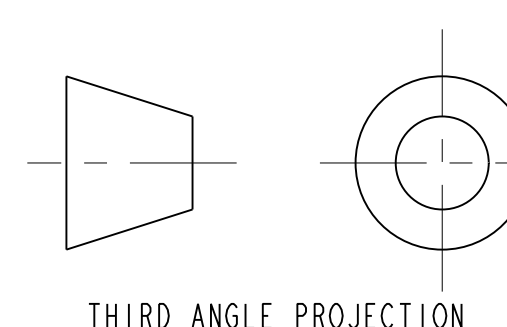
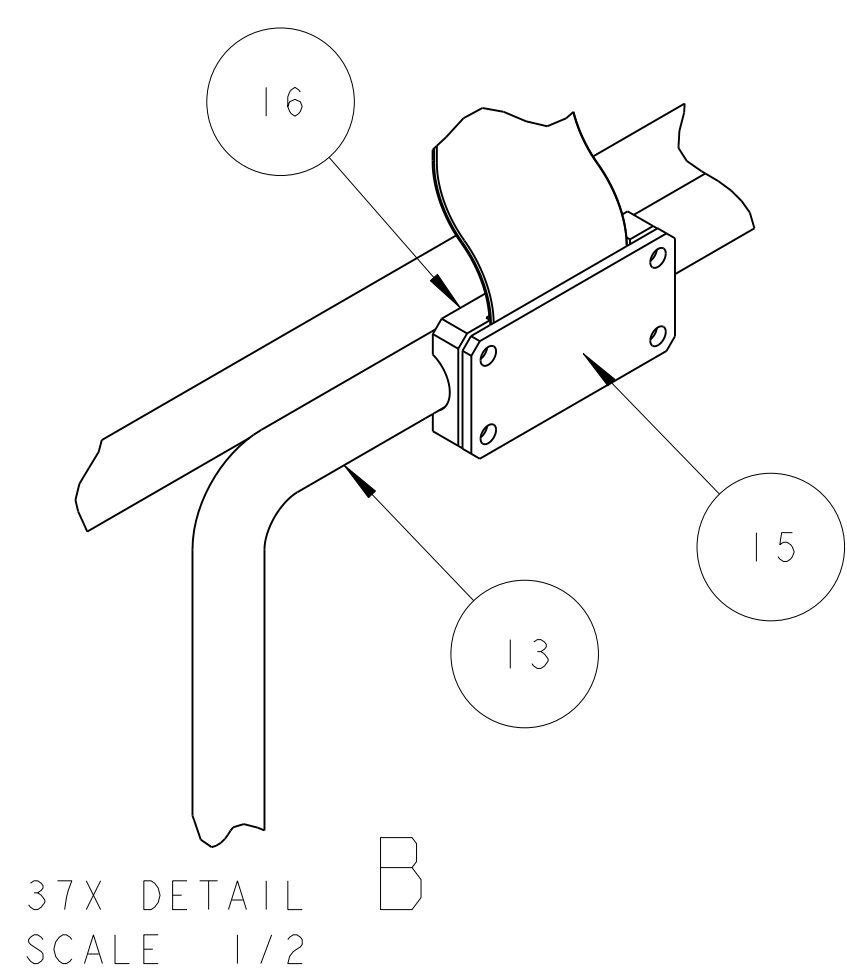
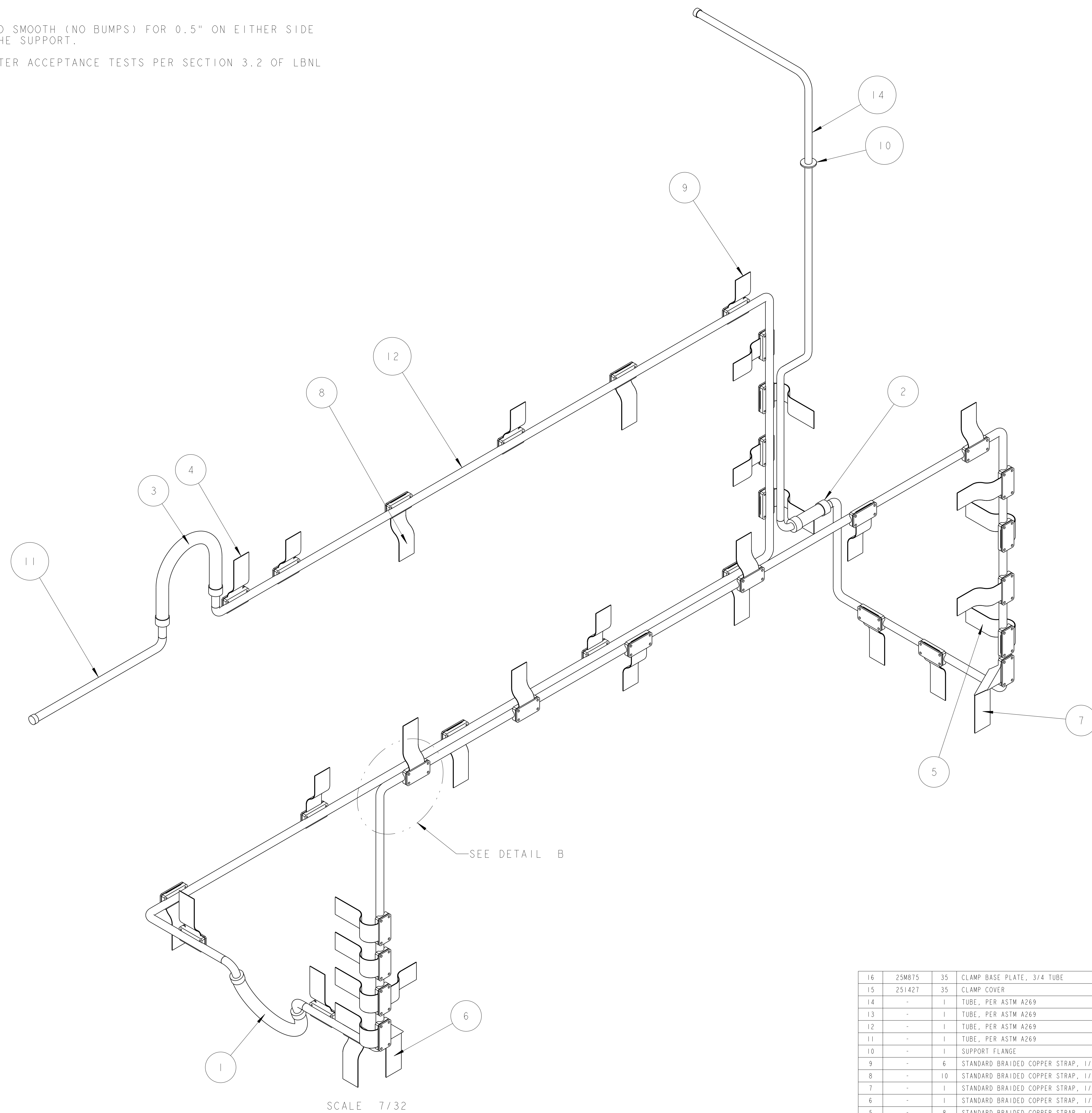


NOTES: (UNLESS OTHERWISE SPECIFIED)

- 1. THIS IS A CRYOGENIC VACUUM COMPONENT.
- 2. WELDING PROCEDURE: PER VENDOR SPECIFICATION WITH LBNL APPROVAL.
- 3. CLEANING PROCEDURE : PER VENDOR SPECIFICATION WITH LBNL APPROVAL.
- 4. PACKAGING AND STORAGE PROCEDURE OF THE COMPONENTS: PER VENDOR SPECIFICATION WITH LBNL APPROVAL.
- 5. DIMENSIONS AND TOLERANCING PER ANSI Y14.5M-1982. UNITS ARE IN INCHES [mm] UNLESS OTHERWISE SPECIFIED.
- 6. USE OF SULFUR OR SILICONE BEARING OILS, LUBRICANTS, OR COOLANTS ARE STRICTLY PROHIBITED.
- 7. USE OF RESIN OR RUBBER BONDED ABRASIVES UNDER POWER IS STRICTLY PROHIBITED. USE VITREOUS BONDED ABRASIVES ONLY.
- 8. VENDOR SUGGESTED CHANGES TO WELD PREPS; SUBJECT TO LBNL APPROVAL.
- 9. FITTINGS MAY BE USED IN PLACE OF BENDS; SUBJECT TO LBNL APPROVAL.
- 10. VENDOR SUGGESTED CHANGES TO TOLERANCES TO FACILITATE FABRICATION OR ASSEMBLY; SUBECT TO LBNL APPROVAL.
- 11. REMOVE ALL THE BURRS AND REAM THE ENDS FOR CIRCULARITY AND CLEAN ENDS.
- 12. TUBE END SURFACE MUST BE PERPENDICULAR TO THE TUBE AXIS WITHIN +/- .010.
- 13. PERFORM ACCEPTANCE TESTS PER SECTION 3.2 OF LBNL SPECIFICATION M856.
- 14. A MARK DESIGNATING THE INSTALLED LENGTH WILL BE UTILIZED DURING FINAL INSTALLATION OF THE DEEDBOX ASSEMBLY. MARK, SCRIBE OR ETCH THIS LOCATION IN A PERMANENT MANNER, SUBJECT TO LBNL APPROVAL, TO AN ACCURACY OF 0.063".
- 15. 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.
- 16. PIPE MUST BE STRAIGHT AND SMOOTH (NO BUMPS) FOR 0.5" ON EITHER SIDE OF THE CENTER-PLANE OF THE SUPPORT.
- 17. CAP BOTH ENDS OF PIPE AFTER ACCEPTANCE TESTS PER SECTION 3.2 OF LBNL SPECIFICATION M856.



THIRD ANGLE PROJECTION

ITEM	PART NO	REQD	DESCRIPTION	MATERIAL
16	25M075	35	CLAMP BASE PLATE, 3/4" TUBE	COPPER, OFHC, C101
15	25142T	35	CLAMP COVER	OFHC, C101
14	-	1	TUBE, PER ASTM A269	SS 304L
13	-	1	TUBE, PER ASTM A269	SS 304L
12	-	1	TUBE, PER ASTM A269	SS 304L
11	-	1	TUBE, PER ASTM A269	SS 304L
10	-	1	SUPPORT FLANGE	SS 304L
9	-	6	STANDARD BRAIDED COPPER STRAP, 1/8" X 1.00"	OFC COPPER BRAID
8	-	10	STANDARD BRAIDED COPPER STRAP, 1/8" X 1.00"	OFC COPPER BRAID
7	-	1	STANDARD BRAIDED COPPER STRAP, 1/8" X 1.00"	OFC COPPER BRAID
6	-	1	STANDARD BRAIDED COPPER STRAP, 1/8" X 1.00"	OFC COPPER BRAID
5	-	8	STANDARD BRAIDED COPPER STRAP, 1/8" X 1.00"	OFC COPPER BRAID
4	-	1	STANDARD BRAIDED COPPER STRAP, 1/8" X 1.00"	OFC COPPER BRAID
3	-	1	BRAIDED FLEX HOSE, .625" ID X 3/4" STR, 17MM ELBOW	SS 309 SERIES
2	-	1	BRAIDED FLEX HOSE, .625" ID X 3/4" STR, 17MM ELBOW	SS 309 SERIES
1	-	1	BRAIDED FLEX HOSE, .625" ID X 3/4" ELBOW WELD ENDS	SS 309 SERIES

**SHOP ORDERS**  
 UNLESS OTHERWISE SPECIFIED  
 X.X ± 0.1 FRAC ± 1/64  
 X.XX ± 0.03 Angles ± 1.0°  
 X.XXX ± 0.010 FINISH 12.5  
 DO NOT SCALE PRINT  
 TOLERANCES ARE CLASS 2  
 CHAMFER ENDS OF ALL SCREW THREADS 30°  
 CUT ROUNDS, 1.5 THREAD RELIEF ON MACHINED THREADS  
 BREAK EDGES .010 MAX. ON MACHINED WORK  
 REMOVE BURRS, WELD SPATTER & LOOSE SCALE  
 IN ACCORDANCE WITH SEMI H4.10M & B46.1

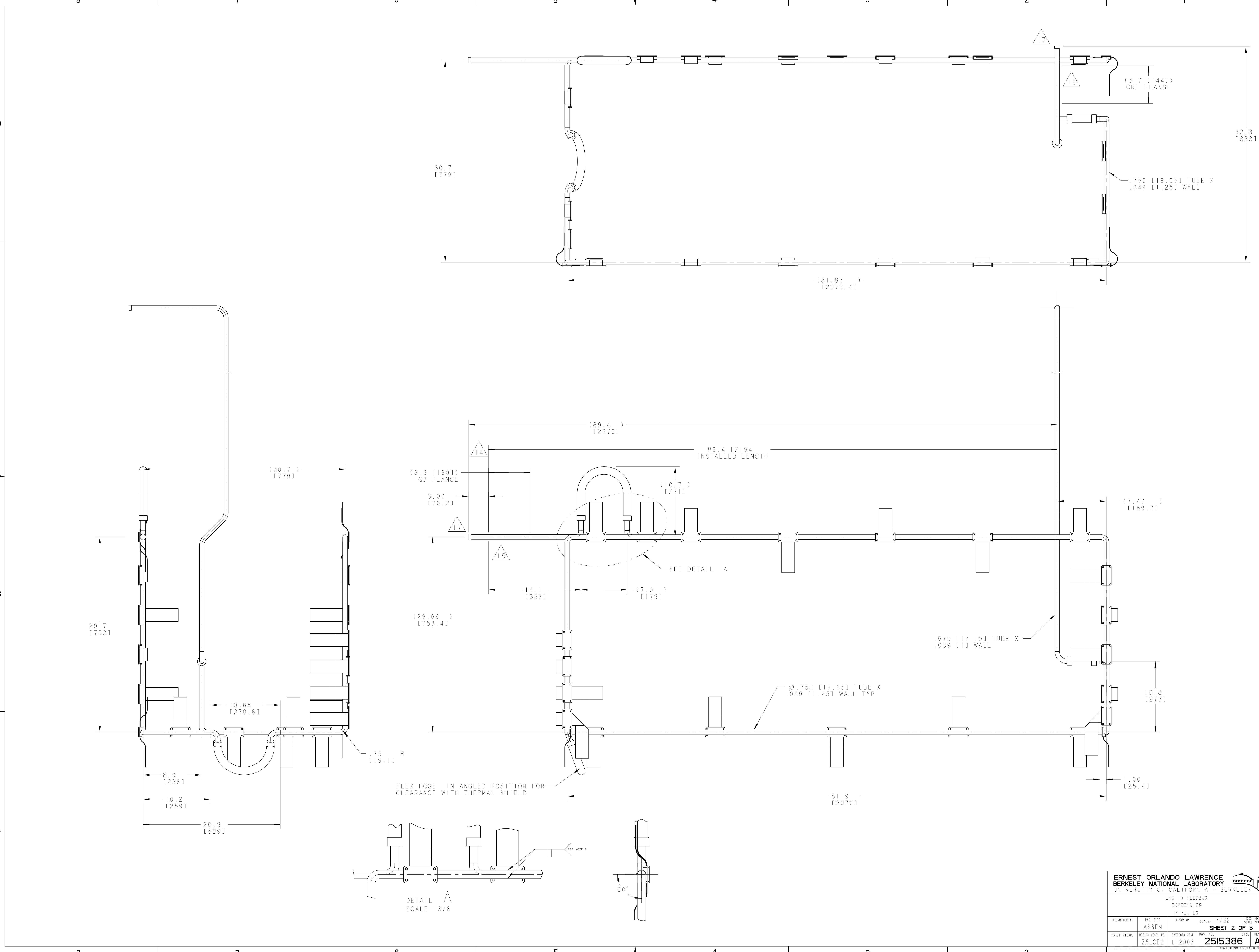
**ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY**  
 UNIVERSITY OF CALIFORNIA BERKELEY  
 LHC IR FEEDBOX  
 CRYOGENICS  
 PIPE, EX

DWG. TYPE: ASSEM  
 DATE: 29-Jul-02  
 PATENT CLEAR: DESIGN ACCT. NO. Z5LC22  
 CATEGORY CODE: LH2003  
 SCALE: 7/32  
**SHEET 1 OF 5**  
 SIZE: A

REV	DWG	CHK	ZONE	DATE	INITIALS	RELEASE	CHANGES
A	ARH	SPV		29-31-02		INITIAL RELEASE	

NAME: ARH:ARH:OBJ: 2515386\_1 DATE: 26-Nov-02 09:51:59  
 2515386 A 1

NAME: ARHARRIS OBJECT: 2515386.2 DATE: 26-Nov-02 09:52:00



**ERNEST ORLANDO LAWRENCE**  
**BERKELEY NATIONAL LABORATORY**  
 BERKELEY, CALIFORNIA BERKELEY

LHC IR FEEDBOX  
 CRYOGENICS  
 PIPE, EX

MICROFILMED:	ENG. TYPE	SHOW ON	SCALE: 7/32	DO NOT SCALE PRINTS
ASSEM				
PATENT CLEAR:	DESIGN ACCT. NO.	CATEGORY CODE	ENG. NO.	SIZE
Z5LCE2	LH2003		2515386	5

**SHEET 2 OF 5**

REV: A

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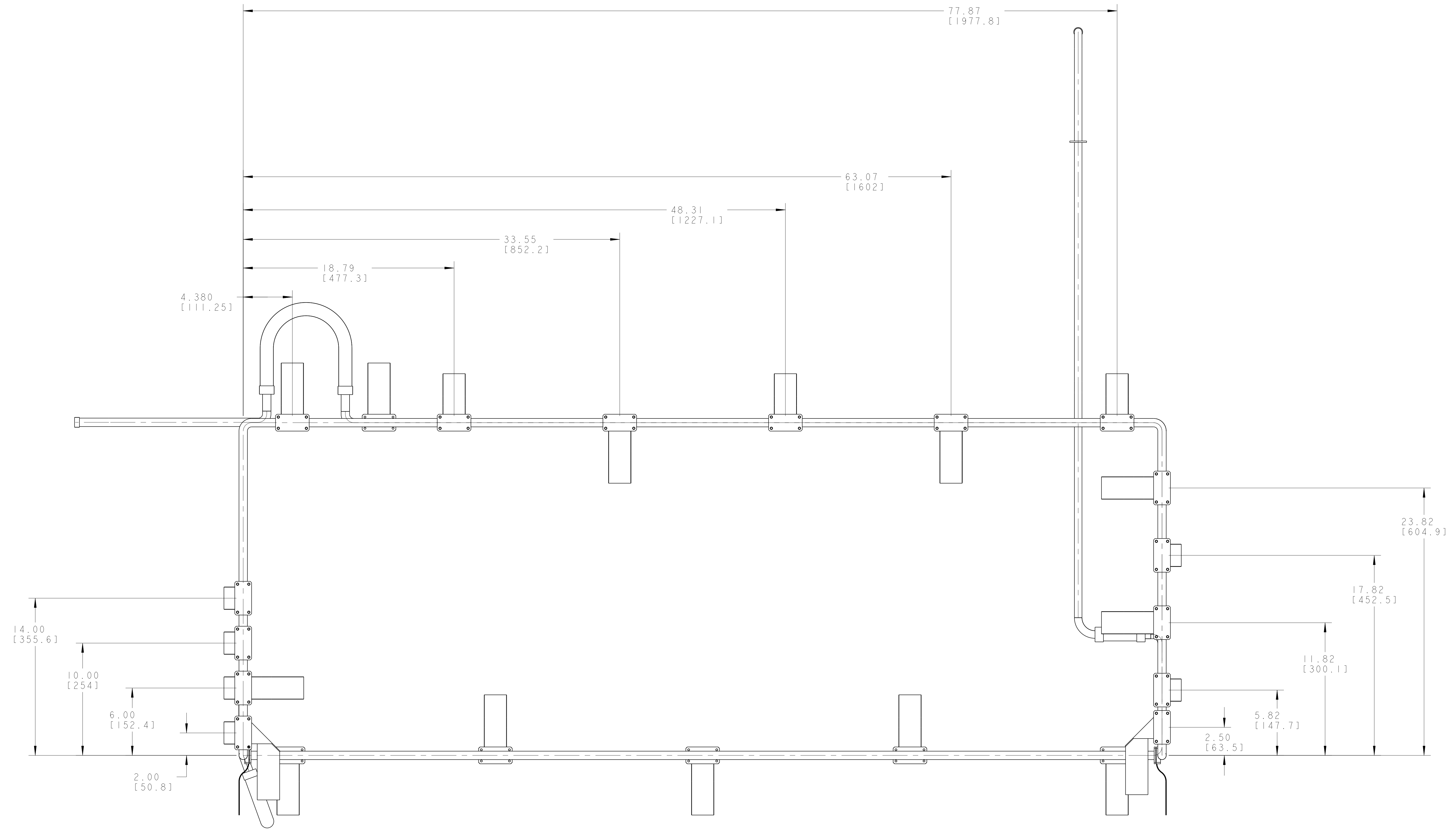
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RIGHT SIDE VIEW SCALE 1/4

<b>ERNEST ORLANDO LAWRENCE</b> <b>BERKELEY NATIONAL LABORATORY</b> <small>UNIVERSITY OF CALIFORNIA BERKELEY</small>			
LHC IR FEEDBOX CRYOGENICS PIPE, EX			
MICROFILMED:	DWG. TYPE	SHOW ON	SCALE: 7/32
	ASSEM		[DO NOT SCALE PRINTS]
PATENT CLEAR:	DESIGN ACCT. NO.	CATEGORY CODE	DWG. NO.
	Z5LCE2	LH2003	2515386
		<b>SHEET 3 OF 5</b> SIZE: A	

NAME: ARHARRIS OBJECT: 2515386\_3 DATE: 26-Nov-02 09:52:02

2515386 A 3

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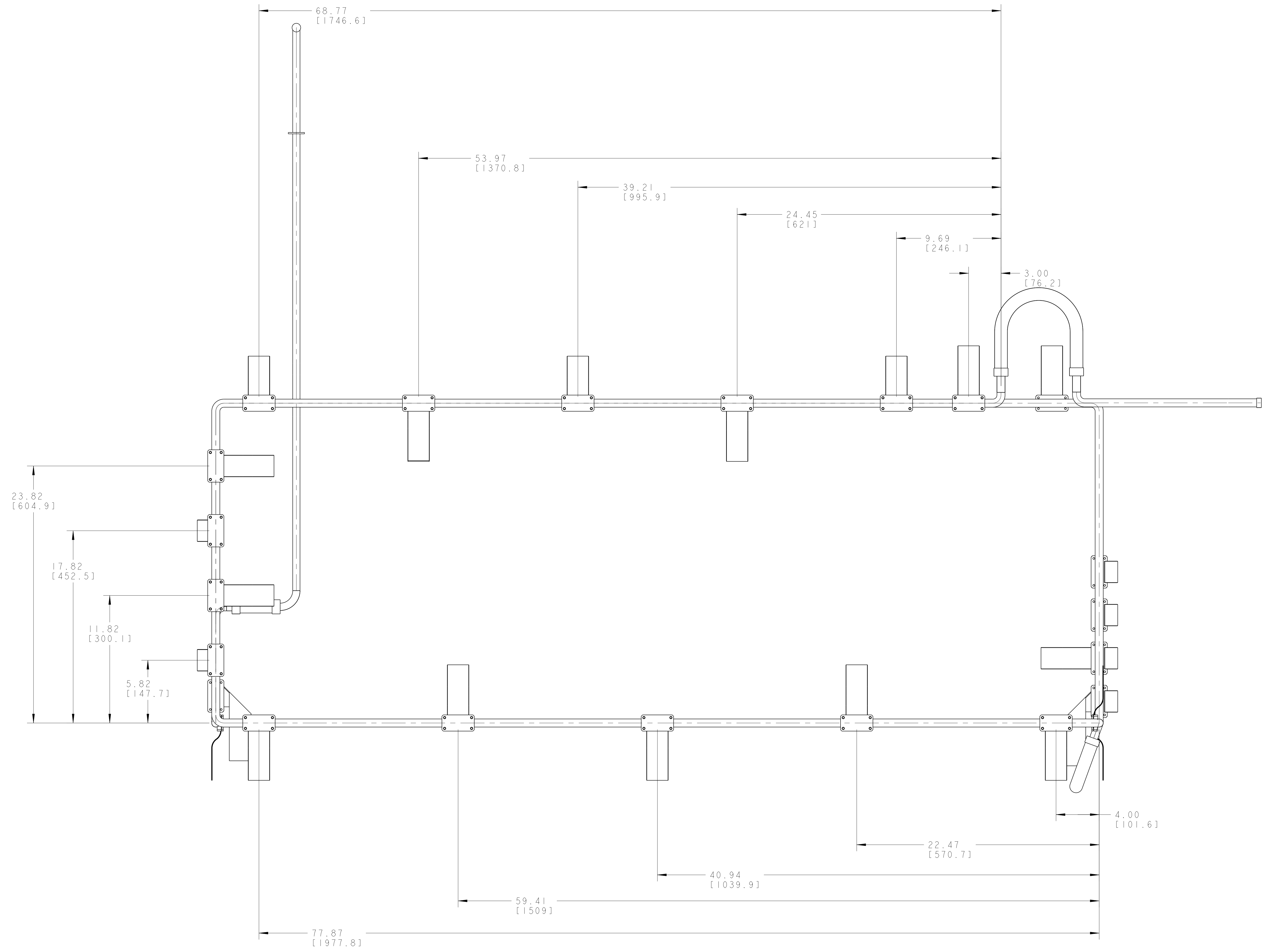
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LEFT SIDE VIEW SCALE 1/4

<b>ERNEST ORLANDO LAWRENCE</b> <b>BERKELEY NATIONAL LABORATORY</b> <small>UNIVERSITY OF CALIFORNIA BERKELEY</small>			
LHC IR FEEDBOX CRYOGENICS PIPE_EX			
MICROFILMED:	DWG. TYPE	SHOW ON	SCALE
	ASSEM		7/32
PATENT CLEAR:			DO NOT SCALE PRINTS
REVISION ACCT. NO.	CATEGORY CODE	DWG. NO.	SIZE
Z5LCE2	LH2003	2515386	A

2515386 A 4

NAME: ARNARRIS OBJECT: 2515386\_4 DATE: 26-Nov-02 09:52:03

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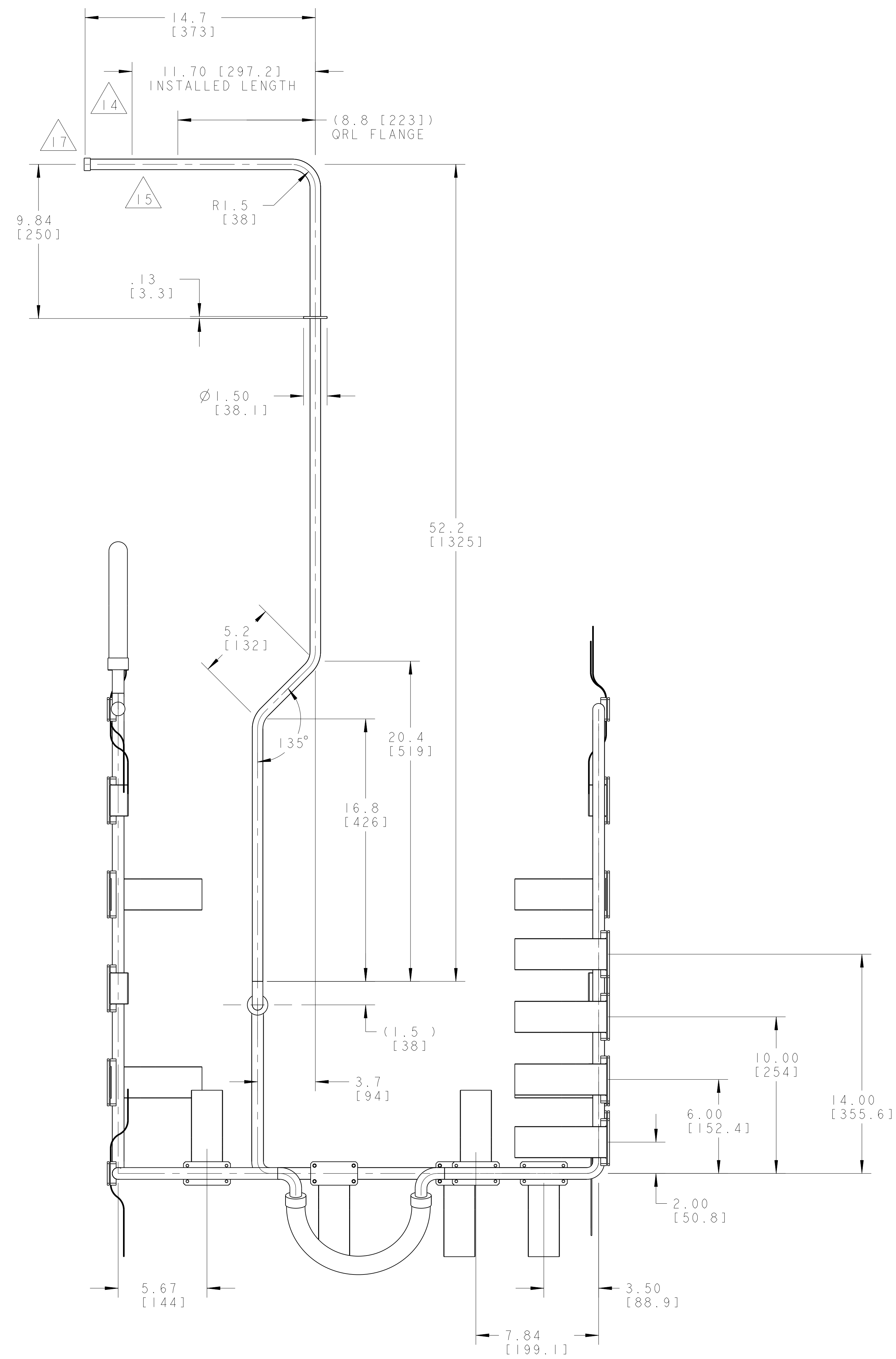
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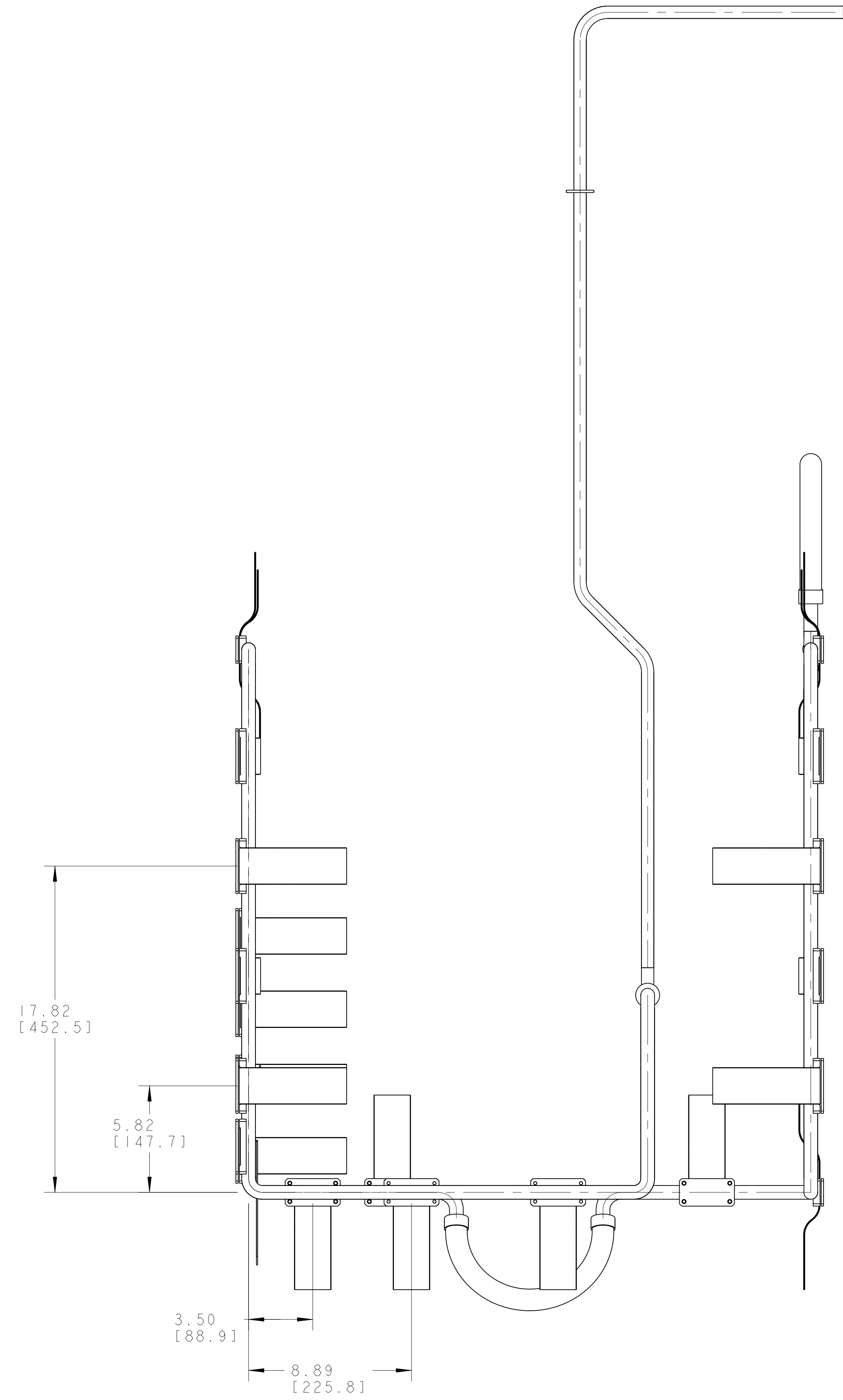
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FRONT VIEW SCALE 1/4



REAR VIEW SCALE 1/4

ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA BERKELEY			
LHC IR FEEDBOX CRYOGENICS PIPE, EX			
MICROFILMED:	DWG. TYPE	SHOW ON	SCALE: 7/32
	ASSEM		[DO NOT SCALE PRINTS]
PATENT CLEAR:	DESIGN ACCT. NO.	CATEGORY CODE	DWG. NO.
	Z5LCE2	LH2003	2515386
SHEET 5 OF 5			SIZE: A

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2515386 A 15

A

NAME: ARHARRIS OBJECT: 2515386\_5 DATE: 26-Nov-02 09:52:04