

REV	DATE	BY	CHK	DESCRIPTION
A	MJK/DPO	11/25/02		INITIAL RELEASE
				CHANGES

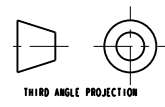
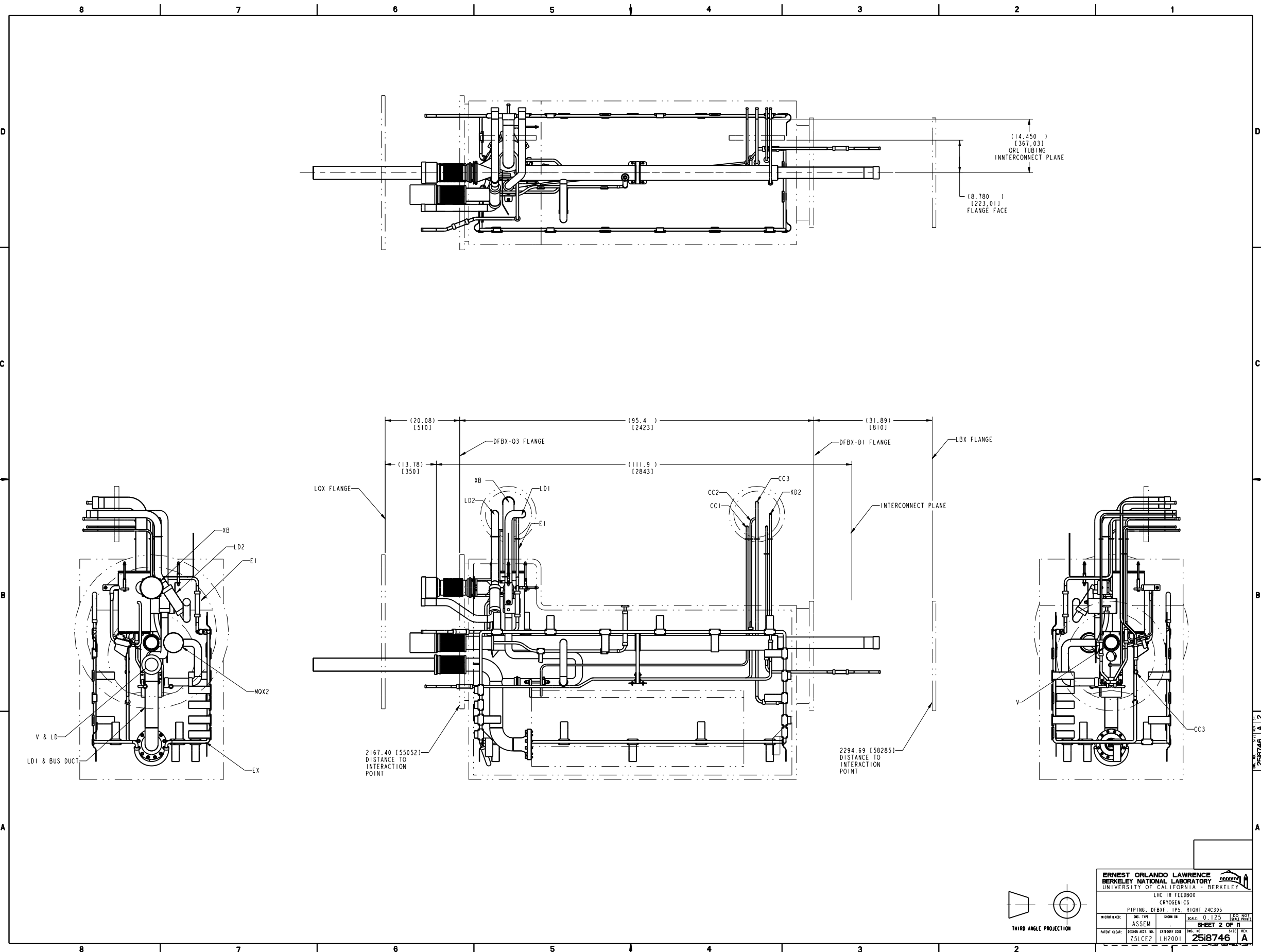
ITEM	PART NO	QTY	DESCRIPTION	MATERIAL
15	251412	1	SUPPORT, O3 SIDE, DFBX / DFBX	NEMA G10
14	251202	1	SUPPORT, OQSB, DFBX	NEMA G10
13	251201	1	SUPPORT, OQSA, DFBX	NEMA G10
12	251423	1	SUPPORT, CENTER PIPE, DFBX	-
11	251570	1	PIPE, LD2	-
10	251540	1	PIPE, EX	-
9	251531	1	PIPE, RD	-
8	251529	1	PIPE, CC2	-
7	251528	1	PIPE, CC3	-
6	251519	1	PIPE, CC1	-
5	251510	1	PIPE, V AND LD ASSY	-
4	251301	1	PIPE, MX2	-
3	251538	1	PIPE, EX	-
2	251554	1	PIPE, WELMENT, LD AND BUS DUCT	-
1	251545	1	PIPE, 1/2 DFBX	-

**ERNEST ORLANDO LAWRENCE**  
**BERKELEY NATIONAL LABORATORY**  
 UNIVERSITY OF CALIFORNIA - BERKELEY

LHC IR FEEDBOX  
 CRYOGENICS  
 PIPING, DFBX, IPS, RIGHT 24C395

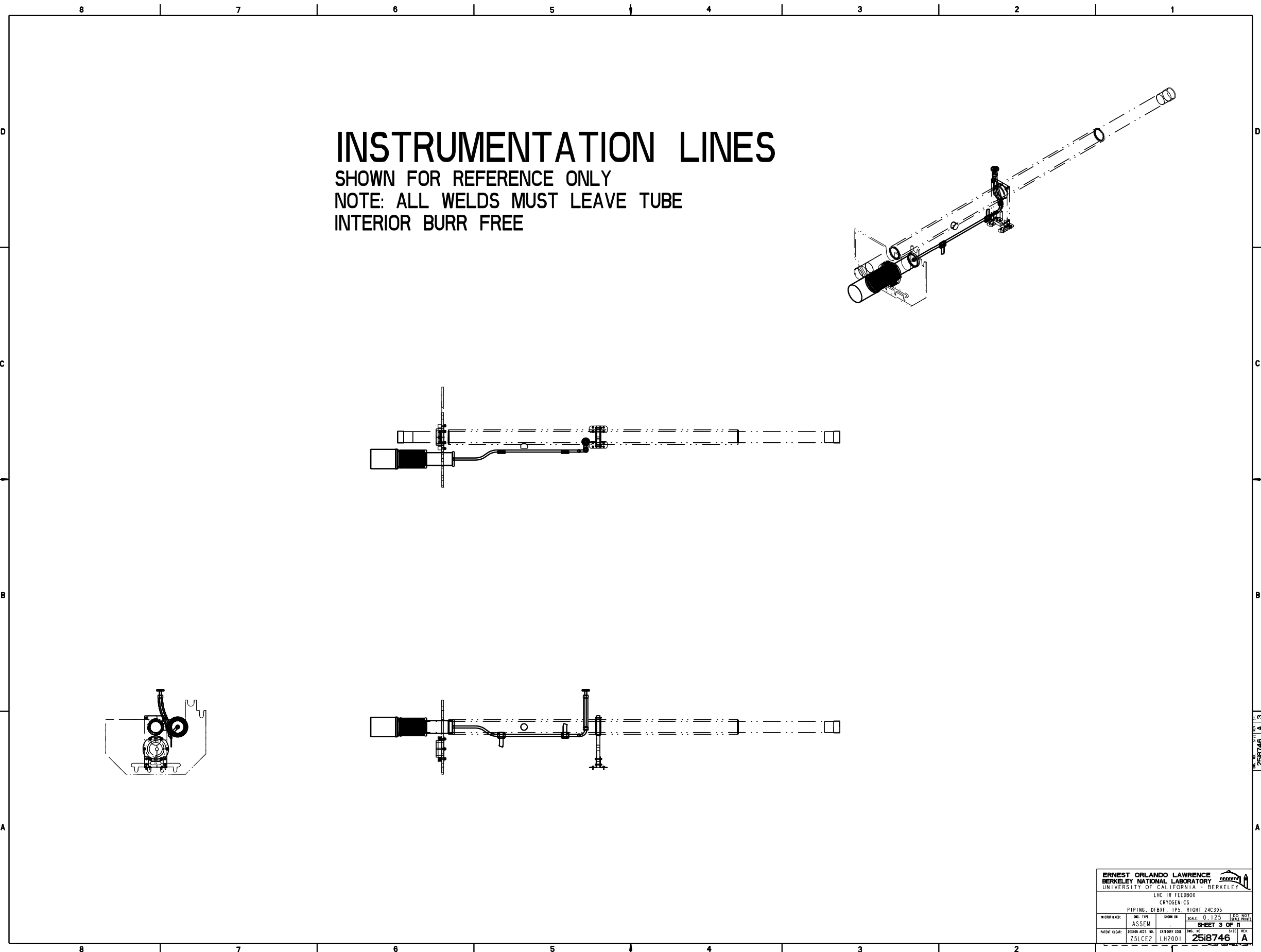
SCALE: 0.125  
 SHEET 1 OF 11  
 2518746 A

2518746 A 1



<b>ERNEST ORLANDO LAWRENCE</b> <b>BERKELEY NATIONAL LABORATORY</b> UNIVERSITY OF CALIFORNIA - BERKELEY			
LHC TR FEEDBOX CRYOGENICS			
PIPING, DFBX, IPS, RIGHT 24C395			
MICROFILMED:	ENG. TYPE: ASSEM	DRAWN BY:	SCALE: 0.125 (1/8"=1'-0")
SHEET 2 OF 11		SIZE: A	
PATENT CLEAR:	DESIGN ACCT. NO.: ZSLCE2	CATEGORY CODE: LH2001	ENG. NO.: 2518746

2518746 A 12

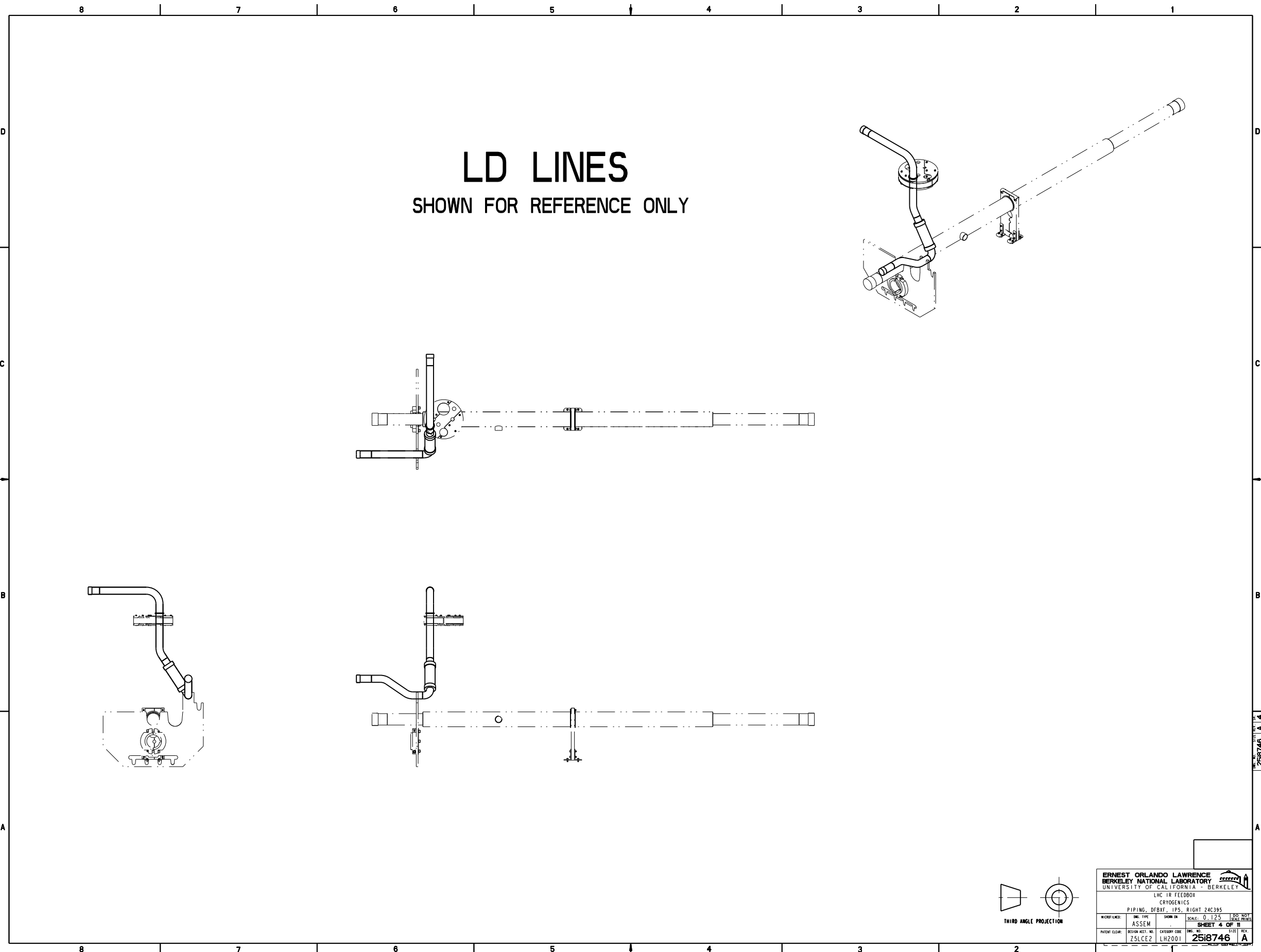


# INSTRUMENTATION LINES

SHOWN FOR REFERENCE ONLY  
 NOTE: ALL WELDS MUST LEAVE TUBE  
 INTERIOR BURR FREE

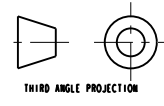
<b>ERNEST ORLANDO LAWRENCE</b> <b>BERKELEY NATIONAL LABORATORY</b> <small>UNIVERSITY OF CALIFORNIA - BERKELEY</small>			
<small>LHC TR FEEDBOX</small> <small>CRYOGENICS</small>			
<small>PIPING, DFBXF, IPS, RIGHT 24C395</small>			
<small>W/SHOP LINES:</small>	<small>ENG. TYPE:</small>	<small>SHOWN IN:</small>	<small>SCALE:</small>
ASSEM			0.125 (1/8" = 1'-0")
<b>SHEET 3 OF 11</b>		<small>DESIGN NO.:</small>	<small>REV.:</small>
2518746		LH2001	A

2518746 A 3



# LD LINES

SHOWN FOR REFERENCE ONLY

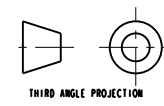
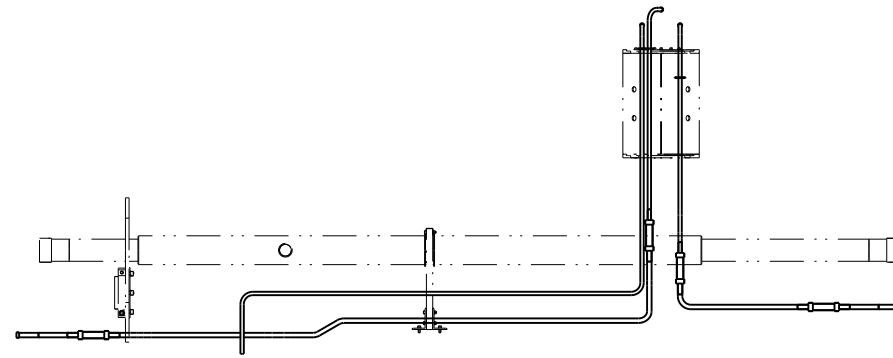
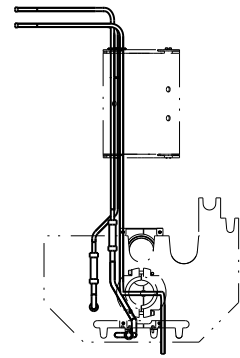
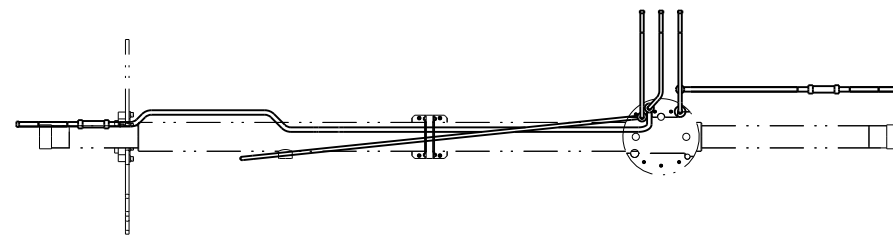
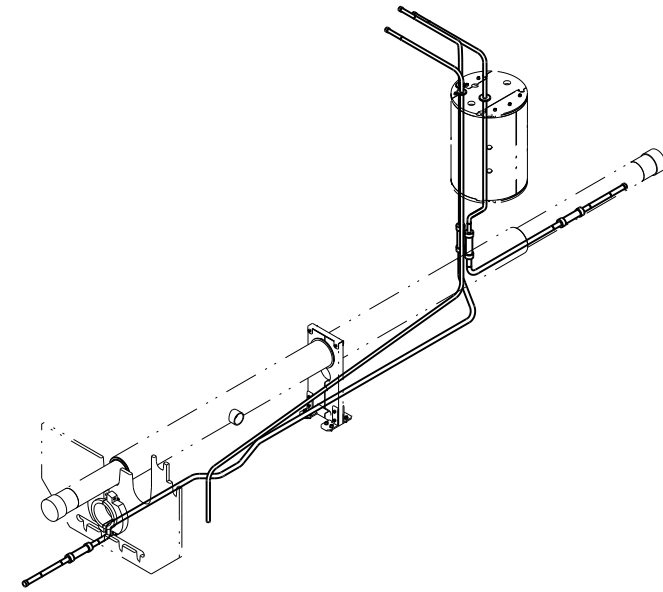


<b>ERNEST ORLANDO LAWRENCE</b> <b>BERKELEY NATIONAL LABORATORY</b> UNIVERSITY OF CALIFORNIA - BERKELEY			
LHC TR FEEDBOX CRYOGENICS			
PIPING, DFBXF, IPS, RIGHT 24C395			
MICROFILMED: ENG. TYPE: ASSEM	DRAWN BY: ASSEM	SCALE: 0.125 (1/8" = 1'-0")	SHEET 4 OF 11 2518746 A
PATENT CLEAR: ZSLCEZ	DESIGN ACCT. NO.: LH2001	CATEGORY CODE: LH2001	ENG. NO.: 2518746 SIZE: A

2518746 A 4

# CC LINES

SHOWN FOR REFERENCE ONLY

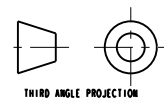
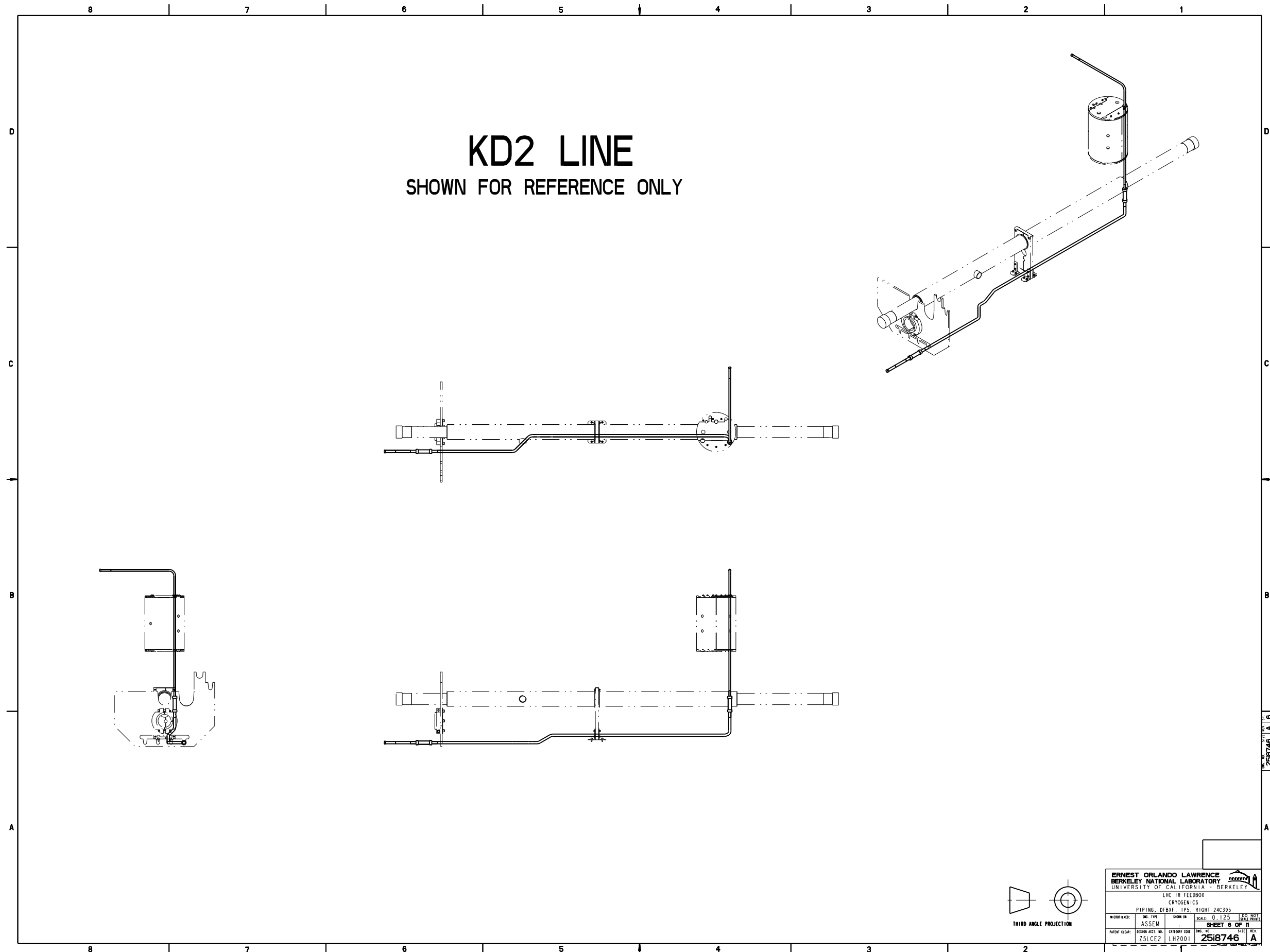


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LHC TR FEEDBOX CRYOGENICS			
PIPING, DFBXF, IPS, RIGHT 24C395			
MICROFILMED: ASSEM	DRAWN BY: LH2001	SCALE: 0.125	SHEET 6 OF 11 2518746 A
PATENT CLEAR: ZSLCEZ	DESIGN ACCT. NO.: LH2001	CATEGORY CODE: LH2001	DATE: 2518746 A

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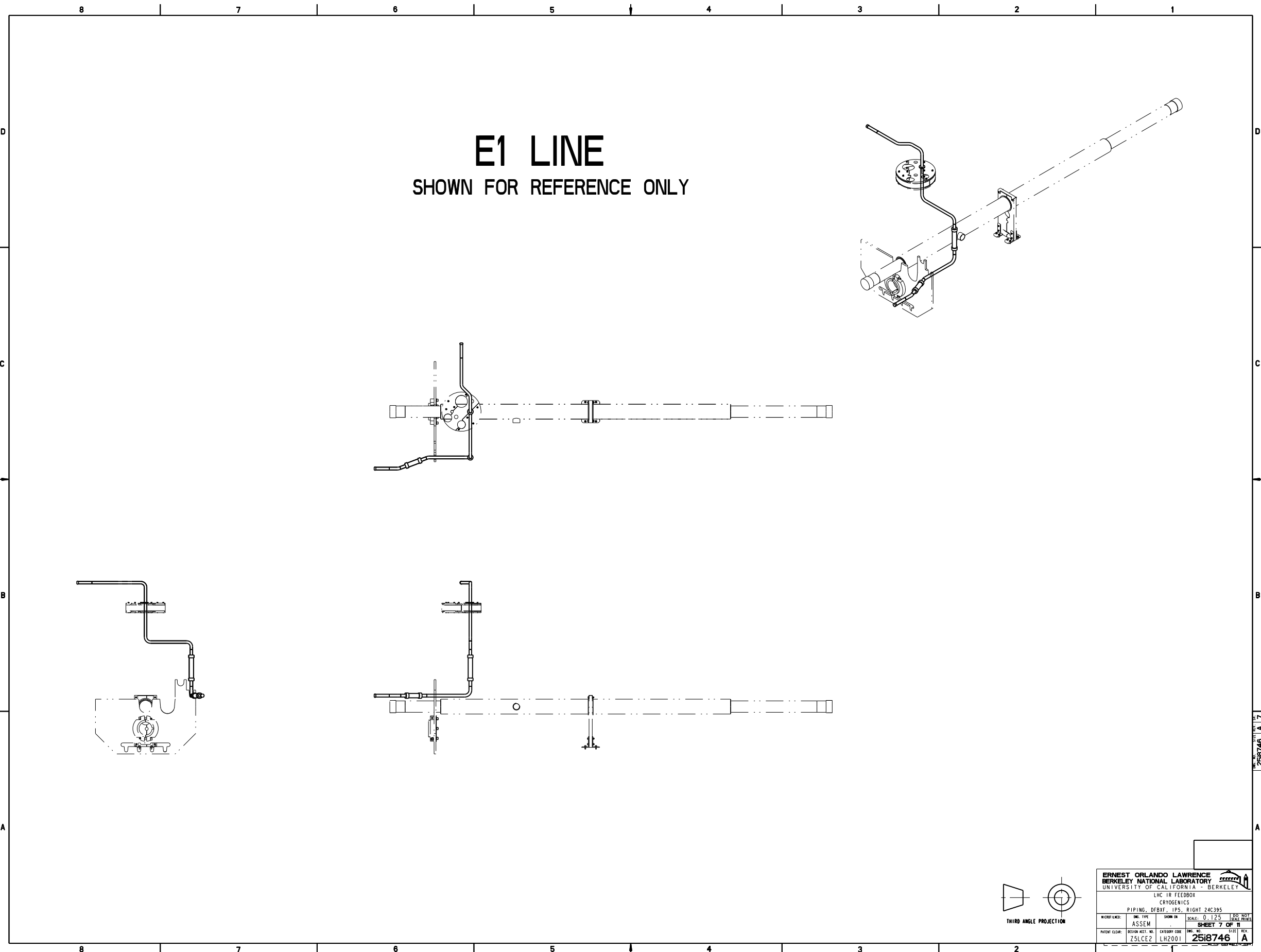
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SHOWN FOR REFERENCE ONLY

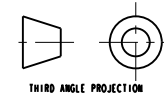


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<small>LHC TR FEEDBOX</small> <small>CRYOGENICS</small>			
<small>PIPING, DFBXF, IPS, RIGHT 24C395</small>			
<small>W/CRD/LINE:</small>	<small>ENG. TYPE:</small>	<small>SHOWN IN:</small>	<small>SCALE:</small>
	<small>ASSEM</small>		<small>0.125 1/8"=1'-0" (SCALE PERMITTED)</small>
<small>SHEET 6 OF 11</small>		<small>2518746 A</small>	
<small>PATENT CLEAR:</small>	<small>DESIGN ACCT. NO.:</small>	<small>CATEGORY CODE:</small>	<small>ENG. NO.:</small>
	<small>Z5LCE2</small>	<small>LH2001</small>	<small>2518746 A</small>

2518746 A 6



**E1 LINE**  
 SHOWN FOR REFERENCE ONLY

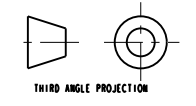
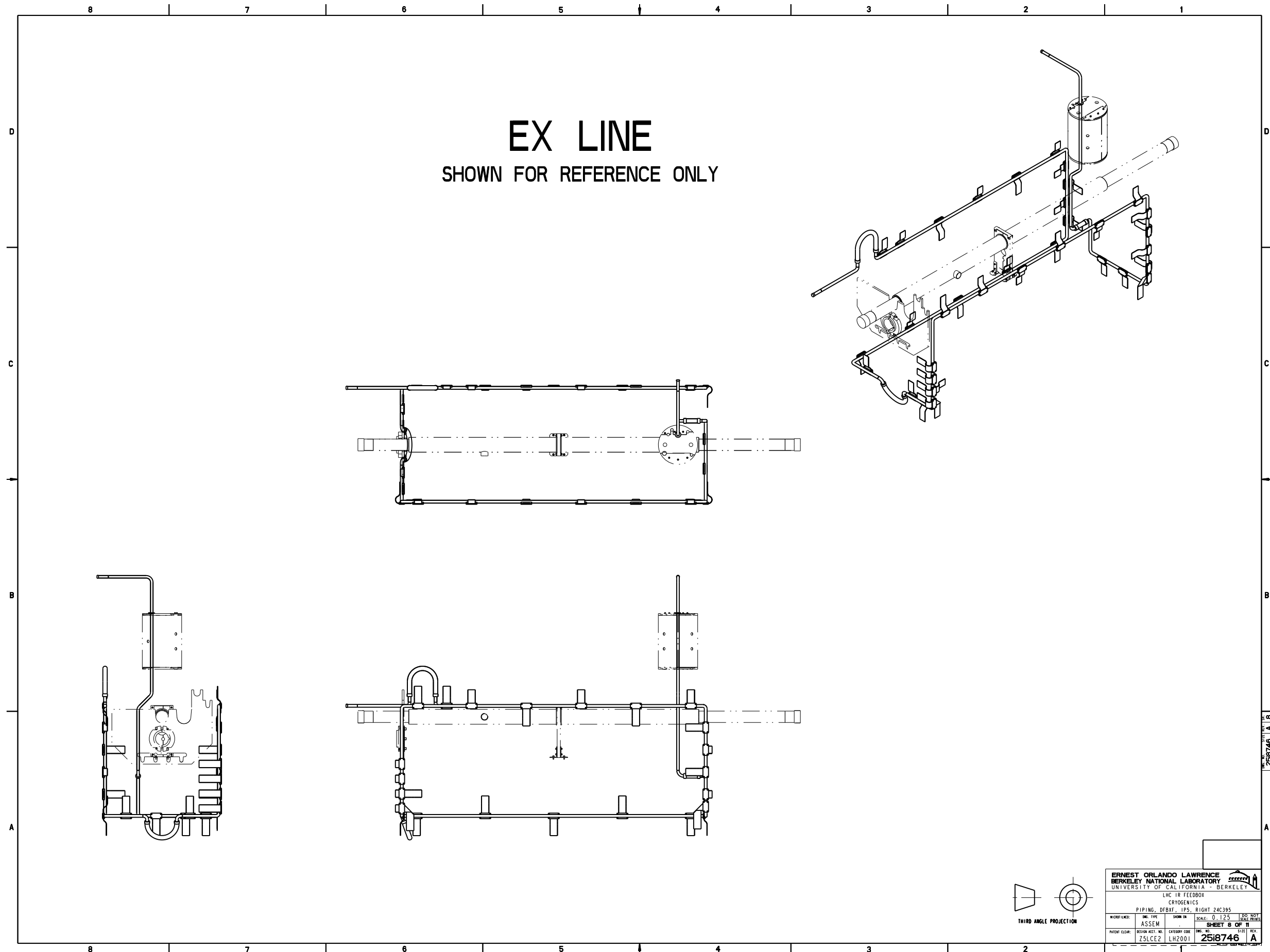


<b>ERNEST ORLANDO LAWRENCE</b> <b>BERKELEY NATIONAL LABORATORY</b> <small>UNIVERSITY OF CALIFORNIA - BERKELEY</small>			
LHC TR FEEDBOX CRYOGENICS			
PIPING, DFBXF, IPS, RIGHT 24C395			
<small>W/PROJ FILED:</small> ASSEM	<small>ENG. TYPE:</small> ASSEM	<small>SCALE:</small> 0.125	<small>DATE:</small> 1/25/00
<small>PATENT CLEAR:</small> ZSLCEZ	<small>DESIGN ACCT. NO.:</small> LH2001	<small>CATEGORY CODE:</small> LH2001	<small>DRG. NO.:</small> <b>2518746</b>
			<small>REV.:</small> <b>A</b>

2518746 A 17

# EX LINE

SHOWN FOR REFERENCE ONLY



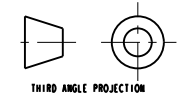
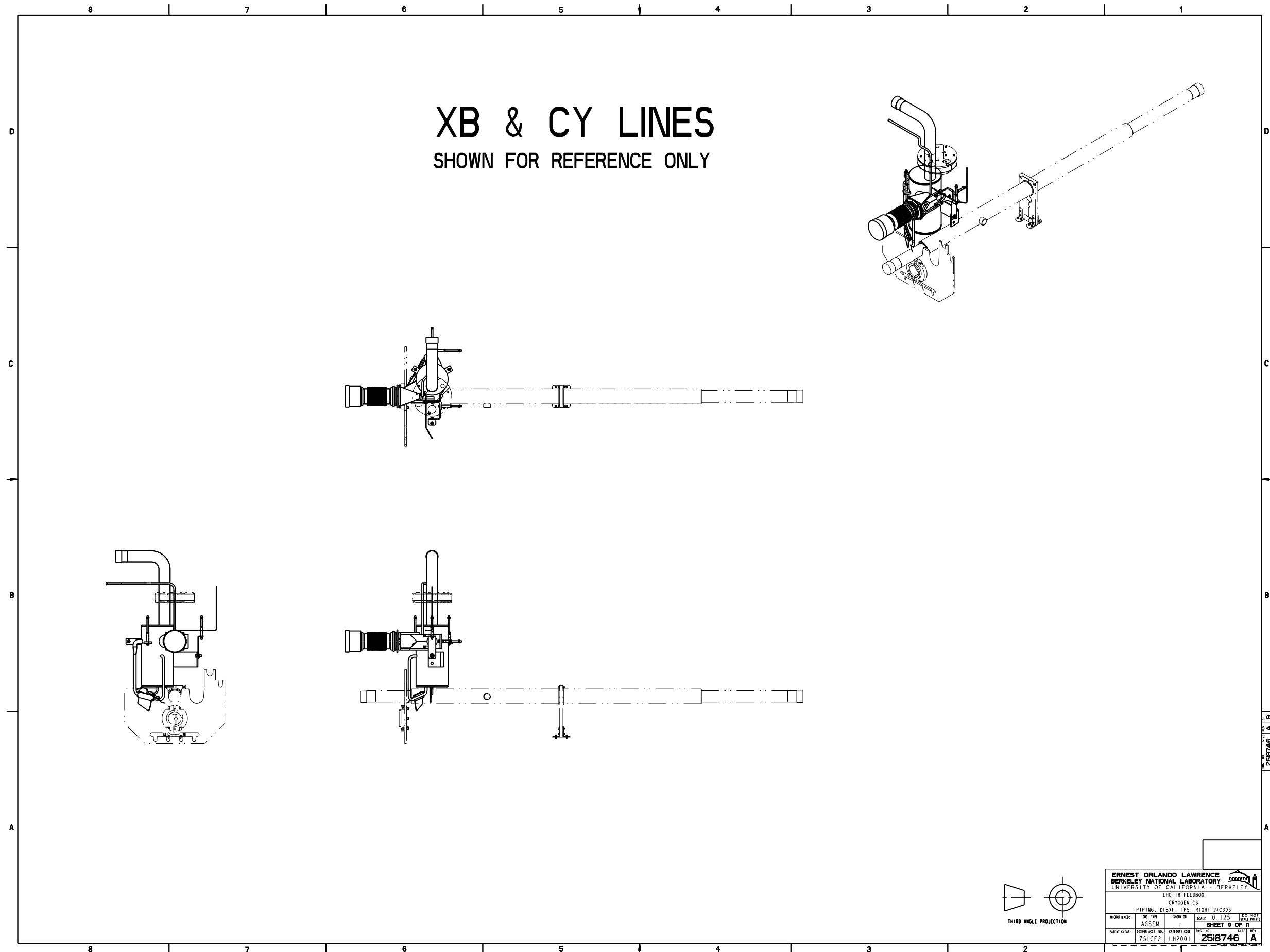
<b>ERNEST ORLANDO LAWRENCE</b> <b>BERKELEY NATIONAL LABORATORY</b> UNIVERSITY OF CALIFORNIA - BERKELEY			
LHC TR FEEDBOX CRYOGENICS			
PIPING, DFBXF, IPS, RIGHT 24C395			
MICROFILMED: ASSEM	ENG. TYPE: ASSEM	DRAWN BY: LH2001	SCALE: 0.125 (1/8" = 1'-0")
SHEET 8 OF 11		2518746 A	
PATENT CLEAR: ZSLCEZ	DESIGN ACCT. NO.: LH2001	CATEGORY CODE: LH2001	ENG. NO.: 2518746 SIZE: A

2518746 A B



# XB & CY LINES

SHOWN FOR REFERENCE ONLY

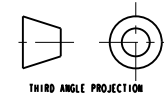
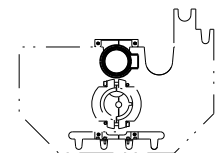
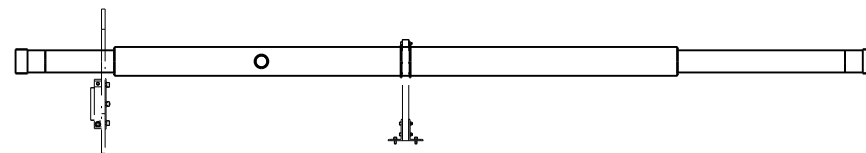
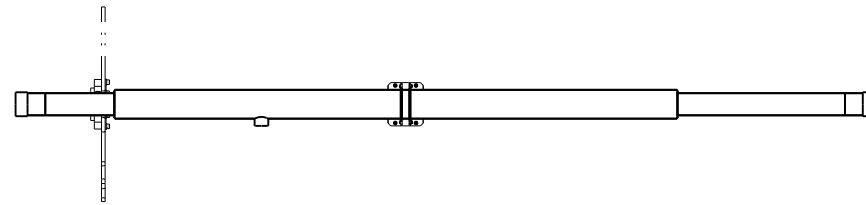
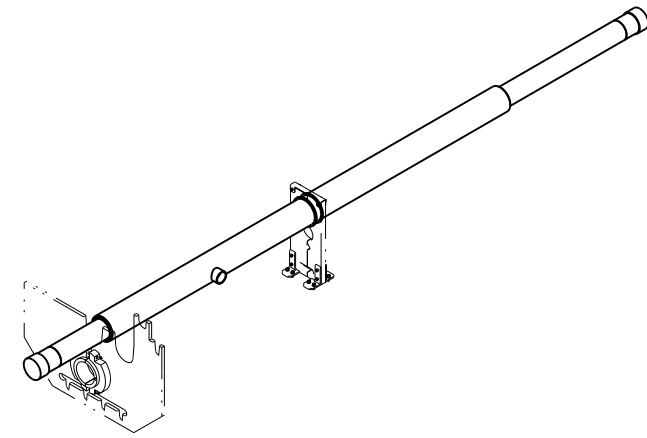


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<small>LHC TR FEEDBOX</small> <small>CRYOGENICS</small>			
<small>PIPING, DFBXF, IPS, RIGHT 24C395</small>			
MICROFILMED:	DWG. TYPE:	DRAWN BY:	SCALE: 0.125 (1/8"=1'-0")
	ASSEM		SHEET 9 OF 11
PATENT CLEAR:	DESIGN ACCT. NO.:	CATEGORY CODE:	DWG. NO.:
	ZSLCEZ	LH2001	2518746 A

2518746 A

# BEAM TUBE

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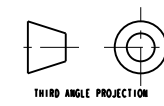
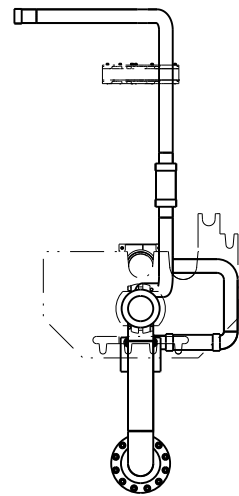
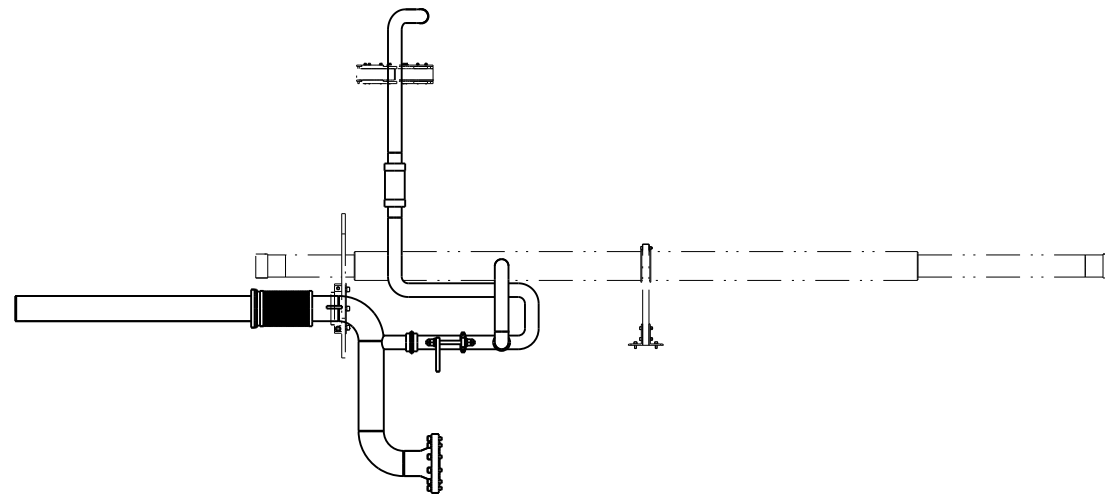
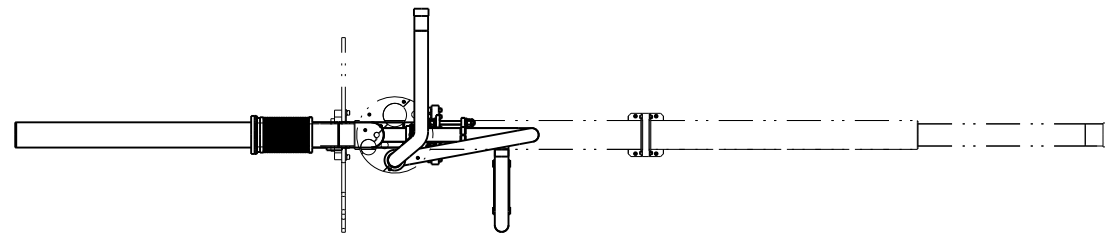
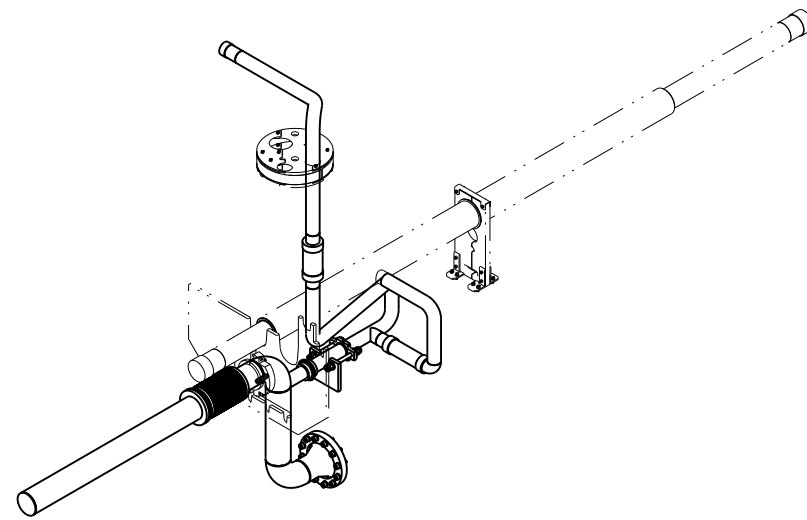


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LHC TR FEEDBOX CRYOGENICS			
PIPING, DFBXF, IPS, RIGHT 24C395			
MICROFILMED:	ENG. TYPE: ASSEM	DRAWN BY: LH2001	SCALE: 0.125 (1/8" = 1'-0")
SHEET NO. OF 11			SIZE: A
PATENT CLEAR:	DESIGN ACCT. NO.: ZSLCEZ	CATEGORY CODE: LH2001	Dwg. No.: <b>2518746</b>

2518746 A 10

# BUS DUCT ASSEMBLY

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<b>ERNEST ORLANDO LAWRENCE</b> BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA - BERKELEY			
LHC TR FEEDBOX CRYOGENICS			
PIPING, DFBXF, IPS, RIGHT 24C395			
MICROFILMED:	ENG. TYPE: ASSEM	DRAWN BY: LH2001	SCALE: 0.125 (1/8"=1'-0")
PATENT CLEAR:		DESIGN ACCT. NO.: ZSLCE2	CATEGORY CODE: LH2001
		DRG. NO.: <b>2518746</b>	SHEET II OF II SIZE: A

2518746 A II