

STEM CELL LABORATORY (STCL)



DOCUMENT NUMBER: STCL-EQUIP-016 JA2

DOCUMENT TITLE:

LN2 System Piping Diagram for North Pavilion JA2

DOCUMENT NOTES:

Document Information

Revision: 02

Vault: STCL-Equipment-rel

Status: Release

Document Type: Equipment

Date Information

Creation Date: 16 Aug 2016

Release Date: 23 Sep 2016

Effective Date: 23 Sep 2016

Expiration Date:

Control Information

Author: WATE02

Owner: WATE02

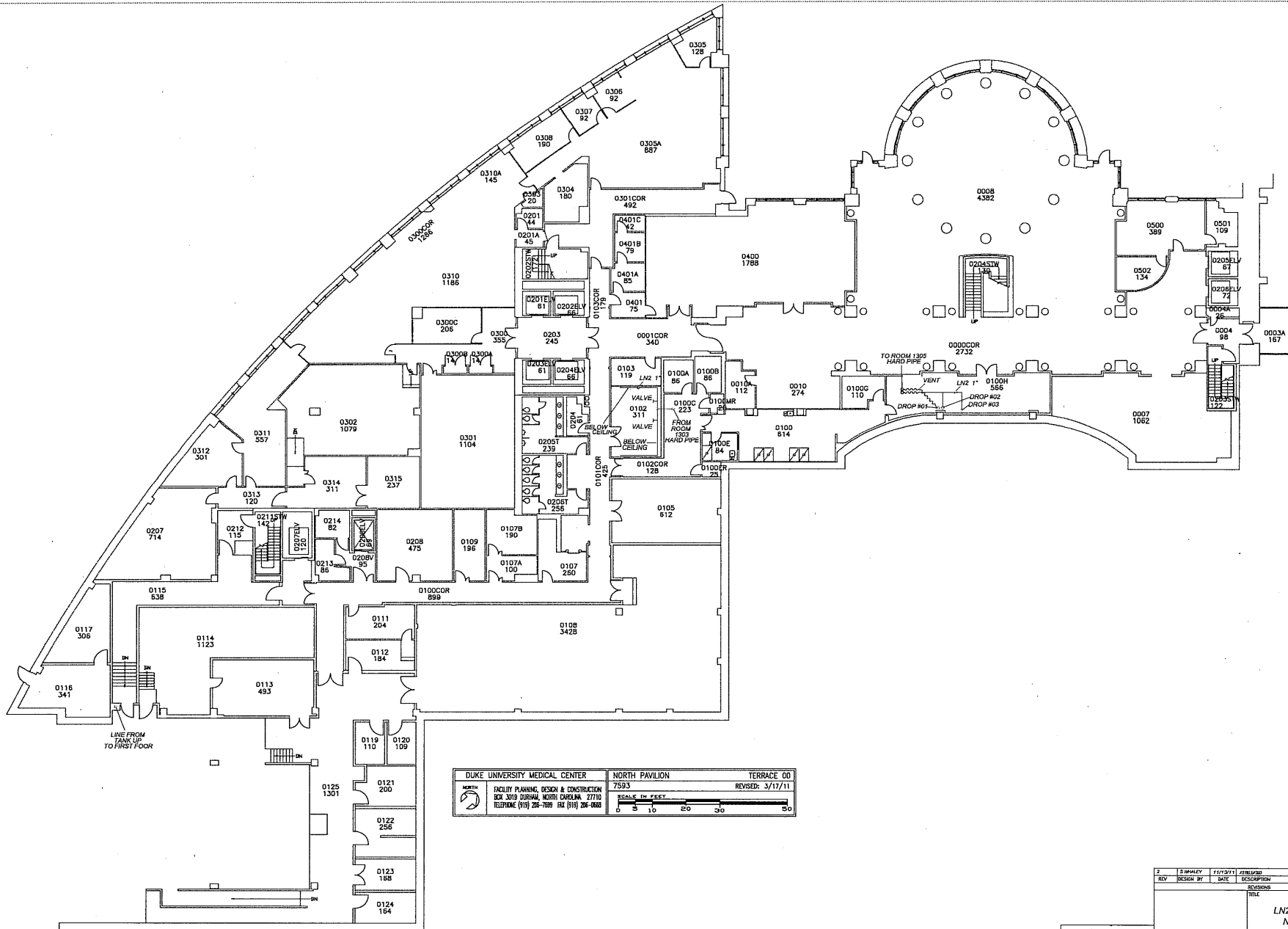
Previous Number: STCL-EQUIP-016 JA2 Rev 01 **Change Number:** STCL-CCR-349



NORTH PAVILION	PLAZA 01
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7593 REVISED: 3/18/11
SCALE IN FEET

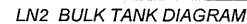
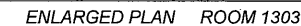
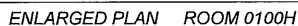
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REV	DESIGN BY	DATE	DESCRIPTION															1/20/2011										ISSUE DATE										ISSUED/APPROVED BY																																																															
REVISIONS																														TITLE BARLOW SCIENTIFIC LN2 SYSTEM - PIPING DIAGRAM NORTH PAVILION BUILDING PAVILION LEVEL PIPING PLAN																																																																							
SIZE										PROJECT NO.										DWG NO.																																																																																	
B										NA																				P001-01																																																																							
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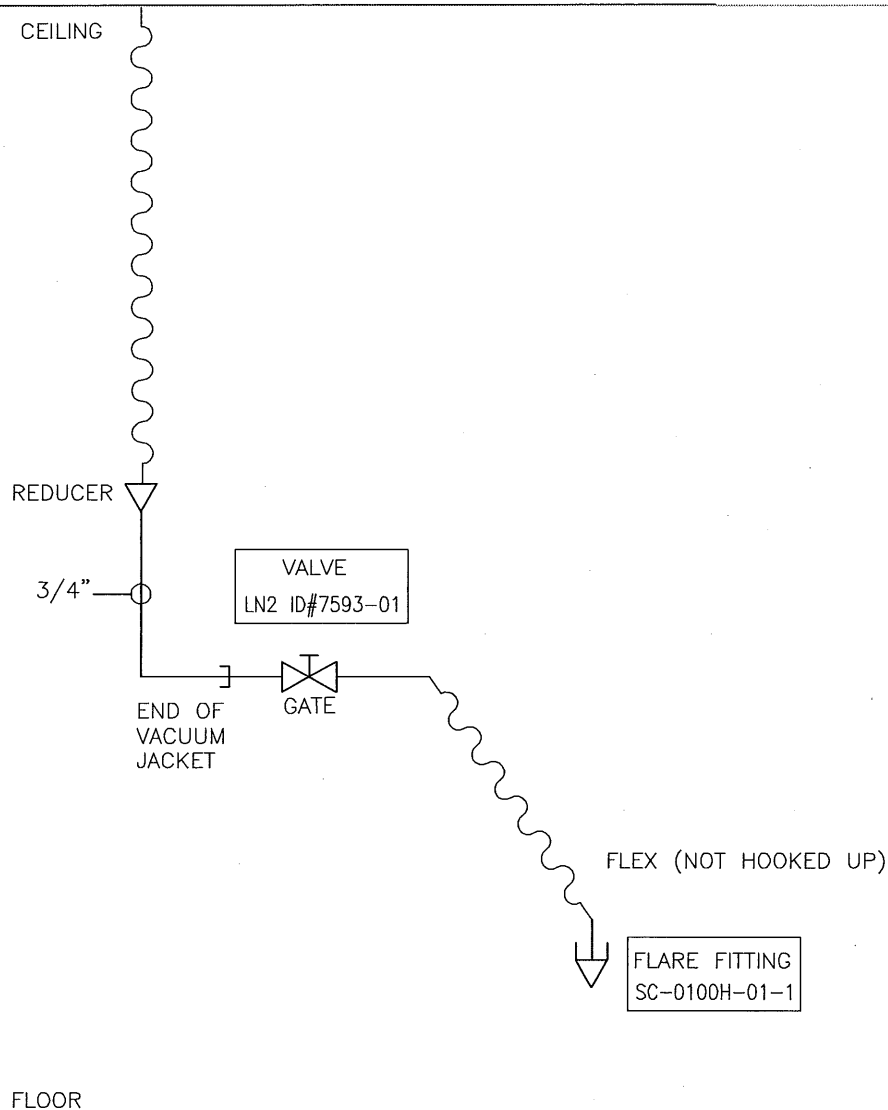
DUKE UNIVERSITY MEDICAL CENTER		NORTH PAVILION		TERRACE 00	
FACILITY PLANNING, DESIGN & CONSTRUCTION		7583		REVISED: 3/17/11	
BOX 3019 DURHAM, NORTH CAROLINA 27710		SCALE IN FEET			
TELEPHONE (919) 286-7699 FAX (919) 286-5600		0 5 10 20 30 50			



REV	DESIGN BY	DATE	DESCRIPTION	ISSUE DATE	ISSUED/REVISED BY
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TITLE					
BARLOW SCIENTIFIC					
LN2 SYSTEM - PIPING DIAGRAM					
NORTH PAVILION BUILDING					
TERRACE LEVEL PIPING PLAN					
SIZE	PROJECT NO.	DWG NO.			
9	NA	P001-02			
SCALE	NTS	P001-02	SHEET 1 OF 1		



REVISIONS		TITLE	
		BARLOW SCIENTIFIC LN2 SYSTEM - PIPING DIAGRAM NORTH PAVILION BUILDING SYSTEM DETAILS	
SIZE B	PROJECT NO. NA	DWG NO.	LN2001-01
SCALE N.T.S.			SHEET 1 OF 1



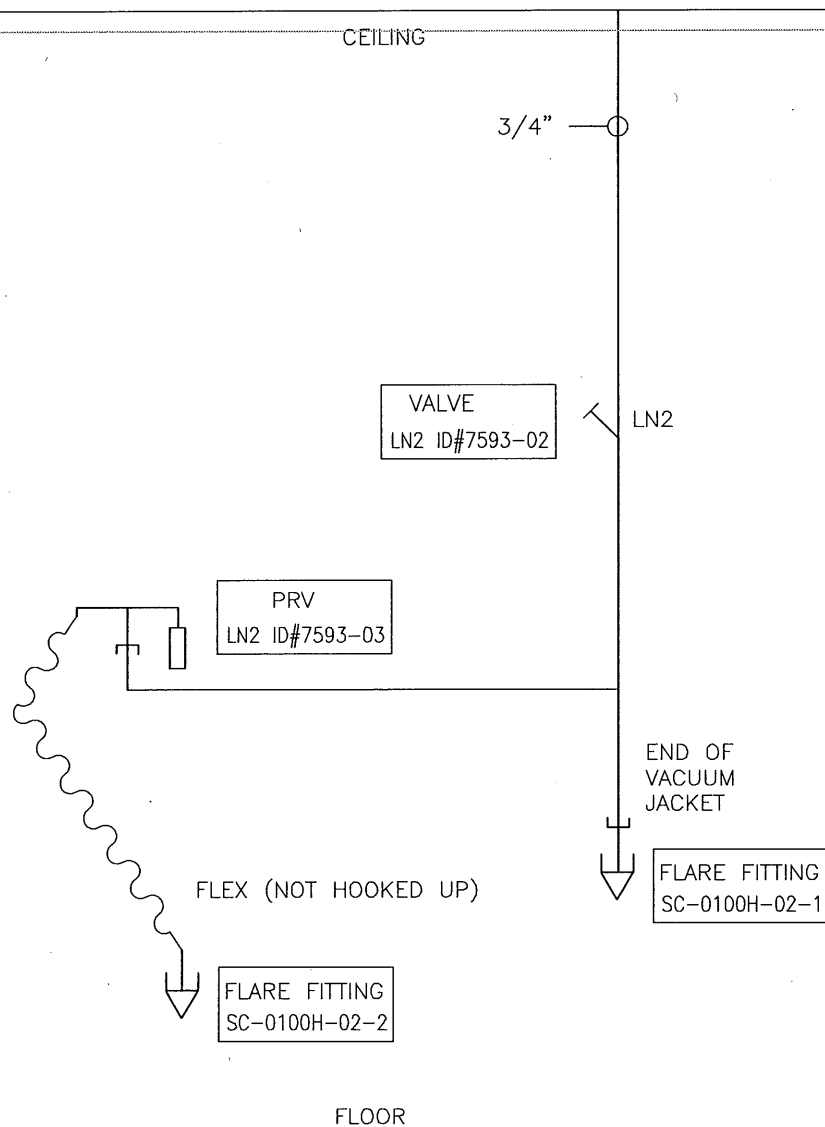
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STEEL EXTERIOR, LN2 APPROVED STEEL FLEX TUBING, LN2
APPROVED STAINLESS STEEL AND BRASS FITTINGS

** NOTE: LN2 LINE SIZE IS 1" UNLESS OTHERWISE SPECIFIED

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REV	DESIGN BY	DATE	DESCRIPTION	ISSUED BY	DATE
REVISIONS					
TITLE					
BARLOW SCIENTIFIC					
LN2 SYSTEM - PIPING DIAGRAM					
NORTH PAVILION BUILDING					
ROOM 0100H SOUTH WALL DROP #1					
REV	PROJECT NO.	SHEET NO.			
0	NA	0100H-01			
SCALE	NTS	FILE#	0100H-01	SHEET	1 OF 1



** NOTE: APPROVED MATERIALS OF CONSTRUCTION INCLUDE:
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STEEL EXTERIOR, LN2 APPROVED STEEL FLEX TUBING, LN2
APPROVED STAINLESS STEEL AND BRASS FITTINGS

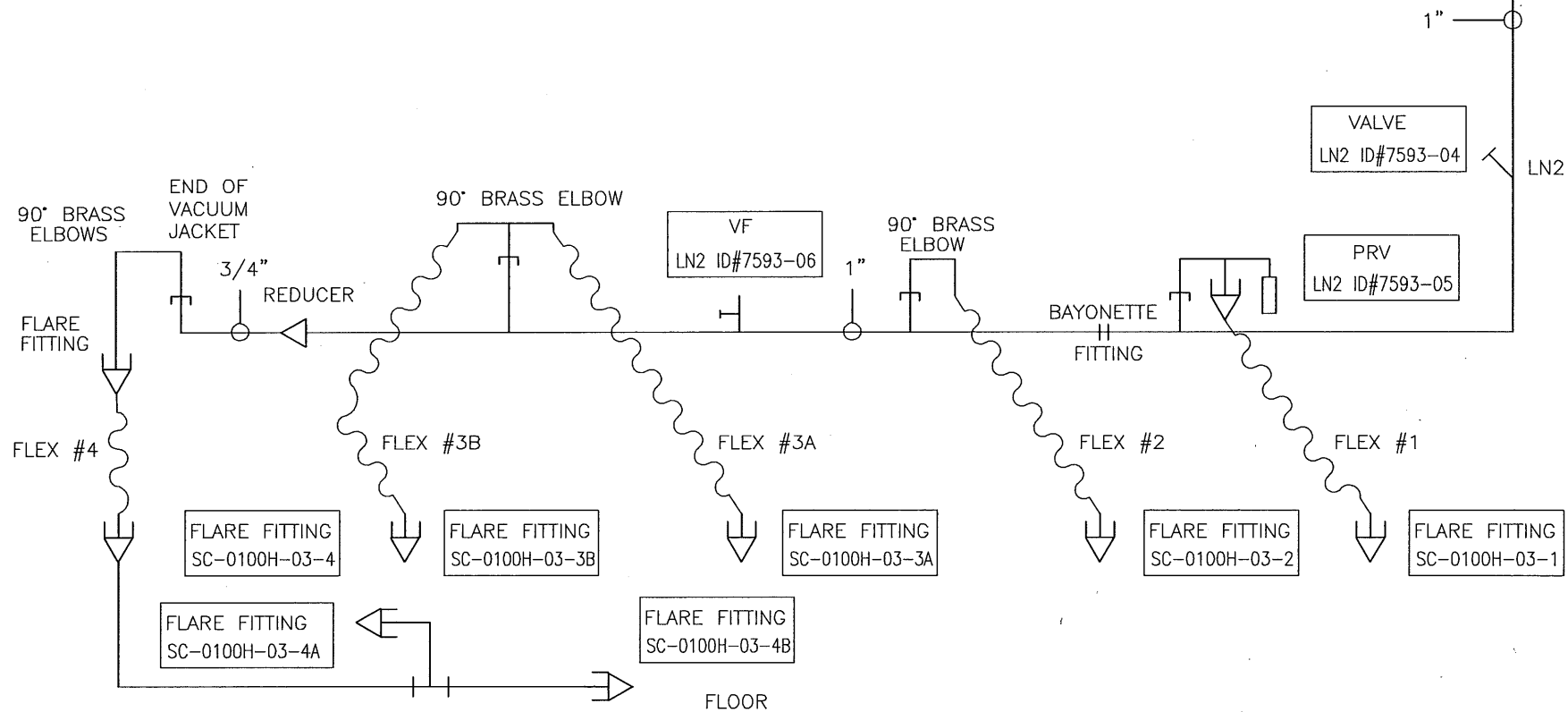
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REVISIONS						
TITLE						
BARLOW SCIENTIFIC						
LN2 SYSTEM - PIPING DIAGRAM						
NORTH PAVILION BUILDING						
ROOM 0100H SOUTH WALL DROP #2						
SIZE	PROJECT NO.	SHEET NO.				
8	NA	0100H-02				
SCALE	NTS	FILE#	0100H-02	SHEET	1 OF 1	

CEILING



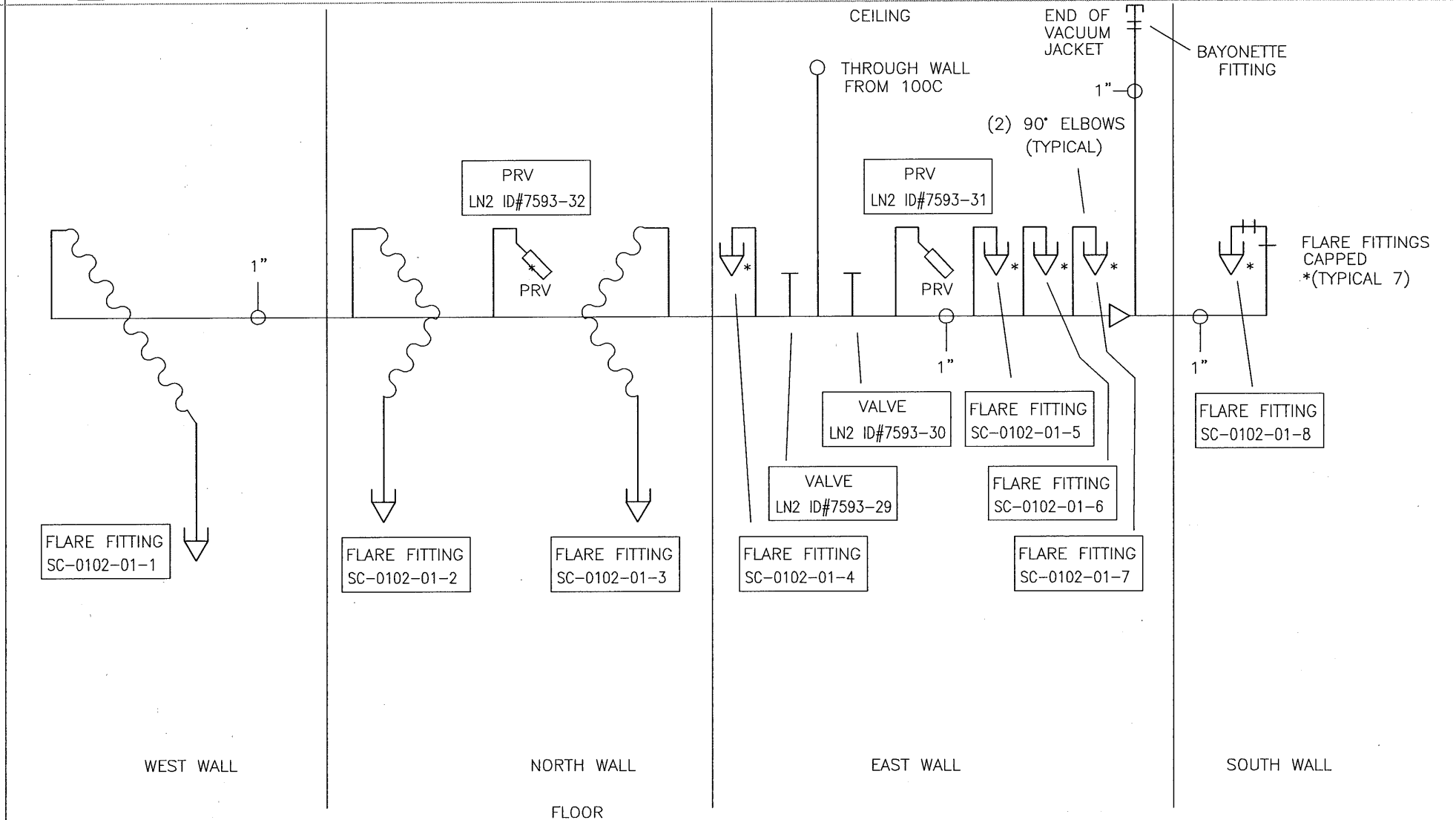
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TITLE																							
BARLOW SCIENTIFIC																							
LN2 SYSTEM - PIPING DIAGRAM																							
NORTH PAVILION BUILDING																							
ROOM 0100H SOUTH WALL DROP #3																							
SIZE	PROJECT NO.																						
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NTS	Sheet 1 OF 1																						





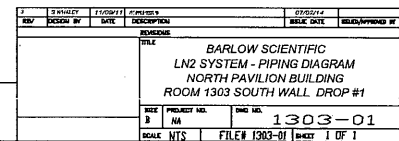
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STEEL EXTERIOR, LN2 APPROVED STEEL FLEX TUBING, LN2
APPROVED STAINLESS STEEL AND BRASS FITTINGS

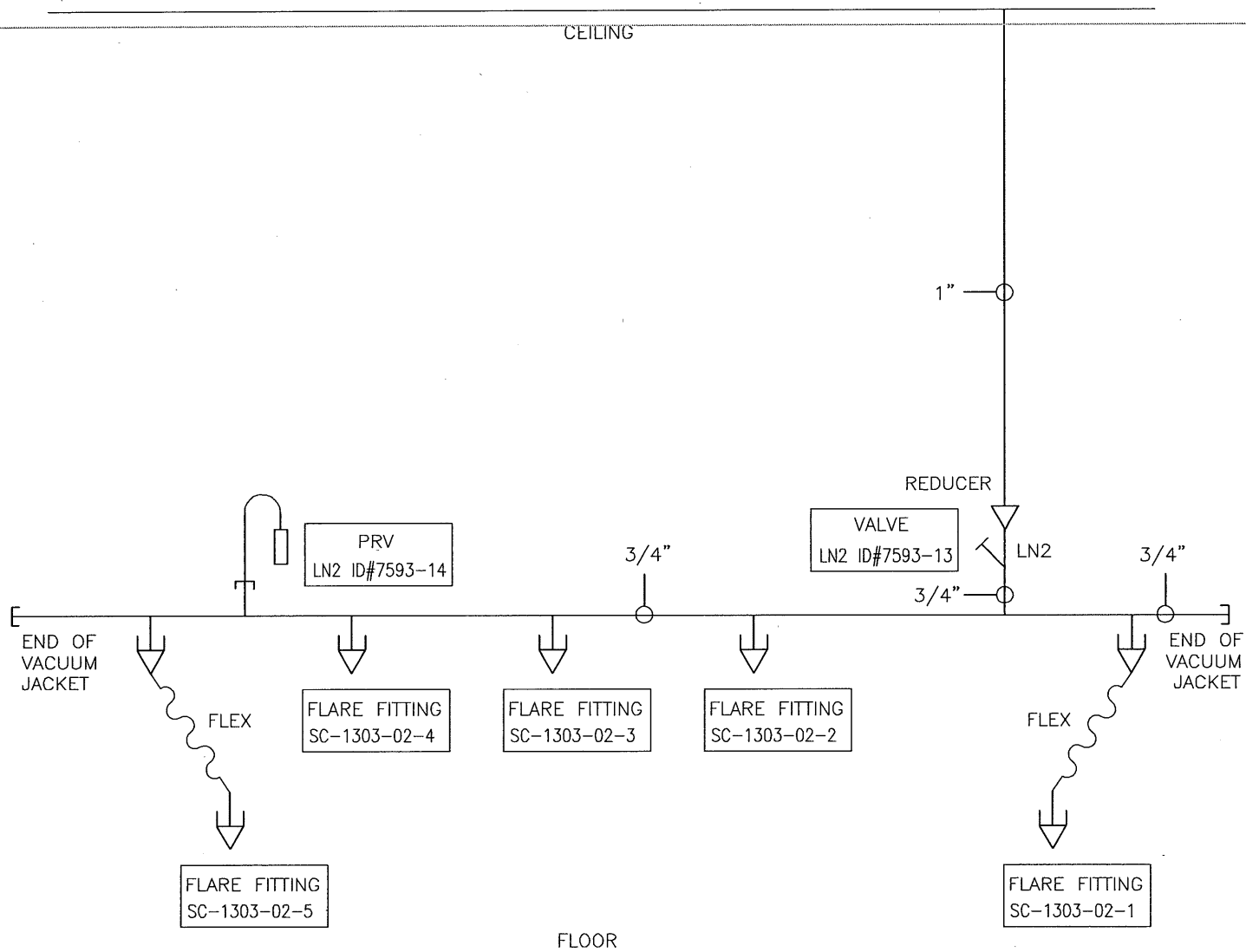
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REV	DESIGN BY	DATE	DESCRIPTION	REVISED BY	DATE	DESCRIPTION
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TITLE						
BARLOW SCIENTIFIC						
LN2 SYSTEM - PIPING DIAGRAM						
NORTH PAVILION BUILDING						
ROOM 0102 COMPLETE ROOM DROP						
SIZE	PROJECT NO.	DATE	SCALE	FILE NO.	REV	DATE
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SCALE	NTS	FILE NO.	0102-01	SHEET	1 OF 1	





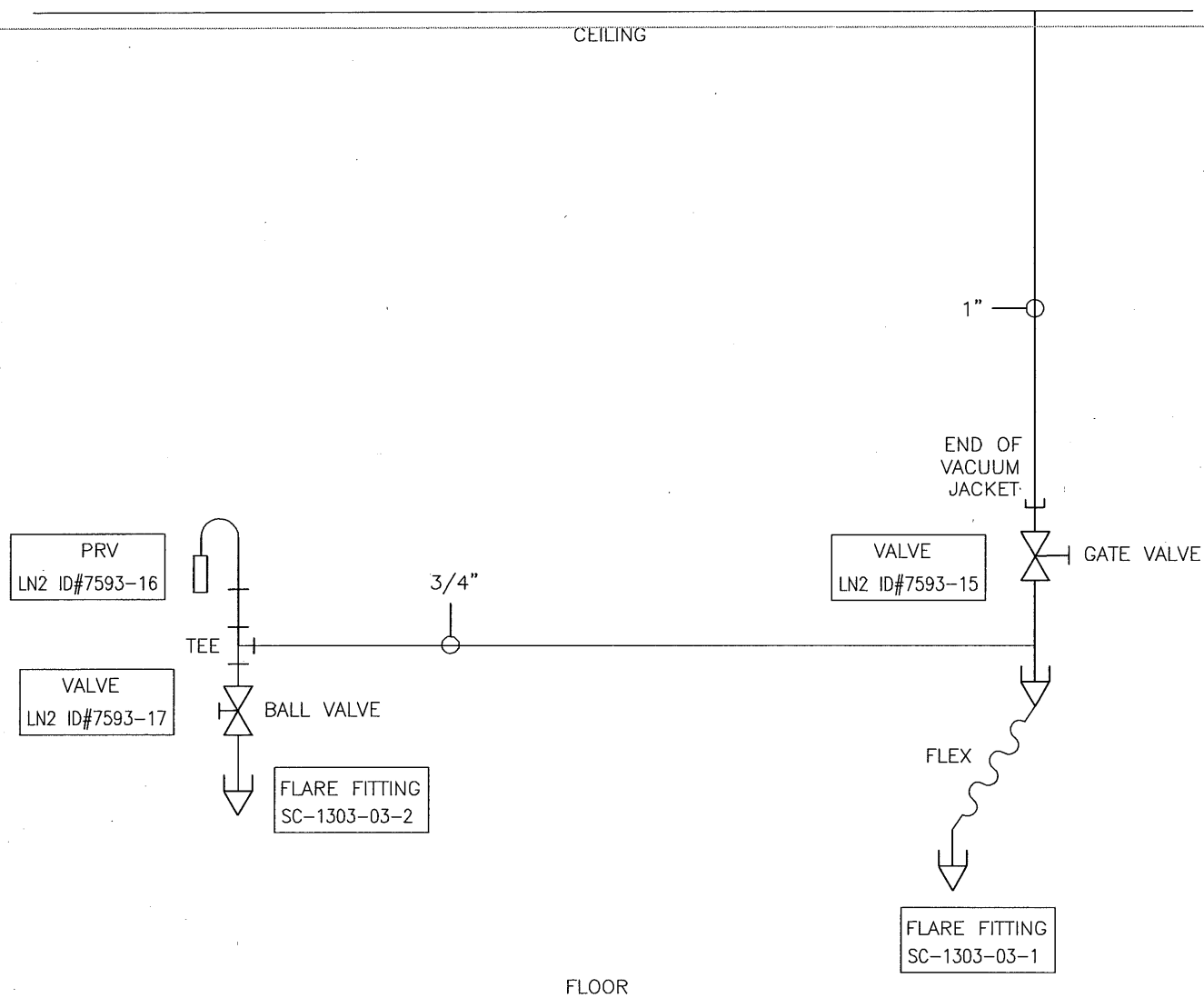
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REV	DESIGN BY	DATE	DESCRIPTION	DATE	DESIGNED BY
1					
REVISIONS					
TITLE					
BARLOW SCIENTIFIC					
LN2 SYSTEM - PIPING DIAGRAM					
NORTH PAVILION BUILDING					
ROOM 1303 WEST WALL DROP #2					
REV	PROJECT NO.	DATE	1303-02		
2	NA				
SCALE	NTS	FILE#	1303-02	SHEET 1 OF 1	



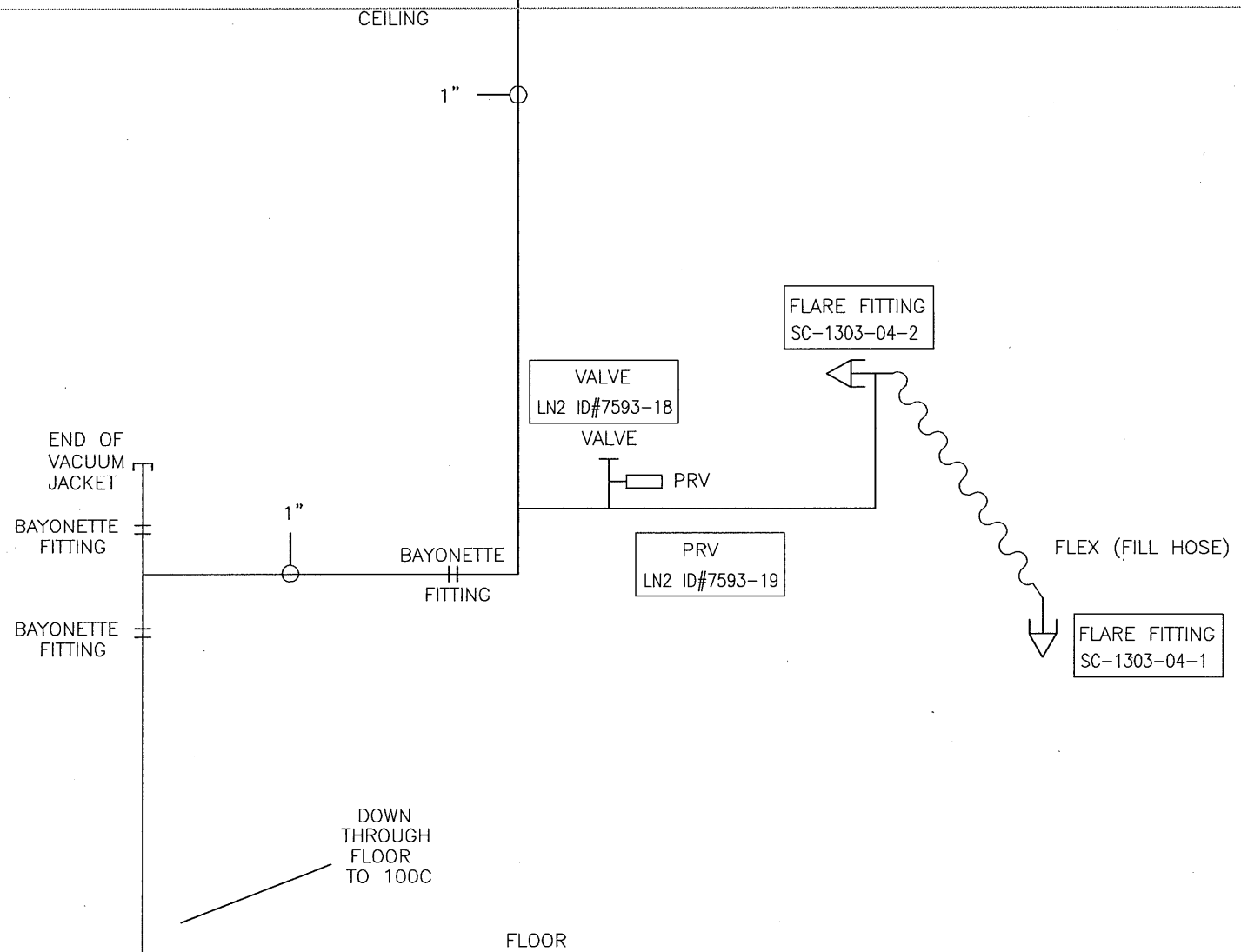
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REV	DESIGN BY	DATE	DESCRIPTION	REVISED BY	DATE	DESCRIPTION
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BARLOW SCIENTIFIC LN2 SYSTEM - PIPING DIAGRAM NORTH PAVILION BUILDING ROOM 1303 WEST WALL DROP #3						
SIZE	PROJECT NO.	DWG NO.	1303-03			
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SCALE	NTS	FILE#	1303-03	SHEET	1	OF 1



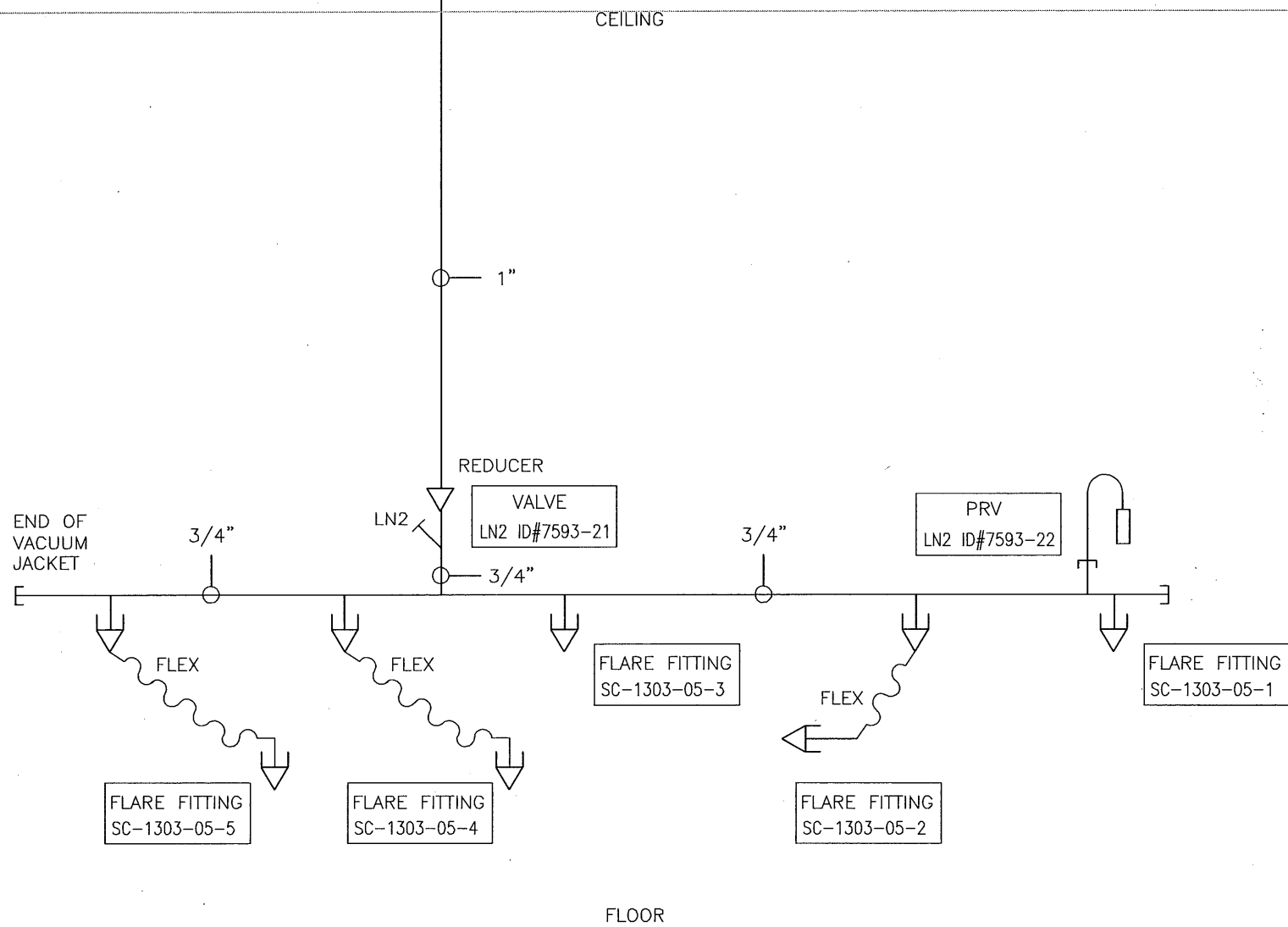
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REV	DESIGN BY	DATE	DESCRIPTION	DATE	DESIGNED BY
TITLE					
BARLOW SCIENTIFIC					
LN2 SYSTEM - PIPING DIAGRAM					
NORTH PAVILION BUILDING					
ROOM 1303 WEST WALL DROP #4					
DATE	PROJECT NO.	DATE	PROJECT NO.	DATE	PROJECT NO.
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SCALE	NTS	FILE#	1303-04	Sheet	1 OF 1

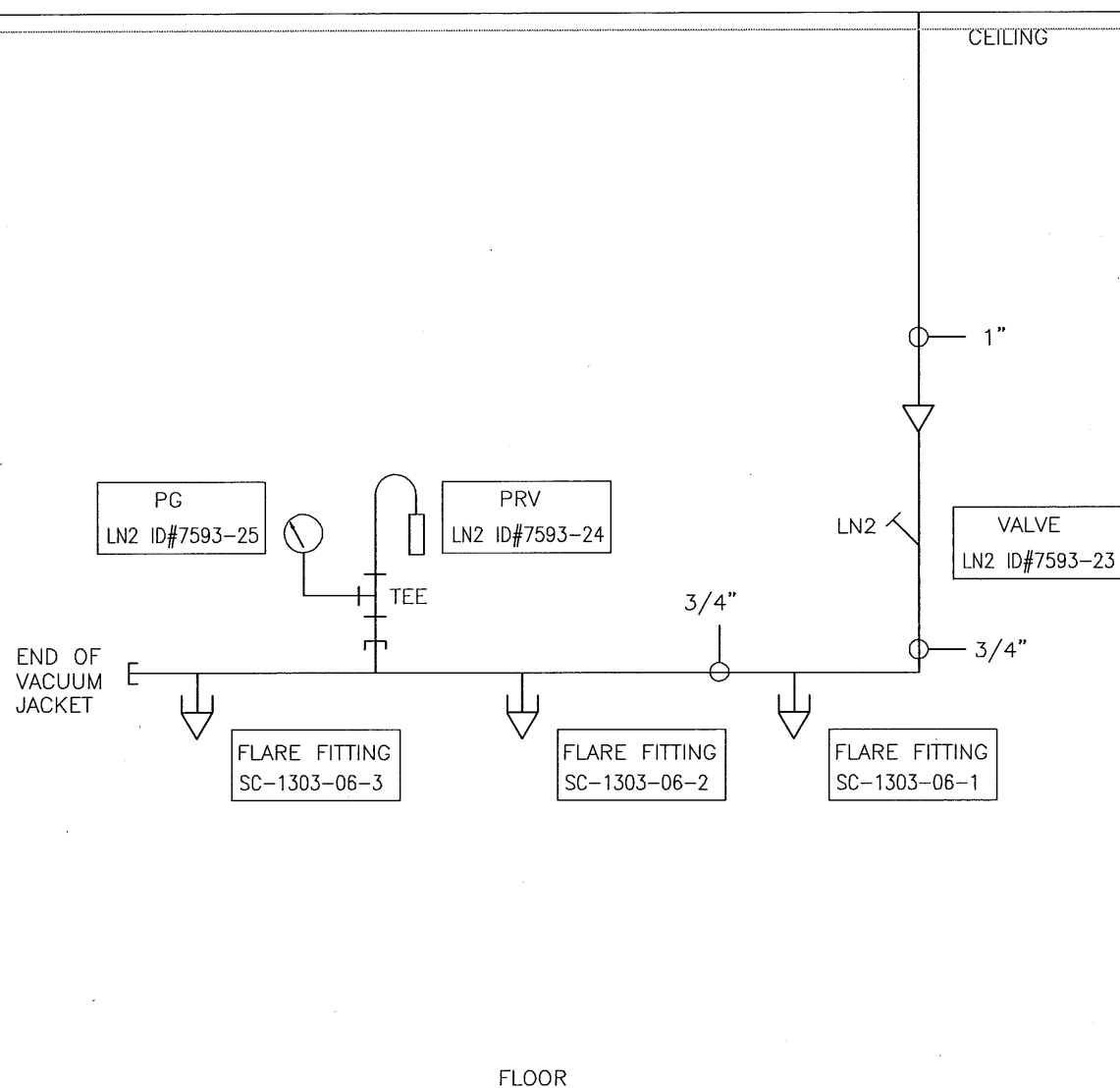


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REV	DESIGN BY	DATE	DESCRIPTION	SCALE	DATE	DESIGNED BY	DATE	APPROVED BY	DATE
BARLOW SCIENTIFIC LN2 SYSTEM - PIPING DIAGRAM NORTH PAVILION BUILDING ROOM 1303 NORTH WALL DROP #5									
SIZE	PROJECT NO.	DATE	FILE #	1303-05					
SCALE	NTS	FILE #	1303-05	PAGE 1 OF 1					



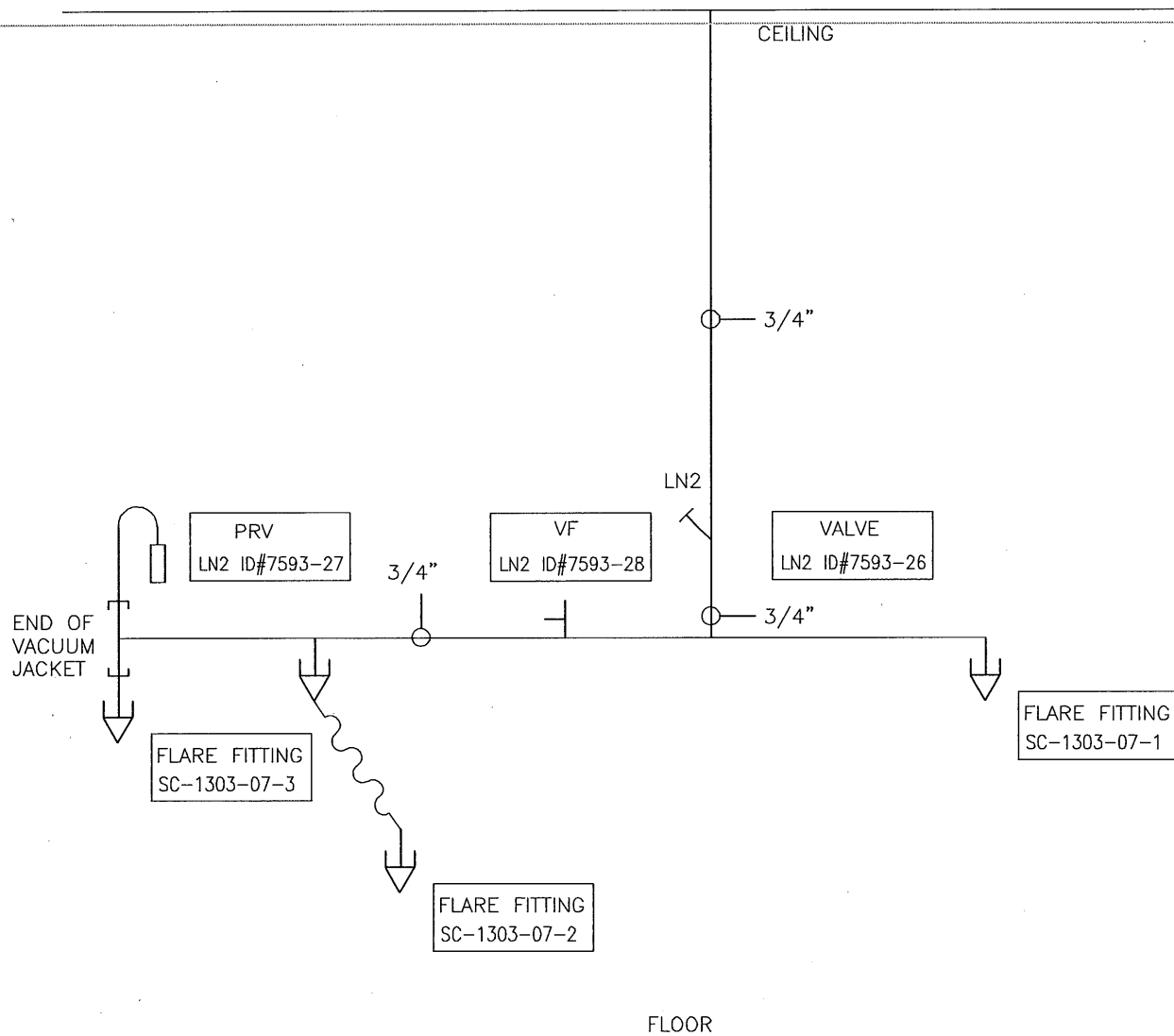
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REV	DESIGN BY	DATE	DESCRIPTION	DATE	DESIGNED BY
REVISIONS					
			TITLE		
			BARLOW SCIENTIFIC		
			LN2 SYSTEM - PIPING DIAGRAM		
			NORTH PAVILION BUILDING		
			ROOM 1303 EAST WALL DROP #6		
DATE	PROJECT NO.	ENC. NO.			
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SCALE	NTS	FILE# 1303-06	SHEET 1 OF 1		

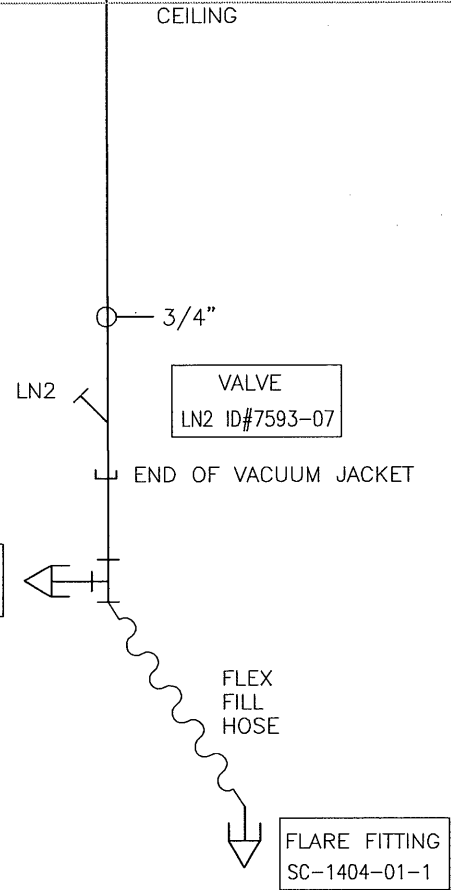


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APPROVED STAINLESS STEEL AND BRASS FITTINGS

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DESIGNED BY	DATE	DESCRIPTION	SCALE	DATE	DESIGNED BY
BARLOW SCIENTIFIC LN2 SYSTEM - PIPING DIAGRAM NORTH PAVILION BUILDING ROOM 1303 SOUTH WALL DROP #7 SCALE: NTS FILE# 1303-07 Sheet 1 OF 1					



FLOOR

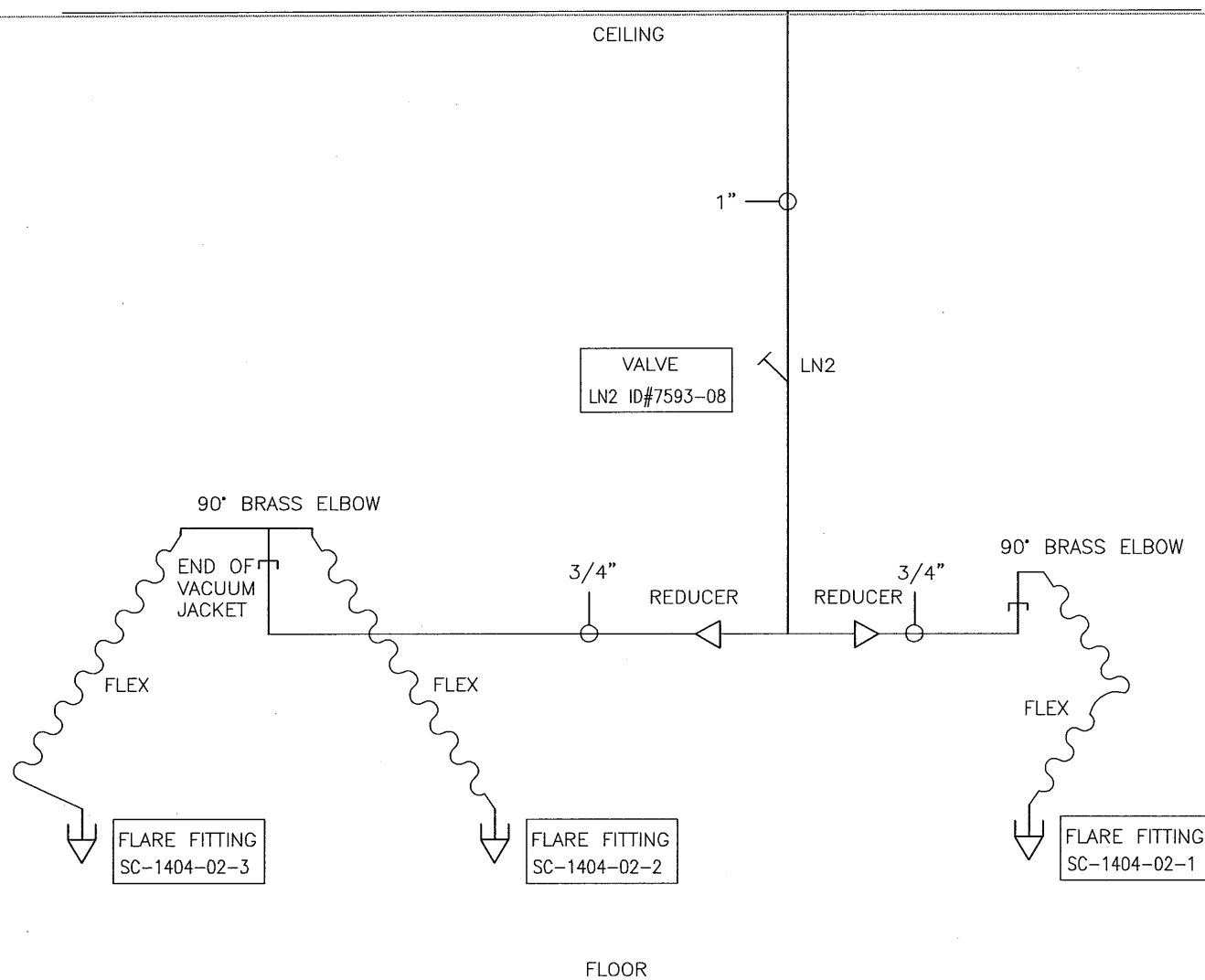
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REV	DESIGN BY	DATE	DESCRIPTION	REVISION	DATE	DESIGNED BY
TITLE						
BARLOW SCIENTIFIC						
LN2 SYSTEM - PIPING DIAGRAM						
NORTH PAVILION BUILDING						
ROOM 1404 SOUTH WALL DROP #1						
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SCALE	NTS	FILE #	1404-01	SHEET	1	OF 1



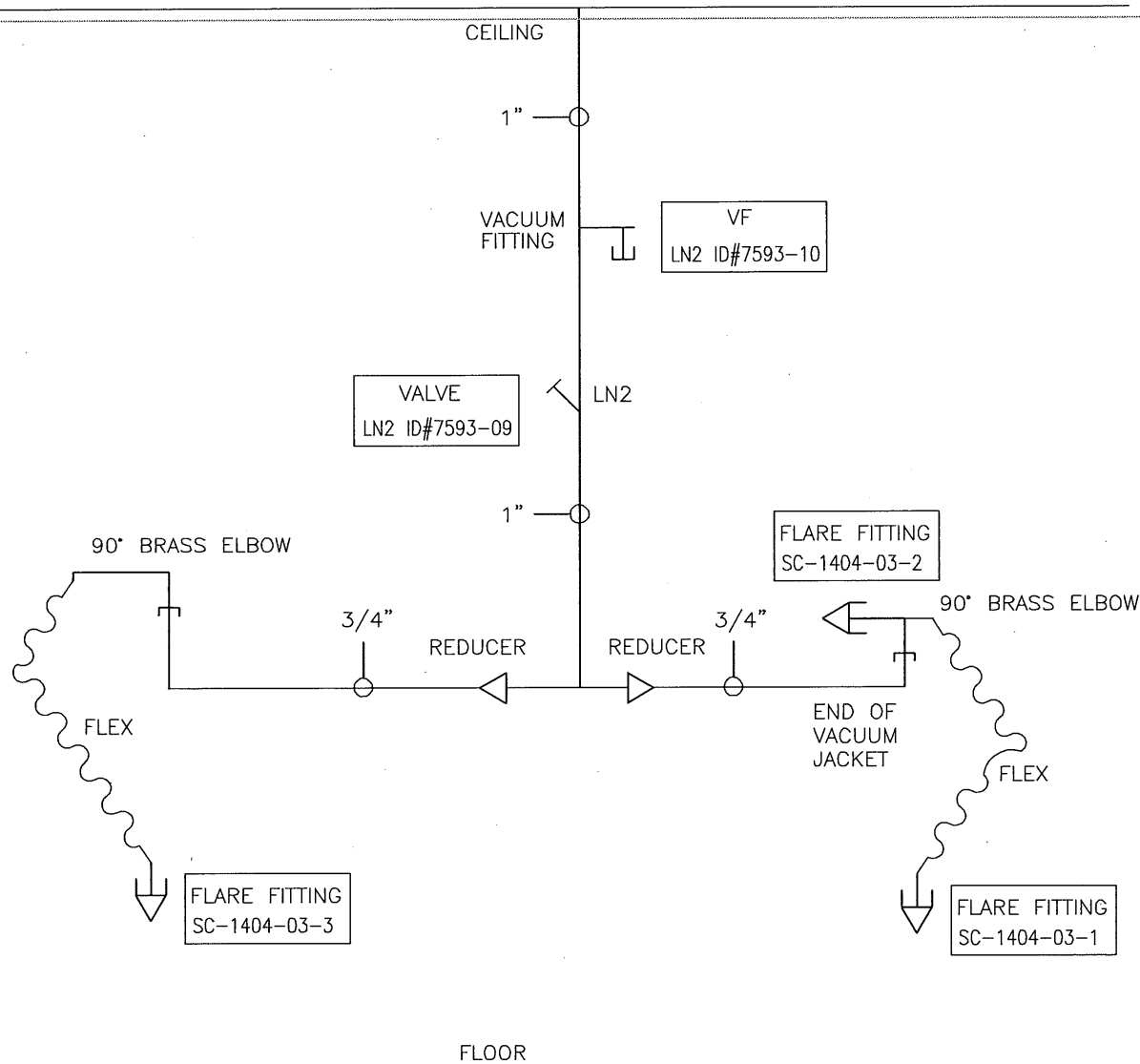
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REV	DESIGN BY	DATE	DESCRIPTION	SCALE	DATE	APPROVED BY
TITLE						
BARLOW SCIENTIFIC						
LN2 SYSTEM - PIPING DIAGRAM						
NORTH PAVILION BUILDING						
ROOM 1404 EAST WALL DROP #2						
REV	PRODUCT NO.	DOC NO.				
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APPROVED STAINLESS STEEL AND BRASS FITTINGS

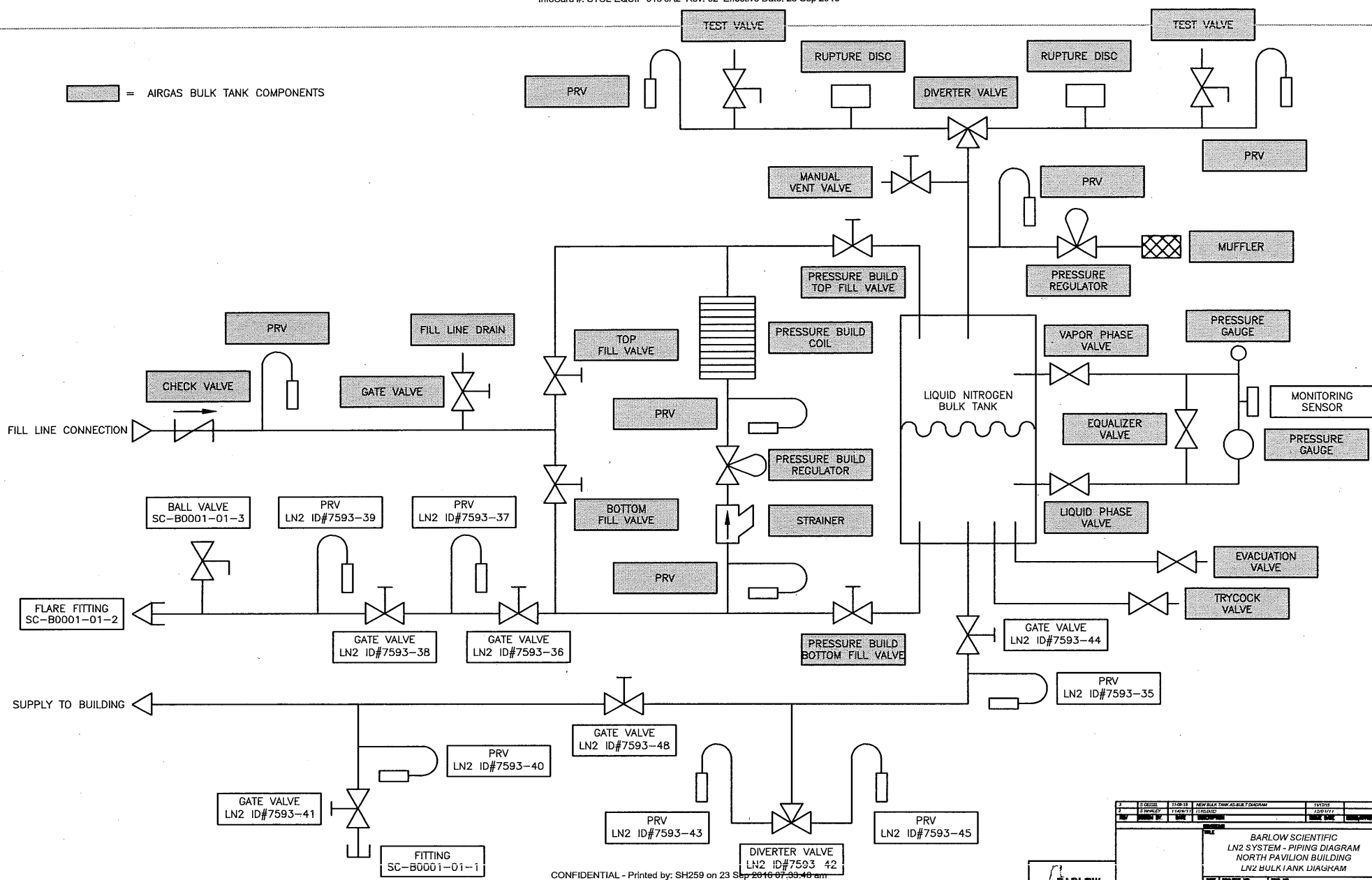
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REV	DESIGNED BY	DATE	DESCRIPTION	SCALE	DATE	DESIGNED BY
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TITLE						
BARLOW SCIENTIFIC						
LN2 SYSTEM - PIPING DIAGRAM						
NORTH PAVILION BUILDING						
ROOM 1404 WEST WALL DROP #3						
SIZE	PROJECT NO.	DOC NO.				
8	NA	1404-03				
SCALE	NTS	FILE# 1404-03	SHEET 1 OF 1			

 = AIRGAS BULK TANK COMPONENTS



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3	DESIGN	11-08-15	NEW BLANK TANK AS-BUILT DIAGRAM	11/08/15	
2	DESIGN	11/08/15	REVISION	11/08/15	
1	DESIGN	11/08/15	REVISION	11/08/15	
BARLOW SCIENTIFIC LN2 SYSTEM - PIPING DIAGRAM NORTH PAVILION BUILDING LN2 BULK TANK DIAGRAM					
2	REV	11/08/15	1	11/08/15	1
1	REV	11/08/15	1	11/08/15	1
B0001-01 FILE: B0001-01					

N. Pavilion - LN2 Supply Connection ID Chart

Building # 7593

(Updated 03/22/2016)



Tag ID				
Building	Line 1	Room #	Drop #	Description
7593	SC-0100H-01-1	0100H	1	Supply Connection
7593	SC-0100H-02-1	0100H	2	Supply Connection
7593	SC-0100H-02-2	0100H	2	Supply Connection
7593	SC-0100H-03-1	0100H	3	Supply Connection
7593	SC-0100H-03-2	0100H	3	Supply Connection
7593	SC-0100H-03-03A	0100H	3	Supply Connection
7593	SC-0100H-03-03B	0100H	3	Supply Connection
7593	SC-0100H-03-04	0100H	3	Supply Connection
7593	SC-1404-01-1	1404	1	Supply Connection
7593	SC-1404-01-2	1404	1	Supply Connection
7593	SC-1404-02-1	1404	2	Supply Connection
7593	SC-1404-02-2	1404	2	Supply Connection
7593	SC-1404-02-3	1404	2	Supply Connection
7593	SC-1404-03-1	1404	3	Supply Connection
7593	SC-1404-03-2	1404	3	Supply Connection
7593	SC-1404-03-3	1404	3	Supply Connection
7593	SC-1303-01-1	1303	1	Supply Connection
7593	SC-1303-01-2	1303	1	Supply Connection
7593	SC-1303-01-3	1303	1	Supply Connection
7593	SC-1303-01-4	1303	1	Supply Connection
7593	SC-1303-02-1	1303	2	Supply Connection
7593	SC-1303-02-2	1303	2	Supply Connection
7593	SC-1303-02-3	1303	2	Supply Connection
7593	SC-1303-02-4	1303	2	Supply Connection
7593	SC-1303-02-5	1303	2	Supply Connection
7593	SC-1303-03-1	1303	3	Supply Connection
7593	SC-1303-03-2	1303	3	Supply Connection
7593	SC-1303-04-1	1303	4	Supply Connection
7593	SC-1303-04-2	1303	4	Supply Connection
7593	SC-1303-05-1	1303	5	Supply Connection
7593	SC-1303-05-2	1303	5	Supply Connection
7593	SC-1303-05-3	1303	5	Supply Connection
7593	SC-1303-05-4	1303	5	Supply Connection
7593	SC-1303-05-5	1303	5	Supply Connection
7593	SC-1303-06-1	1303	6	Supply Connection
7593	SC-1303-06-2	1303	6	Supply Connection
7593	SC-1303-06-3	1303	6	Supply Connection
7593	SC-1303-07-1	1303	7	Supply Connection
7593	SC-1303-07-2	1303	7	Supply Connection
7593	SC-1303-07-3	1303	7	Supply Connection
7593	SC-0102-01-1	0102	1	Supply Connection
7593	SC-0102-01-2	0102	1	Supply Connection
7593	SC-0102-01-3	0102	1	Supply Connection
7593	SC-0102-01-4	0102	1	Supply Connection
7593	SC-0102-01-5	0102	1	Supply Connection
7593	SC-0102-01-6	0102	1	Supply Connection
7593	SC-0102-01-7	0102	1	Supply Connection
7593	SC-0102-01-8	0102	1	Supply Connection
7593	SC-B0001-01-1	Bulk Tank	Main	Supply Connection
7593	SC-B0001-01-2	Bulk Tank	Main	Supply Connection
7593	SC-B0001-01-3	Bulk Tank	Main	Supply Connection

N. Pavilion - LN2 Valve ID Chart

Building # 7593

(Updated 03/22/2016)



Tag ID		Room #	Drop #	Description
Type Valve	Line 2			
Valve	LN2 ID#: 7593-01	0100H	1	Vent Gate Valve
Valve	LN2 ID#: 7593-02	0100H	2	LN2 Valve
PRV	LN2 ID#: 7593-03	0100H	2	Pressure Relief Valve
Valve	LN2 ID#: 7593-04	0100H	3	LN2 Valve
PRV	LN2 ID#: 7593-05	0100H	3	Pressure Relief Valve
VF	LN2 ID#: 7593-06	0100H	3	Manual Vacuum Fitting
Valve	LN2 ID#: 7593-07	1404	1	LN2 Valve
Valve	LN2 ID#: 7593-08	1404	2	LN2 Valve
Valve	LN2 ID#: 7593-09	1404	3	LN2 Valve
VF	LN2 ID#: 7593-10	1404	3	Manual Vacuum Fitting
Valve	LN2 ID#: 7593-11	1303	1	LN2 Valve
PRV	LN2 ID#: 7593-12	1303	1	Pressure Relief Valve
Valve	LN2 ID#: 7593-13	1303	2	LN2 Valve
PRV	LN2 ID#: 7593-14	1303	2	Pressure Relief Valve
Valve	LN2 ID#: 7593-15	1303	3	Vent Gate Valve
PRV	LN2 ID#: 7593-16	1303	3	Pressure Relief Valve
Valve	LN2 ID#: 7593-17	1303	3	Vent Ball Valve
Valve	LN2 ID#: 7593-18	1303	4	LN2 Valve
PRV	LN2 ID#: 7593-19	1303	4	Pressure Relief Valve
Valve	LN2 ID#: 7593-21	1303	5	LN2 Valve
PRV	LN2 ID#: 7593-22	1303	5	Pressure Relief Valve
Valve	LN2 ID#: 7593-23	1303	6	LN2 Valve
PRV	LN2 ID#: 7593-24	1303	6	Pressure Relief Valve
PG	LN2 ID#: 7593-25	1303	6	Pressure Gauge
Valve	LN2 ID#: 7593-26	1303	7	LN2 Valve
PRV	LN2 ID#: 7593-27	1303	7	Pressure Relief Valve
VF	LN2 ID#: 7593-28	1303	7	Manual Vacuum Fitting
Valve	LN2 ID#: 7593-29	102	1	LN2 Valve
Valve	LN2 ID#: 7593-30	102	1	LN2 Valve
PRV	LN2 ID#: 7593-31	102	1	Pressure Relief Valve
PRV	LN2 ID#: 7593-32	102	1	Pressure Relief Valve
CV	LN2 ID#: 7593-33	1301	Main	Cryovent
CV	LN2 ID#: 7593-34	1303	Main	Cryovent
PRV	LN2 ID#: 7593-35	Bulk Tank	Main	Pressure Relief Valve
Valve	LN2 ID#: 7593-36	Bulk Tank	Main	Gate Valve
PRV	LN2 ID#: 7593-37	Bulk Tank	Main	Pressure Relief Valve
Valve	LN2 ID#: 7593-38	Bulk Tank	Main	Gate Valve
PRV	LN2 ID#: 7593-39	Bulk Tank	Main	Pressure Relief Valve
PRV	LN2 ID#: 7593-40	Bulk Tank	Main	Pressure Relief Valve
Valve	LN2 ID#: 7593-41	Bulk Tank	Main	Gate Valve Fill Station
Valve	LN2 ID#: 7593-42	Bulk Tank	Main	Diverter Valve
PRV	LN2 ID#: 7593-43	Bulk Tank	Main	Pressure Relief Valve
Valve	LN2 ID#: 7593-44	Bulk Tank	Main	First Main Valve
PRV	LN2 ID#: 7593-45	Bulk Tank	Main	Pressure Relief Valve
CV	LN2 ID#: 7593-46	1305	Main	Cryovent
CV	LN2 ID#: 7593-47	1401	Main	Cryovent
Valve	LN2 ID#: 7593-48	Bulk Tank	Main	Gate Valve Fill Station

Signature Manifest**Document Number:** STCL-EQUIP-016 JA2**Revision:** 02**Title:** LN2 System Piping Diagram for North Pavilion JA2

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STCL-EQUIP-016 JA2 LN2 System Piping Diagram for North Pavilion**Author**

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