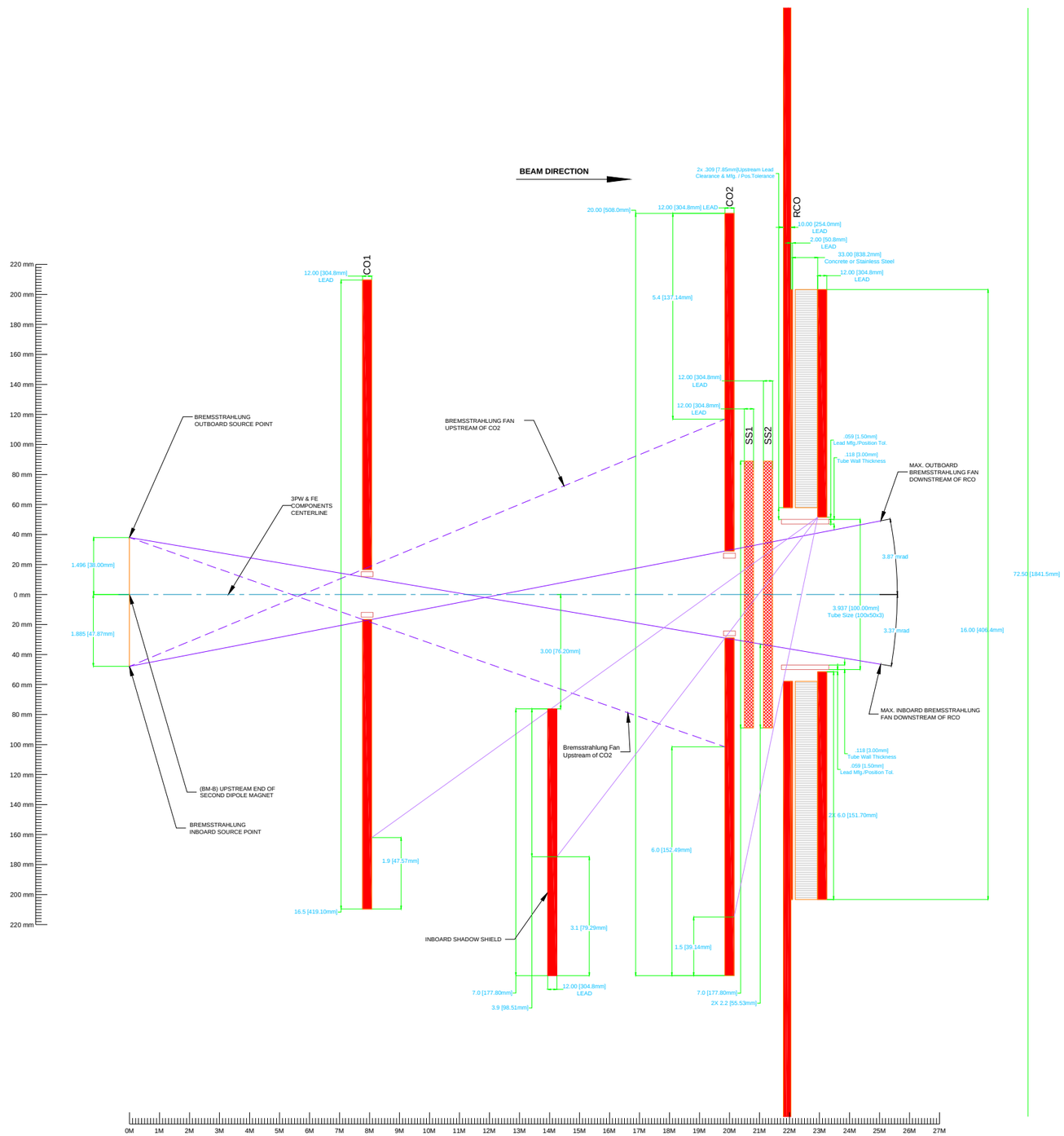


TABLE 1

BMM FRONT END RAYTRACE TOLERANCE

	STANDARD TOLERANCE				
	mm		inches		Comments
	+	-	+	-	
Crotch Absorber	2.0	2.0	0.079	0.079	Manufacturing & Position
Exit Absorber	2.0	2.0	0.079	0.079	Manufacturing & Position
FM at C01	0.1	0.0	0.004	0.000	Manufacturing
FM 2 Vertical	.65	.65	0.026	0.026	Manufacturing & Position
FM 4 Horizontal	.74	.74	0.029	0.029	Manufacturing & Position
FM	.75	.75	0.030	0.030	Manufacturing & Position
CO tube	1.5	1.5	0.059	0.059	Manufacturing & Position
Collimator lead Horizontal	1.5	0.0	0.059	0.000	Manufacturing & Assembly
Collimator lead Vertical	2.5	0.0	0.098	0.000	Manufacturing, Assembly, Heater tape & Heater Tape Clearance
Shadow Shield	3.0	3.0	0.118	0.118	Manufacturing & Position
RCO upstream lead Horizontal	7.85	0.0	.309	0.000	Clearance, Mfg & Position
RCO upstream lead Vertical	8.85	0.0	.348	0.000	Clearance, Mfg & Position
RCO tube (minimum)	4.0	-	0.157	-	Manufacturing & Position

TABLE 2

BMM BEAMLINE FE MIRROR SPECIFICATIONS

Mirror system length, between flanges	1190 mm
Length of mirror substrate	1000 mm
Orientation	Bounce up
Material	Silicon
Mirror figure	Paraboloidal
Beam incidence angle	3.5mrad
Mirror acceptance (H/V)	2.1 mrad (H) x 0.24 mrad (V)
Mirror system center position	13m from source
Mirror operating limits (max incidence angle *).	5 mrad
Water flow rate for the mirror	Ideally 1.5 gpm (6 l/min). First component in any cooling chain; followed by slits, mask, PSH.

* See NSLS-II Controlled Document: PS-C-XFD-RSI-SST-BMM-001 / RSI for the Sources and Front-Ends for the SST1&2 and BMM Beamlines (NIST)

NOTE:

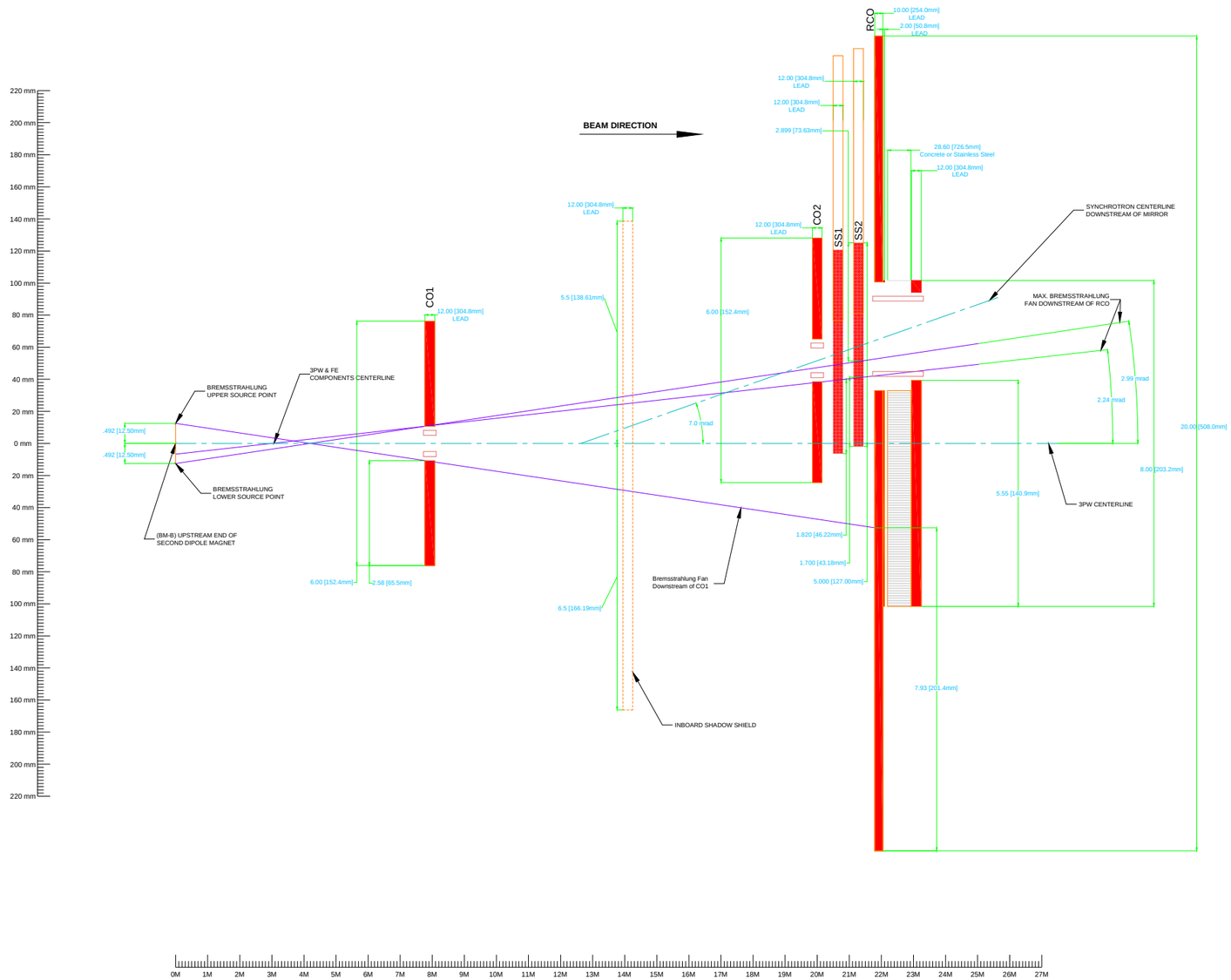
1. BREMSSTRAHLUNG SOURCE POINT (ORIGIN) IS UPSTREAM END OF BM-B.
2. ALL APERTURES & TOLERANCES ARE ASSUMED TO BE SYMMETRIC ABOUT THE COMPONENT CENTERLINE UNLESS OTHERWISE SHOWN.

HORIZONTAL
SCALE: X:Z = 1:50

BMM, CELL 6 BM, BREMSSTRAHLUNG RAY TRACING HORIZONTAL

E	SR-FE-3PW-8001	C
	DRAWING/UNIT NUMBER	REVISION
ESH&Q RISK LEVEL A-1	SHEET 6	OF 7

RELEASED – EFFECTIVE



VERTICAL
SCALE: X:Z = 1:50

TABLE 1

BMM FRONT END RAYTRACE TOLERANCE

	STANDARD TOLERANCE				
	mm		inches		Comments
	+	-	+	-	
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Exit Absorber	2.0	2.0	0.079	0.079	Manufacturing & Position
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FM 2 Vertical	.65	.65	0.026	0.026	Manufacturing & Position
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FM	.75	.75	0.030	0.030	Manufacturing & Position
CO tube	1.5	1.5	0.059	0.059	Manufacturing & Position
Collimator lead Horizontal	1.5	0.0	0.059	0.000	Manufacturing & Assembly
Collimator lead Vertical	2.5	0.0	0.098	0.000	Manufacturing, Assembly, Heater tape & Heater Tape Clearance
Shadow Shield	3.0	3.0	0.118	0.118	Manufacturing & Position
RCO upstream lead Horizontal	7.85	0.0	.309	0.000	Clearance, Mfg & Position
RCO upstream lead Vertical	8.85	0.0	.348	0.000	Clearance, Mfg & Position
RCO tube (minimum)	4.0	-	0.157	-	Manufacturing & Position

TABLE 2

BMM BEAMLINE FE MIRROR SPECIFICATIONS

Mirror system length, between flanges	1190 mm
Length of mirror substrate	1000 mm
Orientation	Bounce up
Material	Silicon
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NOTE:

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BMM, CELL 6 BM, BREMSSTRAHLUNG RAY TRACING VERTICAL

E	SR-FE-3PW-8001	C
	DRAWING/PART NUMBER	REVISION
ESH&Q RISK LEVEL A-1	SHEET 7 OF 7	

RELEASED – EFFECTIVE