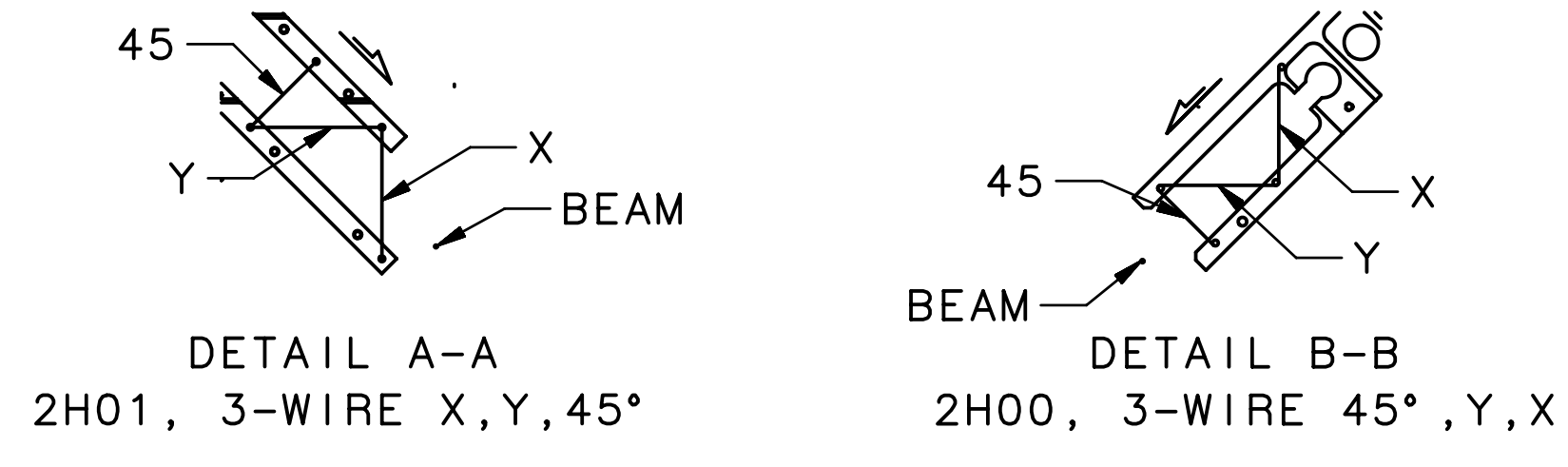


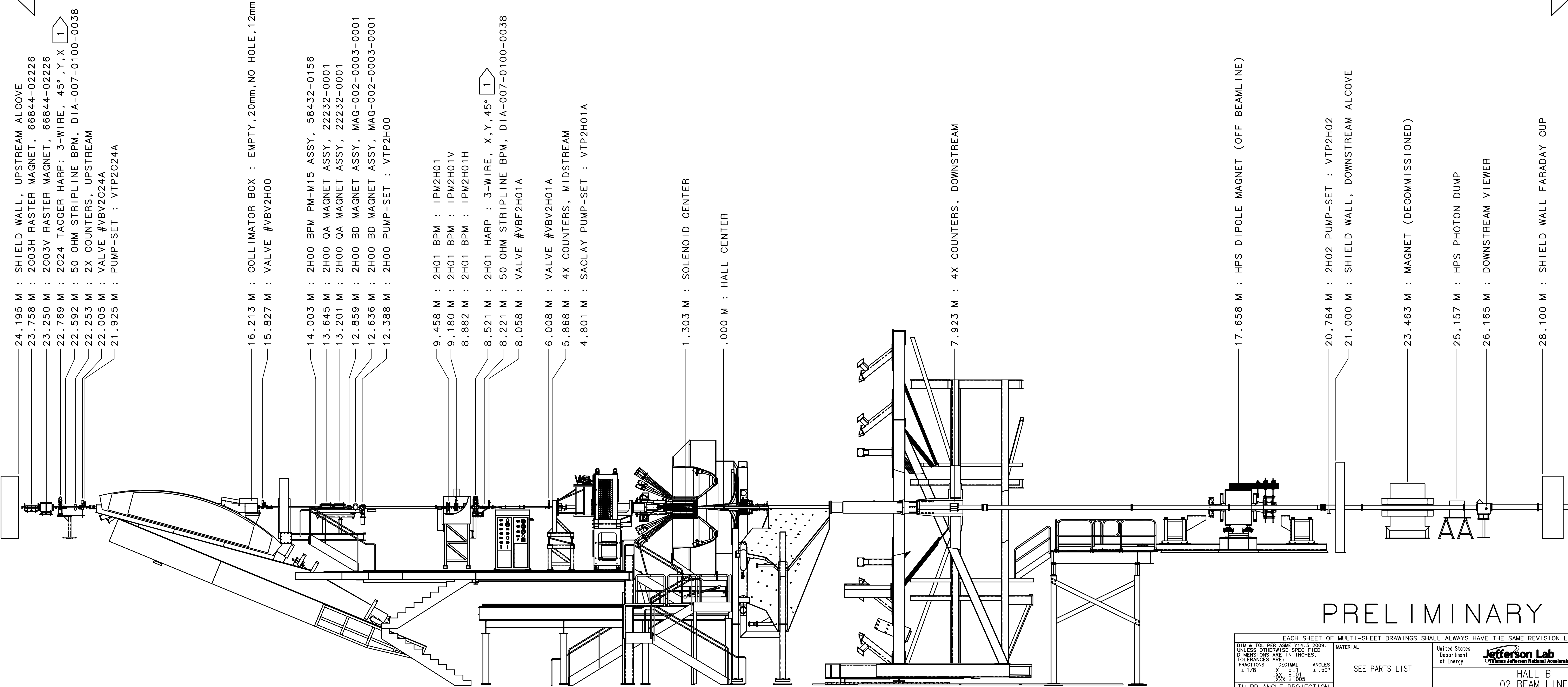
REVISION HISTORY		
ZONE	REV	DESCRIPTION

- NOTES
- ELEMENTS CROSS THE ELECTRON BEAM AS READ (FROM LEFT-TO-RIGHT)
 - MACHINE CENTER IS 400.0948 METERS UPSTREAM OF "HALL CENTER"
 - CONTENTS:
PAGE 1: COMPONENT POSITIONING FOR REFERENCE BY COUNTING-ROOM & MCC OPERATORS
PAGE 2: COMPONENT IDENTIFICATION FOR INSTALLATION BY TECHNICAL STAFF
PAGE 3: IDENTIFICATION OF MATERIALS IN THE BEAM, & BEAMLINE SHIELDING
 - BEAM-TUBE IDENTIFICATION:
FORMAT: A - B - C, L
A = UPSTREAM FLANGE SIZE
B = TUBE OD
C = DOWNSTREAM FLANGE SIZE
L = LENGTH
CONFLAT FLANGES UNLESS SPECIFIED



FOR CONTINUATION
SEE DRAWING NO.
28405-0034

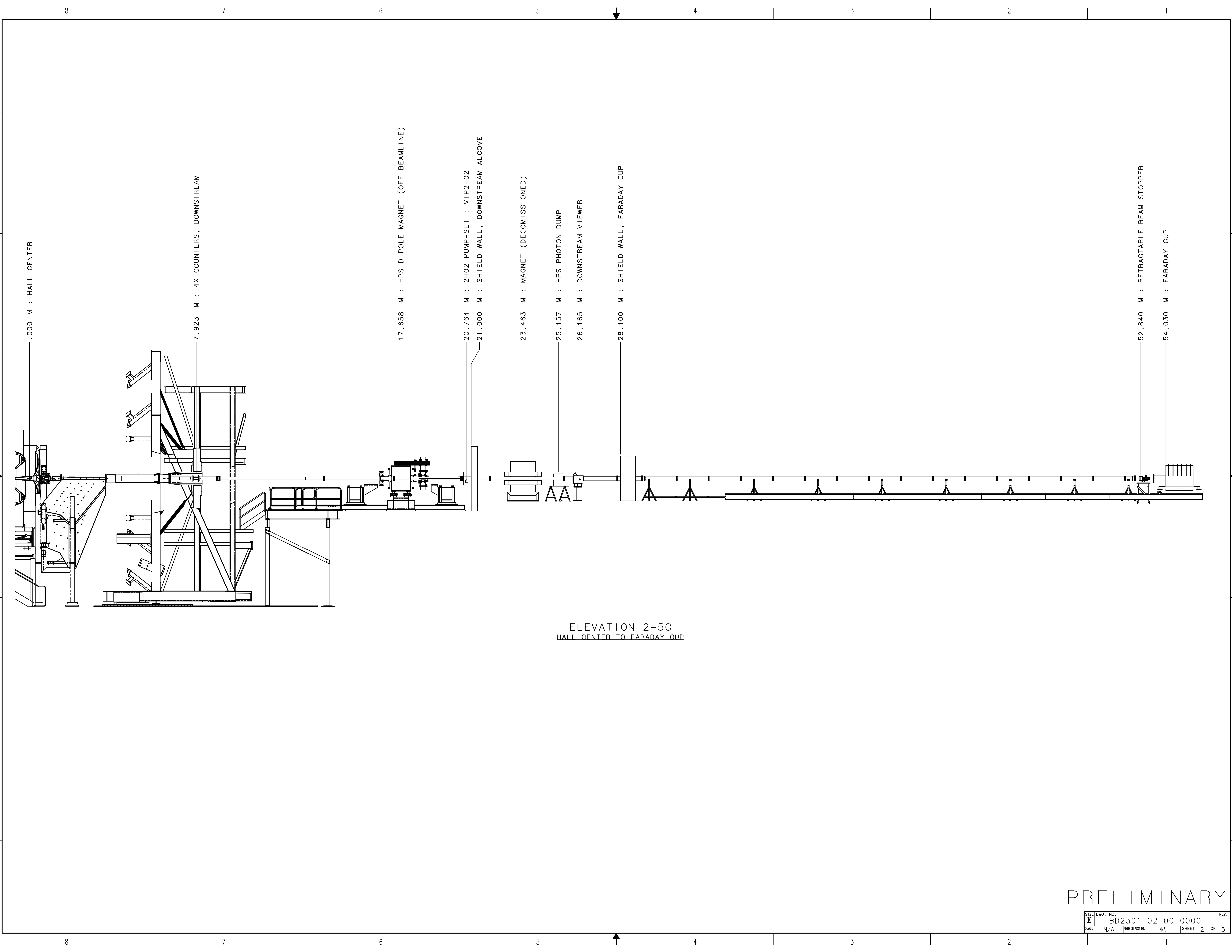
FOR CONTINUATION
SEE ELEVATION 2-5C



ELEVATION 1-5A
UPSTREAM ALCOVE TO DOWNSTREAM ALCOVE
(SHOWN IN LIQUID TARGET CONFIG.)

PRELIMINARY

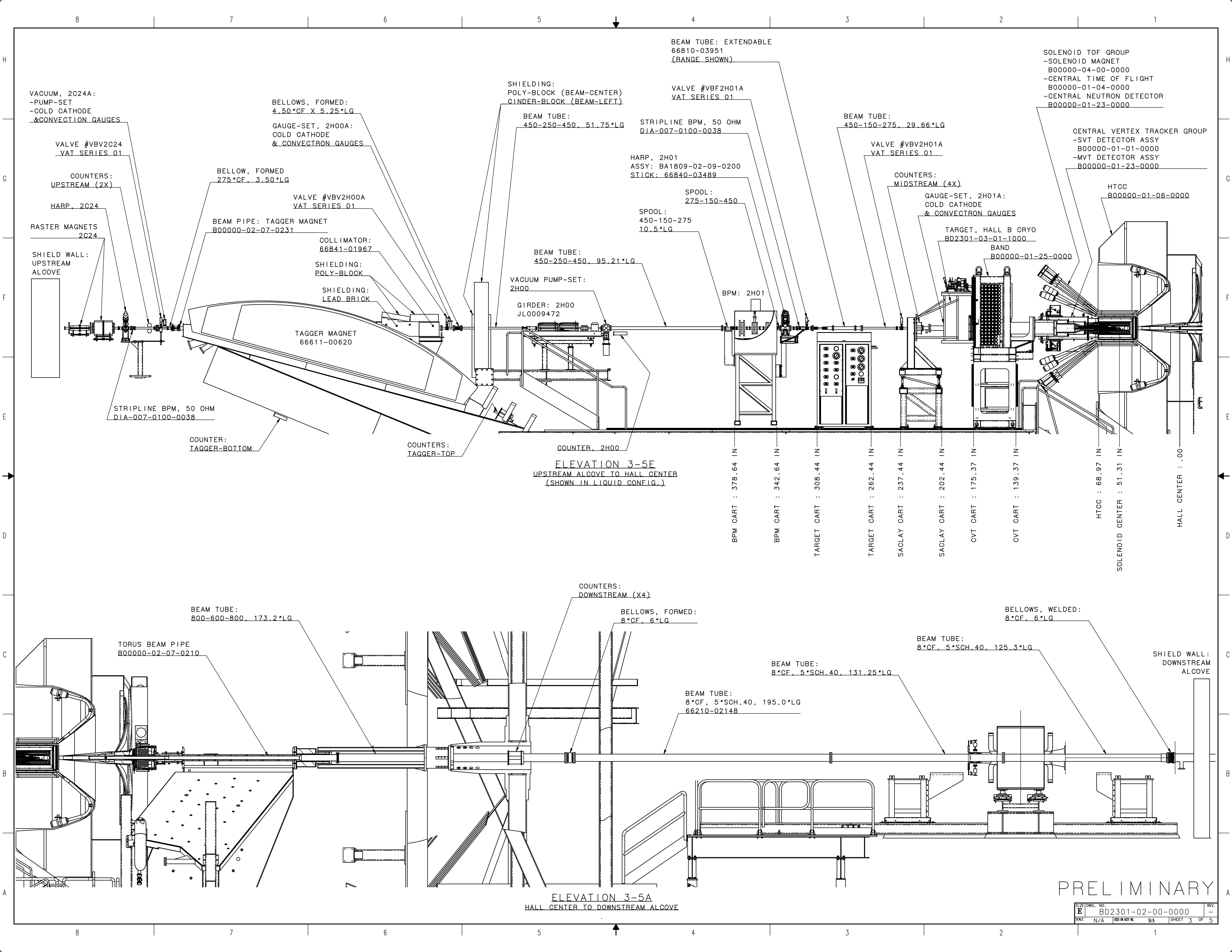
EACH SHEET OF MULTI-SHEET DRAWINGS SHALL ALWAYS HAVE THE SAME REVISION LEVEL.		United States Department of Energy	
DIM & TOL PER ASME Y14.5 2009. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS DECIMAL ANGLES ± 1/16 ± .01 ± .50° XX ± .01 ± .50° XXX ± .005 ± .50°		Jefferson Lab Thomas Jefferson National Accelerator Facility Newport News Virginia	
THIRD ANGLE PROJECTION		SEE PARTS LIST	
FINISH: MACHINED SURFACES DEBUR & BREAK ALL SHARP EDGES UNLESS OTHERWISE NOTED		HALL B 02 BEAM LINE 00 INSTALLATION TEMPLATE BEAMLINE ASSY, CONFIGURATION D01	
DO NOT SCALE DRAWING		SIZE DWG. NO. BD2301-02-00-0000 REV. 1 OF 5	
DRAWN: CHRIS GUTHRIE		DATE: DUMMY	
SCALE: N/A		REV. IN ASSY NO. N/A	



ELEVATION 2-5C
HALL CENTER TO FARADAY CUP

PRELIMINARY

SIZE	DWG. NO.	REV.
E	BD2301-02-00-0000	-
SCALE	REQ'D OR ASSY NO.	SHEET
N/A	N/A	2 OF 5



VACUUM, 2C24A:
-PUMP-SET
-COLD CATHODE
& CONVECTION GAUGES

VALVE #V2C24
VAT SERIES 01

COUNTERS:
UPSTREAM (2X)

HARP, 2C24

RASTER MAGNETS
2C24

SHIELD WALL:
UPSTREAM
ALCOVE

STRIPLINE BPM, 50 OHM
DIA-007-0100-0038

COUNTER:
TAGGER-BOTTOM

COUNTERS:
TAGGER-TOP

COUNTER, 2H00

BELLOWS, FORMED:
4.50*CF X 5.25*LG
GAUGE-SET, 2H00A:
COLD CATHODE
& CONVECTION GAUGES

BELLOW, FORMED
275*CF, 3.50*LG

BEAM PIPE: TAGGER MAGNET
B00000-02-07-0231

VALVE #V2H00A
VAT SERIES 01

COLLIMATOR:
66841-01967

SHIELDING:
POLY-BLOCK

SHIELDING:
LEAD BRICK

TAGGER MAGNET
66611-00620

SHIELDING:
POLY-BLOCK (BEAM-CENTER)
CINDER-BLOCK (BEAM-LEFT)

BEAM TUBE:
450-250-450, 51.75*LG

BEAM TUBE:
450-250-450, 95.21*LG

VACUUM PUMP-SET:
2H00

GIRDER: 2H00
JL0009472

BEAM TUBE: EXTENDABLE
66810-03951
(RANGE SHOWN)

VALVE #V2H01A
VAT SERIES 01

STRIPLINE BPM, 50 OHM
DIA-007-0100-0038

HARP, 2H01
ASSY: BA1809-02-09-0200
STICK: 66840-03489

SPOOL:
275-150-450

SPOOL:
450-150-275
10.5*LG

BPM: 2H01

BEAM TUBE:
450-150-275, 29.66*LG

VALVE #V2H01A
VAT SERIES 01

COUNTERS:
MIDSTREAM (4X)

GAUGE-SET, 2H01A:
COLD CATHODE
& CONVECTION GAUGES

TARGET, HALL B CRYO
BD2301-03-01-1000
BAND
B00000-01-25-0000

SOLENOID TOF GROUP
-SOLENOID MAGNET
B00000-04-00-0000
-CENTRAL TIME OF FLIGHT
B00000-01-04-0000
-CENTRAL NEUTRON DETECTOR
B00000-01-23-0000

CENTRAL VERTEX TRACKER GROUP
-SVT DETECTOR ASSY
B00000-01-01-0000
-MVT DETECTOR ASSY
B00000-01-23-0000

HTCC
B00000-01-06-0000

- BPM CART : 378.64 IN
- BPM CART : 342.64 IN
- TARGET CART : 308.44 IN
- TARGET CART : 262.44 IN
- SACLAY CART : 237.44 IN
- SACLAY CART : 202.44 IN
- CVT CART : 175.37 IN
- CVT CART : 139.37 IN
- HTCC : 68.97 IN
- SOLENOID CENTER : 51.31 IN
- HALL CENTER : .00

BEAM TUBE:
800-600-800, 173.2*LG

TORUS BEAM PIPE
B00000-02-07-0210

COUNTERS:
DOWNSTREAM (X4)

BELLOWS, FORMED:
8*CF, 6*LG

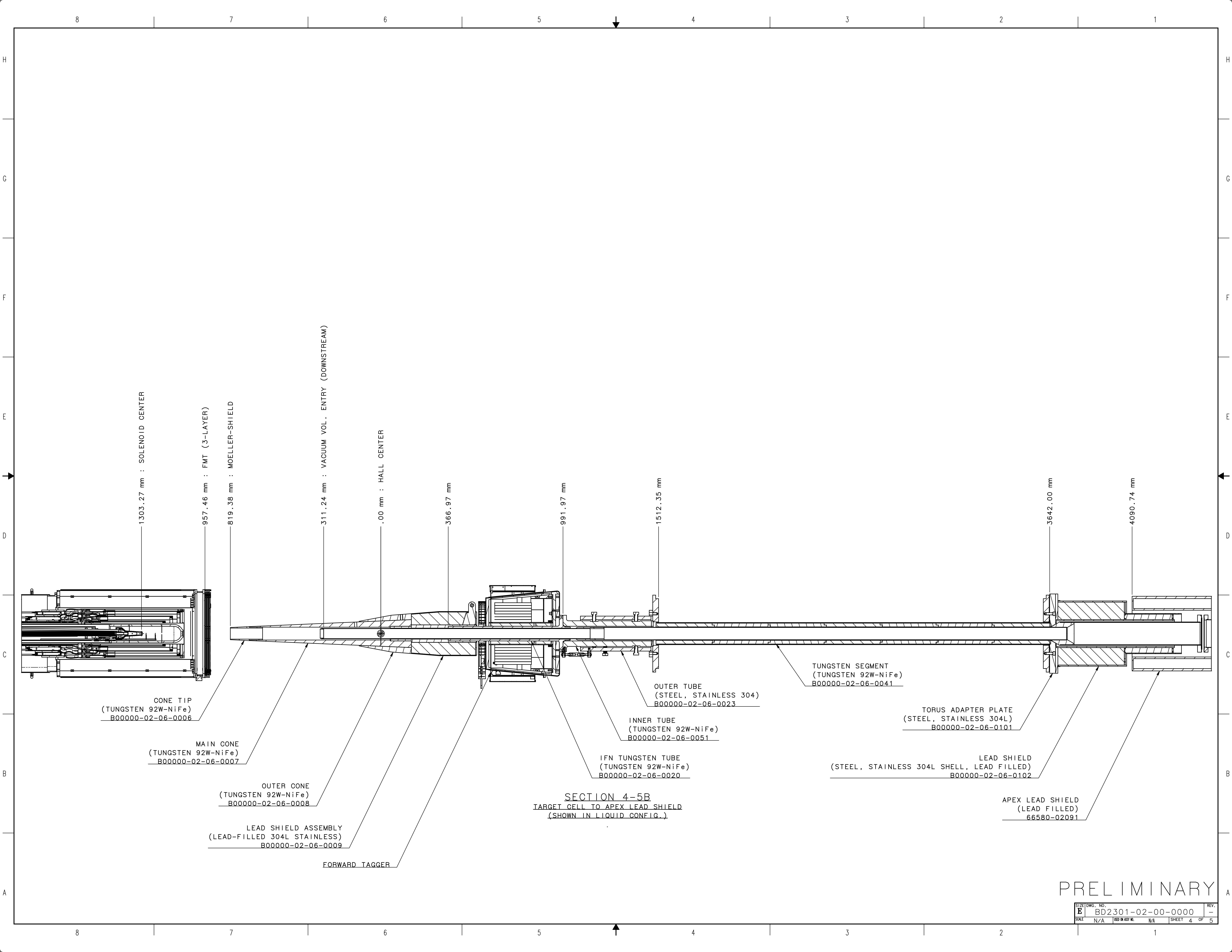
BELLOWS, WELDED:
8*CF, 6*LG

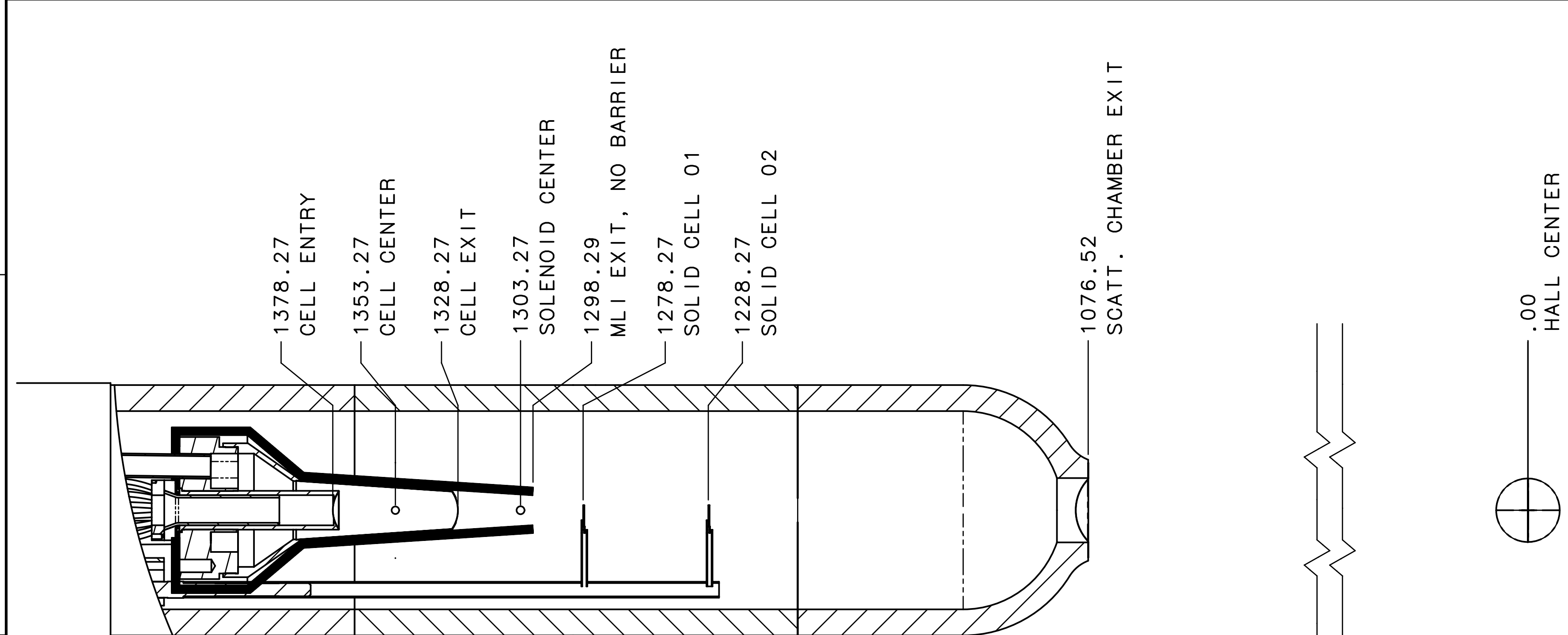
BEAM TUBE:
8*CF, 5*SCH.40, 131.25*LG

BEAM TUBE:
8*CF, 5*SCH.40, 195.0*LG
66210-02148

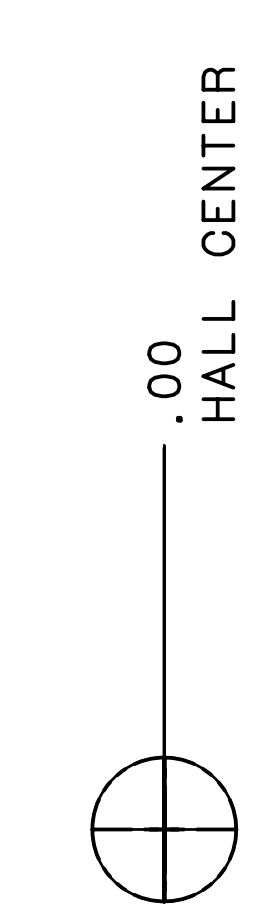
BEAM TUBE:
8*CF, 5*SCH.40, 125.3*LG

SHIELD WALL:
DOWNSTREAM
ALCOVE





SECTION 5-7E
 TARGET CELL TO HALL CENTER
 (SHOWN IN LIQUID CONFIG.)



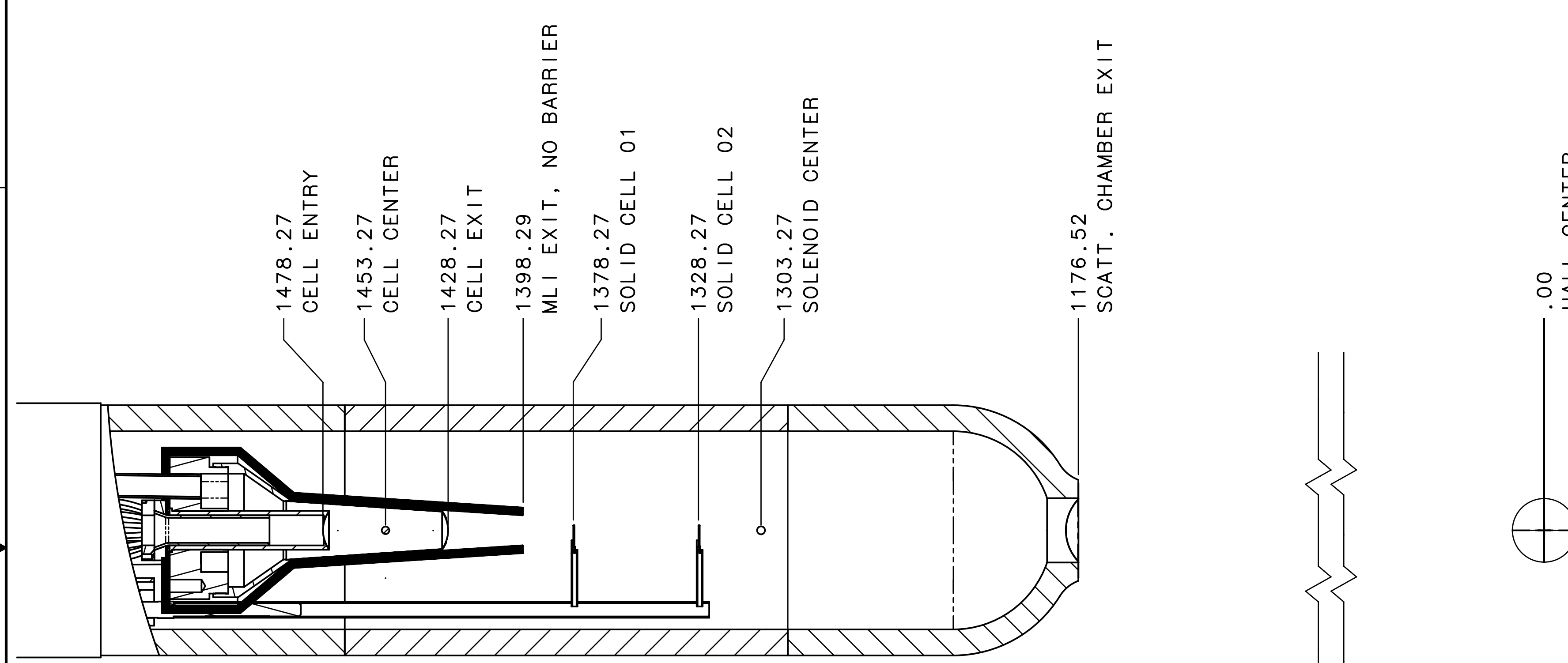
LIQUID CELL (50mm LONG)

TABLE -A-
 MATERIALS IN THE BEAM LINE

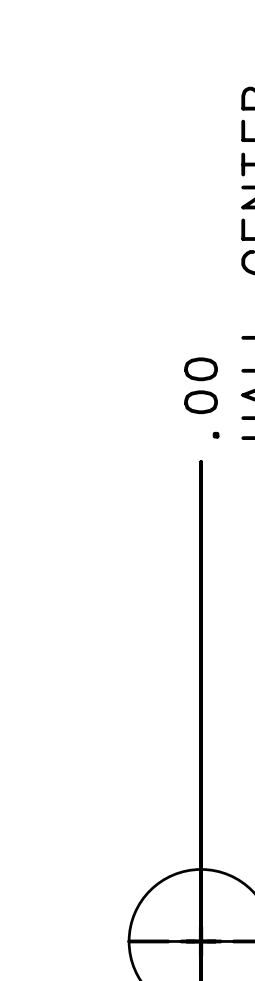
ITEM	DRAWING NO.	MATERIAL	THICKNESS
TARGET CELL ENTRY	BD2301-03-01-0100	ALUMINUM	30um
TARGET CELL EXIT		ALUMINUM	30um
SOLID FOIL 01 RIGHT	-	COPPER	90um
SOLID FOIL 02 RIGHT	-	TIN	180um
SOLID FOIL 01 LEFT	-	CARBON	2000um
SOLID FOIL 02 LEFT	-	CARBON	2000um
SCATTERING CHAMBER EXIT	B00000-03-01-0300	ALUMINUM	50um
VACUUM VOL. ENTRY (DOWNSTREAM)	B00000-02-07-0210	ALUMINUM	75um

TABLE -C-
 STEPPER MOTOR POSITIONS

LOCATION	DEGREES
RIGHT FOIL LIMIT	0
RIGHT FOIL BEAM	2.5
CENTER	30.0
LEFT FOIL BEAM	57.5
LEFT FOIL LIMIT	60.0



SECTION 5-7D
 TARGET CELL TO HALL CENTER
 (SHOWN IN SOLID CONFIG.)



SOLID FOILS

TABLE -B-
 MATERIALS IN THE BEAM LINE

ITEM	DRAWING NO.	MATERIAL	THICKNESS
TARGET CELL ENTRY	BD2301-03-01-0100	ALUMINUM	30um
TARGET CELL EXIT		ALUMINUM	30um
SOLID FOIL 01 RIGHT	-	COPPER	90um
SOLID FOIL 02 RIGHT	-	TIN	180um
SOLID FOIL 01 LEFT	-	CARBON	2000um
SOLID FOIL 02 LEFT	-	CARBON	2000um
SCATTERING CHAMBER EXIT	B00000-03-01-0300	ALUMINUM	50um
VACUUM VOL. ENTRY (DOWNSTREAM)	B00000-02-07-0210	ALUMINUM	75um

TABLE -D-
 STEPPER MOTOR POSITIONS

LOCATION	DEGREES
RIGHT FOIL LIMIT	0
RIGHT FOIL BEAM	2.5
CENTER	30.0
LEFT FOIL BEAM	57.5
LEFT FOIL LIMIT	60.0

PRELIMINARY