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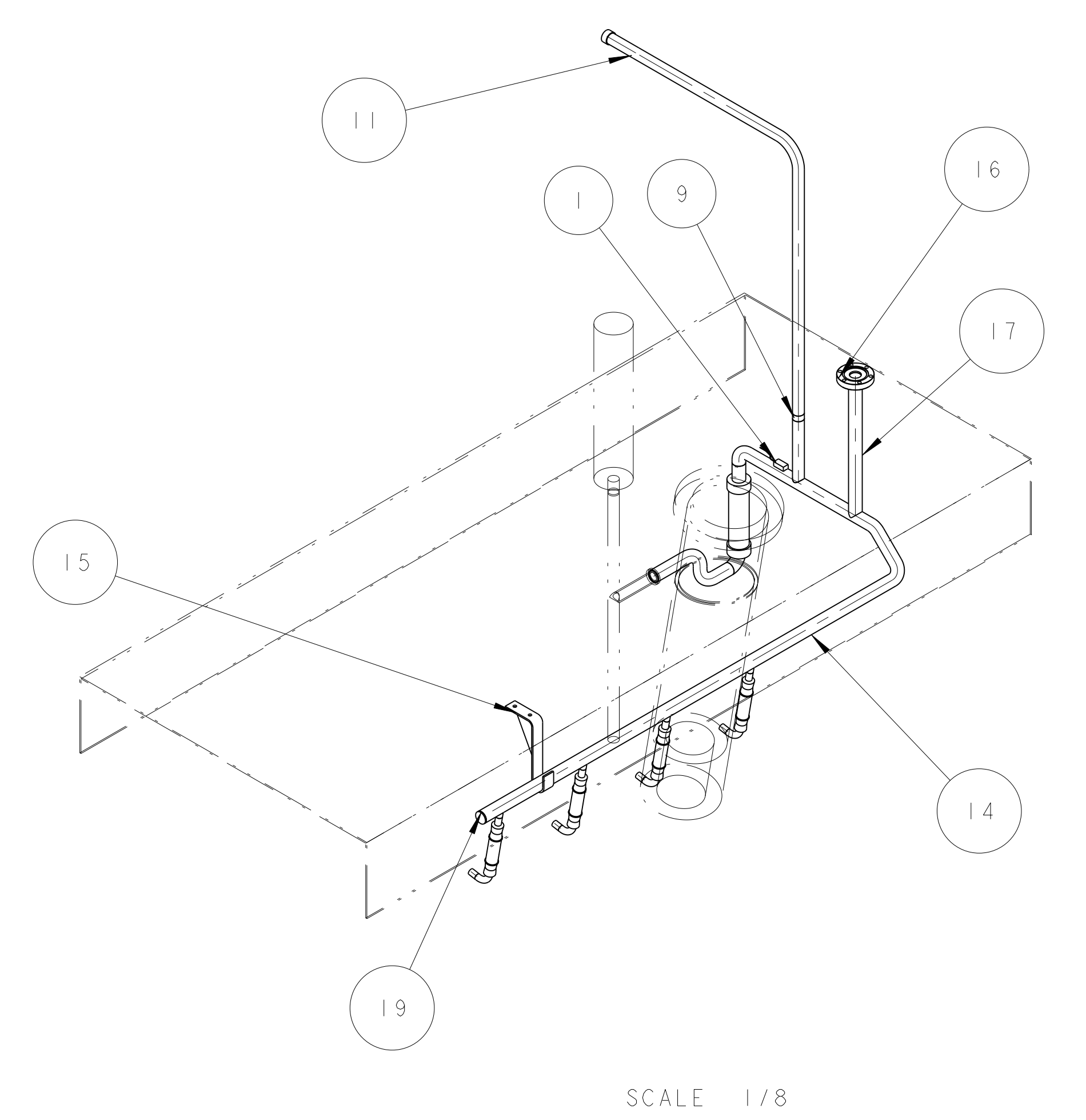
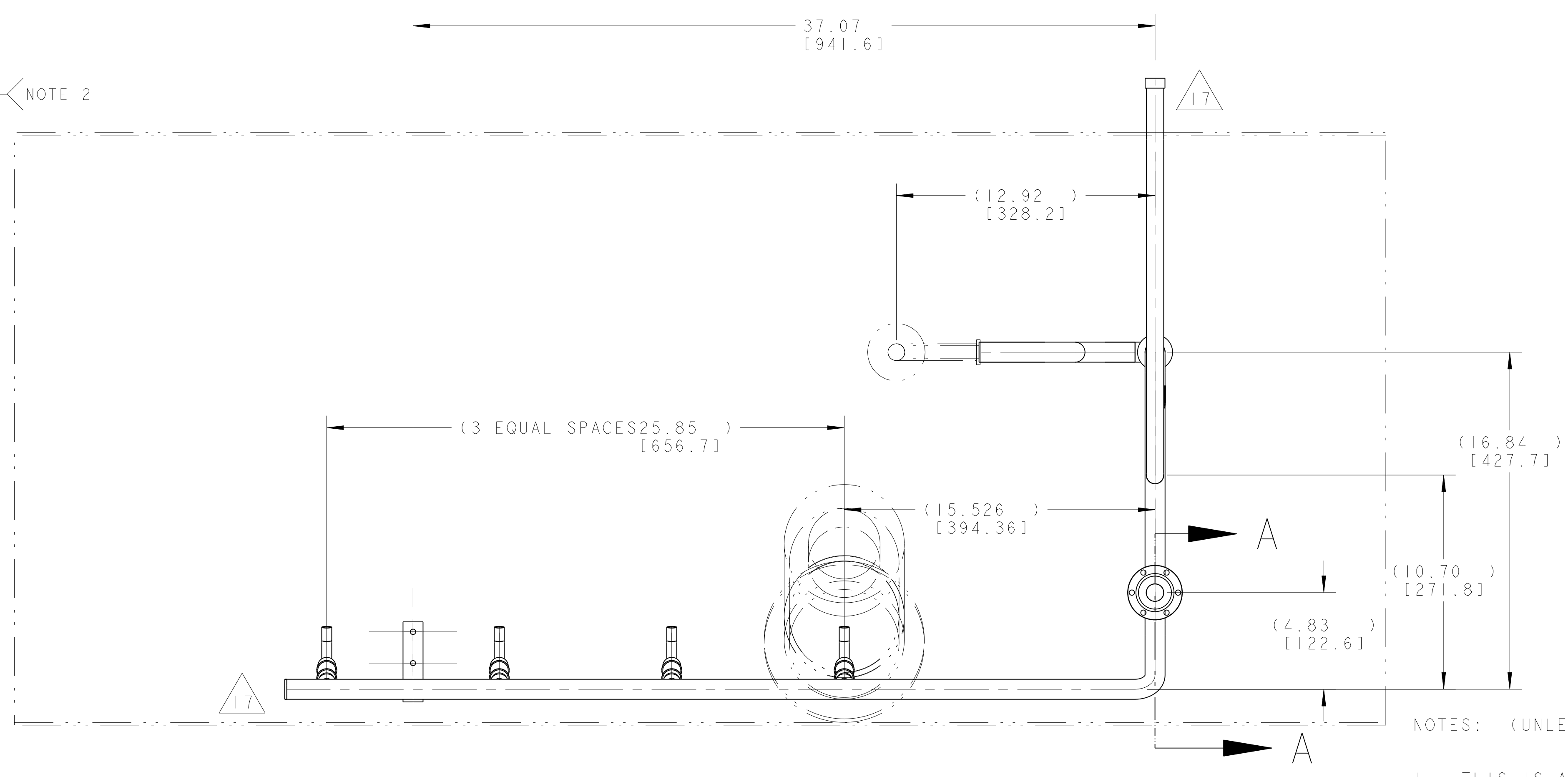
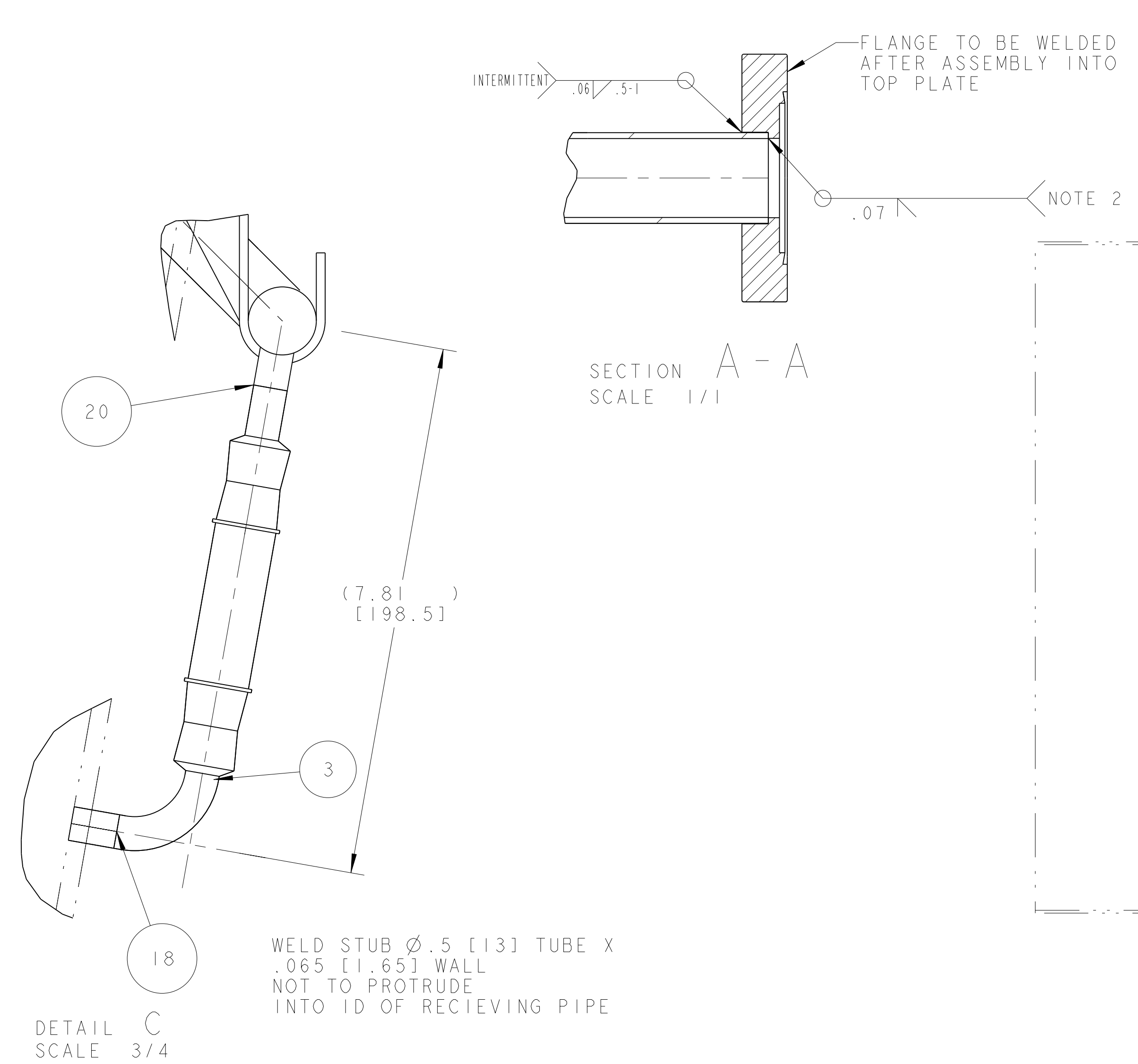
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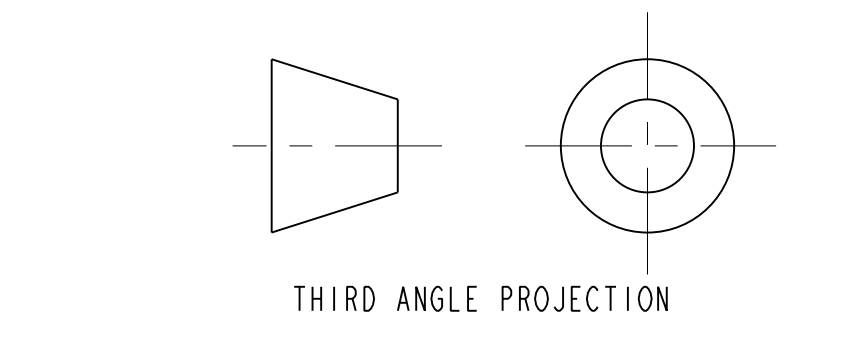
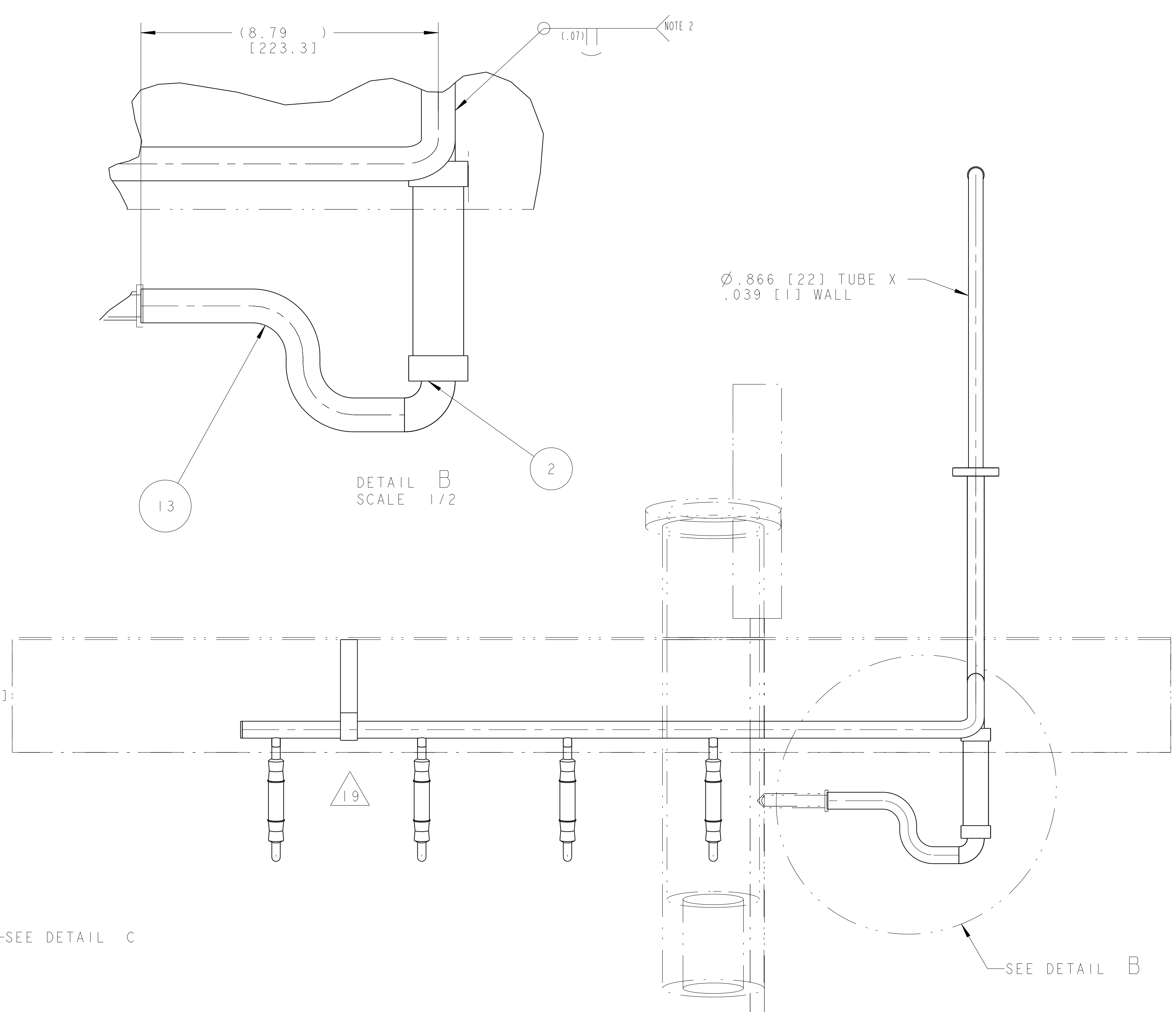
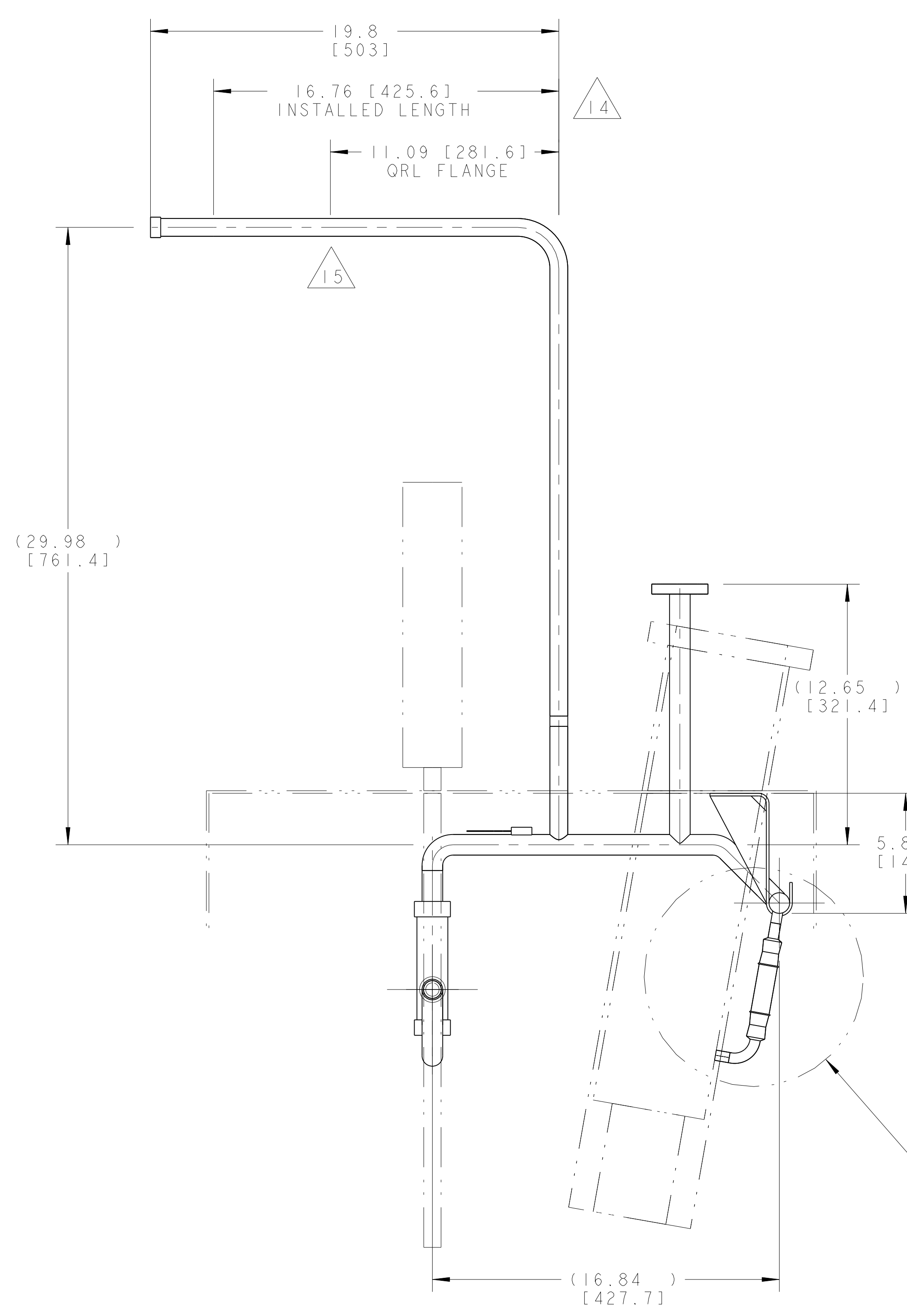
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- NOTES: (UNLESS OTHERWISE SPECIFIED)
- THIS IS A CRYOGENIC VACUUM COMPONENT.
  - WELDING PROCEDURE: PER VENDOR SPECIFICATION WITH LBNL APPROVAL.
  - CLEANING PROCEDURE: PER VENDOR SPECIFICATION WITH LBNL APPROVAL.
  - PACKAGING AND STORAGE PROCEDURE OF THE COMPONENTS: PER VENDOR SPECIFICATION WITH LBNL APPROVAL.
  - DIMENSIONS AND TOLERANCING PER ANSI Y14.5M-1982. UNITS ARE IN INCHES [mm] UNLESS OTHERWISE SPECIFIED.
  - USE OF SULFUR OR SILICONE BEARING OILS, LUBRICANTS, OR COOLANTS ARE STRICTLY PROHIBITED.
  - USE OF RESIN OR RUBBER BONDED ABRASIVES UNDER POWER IS STRICTLY PROHIBITED. USE VITREOUS BONDED ABRASIVES ONLY.
  - VENDOR SUGGESTED CHANGES TO WELD PREPS; SUBJECT TO LBNL APPROVAL.
  - FITTINGS MAY BE USED IN PLACE OF BENDS; SUBJECT TO LBNL APPROVAL.
  - VENDOR SUGGESTED CHANGES TO TOLERANCES TO FACILITATE FABRICATION OR ASSEMBLY; SUBJECT TO LBNL APPROVAL.
  - REMOVE ALL THE BURRS AND REAM THE ENDS FOR CIRCULARITY AND CLEAN ENDS.
  - TUBE END SURFACE MUST BE PERPENDICULAR TO THE TUBE AXIS WITHIN +/- .010.
  - PERFORM ACCEPTANCE TESTS PER SECTION 3.2 OF LBNL SPECIFICATION M856.
  - A MARK DESIGNATING THE INSTALLED LENGTH WILL BE UTILIZED DURING FINAL INSTALLATION OF THE FEEDBOX ASSEMBLY. MARK, SCRIBE OR ETCH THIS LOCATION IN A PERMANENT MANNER, SUBJECT TO LBNL APPROVAL, TO AN ACCURACY OF  $\pm 0.063$ ".
  - PROVIDE A MINIMUM LENGTH OF 4.0" OF STRAIGHT, SMOOTH PIPE ON THE INDICATED SIDE OF THE INSTALLED LENGTH MARK FOR PIPE WELDING DURING FINAL INSTALLATION OF THE FEEDBOX ASSEMBLY.
  - PIPE MUST BE STRAIGHT AND SMOOTH (NO BUMPS) FOR 0.5" ON EITHER SIDE OF THE CENTER-PLANE OF THE SUPPORT.
  - CAP BOTH ENDS OF PIPE AFTER ACCEPTANCE TESTS PER SECTION 3.2 OF LBNL SPECIFICATION M856.
  - INSTALL TEMPERATURE SENSOR PER LHC SPECIFICATION LHC-QIT-ES-0002. SENSOR TO BE PROVIDED BY LBNL.
  - ALL PIPES TO BE INSULATED PER MLI SPECIFICATION PROVIDED BY VENDOR AND SUBJECT TO LBNL APPROVAL. IN LOCATIONS WHERE PIPES PASS THROUGH SUPPORT ASSEMBLIES, INSULATION IS TO BE WRAPPED WITH KAPTON TAPE FOR PROTECTION FROM ABRASION DURING THERMAL CYCLING.



ITEM	PART NO.	REQD	DESCRIPTION	MATERIAL
20	-	4	TUBE, PER ASTM A269	SS 304L
19	-	1	WTS MANIFOLD PIPE CAP	SS 304L
18	-	4	TUBE, PER ASTM A269	SS 304L
17	-	1	TUBE, PER ASTM A269	SS 304L
16	-	1	2-3/4 CONFLAT, MDC 110012	SS 304L
15	29M856	1	PIPE HANGER	SS 304L
14	-	1	WTS MANIFOLD HEADER, SS TUBING	SS 304L
13	-	1	TUBE, PER ASTM A269	SS 304L
11	-	1	TUBE, PER ASTM A269	SS 304L
9	-	1	$\phi$ 5/16" X 1/16" FLAT PLATE ORIFICE	SS 304L
3	-	4	BRAIDED FLEX HOSE, 1/2" ID X 2.3" ILL	SS 300 SERIES
2	-	1	BRAIDED FLEX HOSE, 1" ID X 5" ILL	SS 300 SERIES
1	-	1	CERNOX, TEMP SENSOR	

REV	DATE	BY	CHK	ZONE	DESCRIPTION
A	11/02/02	JDR	SPV		INITIAL RELEASE

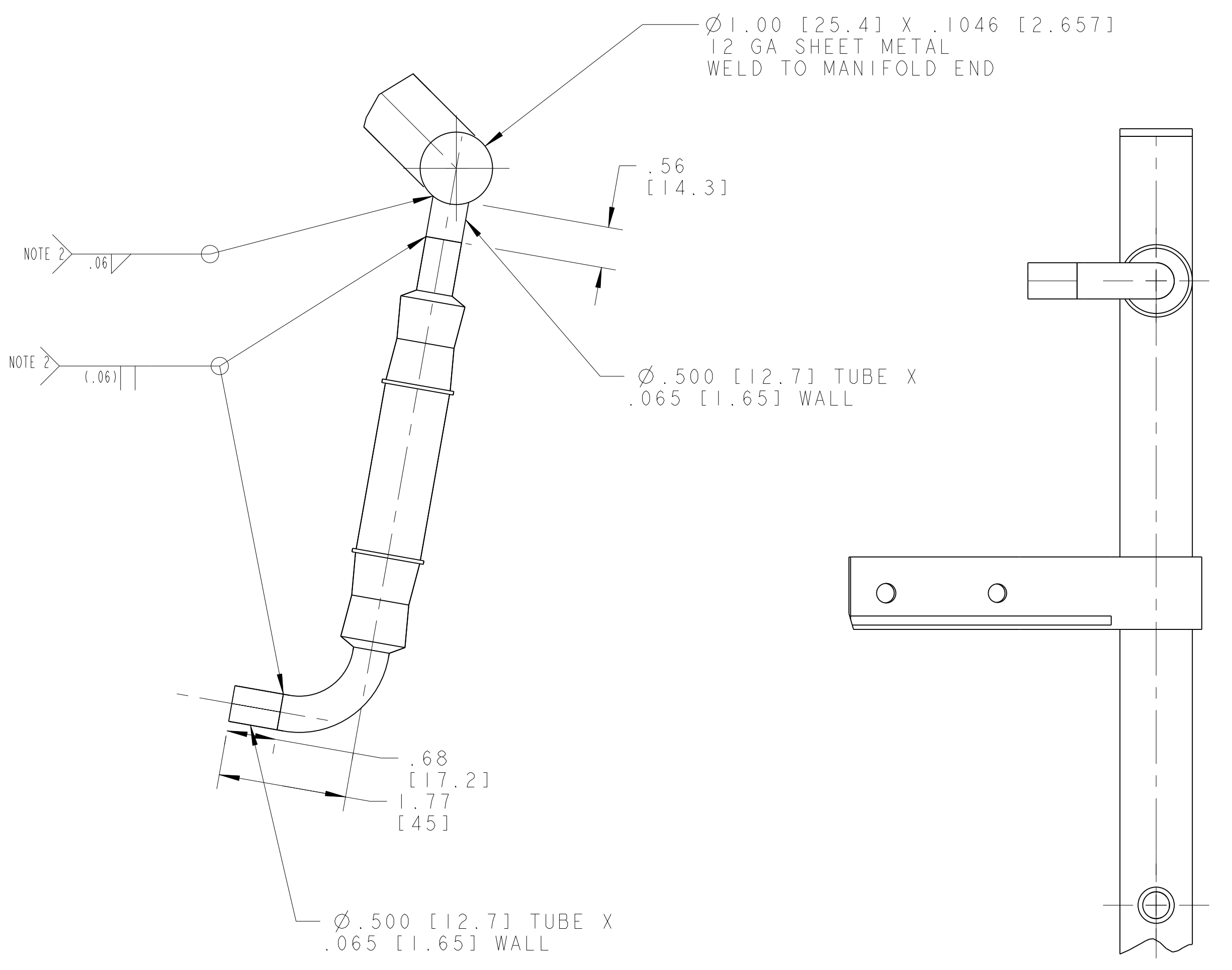
UNLESS OTHERWISE SPECIFIED	SHOP ORDERS	ISA
TOLERANCES: X.X ± 0.1 FRACTION ± 1/64	NO	NO
X.XX ± 0.03 ANGLES ± 1.0°	NO	NO
X.XXX ± 0.010 FINISH: 125	NO	NO
DO NOT SCALE PRINT	NO	NO
THREAD ANGLES: 60°	NO	NO
CHAMFER ENDS OF ALL SCREW THREADS: 30°	NO	NO
BREAK EDGES: 0.16 MAX. ON MACHINED WORK	NO	NO
REMOVE BURRS, WELD SPATTER & LOOSE SCALE	NO	NO
IN ACCORDANCE WITH ASME Y14.5M-1994	NO	NO

ERNEST ORLANDO LAWRENCE	UNIVERSITY OF CALIFORNIA - BERKELEY
LHC IR FEEDBOX	CRYOGENICS
DH VENT PIPE	
DATE: 12-MAY-02	SCALE: 1/4
DATE: 8-NOV-02	ASSEMBLY
DATE: 25-JUL-02	DESIGN ACCT. NO: ZSLCE2
	CATEGORY CODE: LH2003
	DWG. NO: 2516376
	SHEET 1 OF 2

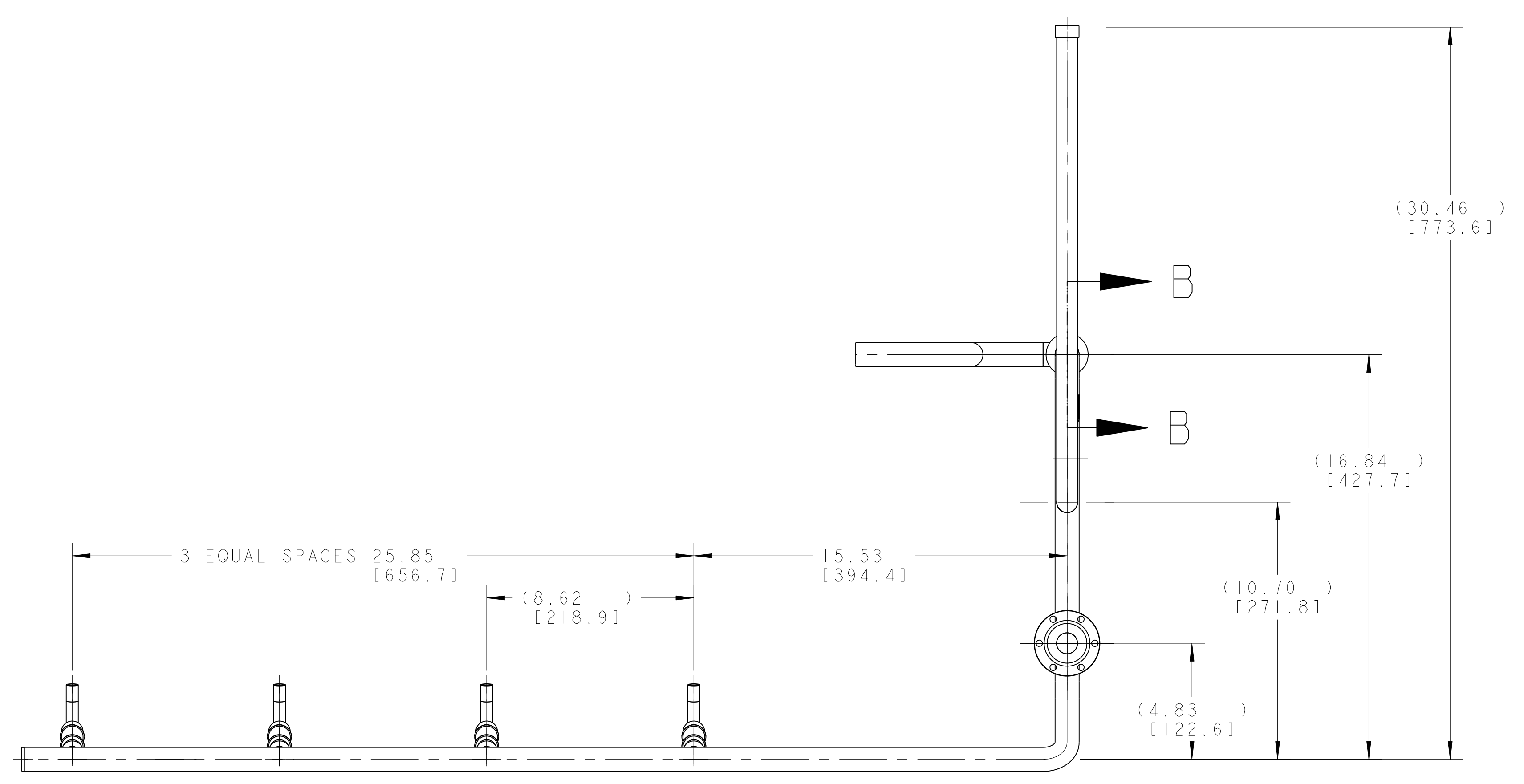
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DETAIL D  
SCALE 3/4

AUXILIARY VIEW OF PIPE  
SCALE 3/4

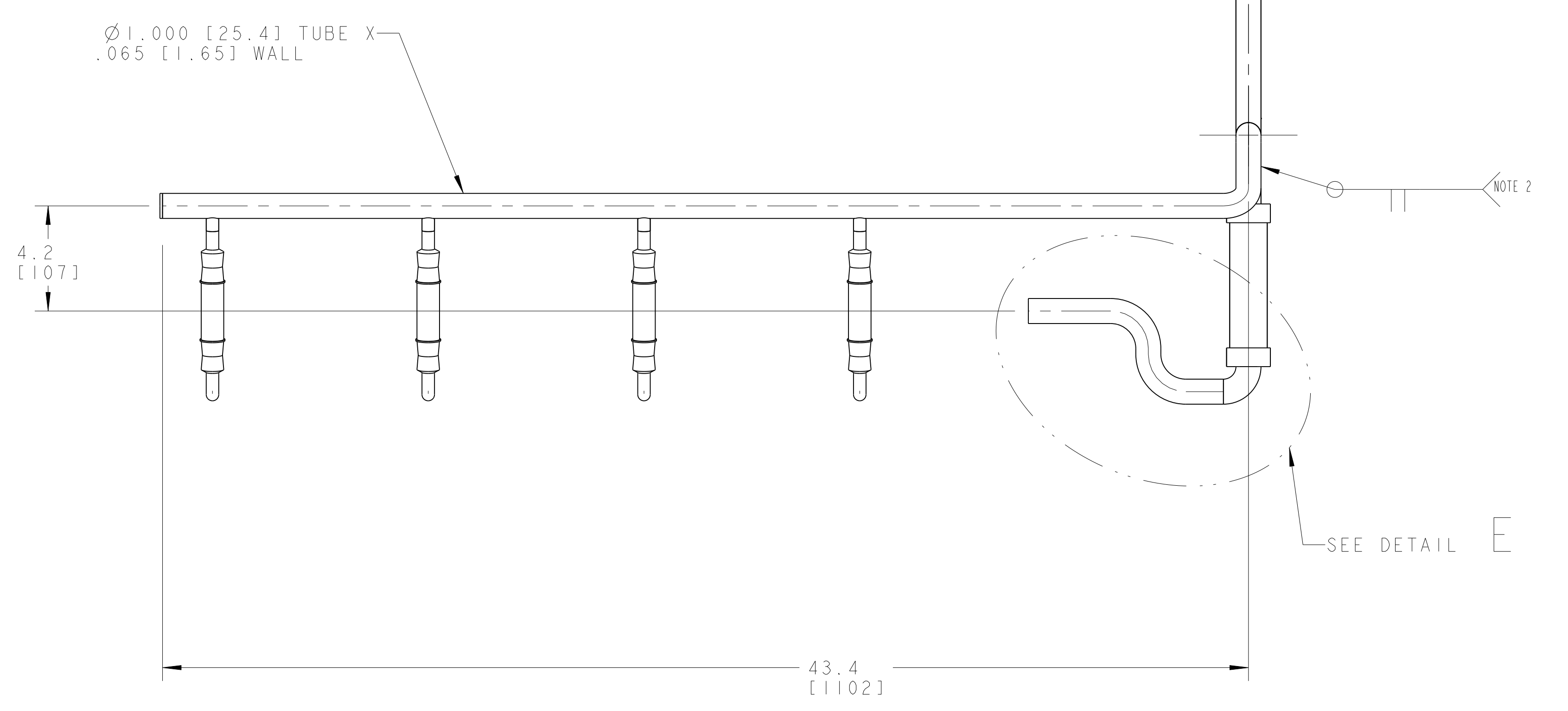
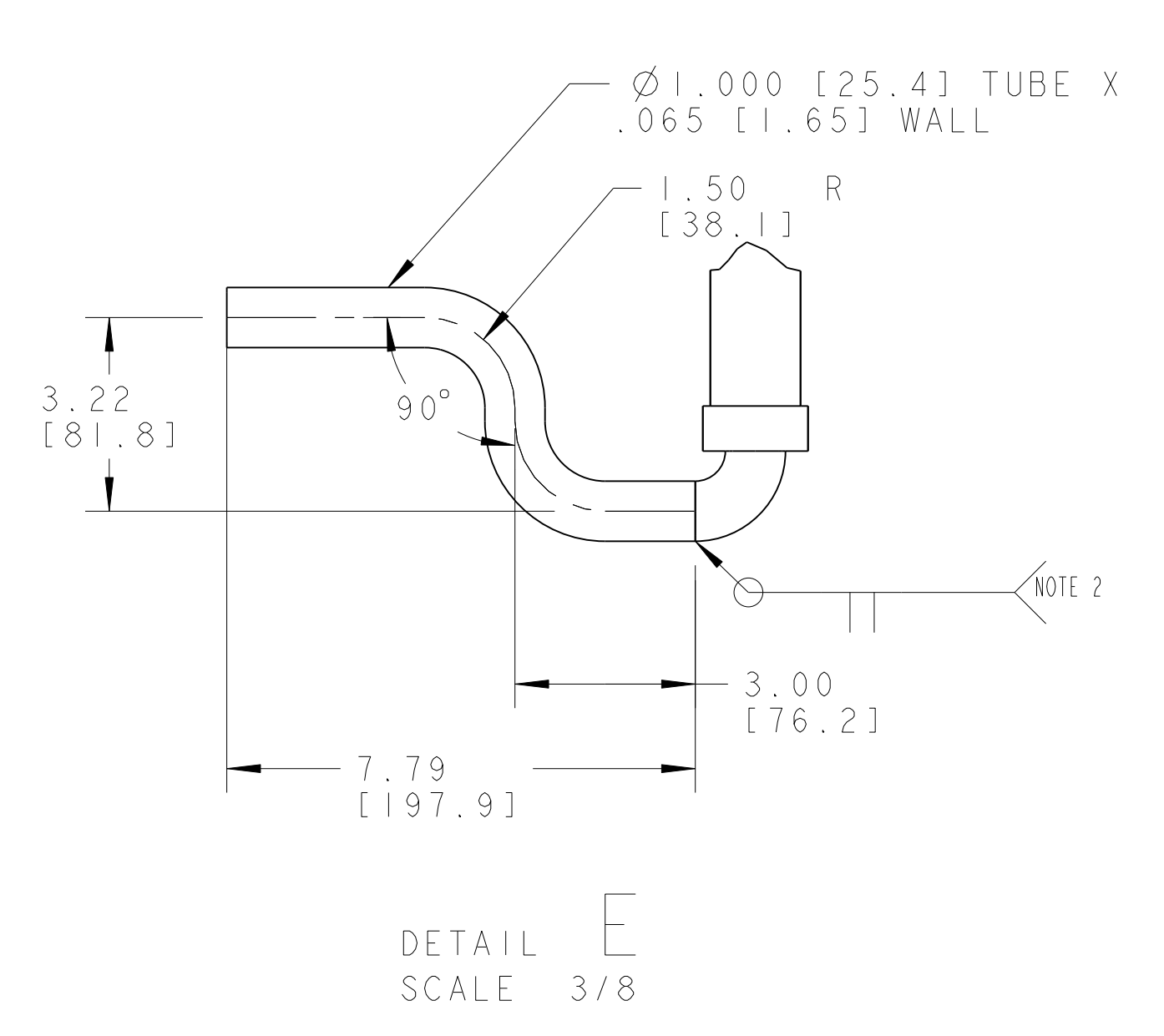
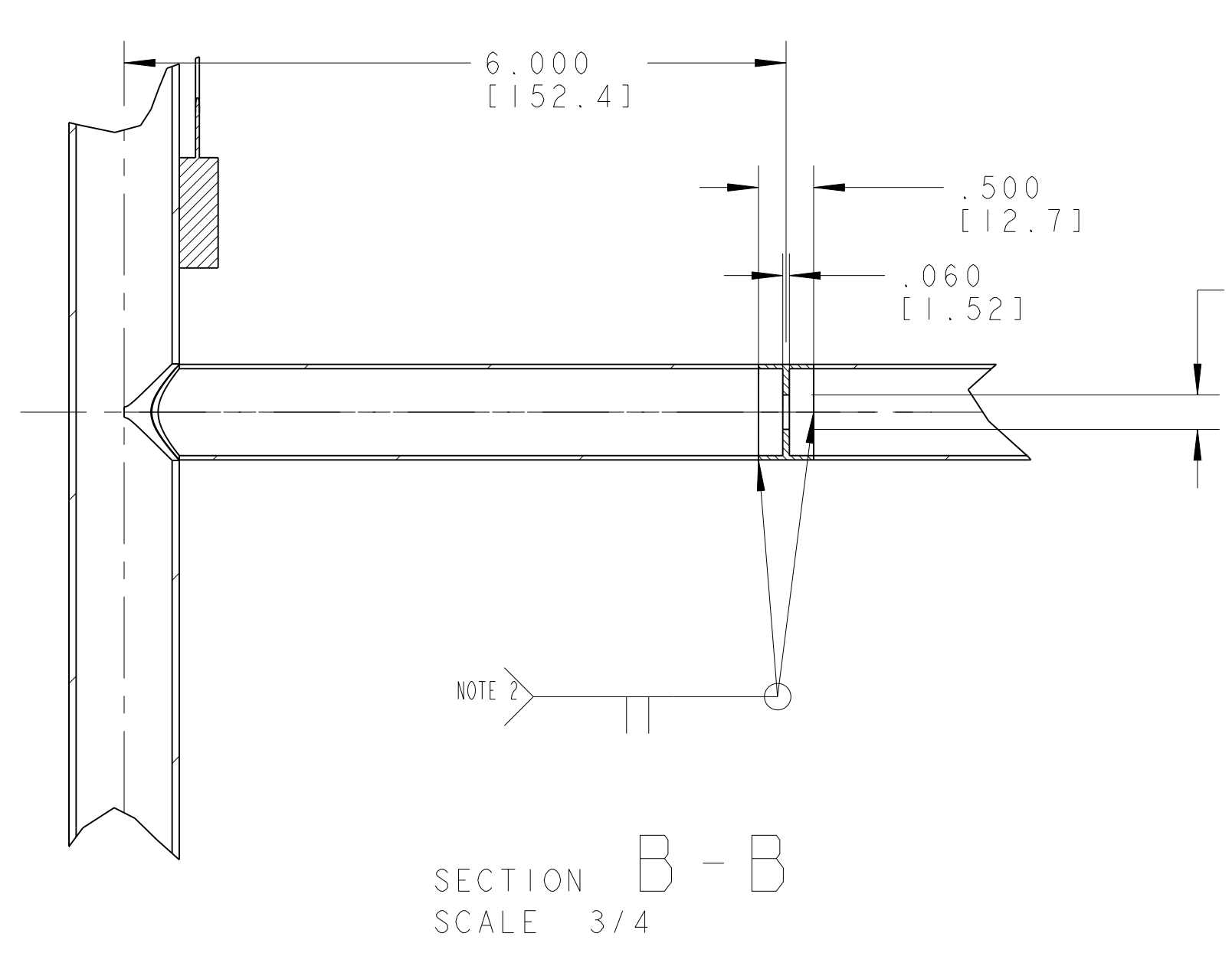
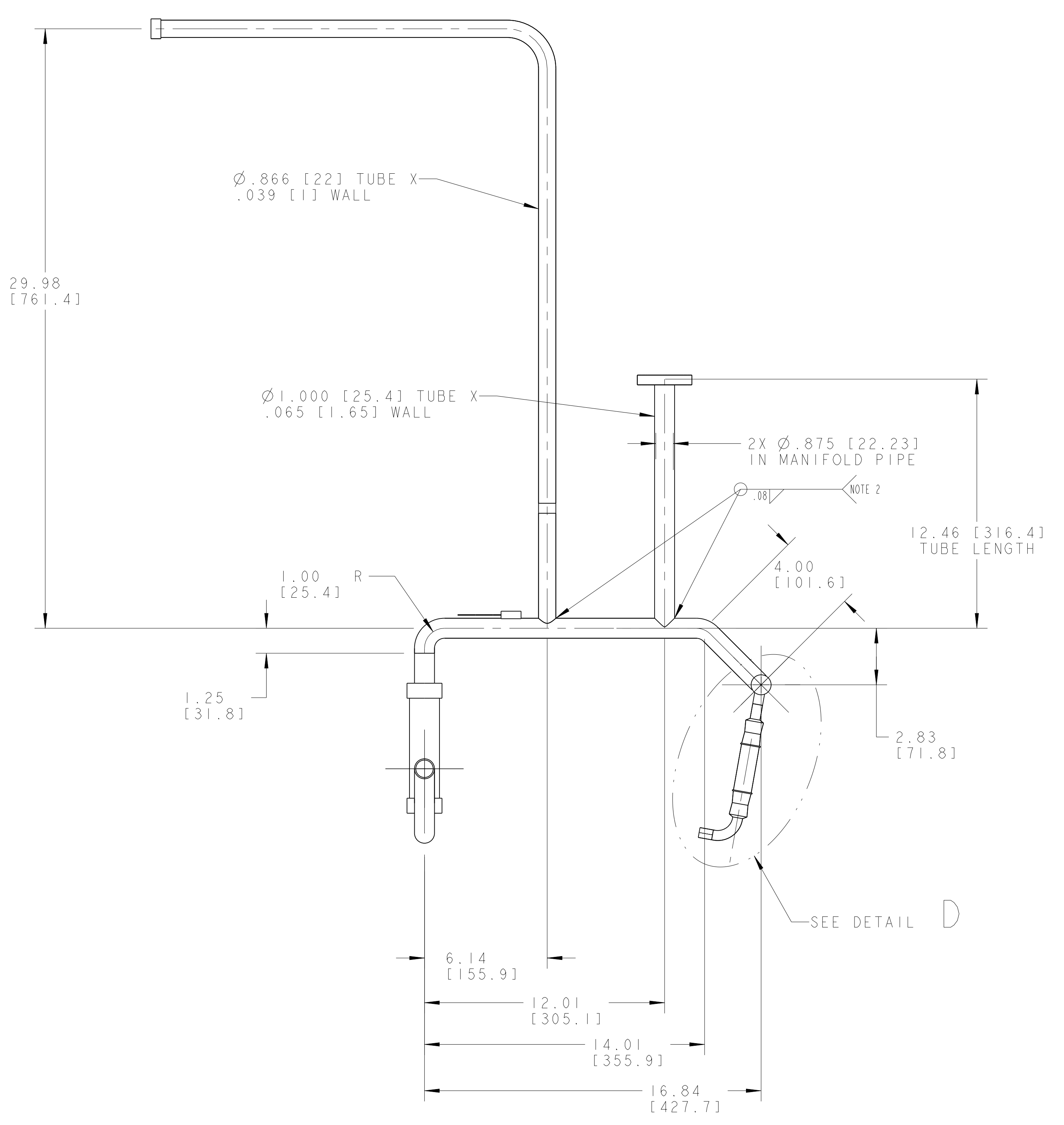


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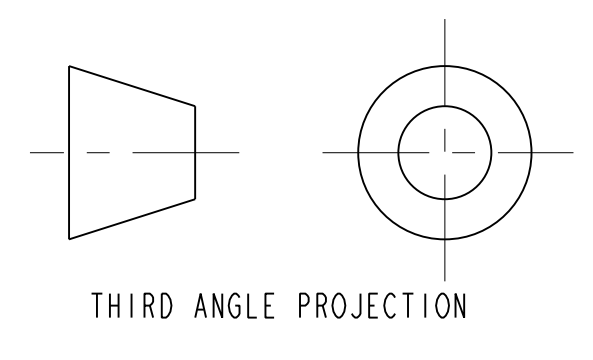
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ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA - BERKELEY			
LHC IR FEEDBOX CRYGENICS DH VENT PIPE			
MICROFILMED:	DWG. TYPE ASSEM	SHOWN ON LH2003	SCALE: 9/32 SHEET 2 OF 2
PATENT CLEAR:	DESIGN ACCT. NO. ZSLCE2	CATEGORY CODE LH2003	DWG. NO. 2516376 REV. A

DWG. NO. 2516376 A 2