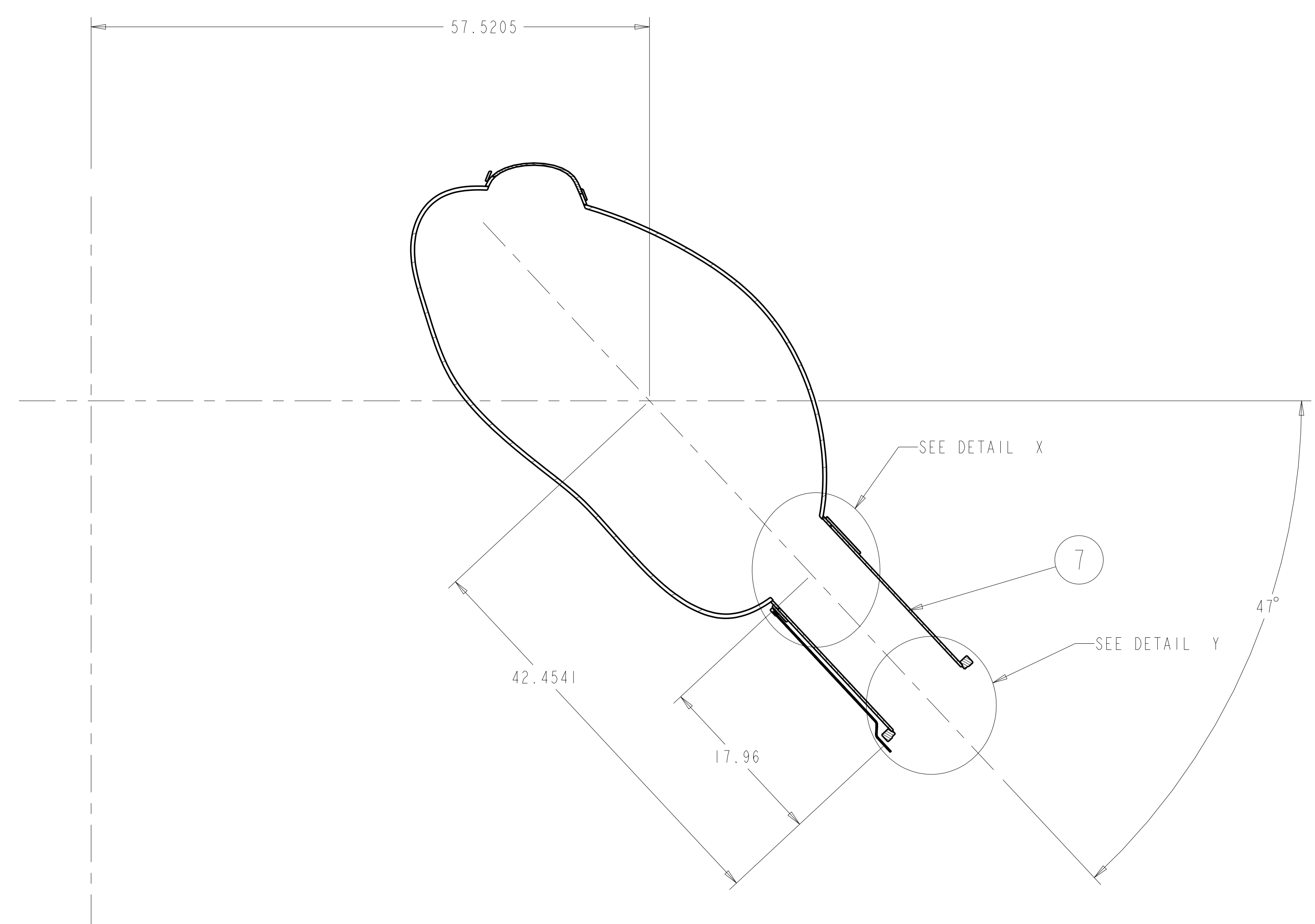
Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee						
UT-BATTELLE NATIONAL COMPACT STELLARATOR EXPERIMENT VACUUM VESSEL PERIOD ASSEMBLY						
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
54+	XX	XX	XX	5 17	XX	U
RELEASE LEVEL	SEI20-002					REV
WIP						A

SEI20-002

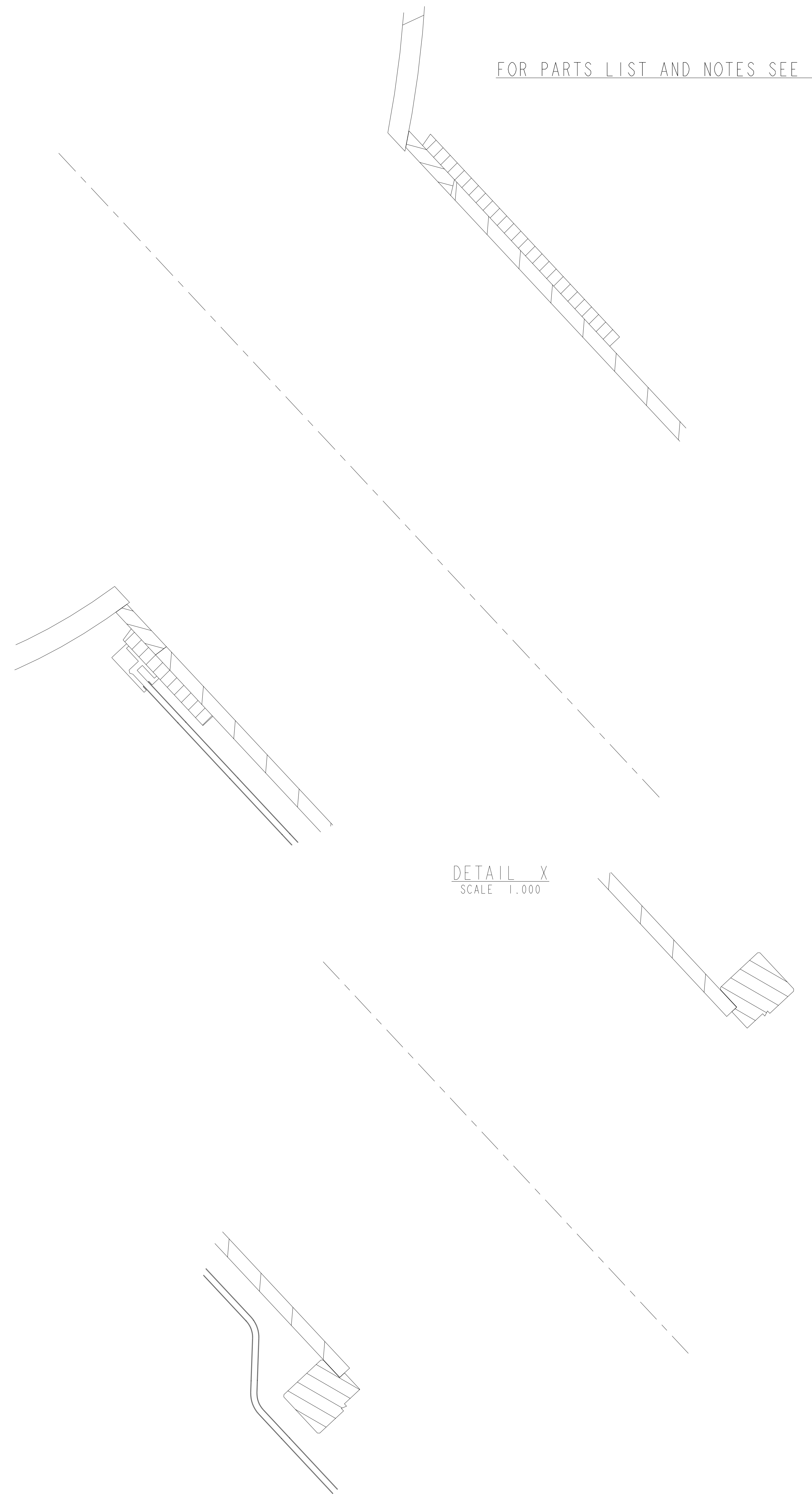
A



BOTTOM VIEW



SECTION PORT06-PORT06



DETAIL X
SCALE 1.000

DETAIL Y
SCALE 1.000

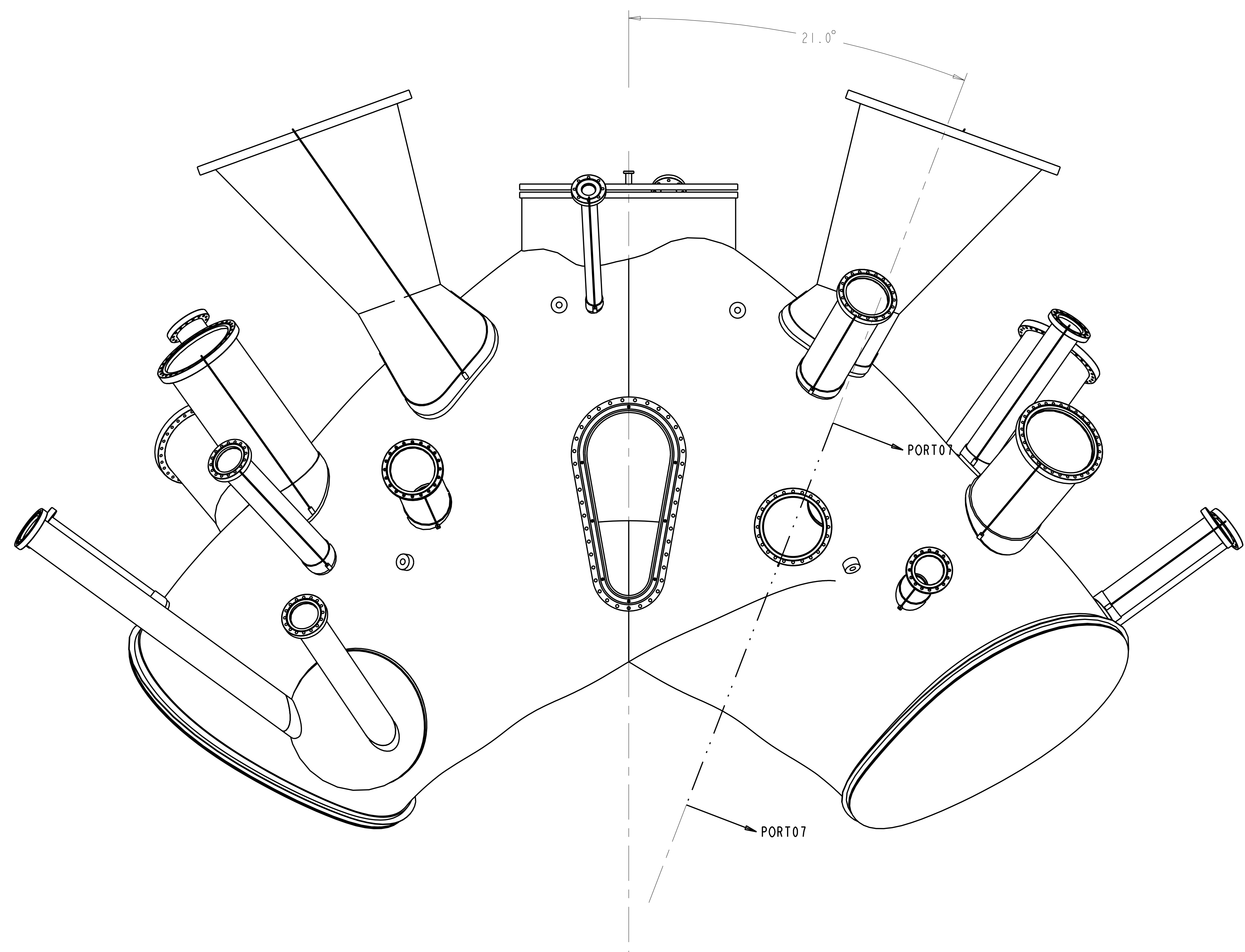
DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS.

PRELIMINARY
FOR INFORMATION ONLY

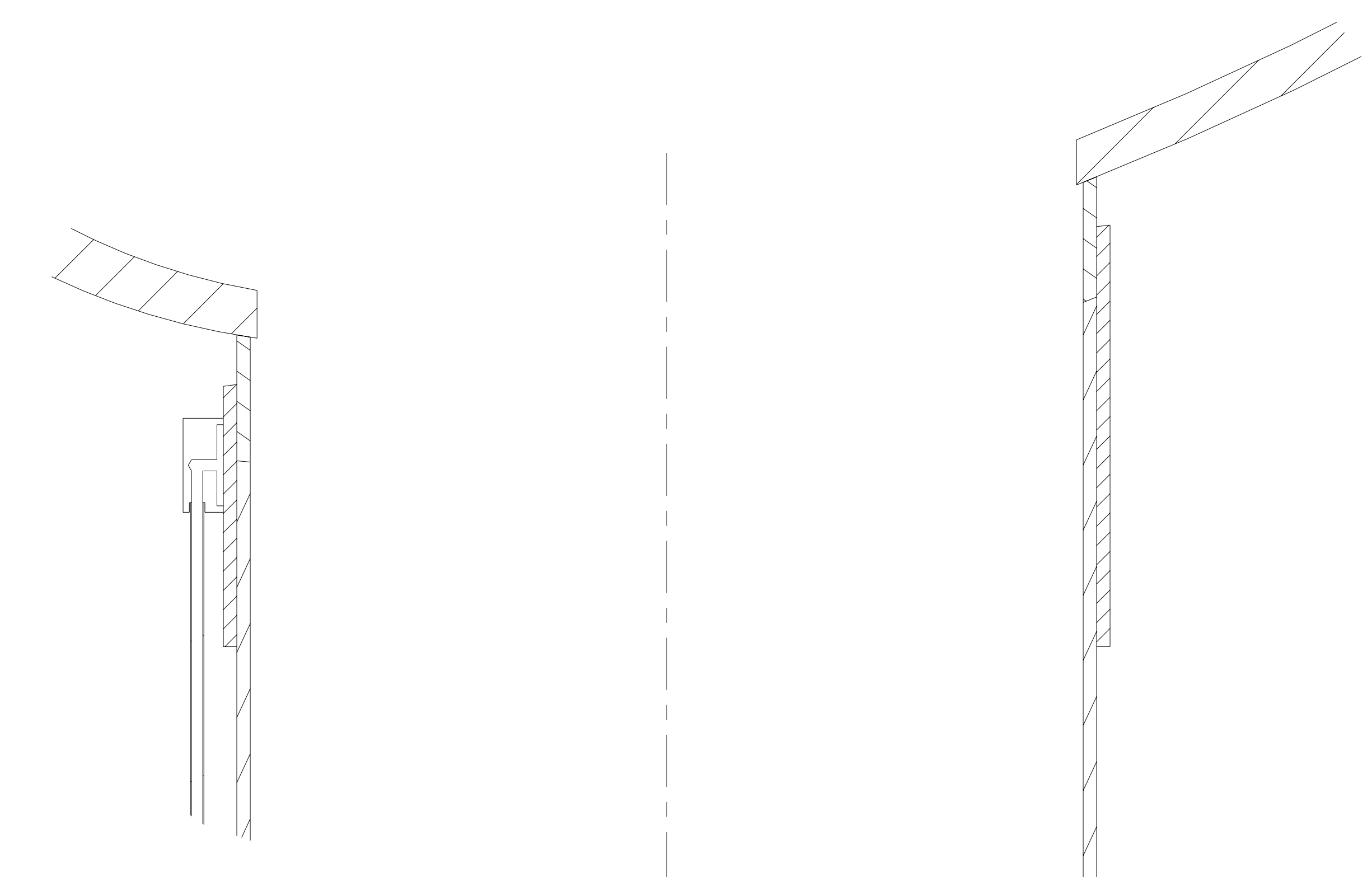
Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee									
UT-BATTELLE									
NATIONAL COMPACT STELLARATOR EXPERIMENT									
VACUUM VESSEL PERIOD ASSEMBLY									
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS			
54+	XX	XX	XX	6	17	XX	U		
RELEASE LEVEL		WIP		SE120-002		REV A			

SE120-002

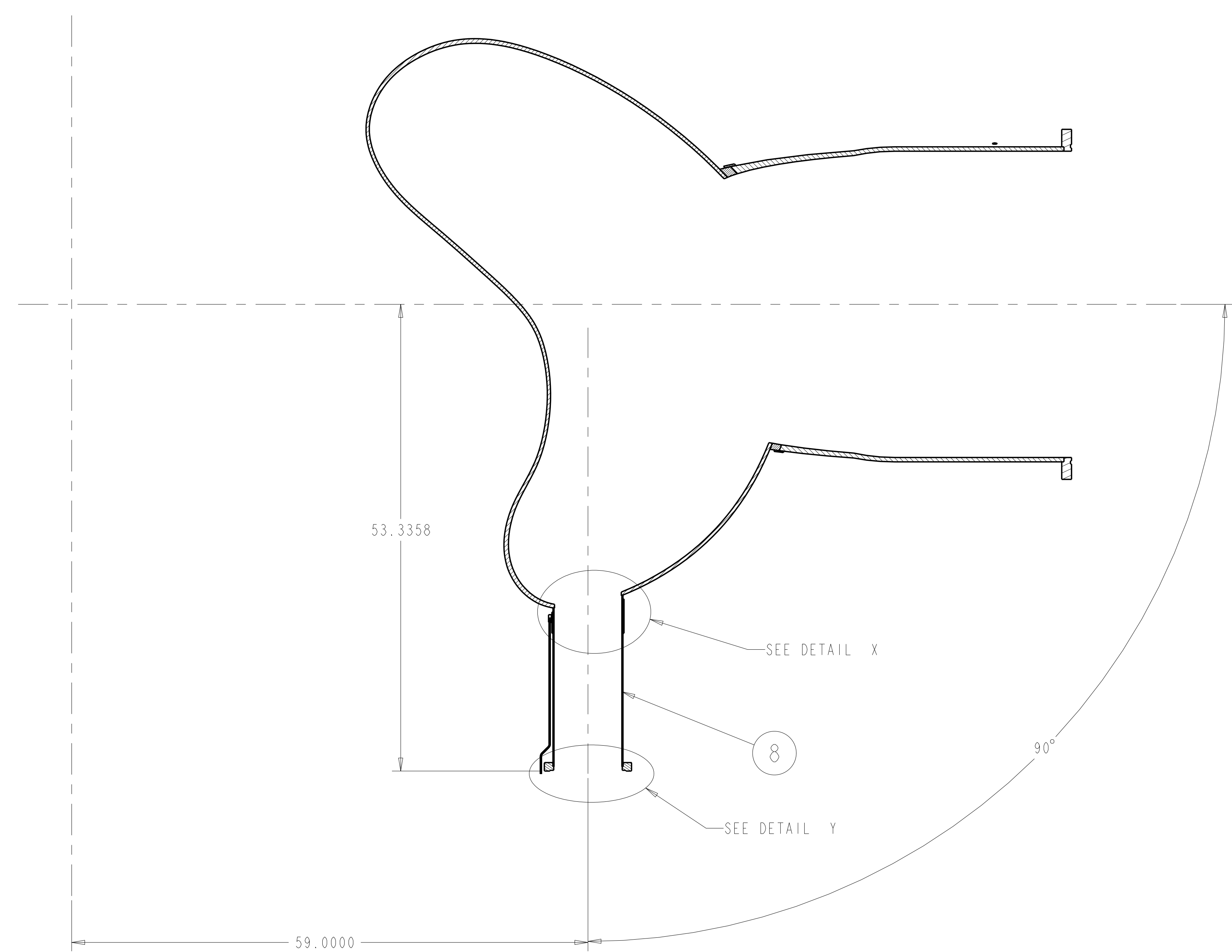
FOR PARTS LIST AND NOTES SEE SHEET 1.



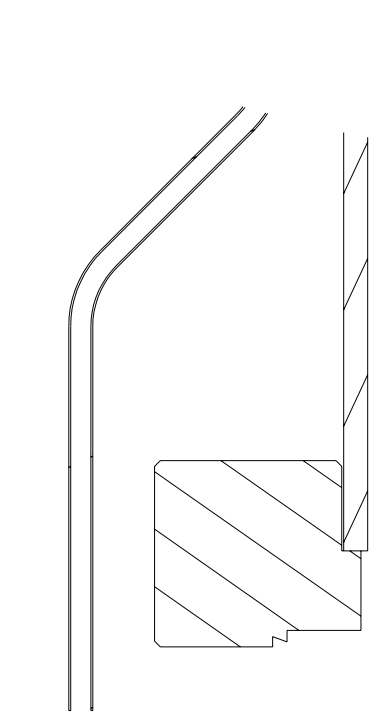
BOTTOM VIEW



DETAIL X
SCALE 1.000



SECTION PORT07-PORT07



DETAIL Y
SCALE 1.000

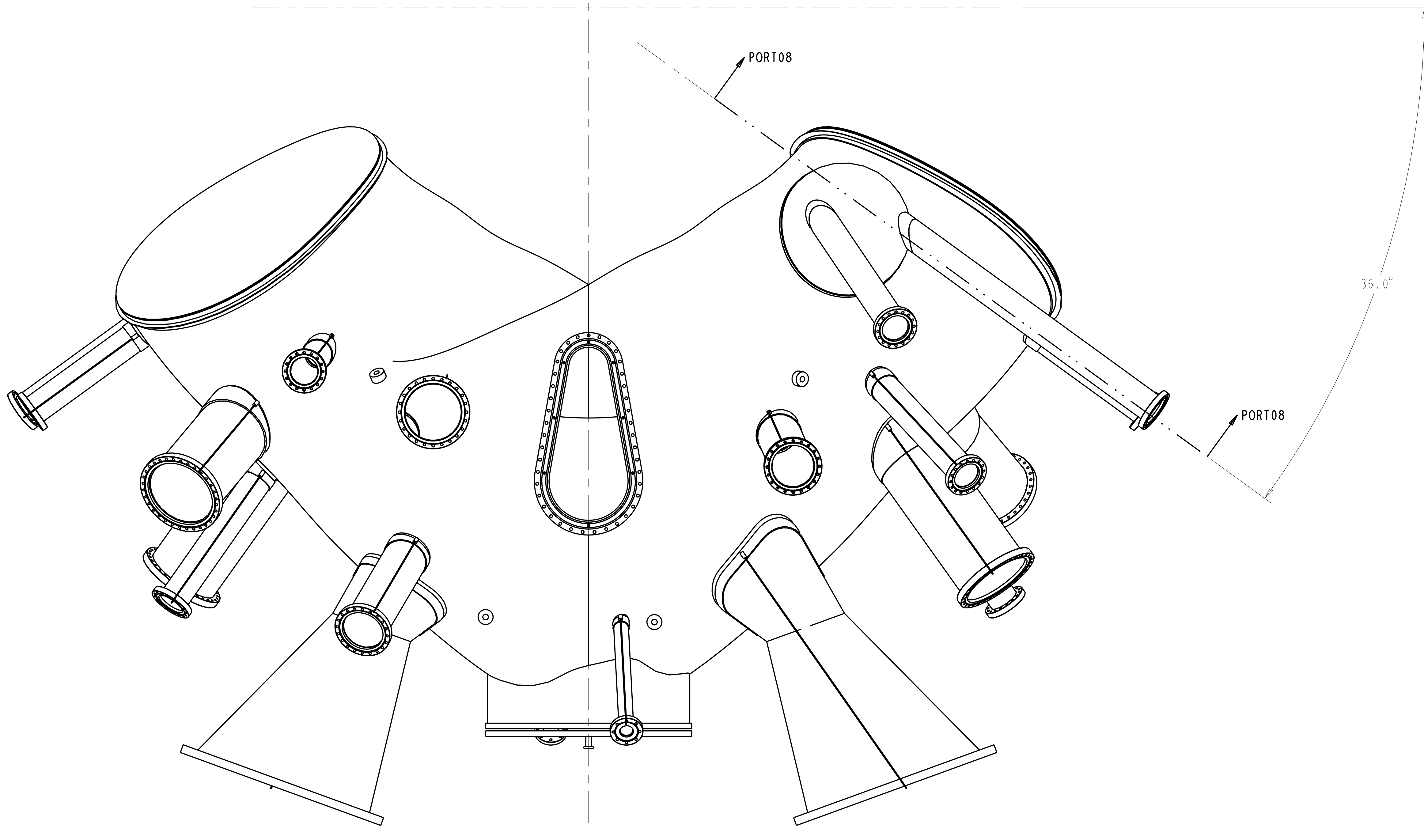
DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS.

PRELIMINARY
FOR INFORMATION ONLY

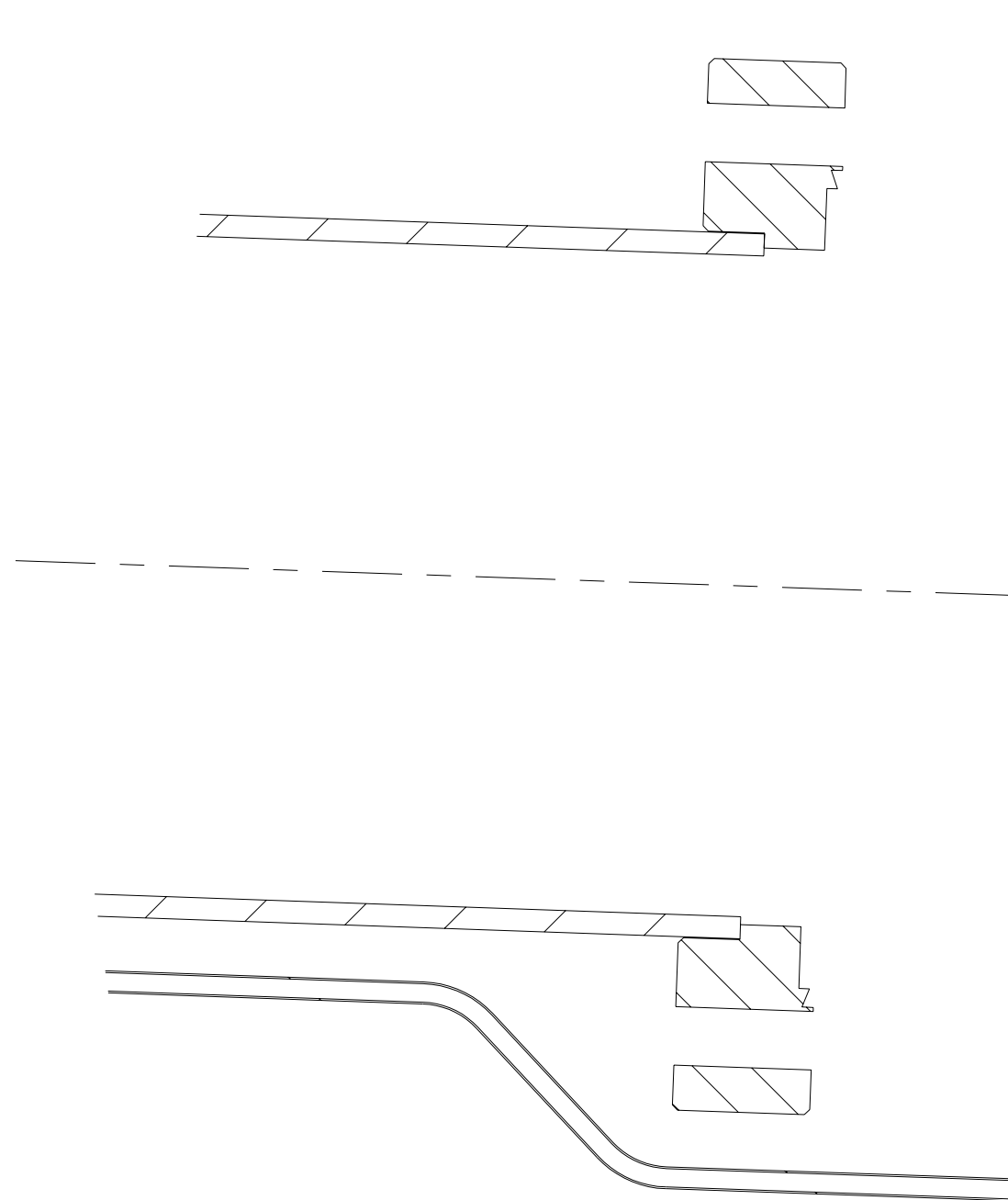
Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee									
NATIONAL COMPACT STELLARATOR EXPERIMENT VACUUM VESSEL PERIOD ASSEMBLY									
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS			
54+	XX	XX	XX	7 17	XX	U			
RELEASE LEVEL	SE120-002						REV		
WIP							A		

SE120-002

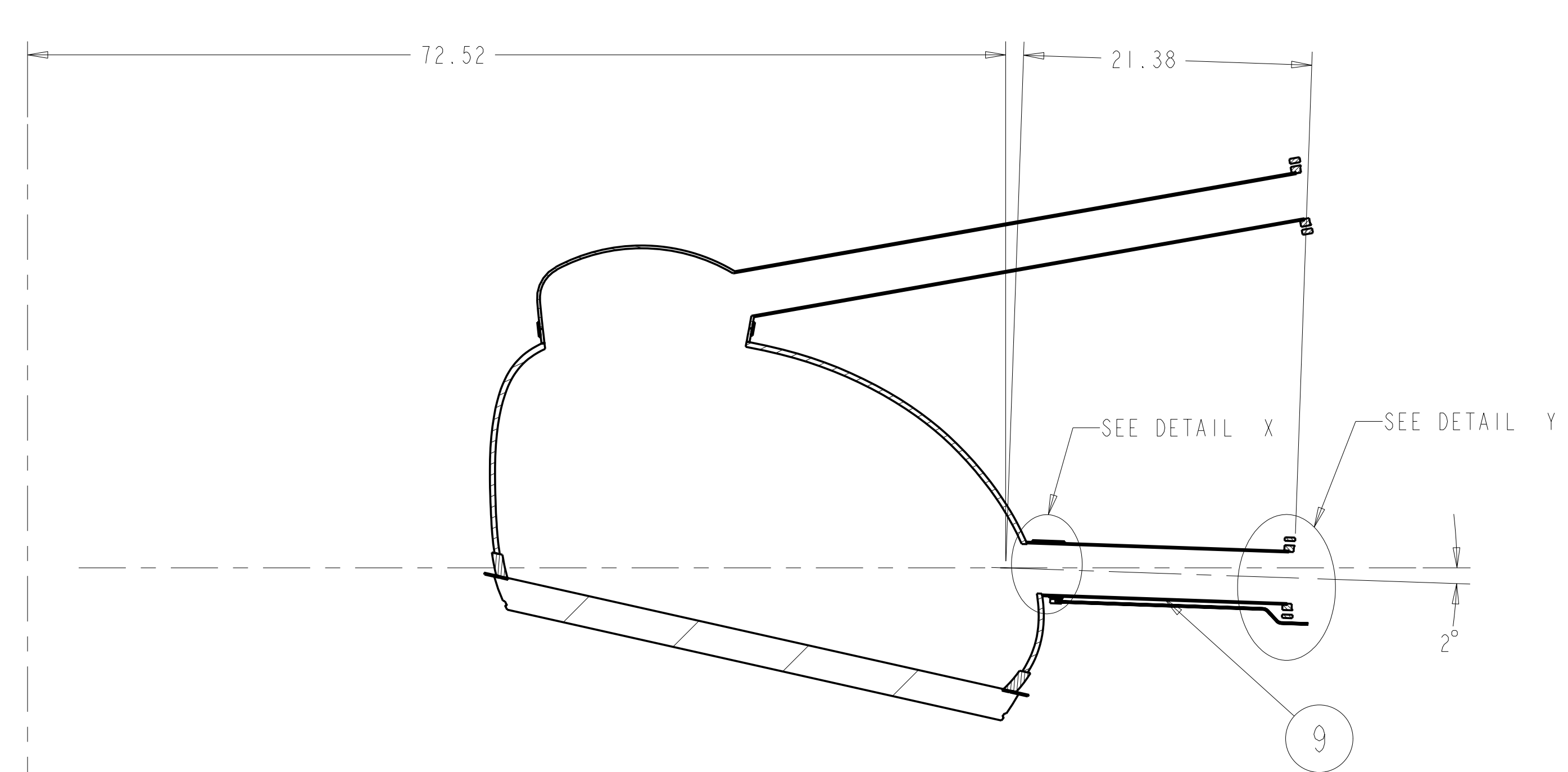
FOR PARTS LIST AND NOTES SEE SHEET 1.



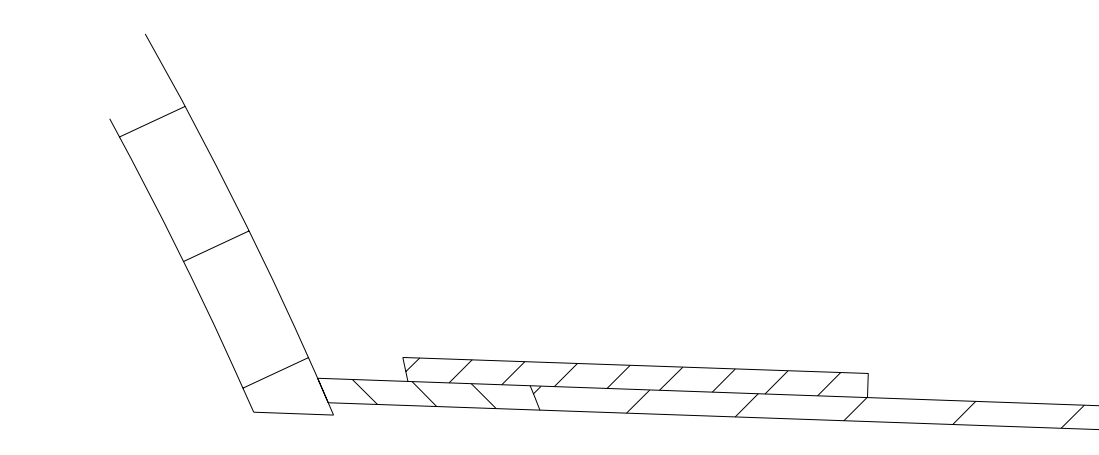
TOP VIEW



DETAIL Y
 SCALE 1.000



SECTION PORT08-PORT08



DETAIL X
 SCALE 1.000

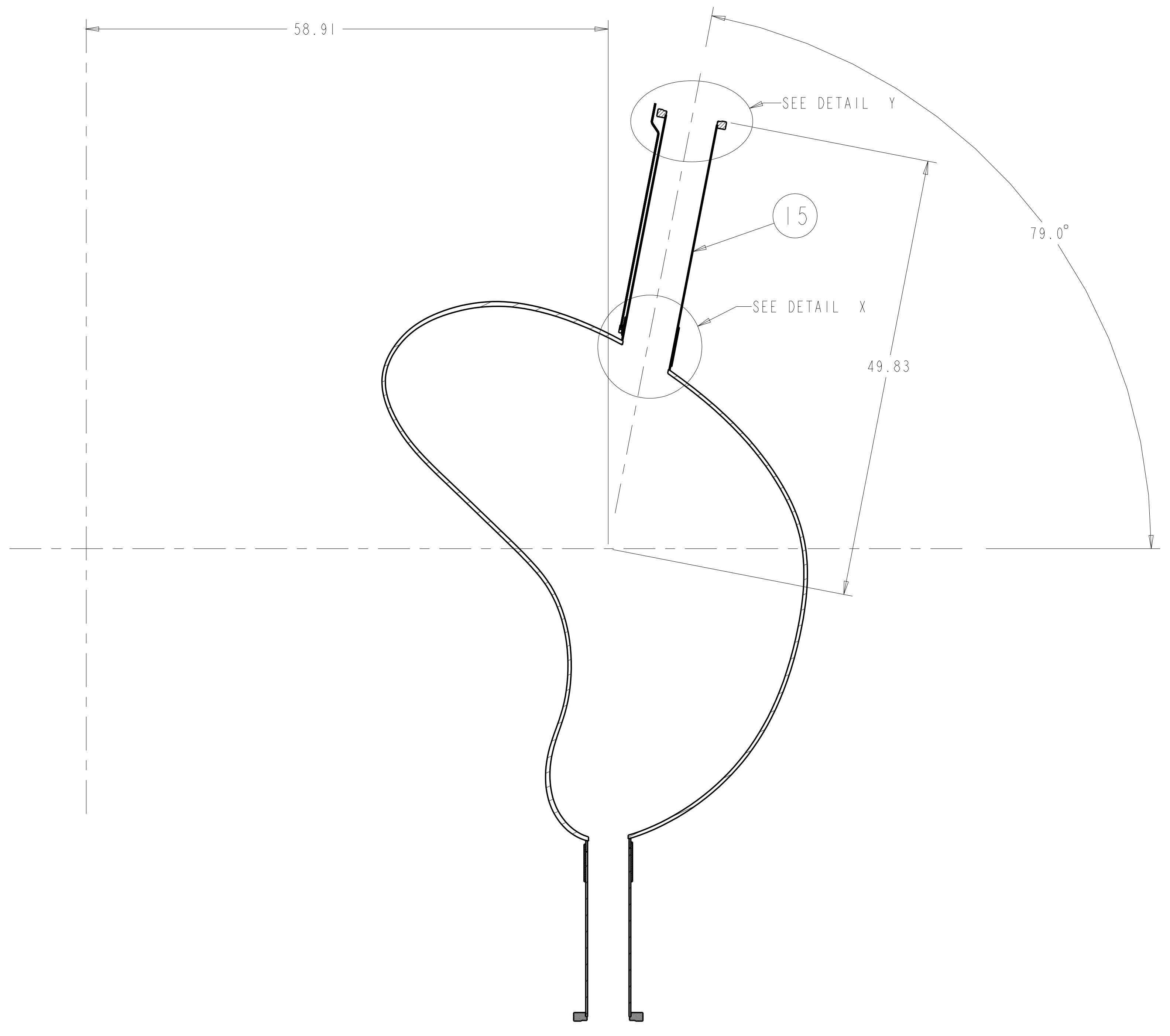
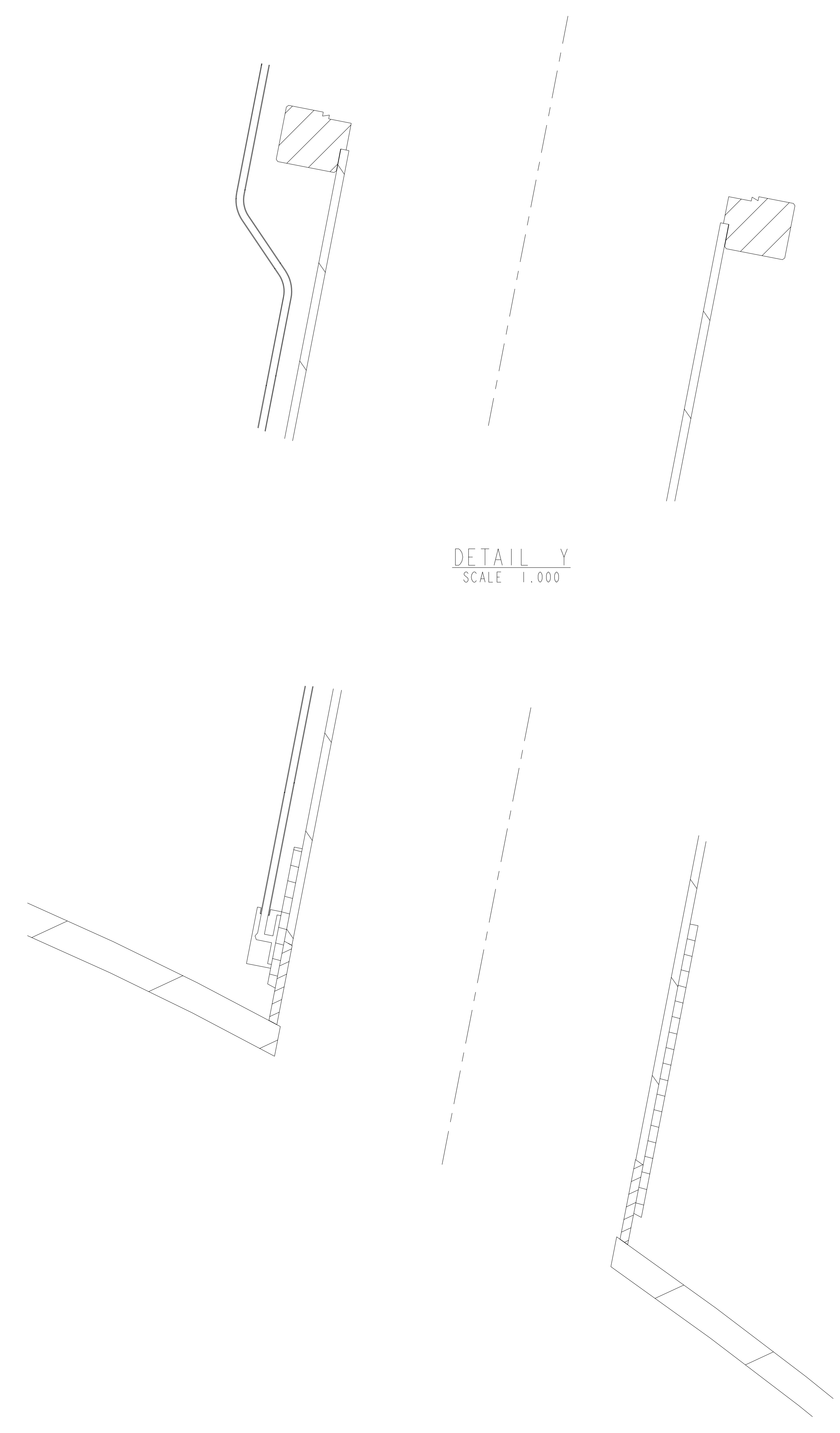
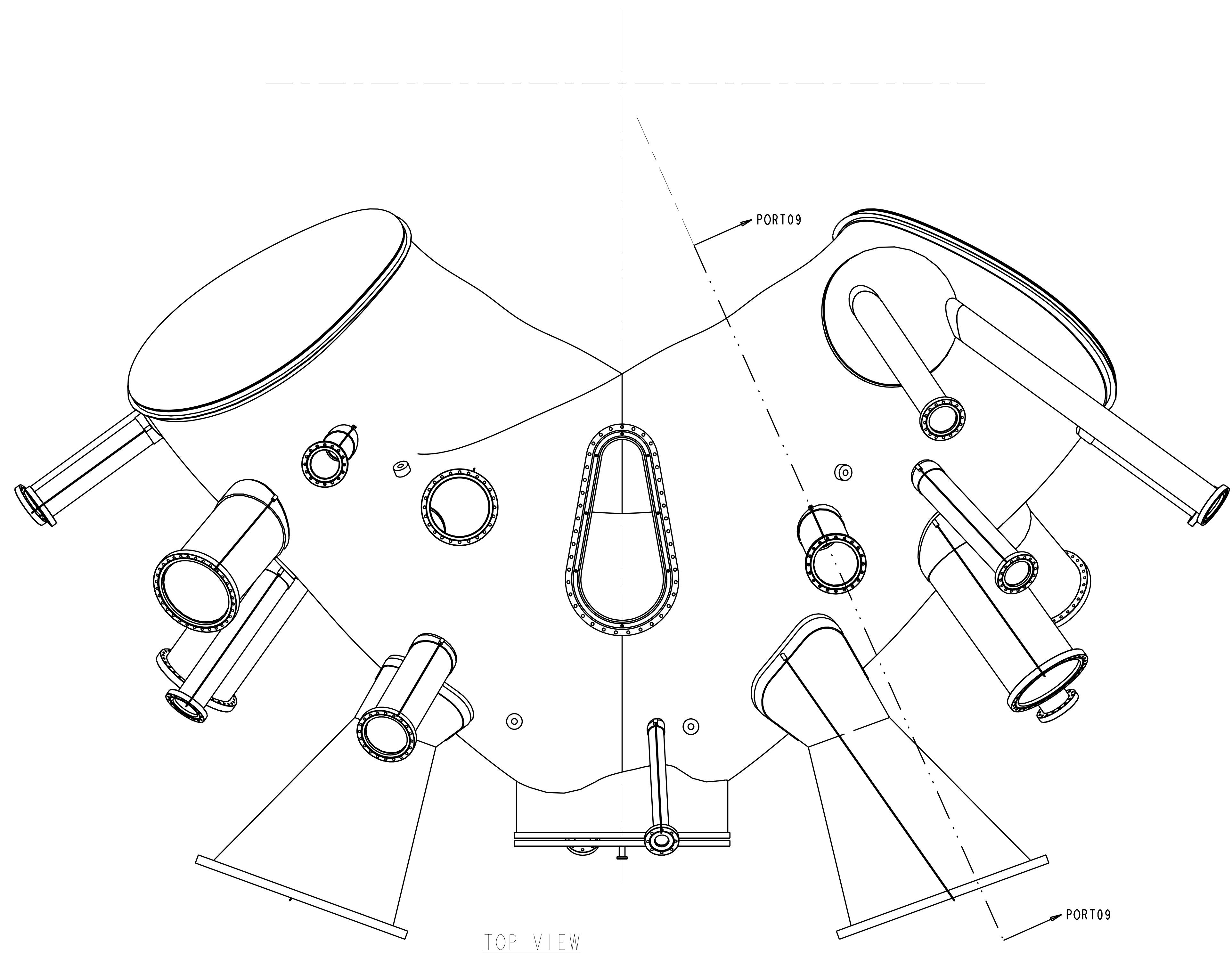
DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS.

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Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee						
UT-BATTELLE NATIONAL COMPACT STELLERATOR EXPERIMENT						
VACUUM VESSEL PERIOD ASSEMBLY						
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
54+	XX	XX	XX	8 17	XX	U
RELEASE LEVEL		SE120-002			REV	
WIP					A	

SE120-002

FOR PARTS LIST AND NOTES SEE SHEET 1.



SECTION PORT09-PORT09

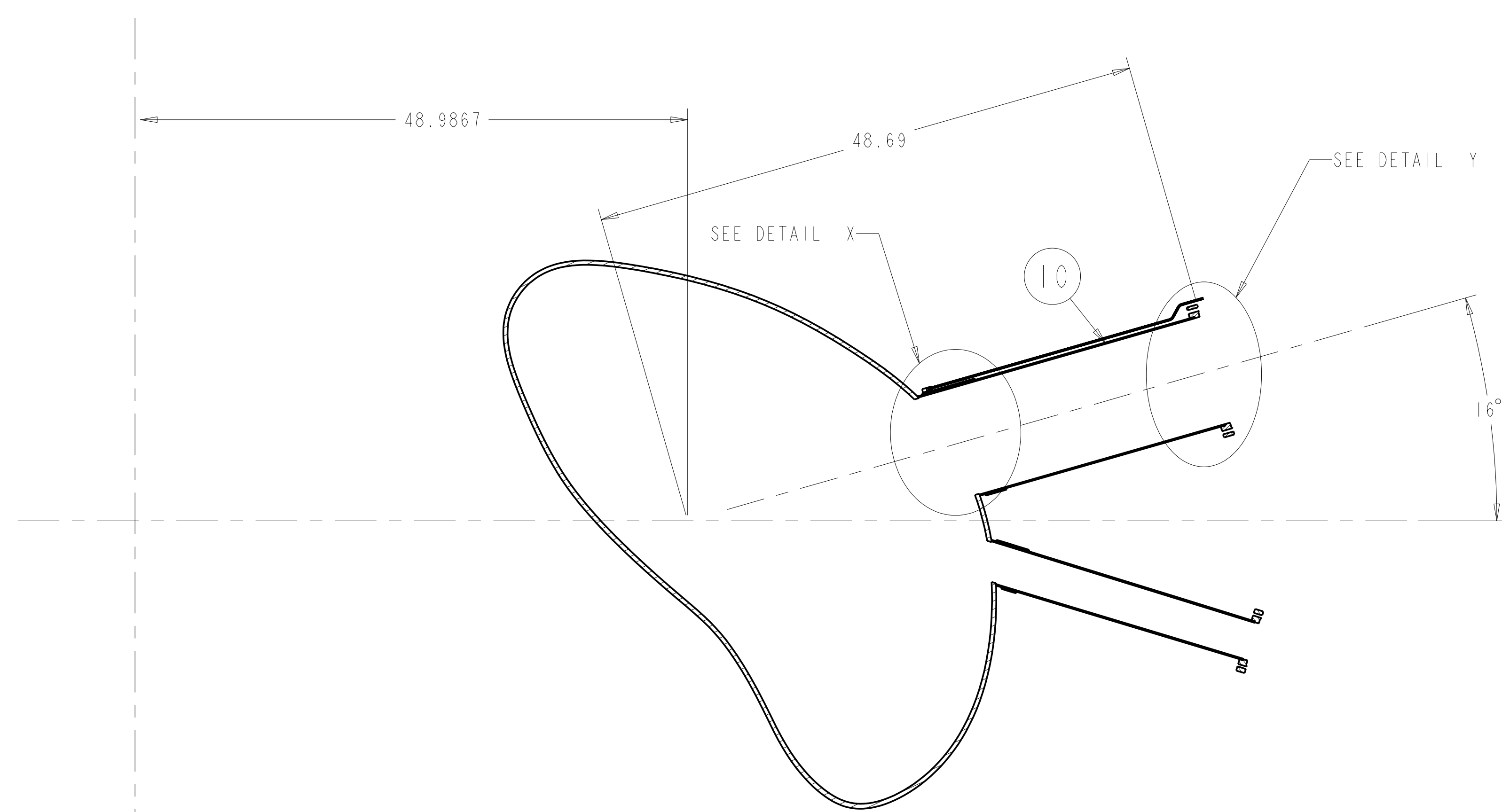
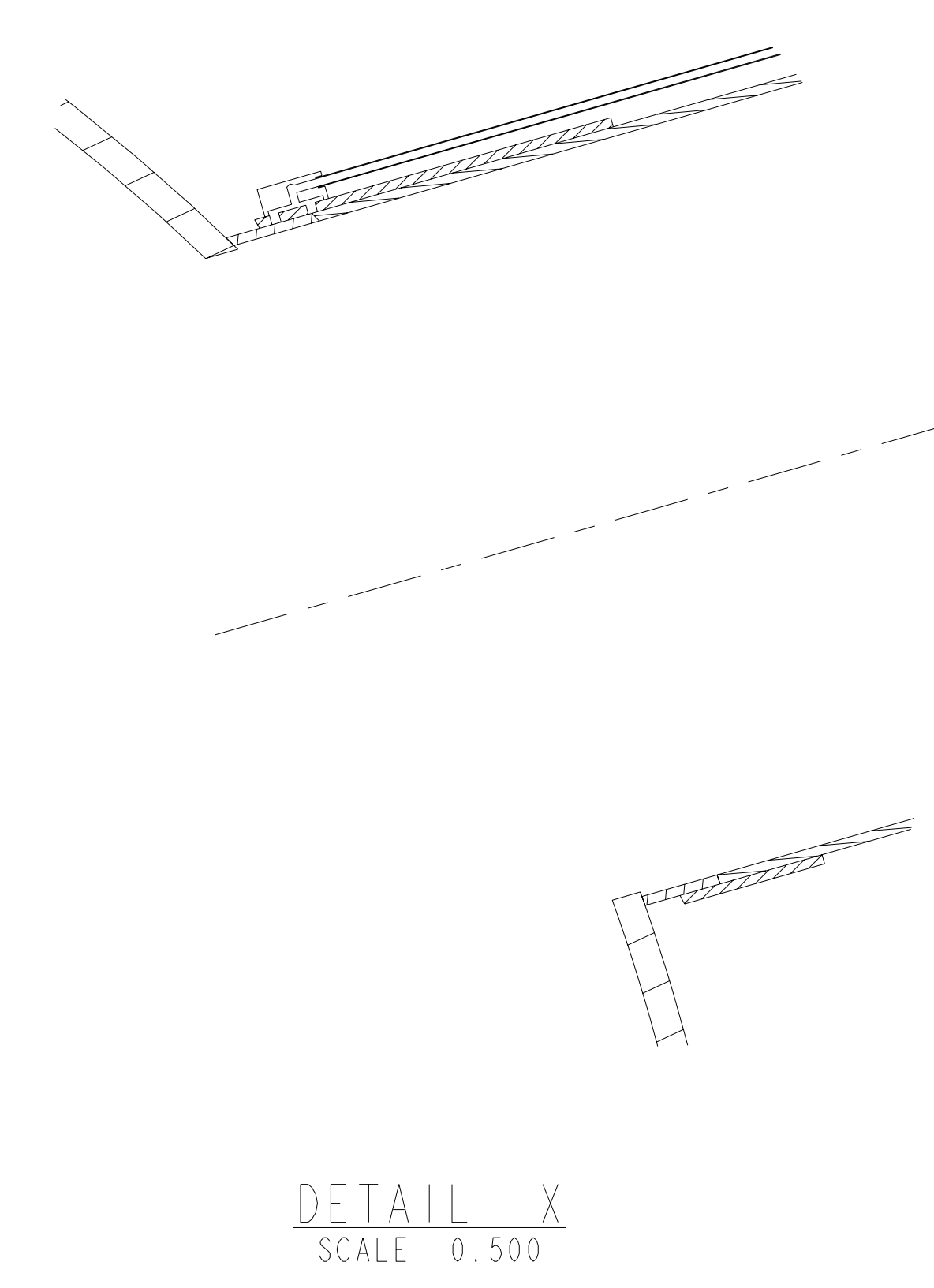
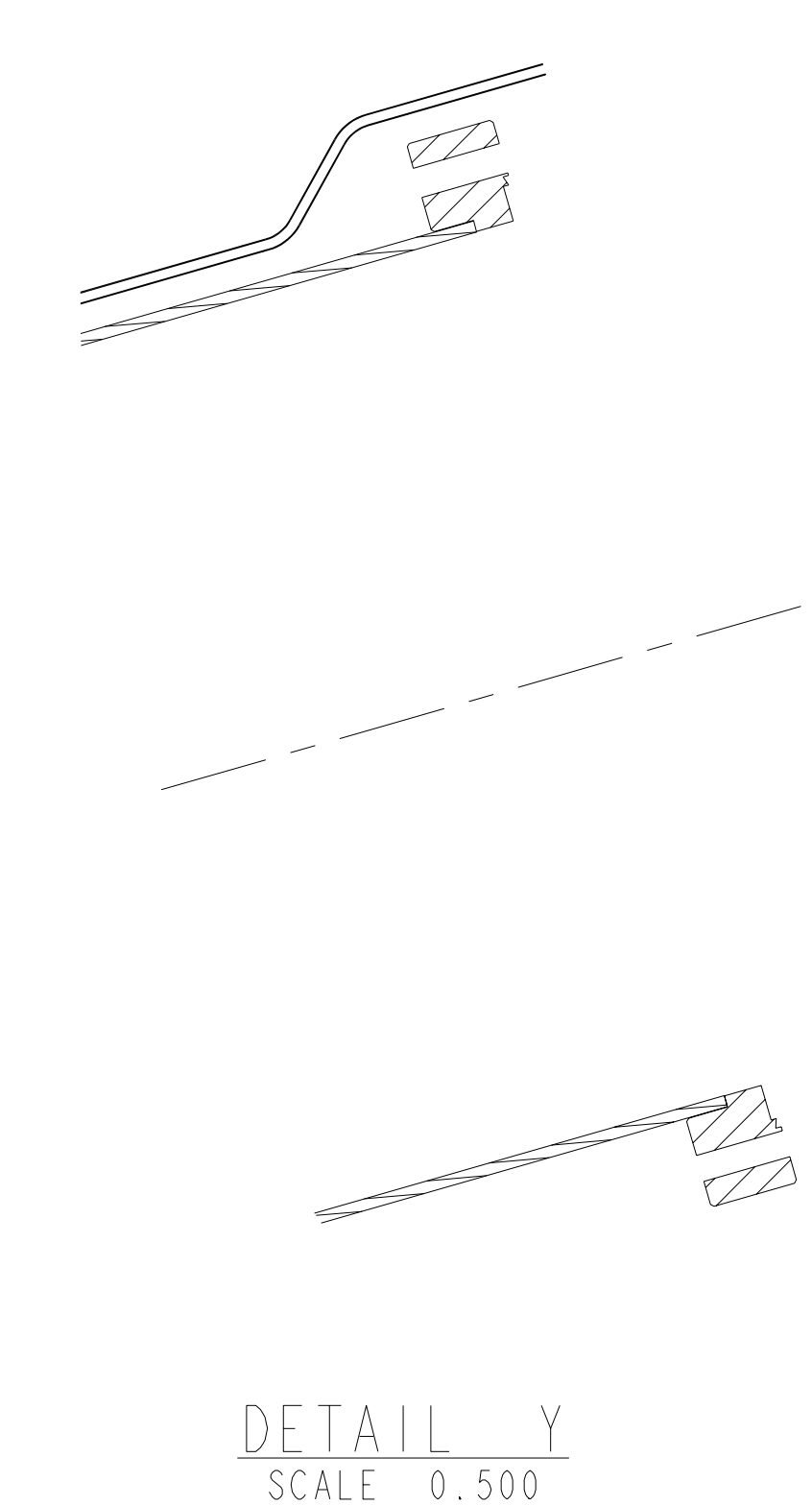
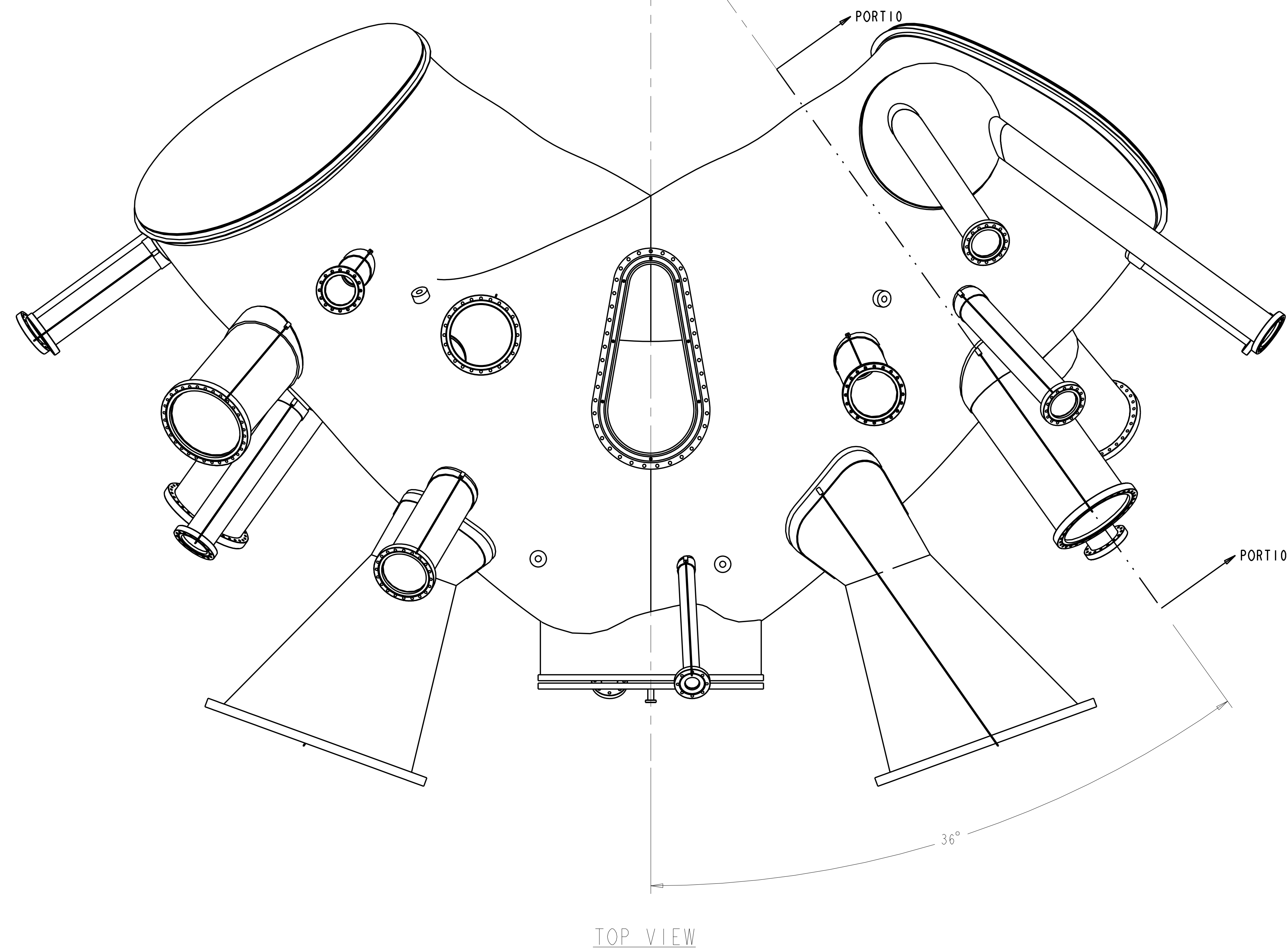
PRELIMINARY
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 AND NOT THE MAGNETIC AXIS.

Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee						
UT-BATTELLE						
NATIONAL COMPACT STELLARATOR EXPERIMENT						
VACUUM VESSEL PERIOD ASSEMBLY						
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
54+	XX	XX	XX	9 17	XX	U
RELEASE LEVEL		WIP			REV	
		SE120-002			A	

SE120-002

FOR PARTS LIST AND NOTES SEE SHEET 1.



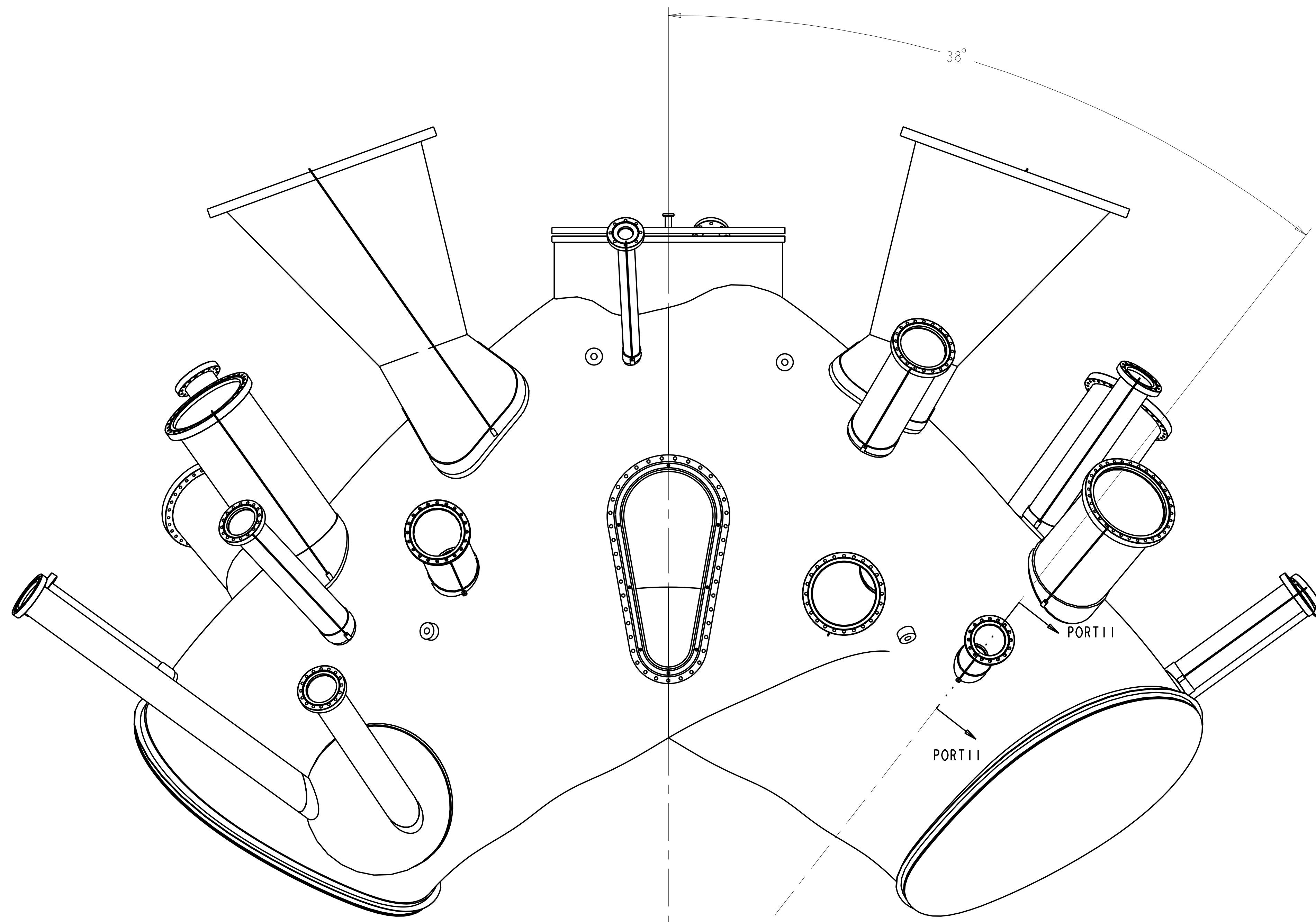
DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS.

PRELIMINARY
FOR INFORMATION ONLY

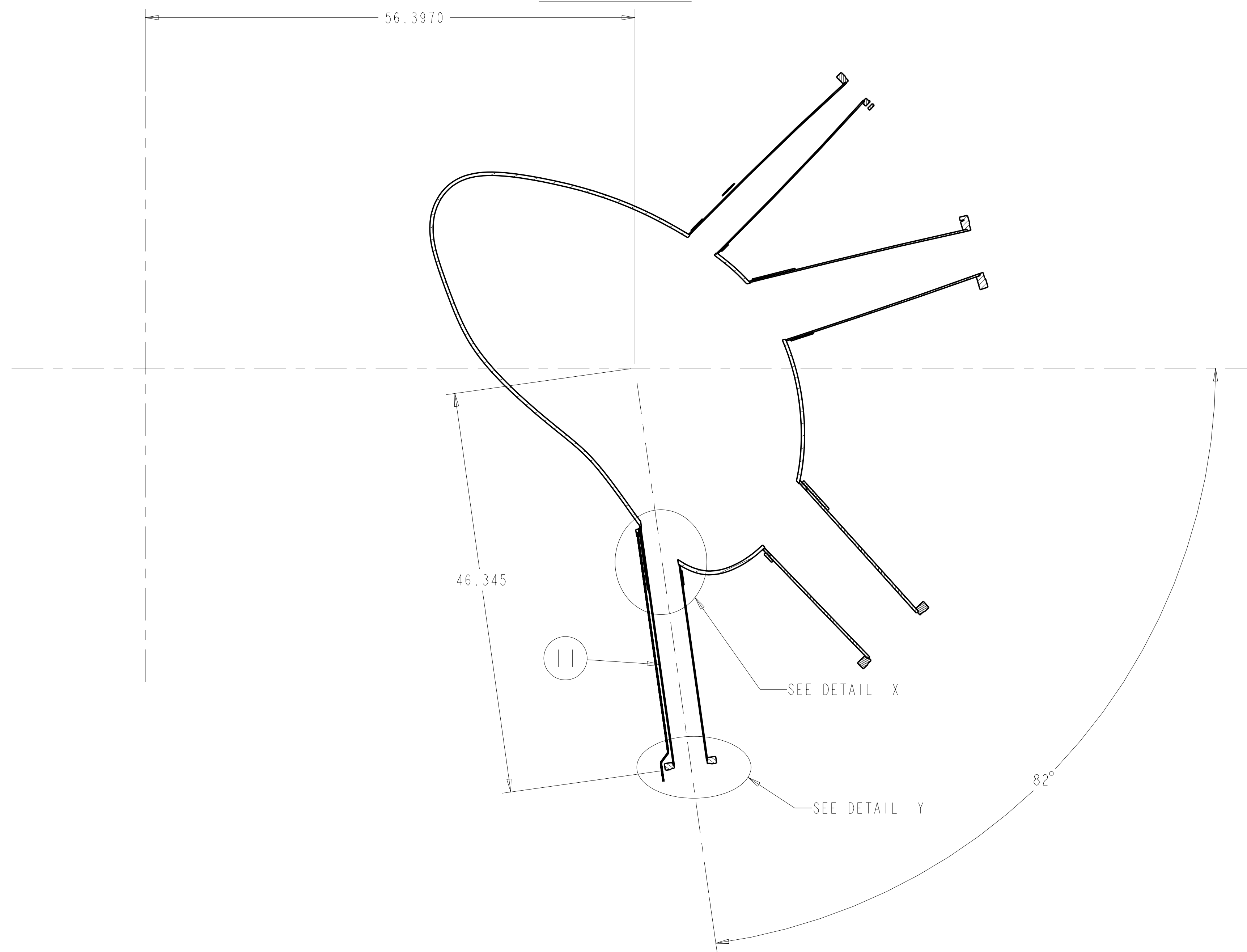
Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee										
UT-BATTELLE										
NATIONAL COMPACT STELLARATOR EXPERIMENT										
VACUUM VESSEL PERIOD ASSEMBLY										
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS				
54+	XX	XX	XX	0	1	XX	U			
RELEASE LEVEL	WIP						SE120-002		REV	A

SE120-002

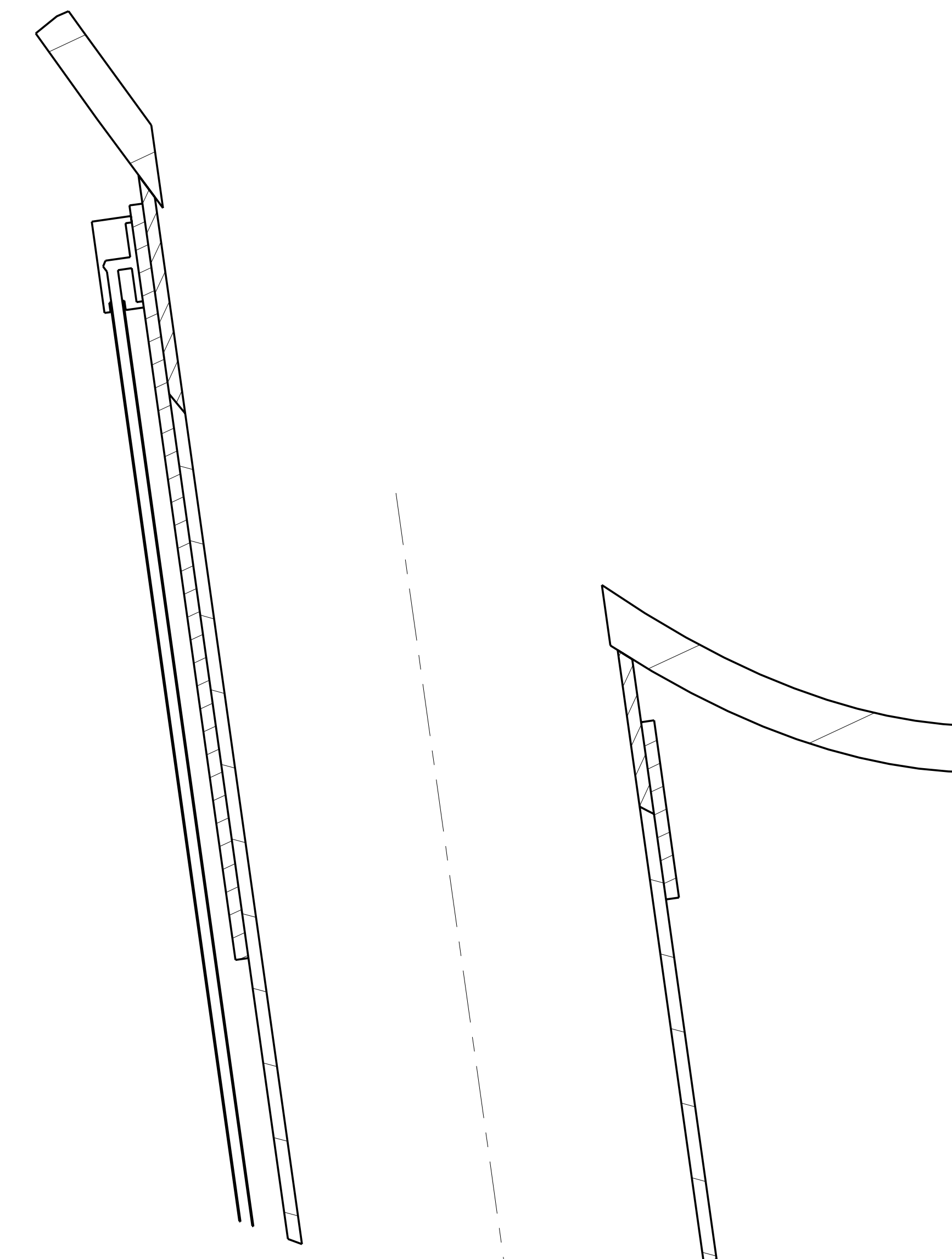
FOR PARTS LIST AND NOTES SEE SHEET 1.



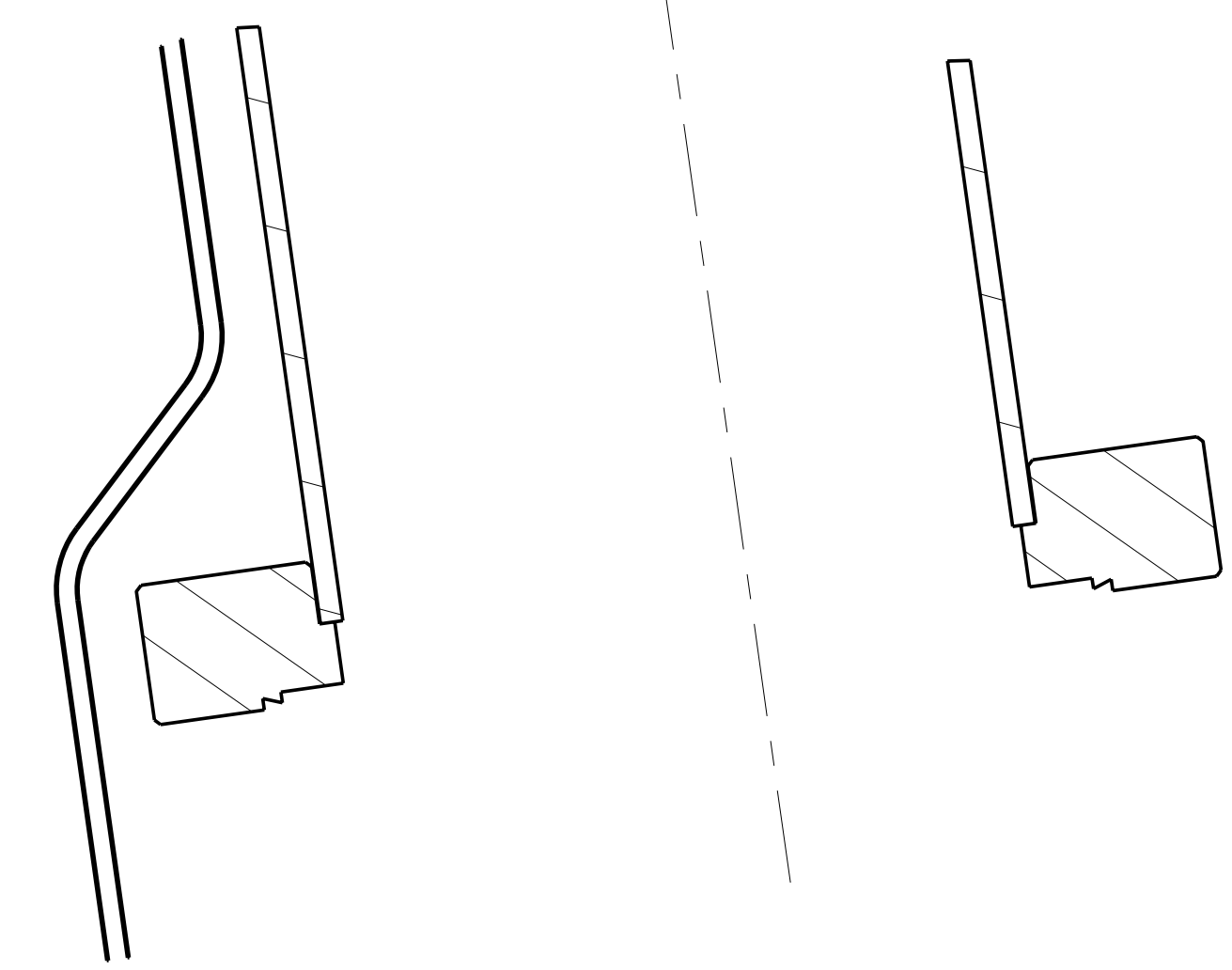
BOTTOM VIEW



SECTION PORT II-PORT II



DETAIL X
SCALE 1.000



DETAIL Y
SCALE 1.000

DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS.

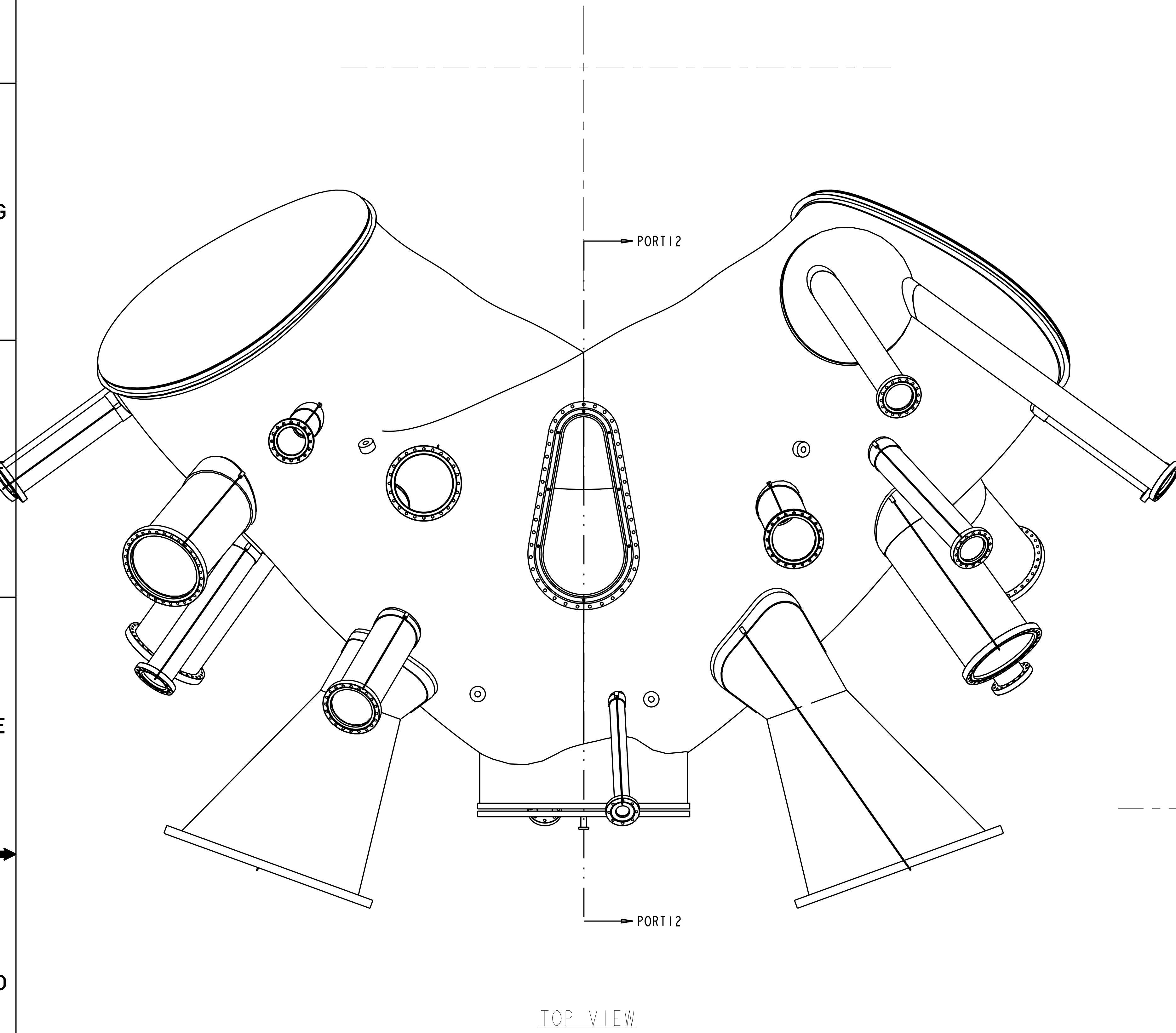
PRELIMINARY
FOR INFORMATION ONLY

Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee									
PROJECT NAME NATIONAL COMPACT STELLARATOR EXPERIMENT									
VACUUM VESSEL PERIOD ASSEMBLY									
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS			
54+	XX	XX	XX	1	XX	U			
RELEASE LEVEL							REV		
WIP							A		

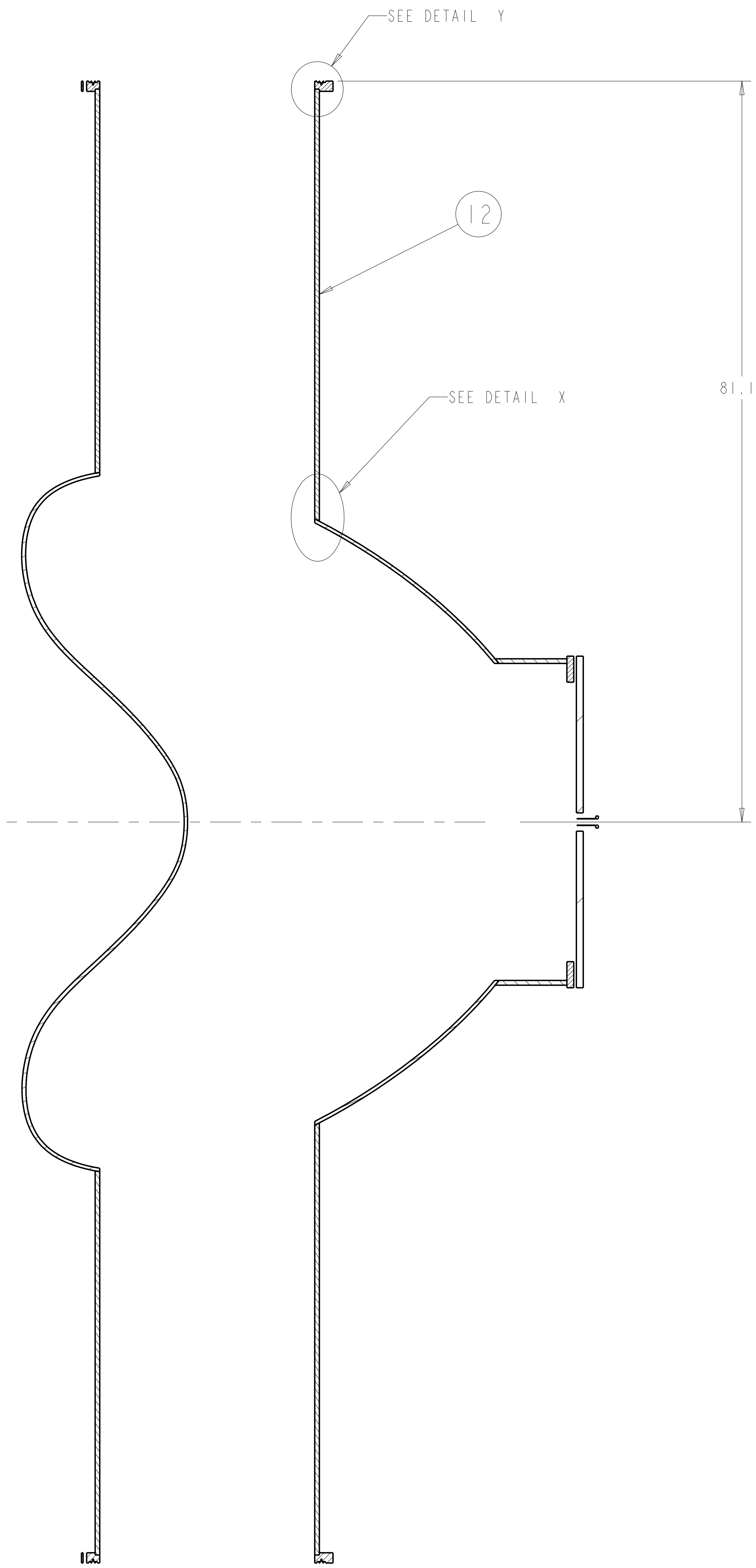
SE120-002

A

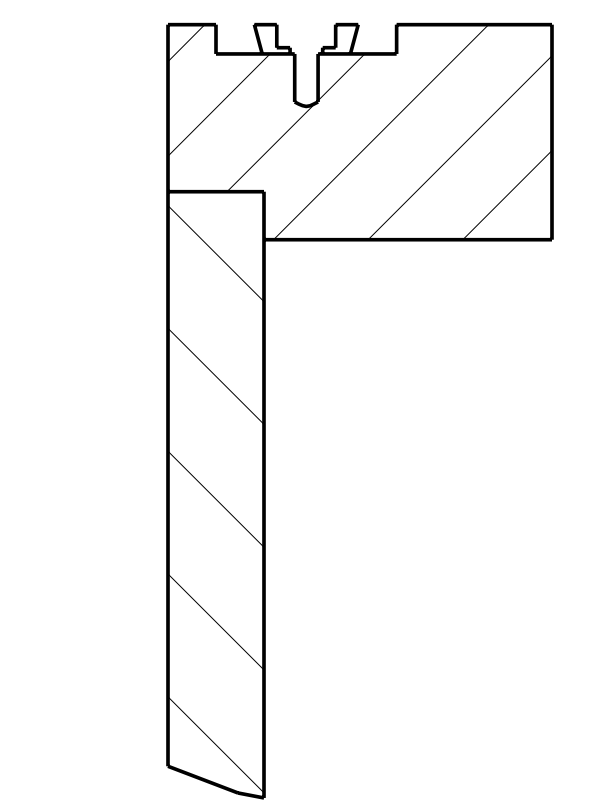
FOR PARTS LIST AND NOTES SEE SHEET 1.



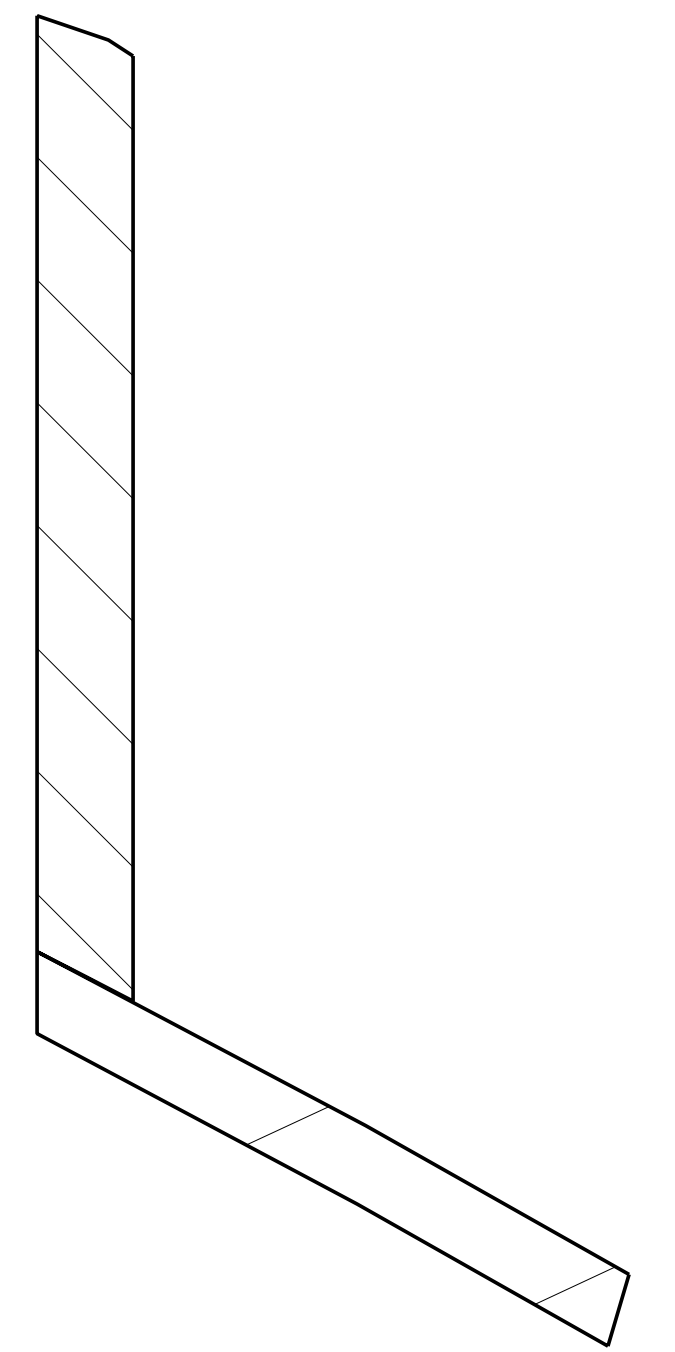
TOP VIEW



SECTION PORT12-PORT12



DETAIL Y
SCALE 1.000



DETAIL X
SCALE 1.000

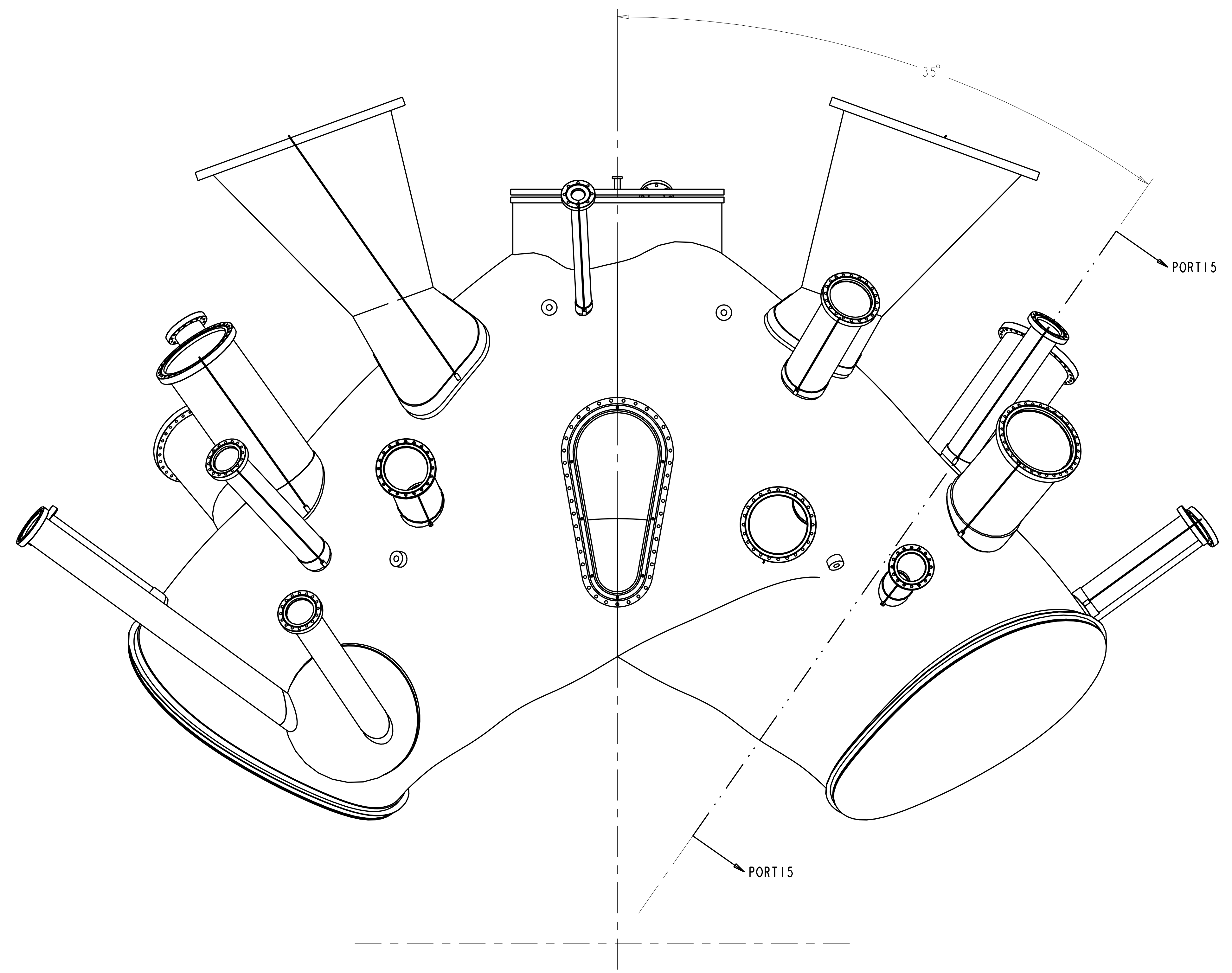
DIM. ARE TO THE COORDANT SYSTEM
AND NOT THE MAGNETIC AXIS

PRELIMINARY
FOR INFORMATION ONLY

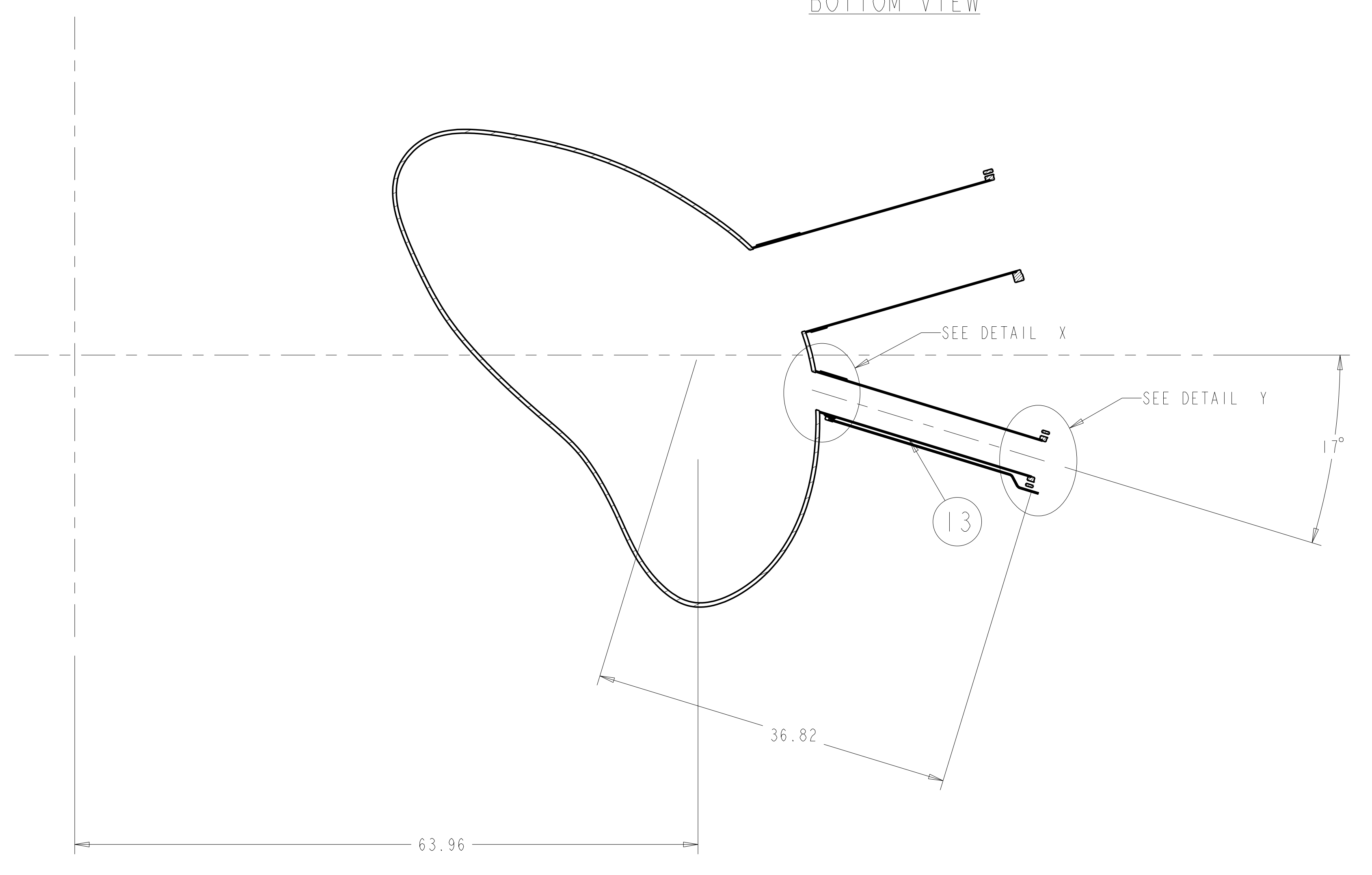
Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee						
PROJECT NAME NATIONAL COMPACT STELLARATOR EXPERIMENT						
VACUUM VESSEL PERIOD ASSEMBLY						
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
54+	XX	XX	XX	2	1	XX U
RELEASE LEVEL						REV
WIP						A
SE120-002						

SE120-002

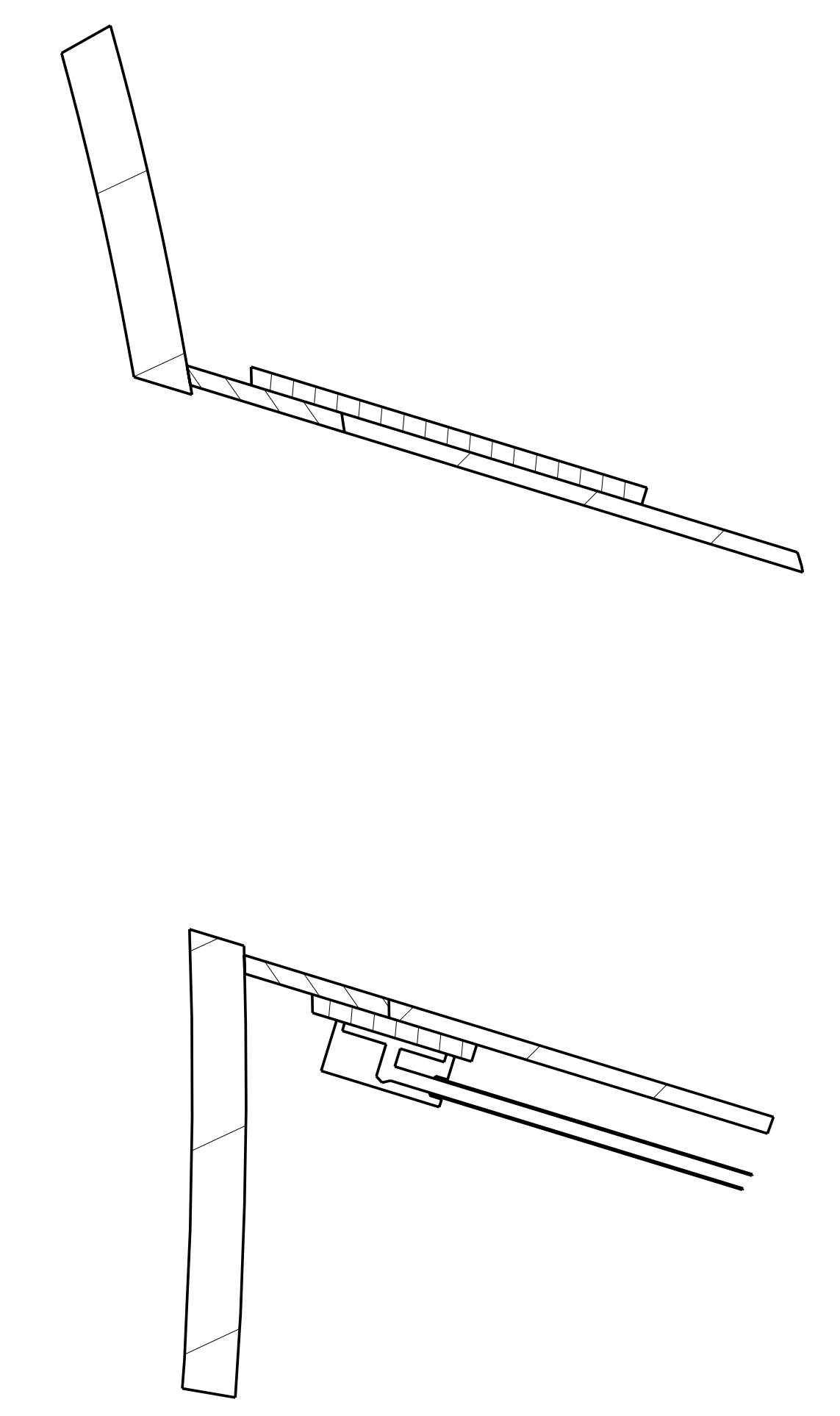
FOR PARTS LIST AND NOTES SEE SHEET 1.



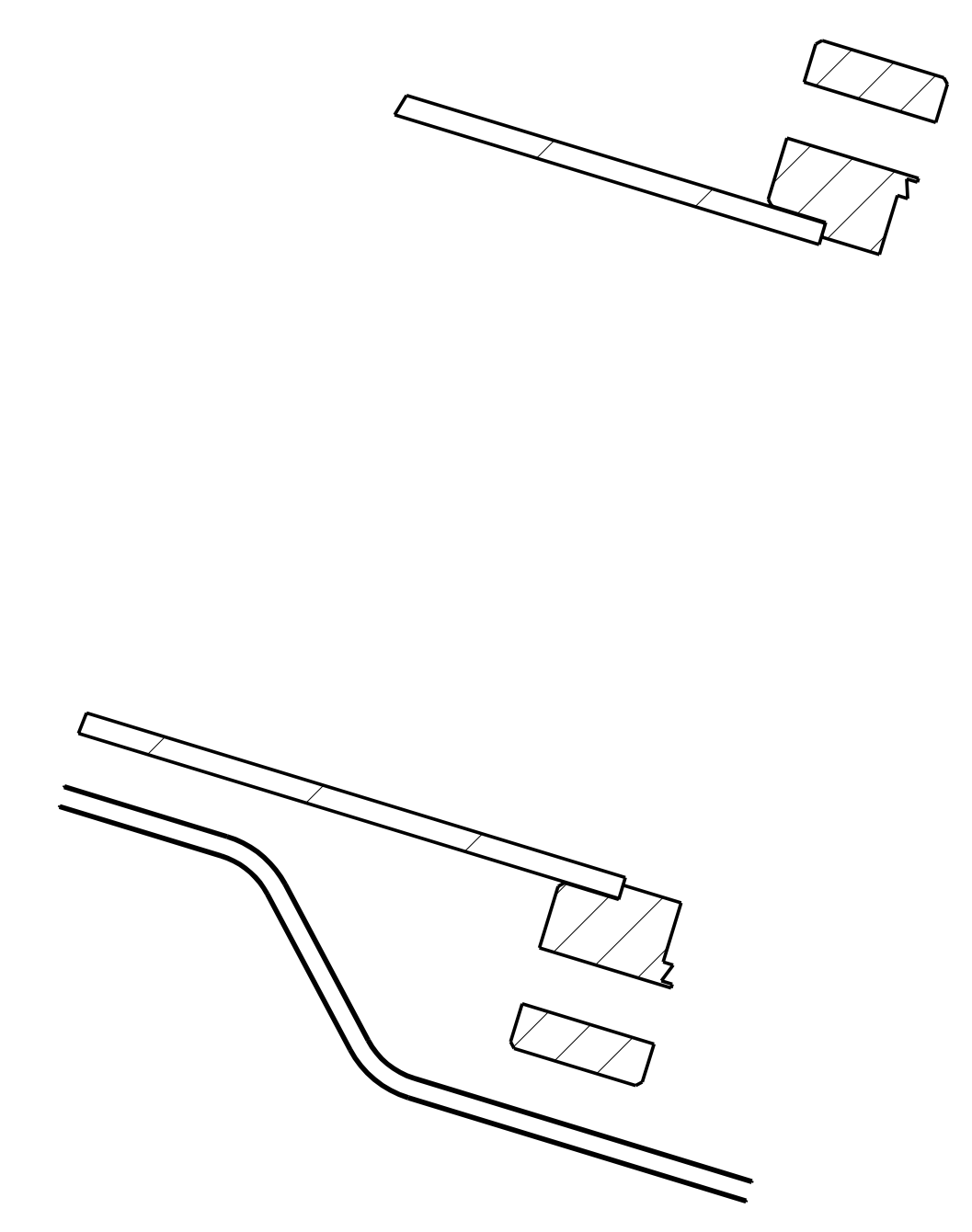
BOTTOM VIEW



SECTION PORT15-PORT15



DETAIL X
 SCALE 1.000



DETAIL Y
 SCALE 1.000

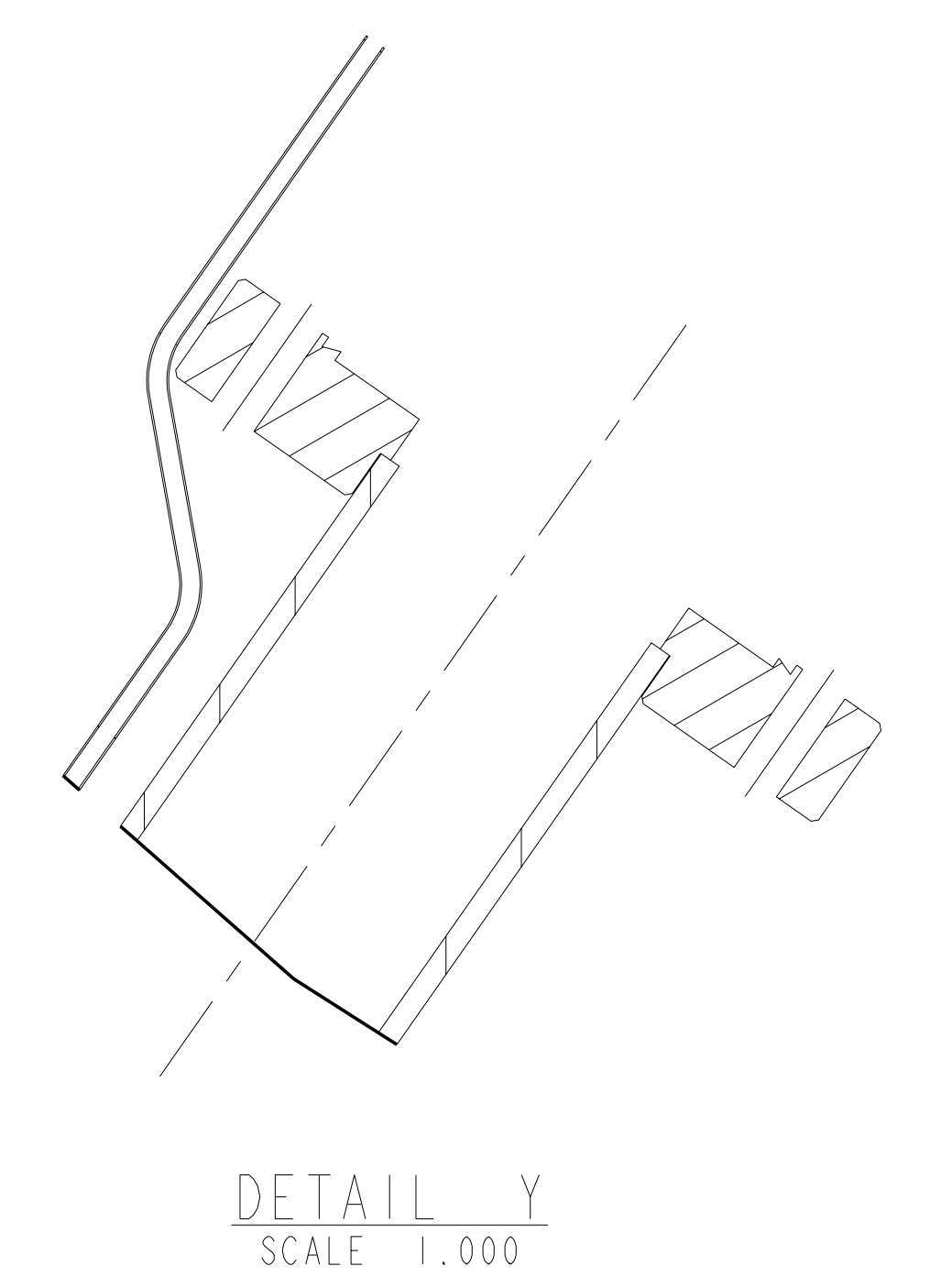
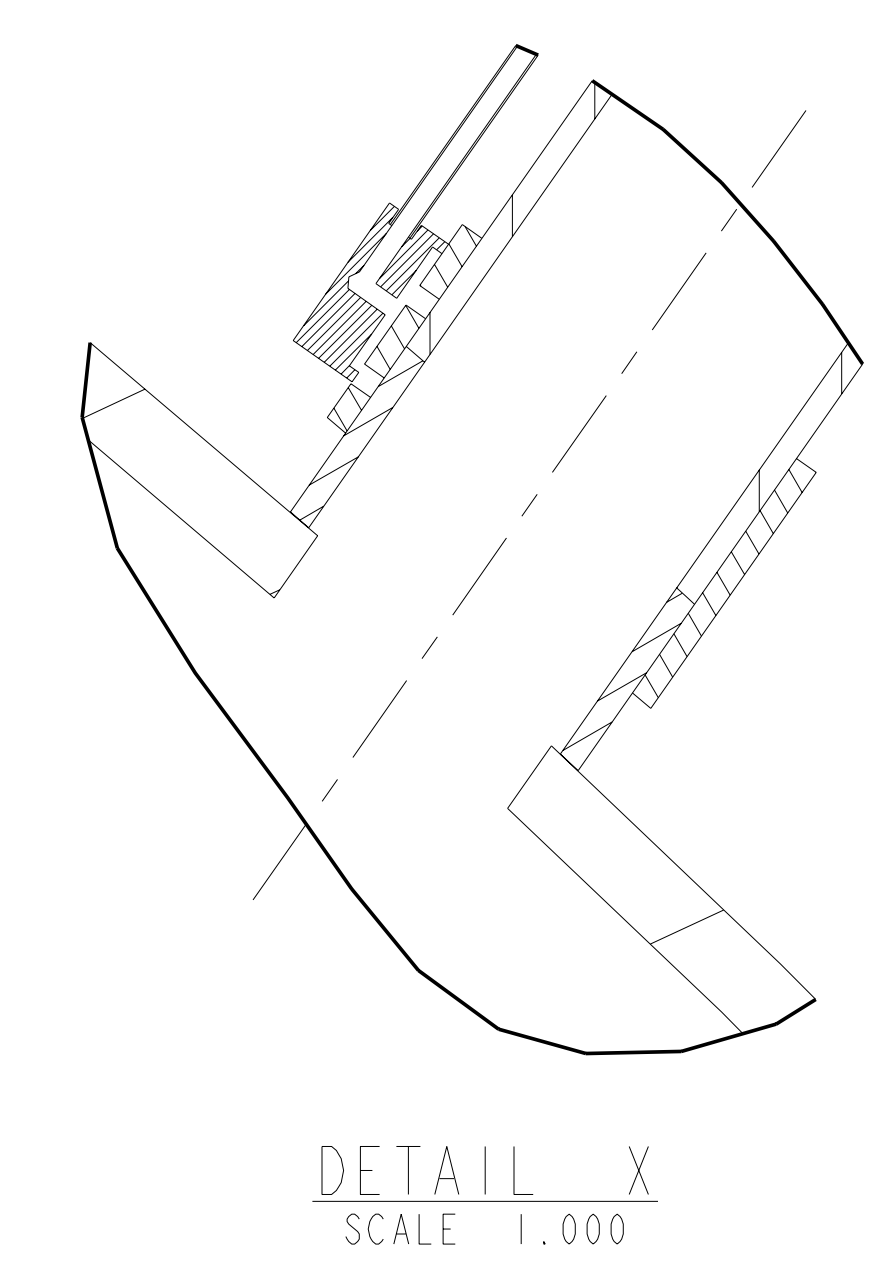
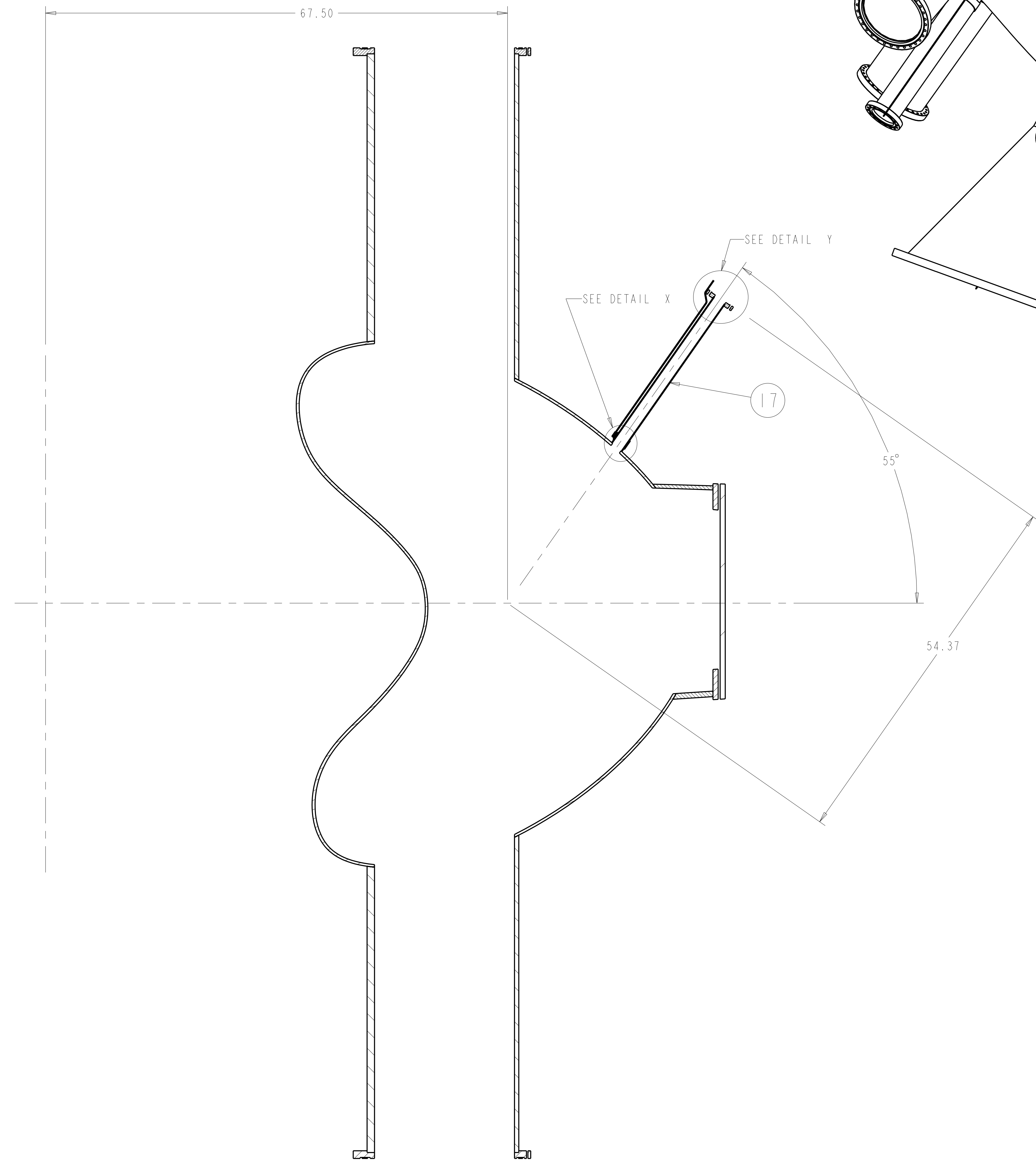
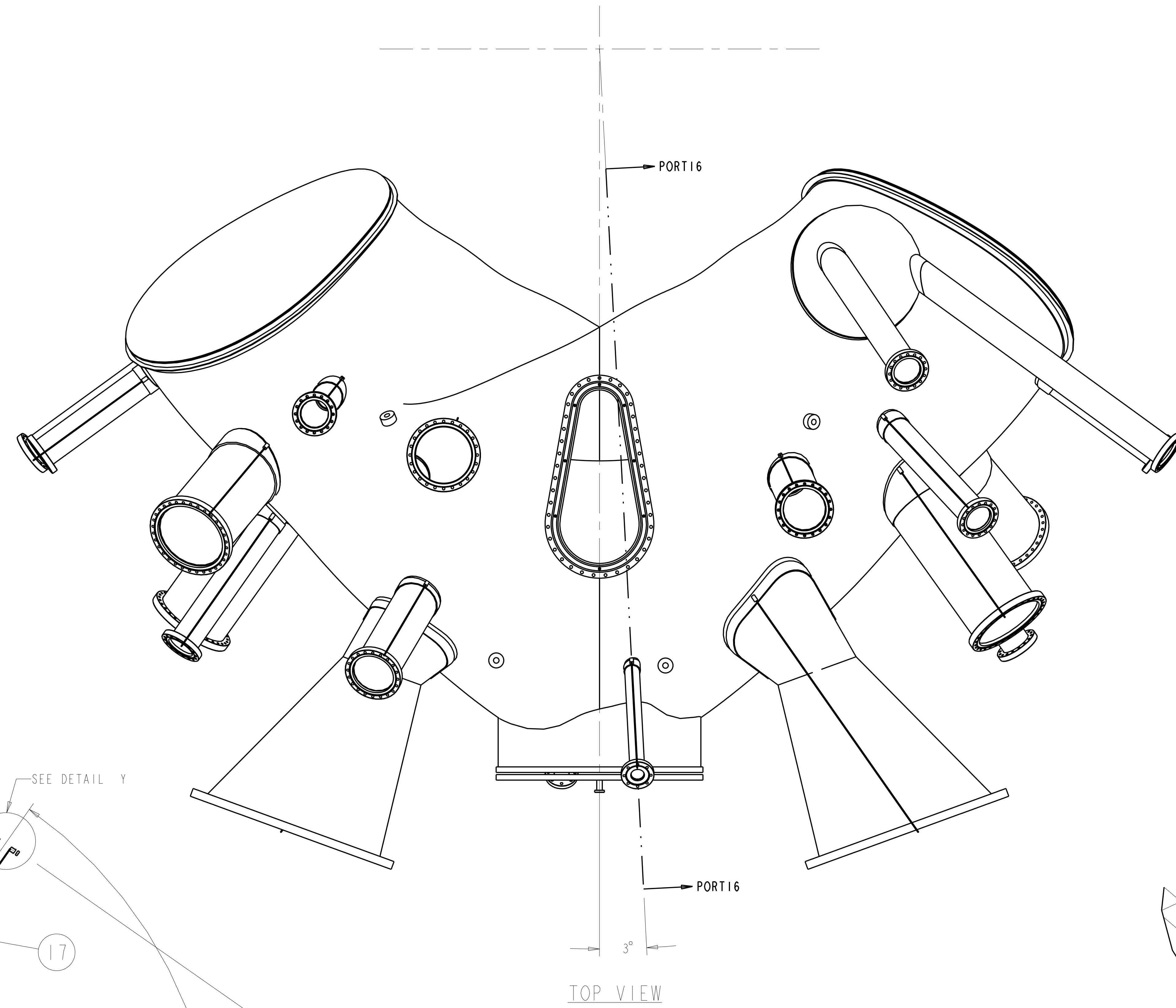
DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS

PRELIMINARY
 FOR INFORMATION ONLY

UT-BATTELLE		Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee	
PROJECT NAME			
NATIONAL COMPACT STELLARATOR EXPERIMENT			
VACUUM VESSEL PERIOD ASSEMBLY			
VERSION NO.	PLANT	BLDG	FL
54+	XX	XX	XX
RELEASE LEVEL		SHT OF	TYPE CLASS
WIP		3	1 XX U
REV			A
SE120-002			

SE120-002

FOR PARTS LIST AND NOTES SEE SHEET 1.



SECTION PORT16-PORT16

TOP VIEW

DETAIL X
SCALE 1.000

DETAIL Y
SCALE 1.000

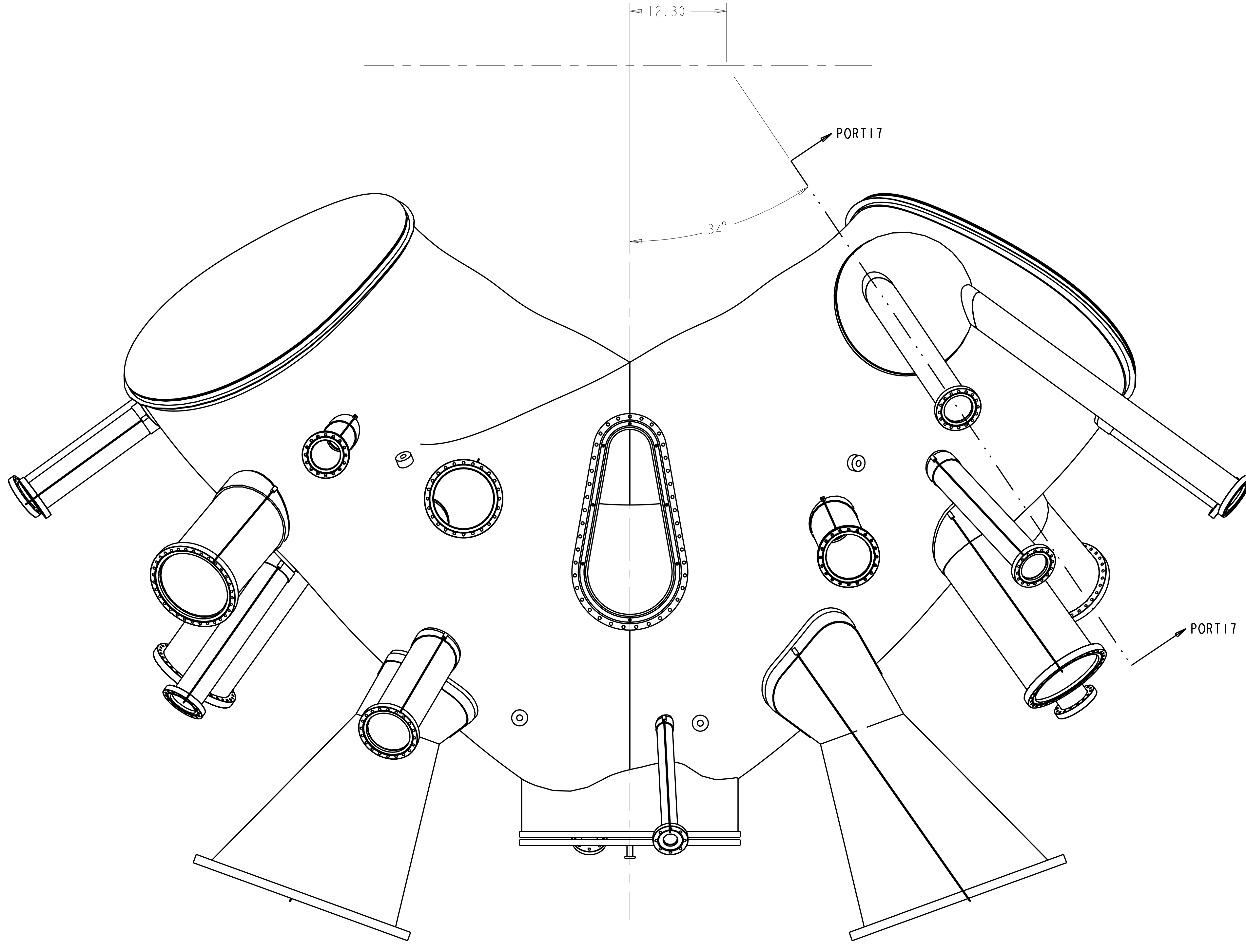
DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS

PRELIMINARY
FOR INFORMATION ONLY

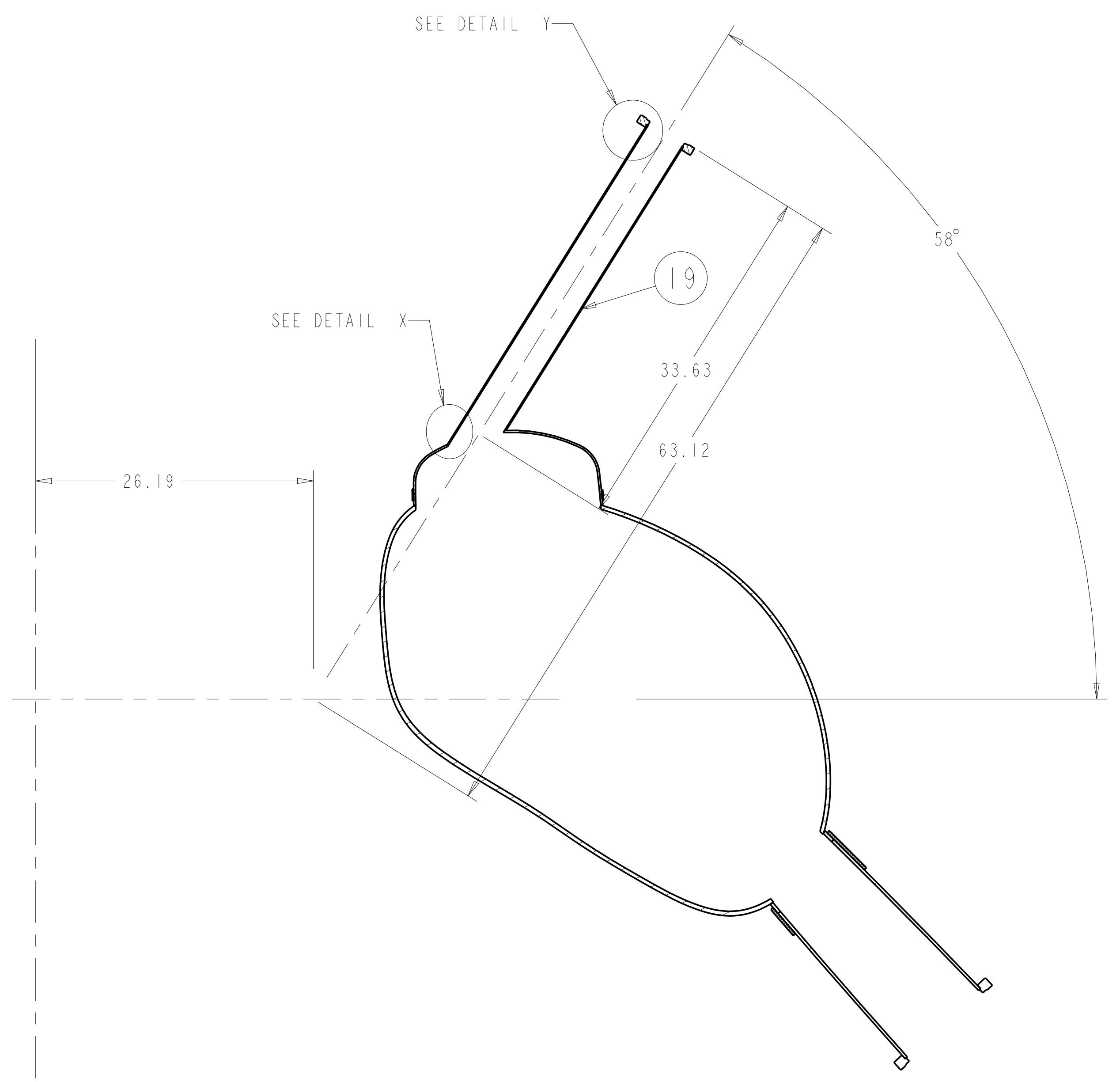
Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee						
UT-BATTELLE NATIONAL COMPACT STELLARATOR EXPERIMENT						
VACUUM VESSEL PERIOD ASSEMBLY						
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS
54+	XX	XX	XX	4	1	XX U
RELEASE LEVEL		WIP			REV	
		SE120-002			A	

SE120-002

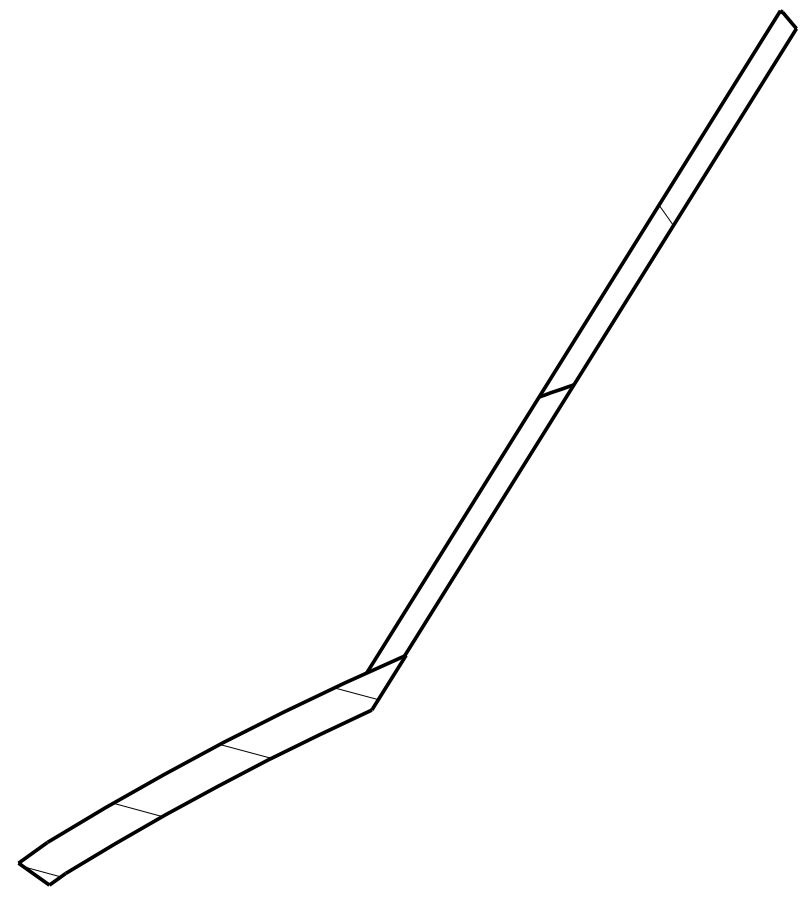
FOR PARTS LIST AND NOTES SEE SHEET 1.



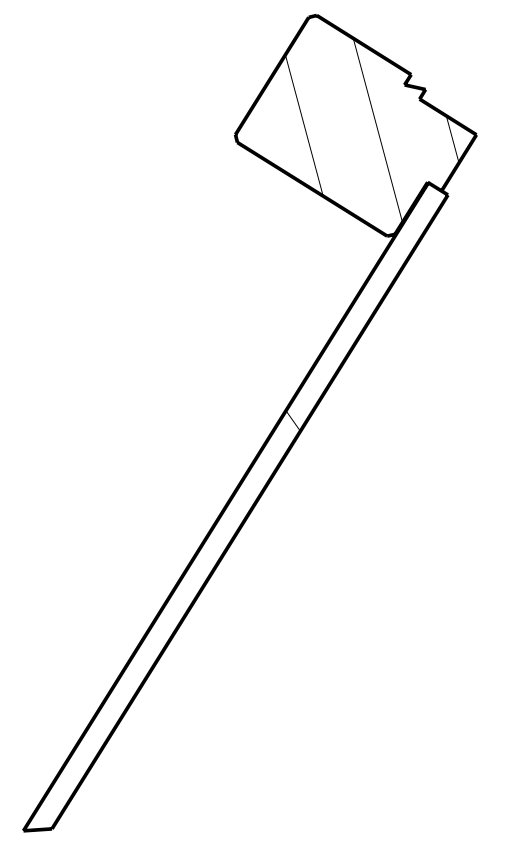
TOP VIEW



SECTION PORT17-PORT17



DETAIL X
SCALE 1.000



DETAIL Y
SCALE 1.000

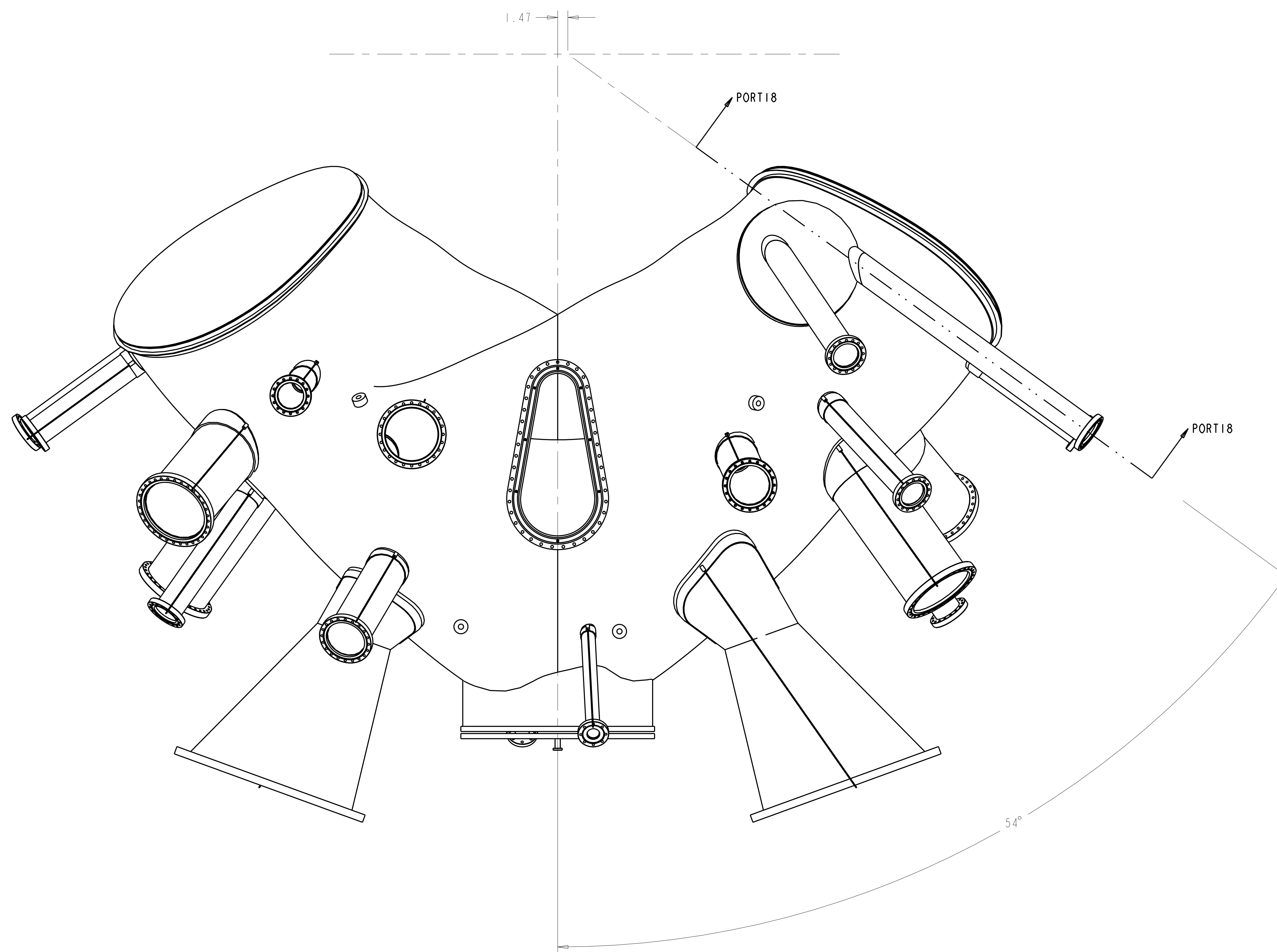
DIM. ARE TO THE COORDANT SYSTEM AND NOT THE MAGNETIC AXIS

PRELIMINARY
FOR INFORMATION ONLY

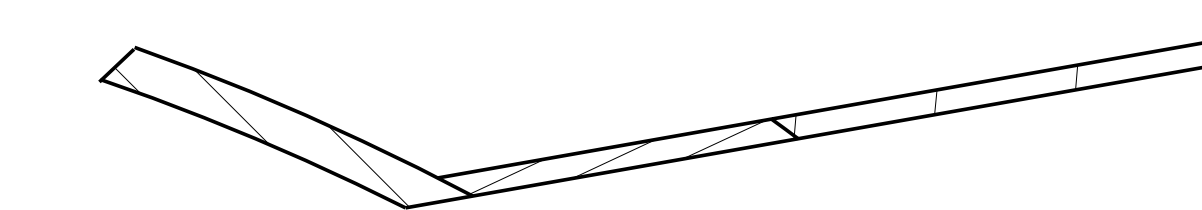
Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee									
UT-BATTELLE									
NATIONAL COMPACT STELLARATOR EXPERIMENT									
VACUUM VESSEL PERIOD ASSEMBLY									
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS			
54+	XX	XX	XX	5	1	XX	U		
RELEASE LEVEL		WIP		SE120-002		REV		A	

SE120-002

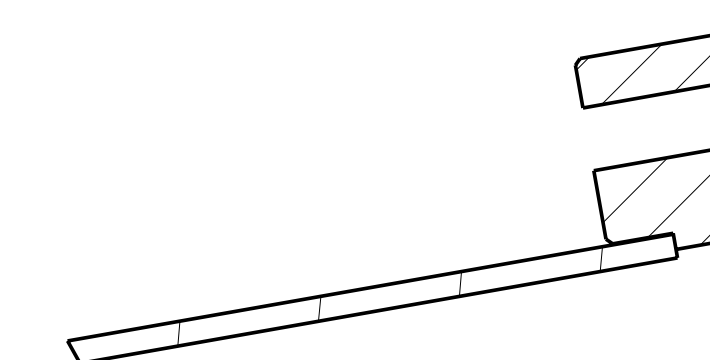
FOR PARTS LIST AND NOTES SEE SHEET 1.



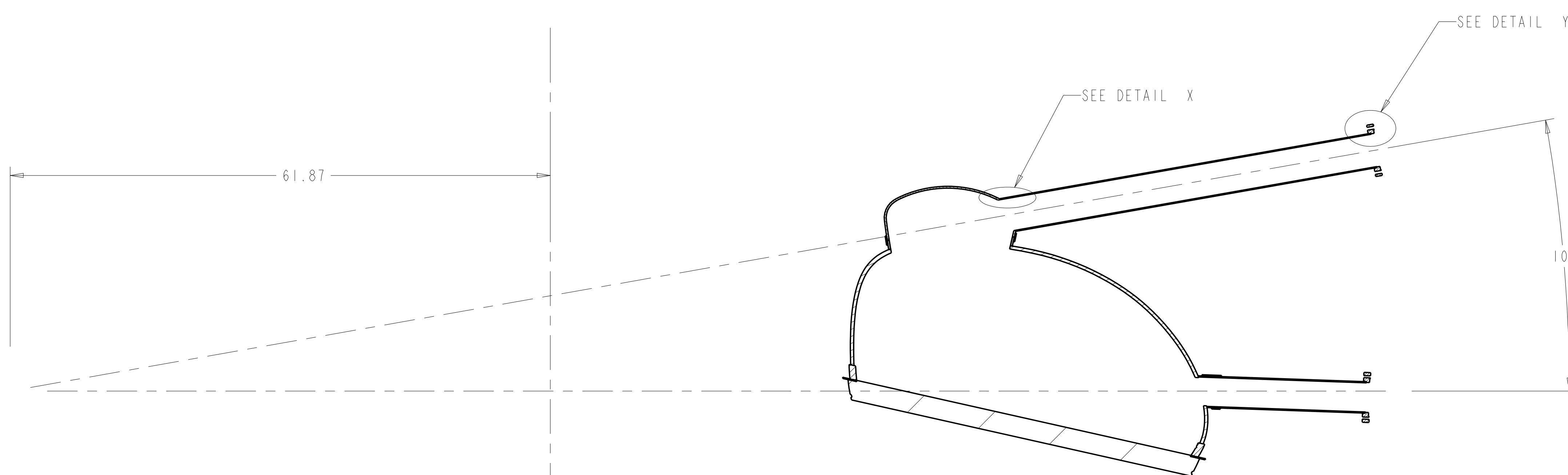
TOP VIEW



DETAIL X
SCALE 1.000



DETAIL Y
SCALE 1.000



SECTION PORT18-PORT18

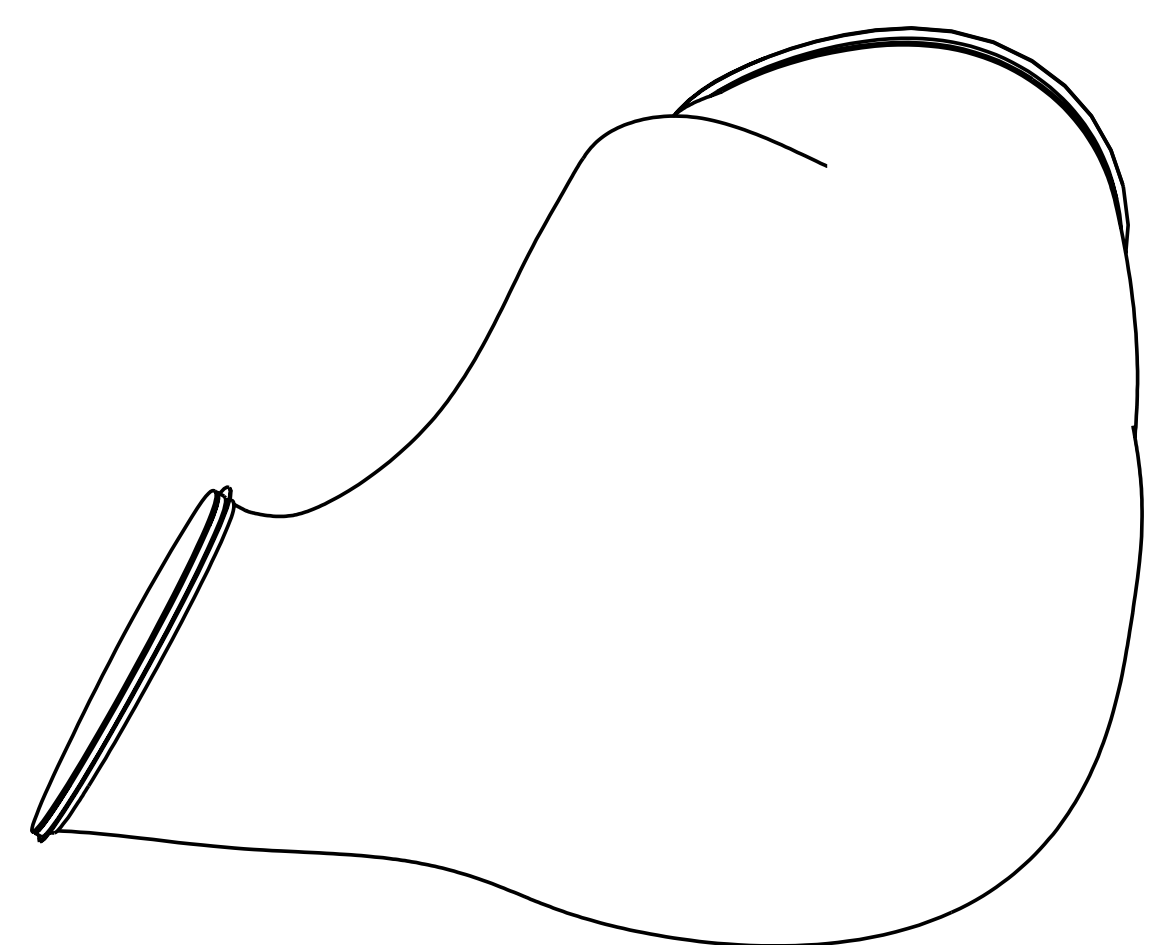
DIM. ARE TO THE COORDANT SYSTEM
AND NOT THE MAGNETIC AXIS

PRELIMINARY
FOR INFORMATION ONLY

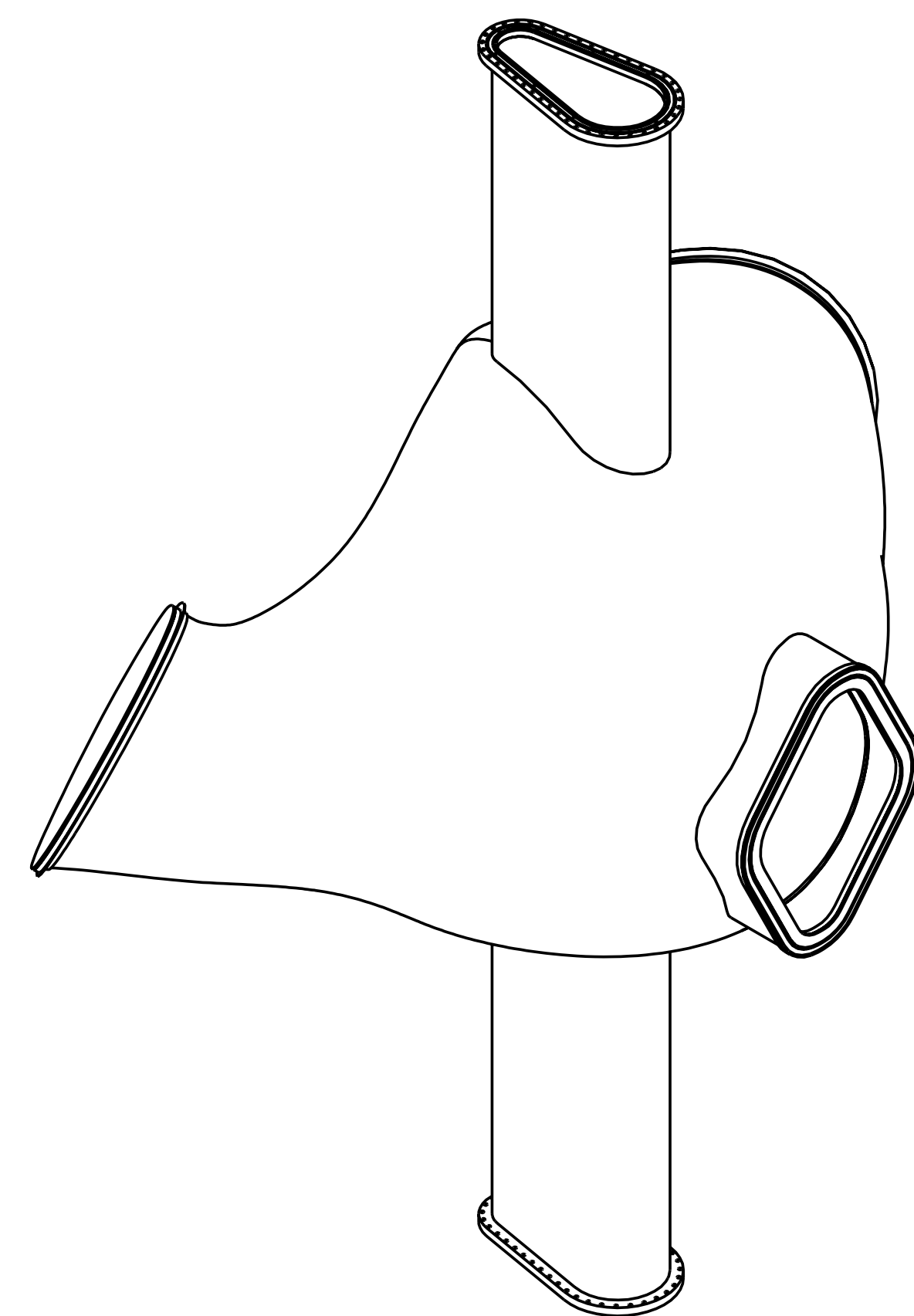
Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee							
UT-BATTELLE							
NATIONAL COMPACT STELLARATOR EXPERIMENT							
VACUUM VESSEL PERIOD ASSEMBLY							
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS	
54+	XX	XX	XX	6	1	XX	U
RELEASE LEVEL		SEI20-002				REV	
WIP						A	

SEI20-002

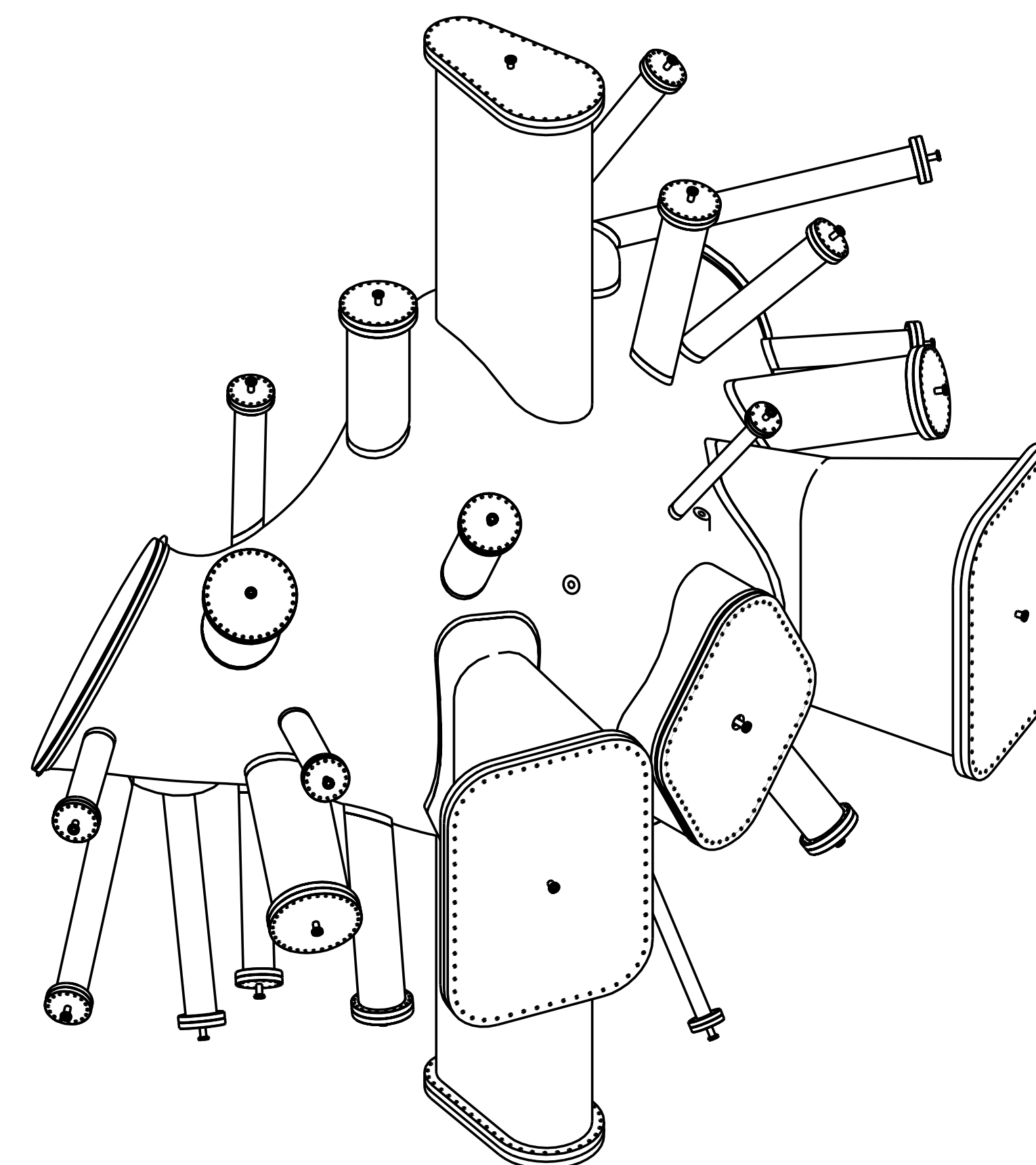
FABRICATION STEPS
 (VENDOR RESPONSIBLE FOR
 STEPS 1 THRU 6)



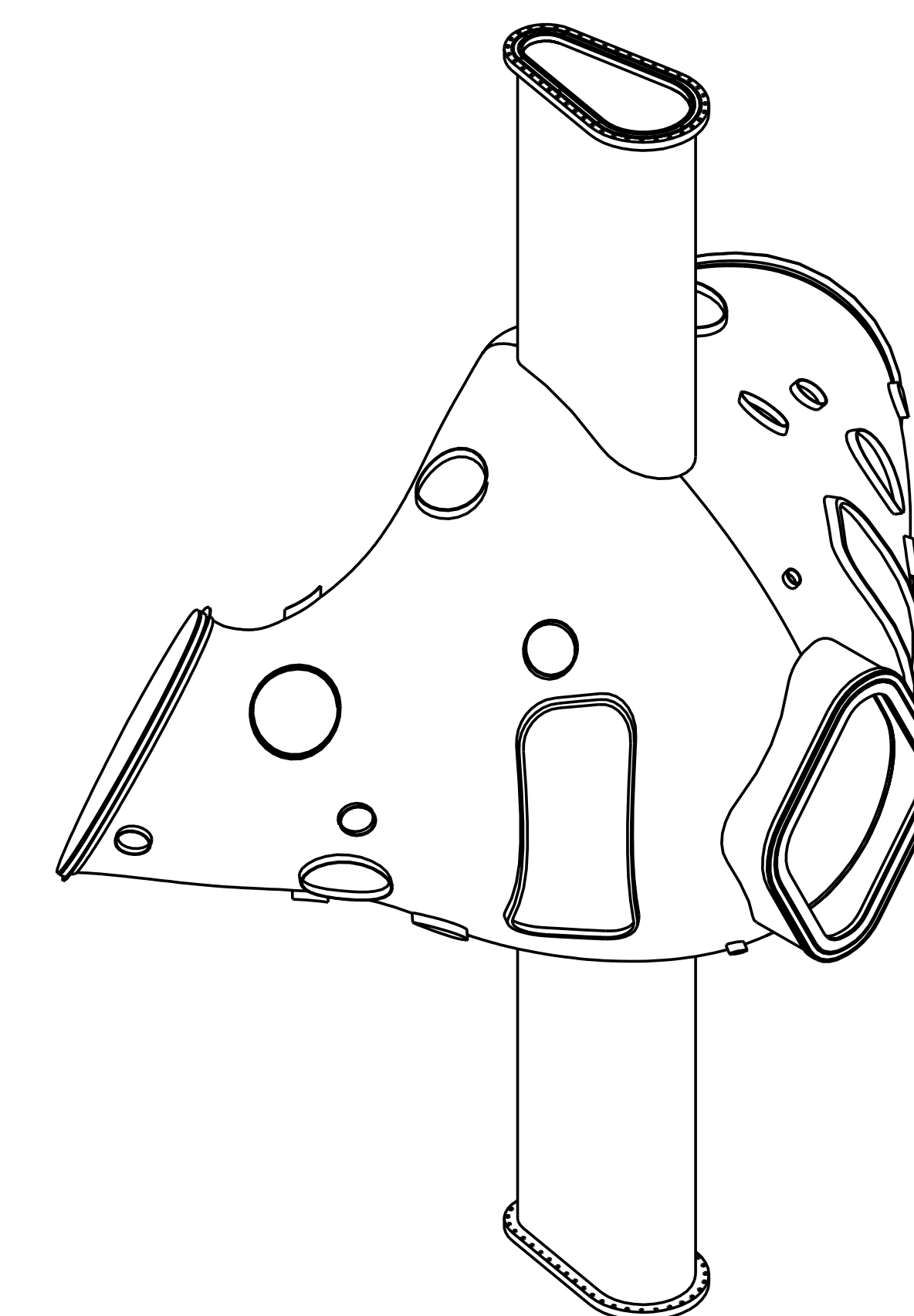
STEP 1
 BASIC VESSEL
 CONFIGURATION



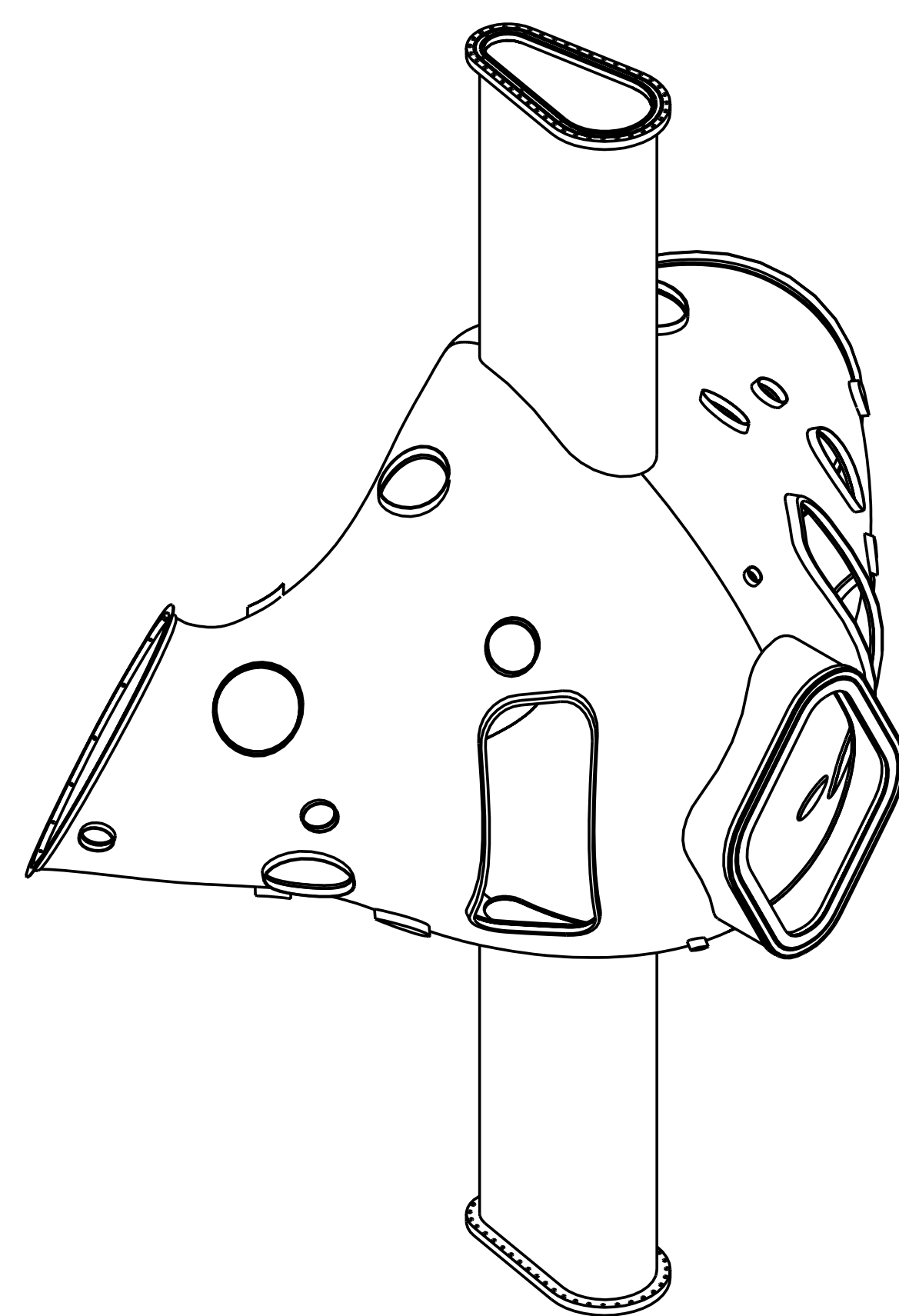
STEP 2
 NB AND VERTICAL PORTS
 HAVE BEEN POSITIONED AND
 WELDED TO VESSEL
 PORT OPENING HAVE BEEN MADE TO VESSEL



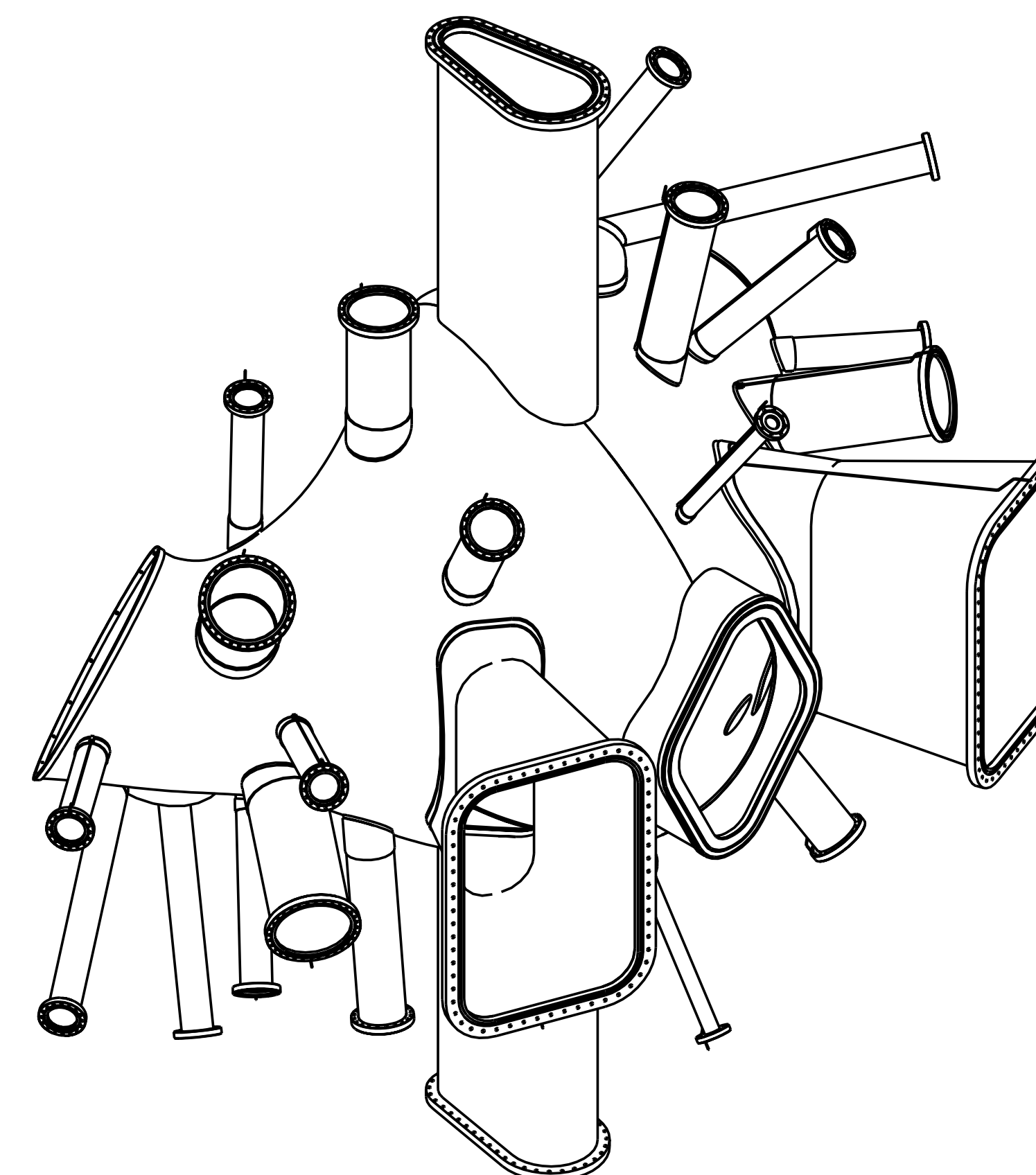
STEP 3
 PORTS HAVE BEEN
 POSITIONED AND
 WELDED TO
 VESSEL



STEP 4
 PORTS HAVE BEEN CUT
 LEAVING A STUB ON THE
 VESSEL FOR REATTACHING
 PORTS AT PPPL



STEP 5
 PORT OPENING HAVE
 BEEN CUT IN THE VESSEL



STEP 6
 DURING THE DEVICE ASSEMBLY
 AT PPPL THE PORTS WILL BE
 REATTACHED AS SHOWN.

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UT-BATTELLE									
NATIONAL COMPACT STELLERATOR EXPERIMENT									
VACUUM VESSEL PERIOD ASSEMBLY									
VERSION NO.	PLANT	BLDG	FL	SHT OF	TYPE	CLASS			
54+	XX	XX	XX	7	1	XX	U		
RELEASE LEVEL	SEI20-002						REV		
WIP							A		

SEI20-002