

NOTES

1 ELEMENTS CROSS THE ELECTRON BEAM AS READ (FROM LEFT-TO-RIGHT)

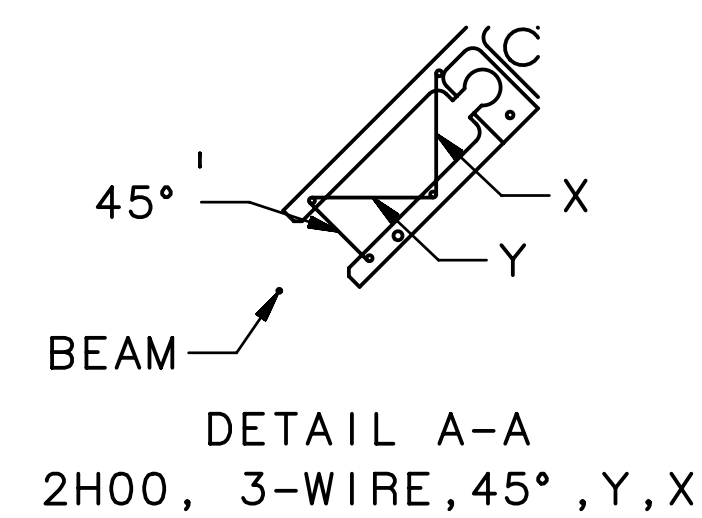
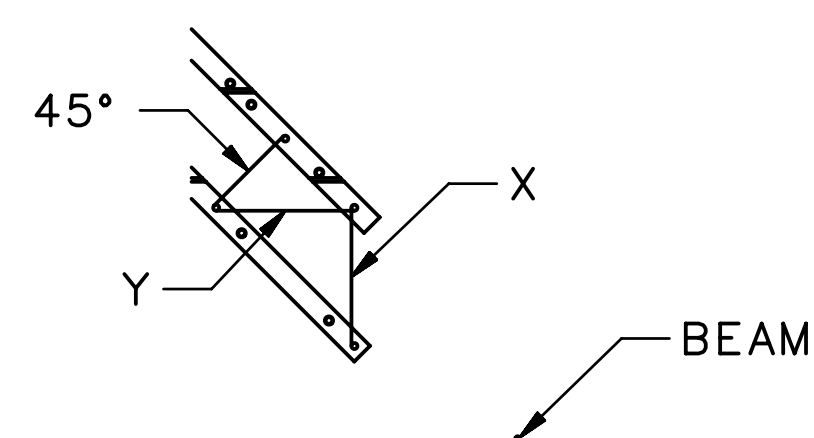
2 MACHINE CENTER IS 400.0948 METERS UPSTREAM OF *HALL CENTER*

3 CONTENTS:

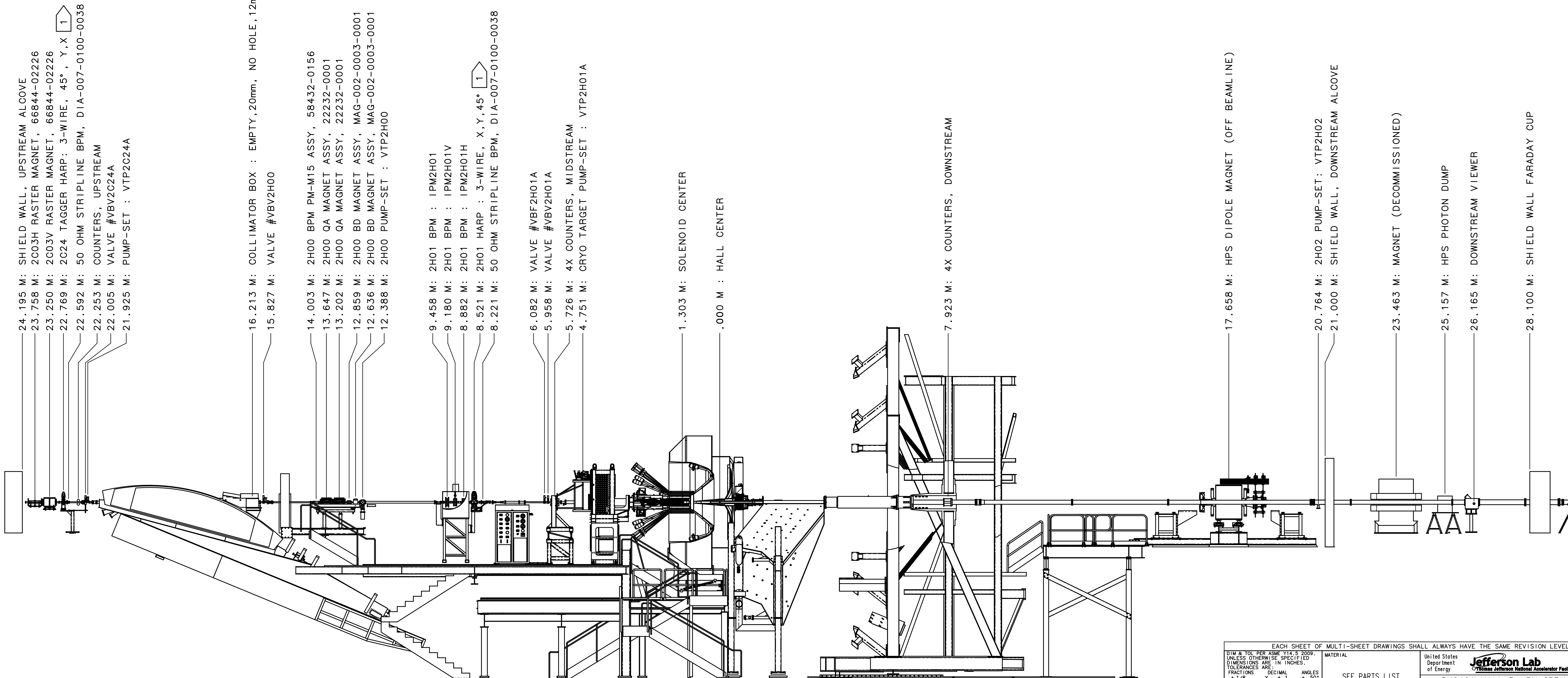
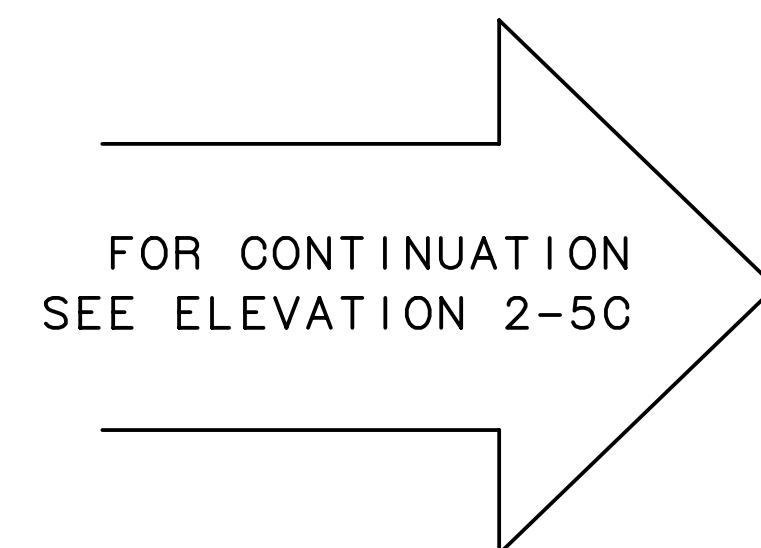
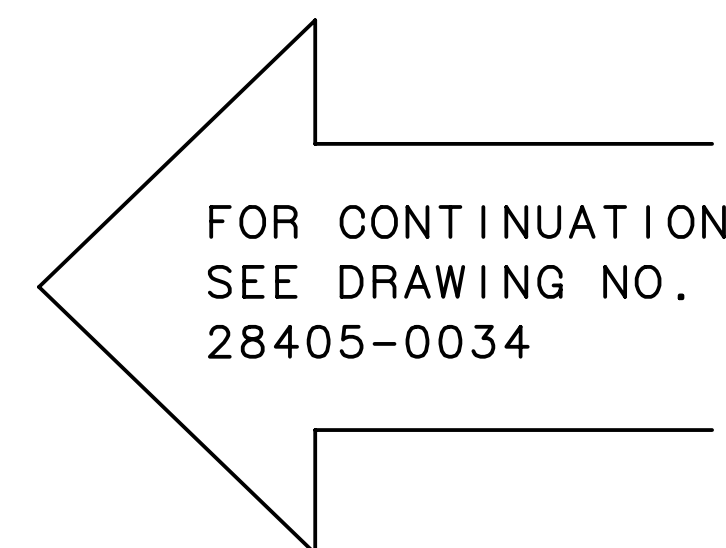
- PAGE 1: COMPONENT POSITIONING FOR REFERENCE BY COUNTING-ROOM & MCC OPERATORS
- PAGE 2: COMPONENT POSITIONING FOR REFERENCE BY COUNTING-ROOM & MCC OPERATORS CONT'D
- PAGE 3: COMPONENT IDENTIFICATION FOR INSTALLATION BY TECHNICAL STAFF
- PAGE 4: BEAMLINE SHIELDING
- PAGE 5: IDENTIFICATION OF MATERIALS IN THE BEAM

4 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

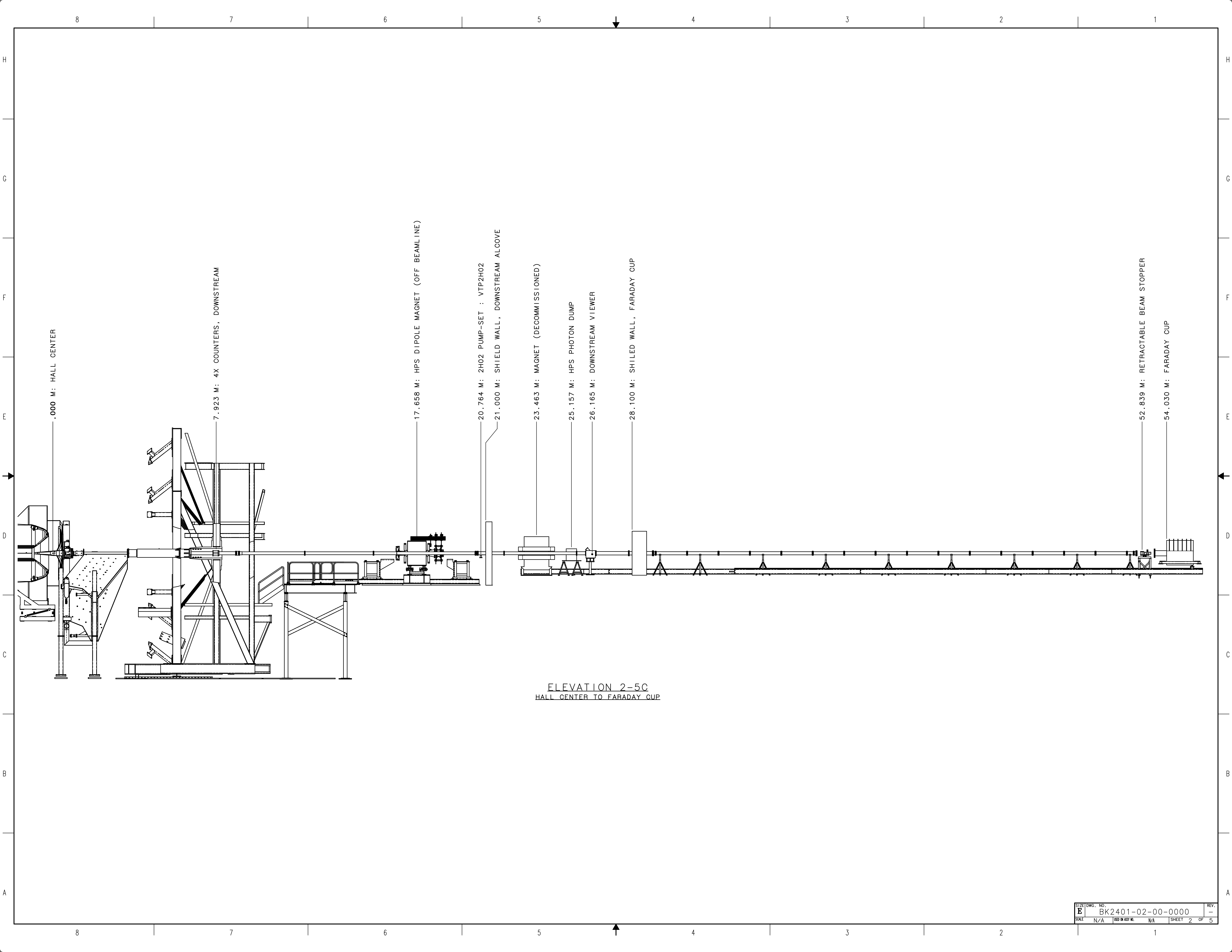


DETAIL B-B
2H01, 3-WIRE X,Y,45°

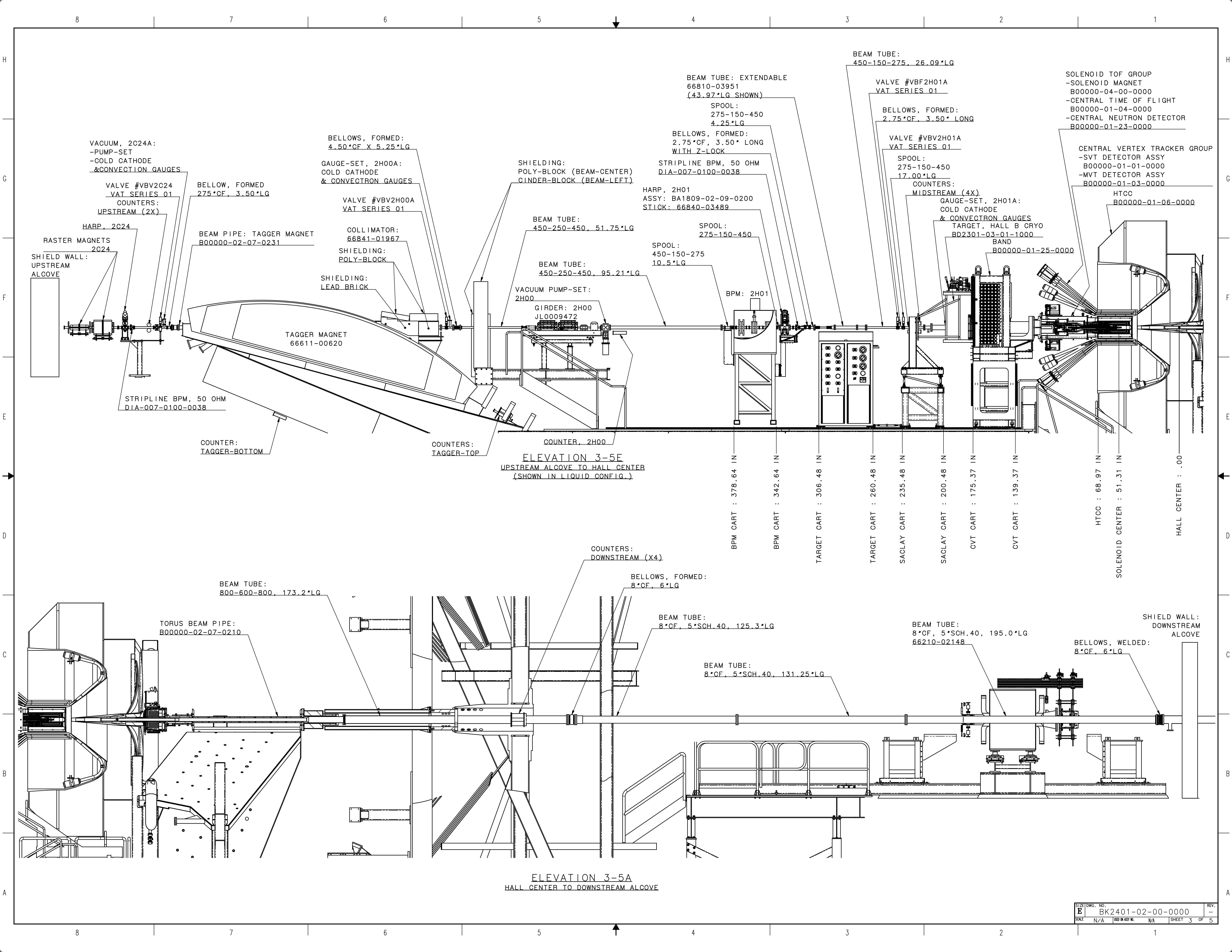


ELEVATION 1-5A
UPSTREAM ALCOVE TO DOWNSTREAM ALCOVE
(LIQUID TARGET CONFIG. ONLY)

EACH SHEET OF MULTI-SHEET DRAWINGS SHALL ALWAYS HAVE THE SAME REVISION LEVEL.		United States Department of Energy	
<small> DIM & TOL PER ASME Y14.5 2009. UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: FRACTIONS DECIMAL ANGLES ± 1/16 ± .01 ± 30° XX ± .01 ± 30° XXX ± .005 </small>		Jefferson Lab <small>Thomas Jefferson National Accelerator Facility</small> Newport News Virginia	
THIRD ANGLE PROJECTION		SEE PARTS LIST	
<small> FINISH MACHINED SURFACES UNLESS OTHERWISE NOTED BREAK & BREAK ALL SHARP EDGES </small>		BK2401 HALL B, RN GRPK, 2024 02 BEAM LINE 00 INSTALLATION TEMPLATE 0000 BEAMLINE ASSEMBLY	
DO NOT SCALE DRAWING	SIZE DWG. NO. E	BK2401-02-00-0000	REV. -
DRAWN: CHRIS QUITRIE	DATE: 10/13/2023	SCALE: N/A	REV. ON ASSY NO. N/A SHEET 1 OF 5



ELEVATION 2-5C
HALL CENTER TO FARADAY CUP



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

VALVE #VVB2C24
VAT SERIES 01
COUNTERS:
UPSTREAM (2X)

HARP, 2C24

SHIELD WALL:
UPSTREAM
ALCOVE

BELLOW, FORMED
275*CF, 3.50*LG

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

BELLOWS, FORMED:
4.50*CF X 5.25*LG

GAUGE-SET, 2H00A:
COLD CATHODE
& CONVECTRON GAUGES

VALVE #VVB2H00A
VAT SERIES 01

COLLIMATOR:
66841-01967

SHIELDING:
POLY-BLOCK

SHIELDING:
LEAD BRICK

TAGGER MAGNET
66611-00620

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

COUNTER:
TAGGER-BOTTOM

COUNTERS:
TAGGER-TOP

COUNTER, 2H00

ELEVATION 3-5E
UPSTREAM ALCOVE TO HALL CENTER
(SHOWN IN LIQUID CONFIG.)

BEAM TUBE: EXTENDABLE
66810-03951
(43.97*LG SHOWN)

SPOOL:
275-150-450
4.25*LG

BELLOWS, FORMED:
2.75*CF, 3.50* LONG
WITH Z-LOCK

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

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

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

VACUUM PUMP-SET:
2H00

GIRDER: 2H00
JL0009472

BPM: 2H01

BEAM TUBE:
450-150-275, 26.09*LG

VALVE #VBF2H01A
VAT SERIES 01

BELLOWS, FORMED:
2.75*CF, 3.50* LONG

VALVE #VVB2H01A
VAT SERIES 01

SPOOL:
275-150-450
17.00*LG

COUNTERS:
MIDSTREAM (4X)

GAUGE-SET, 2H01A:
COLD CATHODE
& CONVECTRON 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
B00000-01-03-0000

HTCC
B00000-01-06-0000

BPM CART : 378.64 IN

BPM CART : 342.64 IN

TARGET CART : 306.48 IN

TARGET CART : 260.48 IN

SACLAY CART : 235.48 IN

SACLAY CART : 200.48 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

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

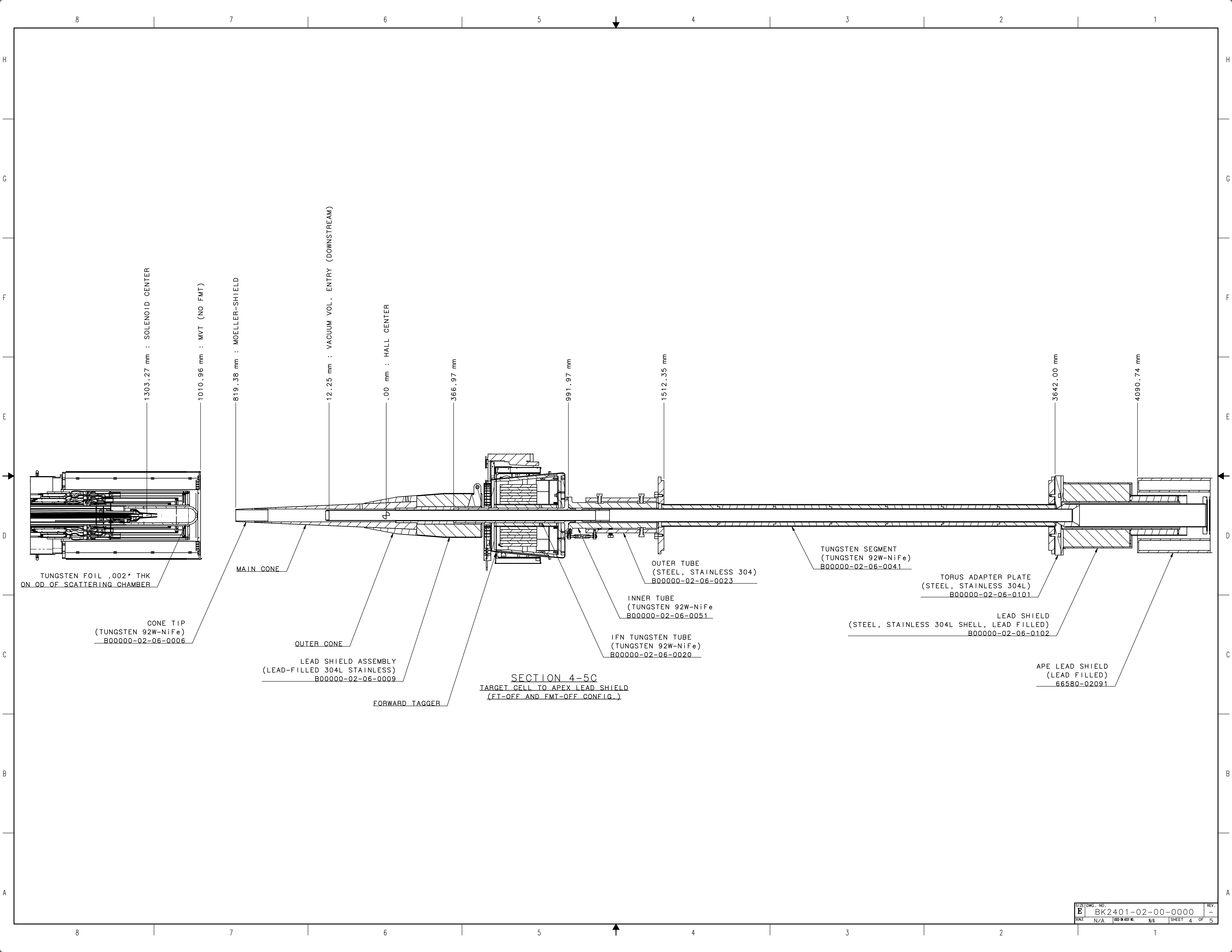
BEAM TUBE:
8*CF, 5*SCH.40, 131.25*LG

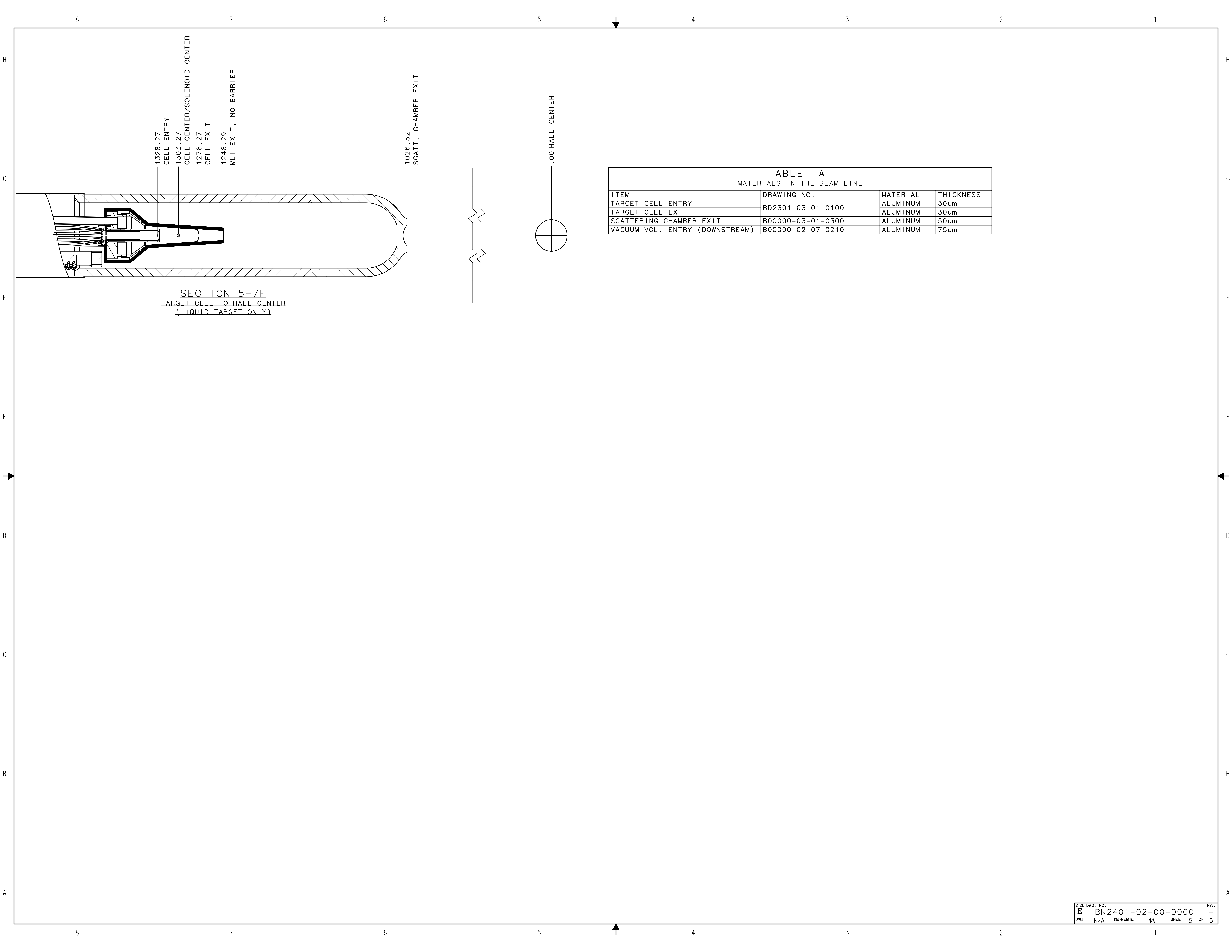
BEAM TUBE:
8*CF, 5*SCH.40, 195.0*LG
66210-02148

BELLOWS, WELDED:
8*CF, 6*LG

SHIELD WALL:
DOWNSTREAM
ALCOVE

ELEVATION 3-5A
HALL CENTER TO DOWNSTREAM ALCOVE





SECTION 5-7F
 TARGET CELL TO HALL CENTER
 (LIQUID TARGET ONLY)

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
SCATTERING CHAMBER EXIT	B00000-03-01-0300	ALUMINUM	50um
VACUUM VOL. ENTRY (DOWNSTREAM)	B00000-02-07-0210	ALUMINUM	75um