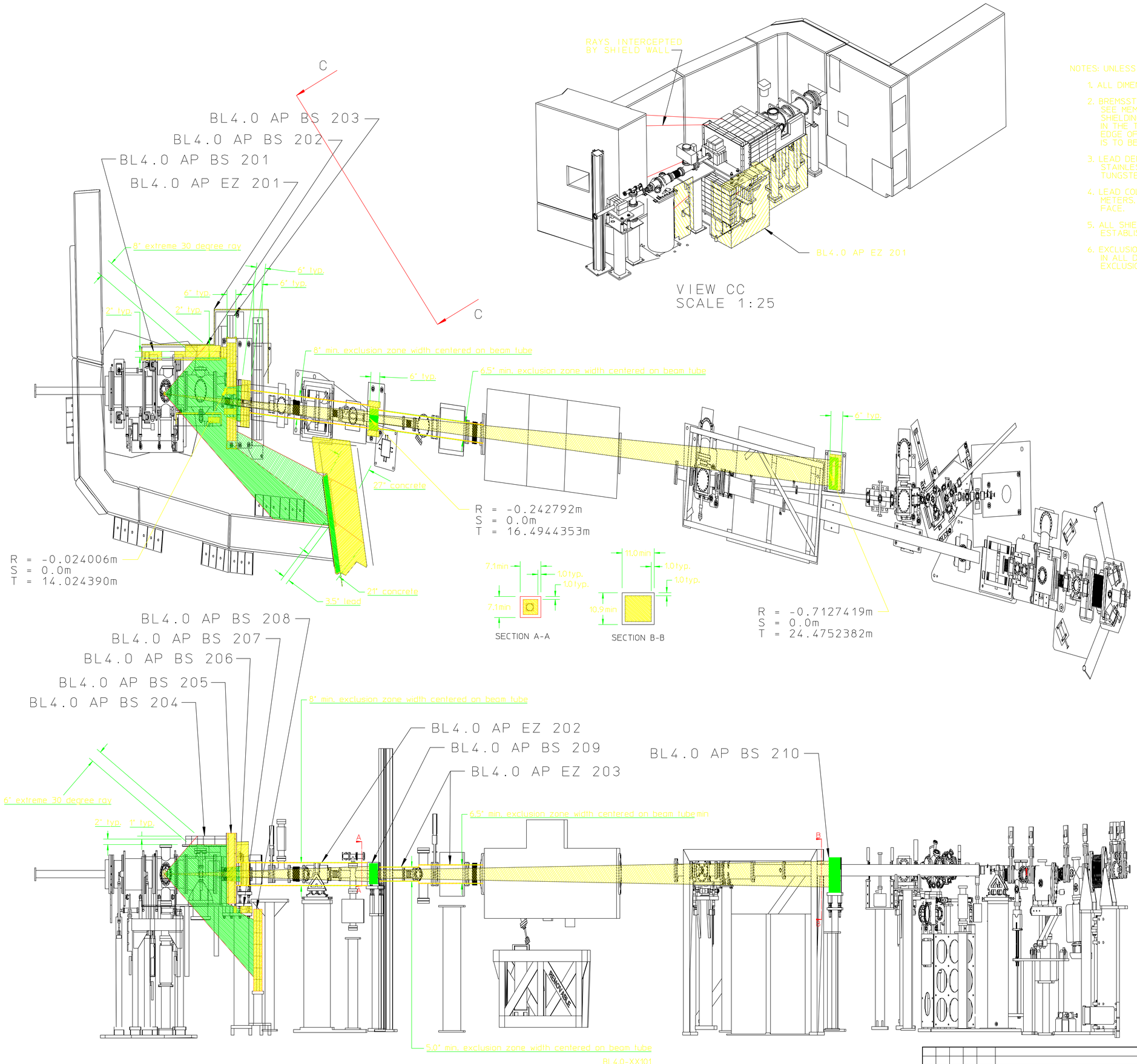
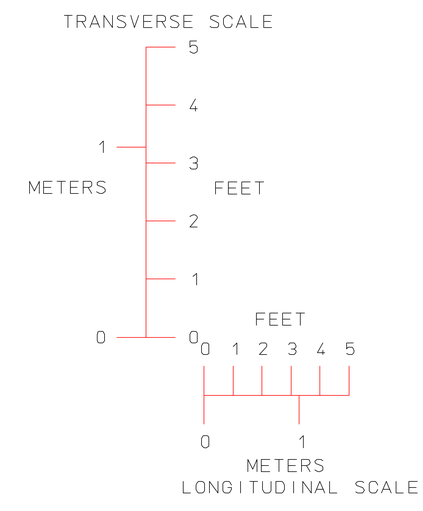


VIEW CC
SCALE 1:25

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE SHOWN IN INCHES.
2. BREMSSTRAHLUNG SOURCE SPECIFIED AS 30 DEGREES FROM THE CENTER OF M1 MIRROR. SEE MEMO FROM R DONAHUE TP D ROBIN "PSS OPEN TESTS FOR BEAMLINE 4.0.2, (1-14-2005) SHIELDING TO BE AT LEAST 6" THICK ALONG BEAM PATH AND 2" MINIMUM IN THE TRANSVERSE DISTANCE BETWEEN THE EXTREME RAY AND THE OUTSIDE EDGE OF THE LEAD SHIELD (LEAD OUTSIDE OF THE TRANSITION WALL). ALL LEAD IS TO BE PAINTED OR COVERED TO PREVENT EXCESSIVE LEAD EXPOSURE.
3. LEAD DENSITY IS EQUAL TO 11.34 GRAMS/cc
   STAINLESS STEEL DENSITY IS EQUAL TO 7.86 GRAMS/cc
   TUNGSTEN (MINIMUM 85%) DENSITY IS EQUAL TO 16.96 GRAMS/cc
4. LEAD COLLIMATOR AND BACKSTOP LOCATIONS ARE IN BEAM LINE 4.0 COORDINATES IN METERS. COORDINATE POSITIONS ARE TO THE CENTER OF THE UPSTREAM FACE.
5. ALL SHIELDS SHOULD COMPLY WITH SEISMIC SAFETY RULES AND PROCEDURES ESTABLISHED IN THE LBNL HEALTH AND SAFETY MANUAL (PUB 300).
6. EXCLUSION ZONES ARE TO BE ADDED FROM THE SCATTERING SOURCE (M1) 30 DEGREES IN ALL DIRECTIONS FROM THE FORWARD AXIS UNTIL BLOCKED BY A BACKSTOP. EXCLUSION ZONES ARE TO BE INSTALLED AND FITTED AROUND AS BUILT COMPONENTS.



26C0966

EQUIVALENT SHIELDING THICKNESS	
LEAD	25.40mm/1.00in
COPPER	32.26mm/1.27in
STAINLESS STEEL	35.81mm/1.41in
TUNGSTEN	14.99mm/.59in

BL4.0-XX101
- SHIELDING ID NUMBER
- END STATION NUMBER
- BRANCH LINE NUMBER
- COMPONENT NUMBER
- BEAMLINE NUMBER
- BEAMLINE

APPROVED BY	SIGNATURE	DATE	REMARKS

REV	DWG	CHK	ZONE	DATE	CHANGES

UNLESS OTHERWISE SPECIFIED
TOLERANCES: .X ± .1 FRAC. ± 1/64; .XX ± .01 ANGLES ± 1°; .XXX ± .001 FINISH 125
THREADS ARE CLASS 2
CHAMFER ENDS OF ALL SCREW THREADS 30° CUT 1.5 PITCH THRD RELIEF WITH ROUND NOSE TOOL ON MACHINE CUT THREADS.
BREAK EDGES .016 MAX. ON MACHINED WORK
REMOVE BURRS WELD SPLATTER & LOOSE SCALE
REFERENCES: ANSI Y14.5 & B46.1

SHOP ORDERS
ACCT. NO.: SERIAL NO
DATE ISSD: DATE REQD.: NO. REQD.:
DELIVER TO
SURFACE TREATMENT: DEGREASE
IDENT METH.: TAG
DWG BY: R. DUARTE DATE 2-27-05
CHK BY: A. DEMELLO DATE 2-27-05

REQD	ITEM	PART NO.	DESCRIPTION

LAWRENCE BERKELEY LABORATORY
UNIVERSITY OF CALIFORNIA-BERKELEY
ALS - INSERTION DEVICE BEAMLINES
BL 4.0 - GENERAL
TOPOFF SHIELDING BL 4.0

PATENT CLEAR	DWG. TYPE	SHOWN ON	SCALE	DO NOT SCALE PRINTS
	ASSEMBLY		FULL	
MICROFILMED	DESIGN ACCT. NO.	CATEGORY CODE	DWG. NO.	SIZE / REV.
		AL4070	26C0966	A