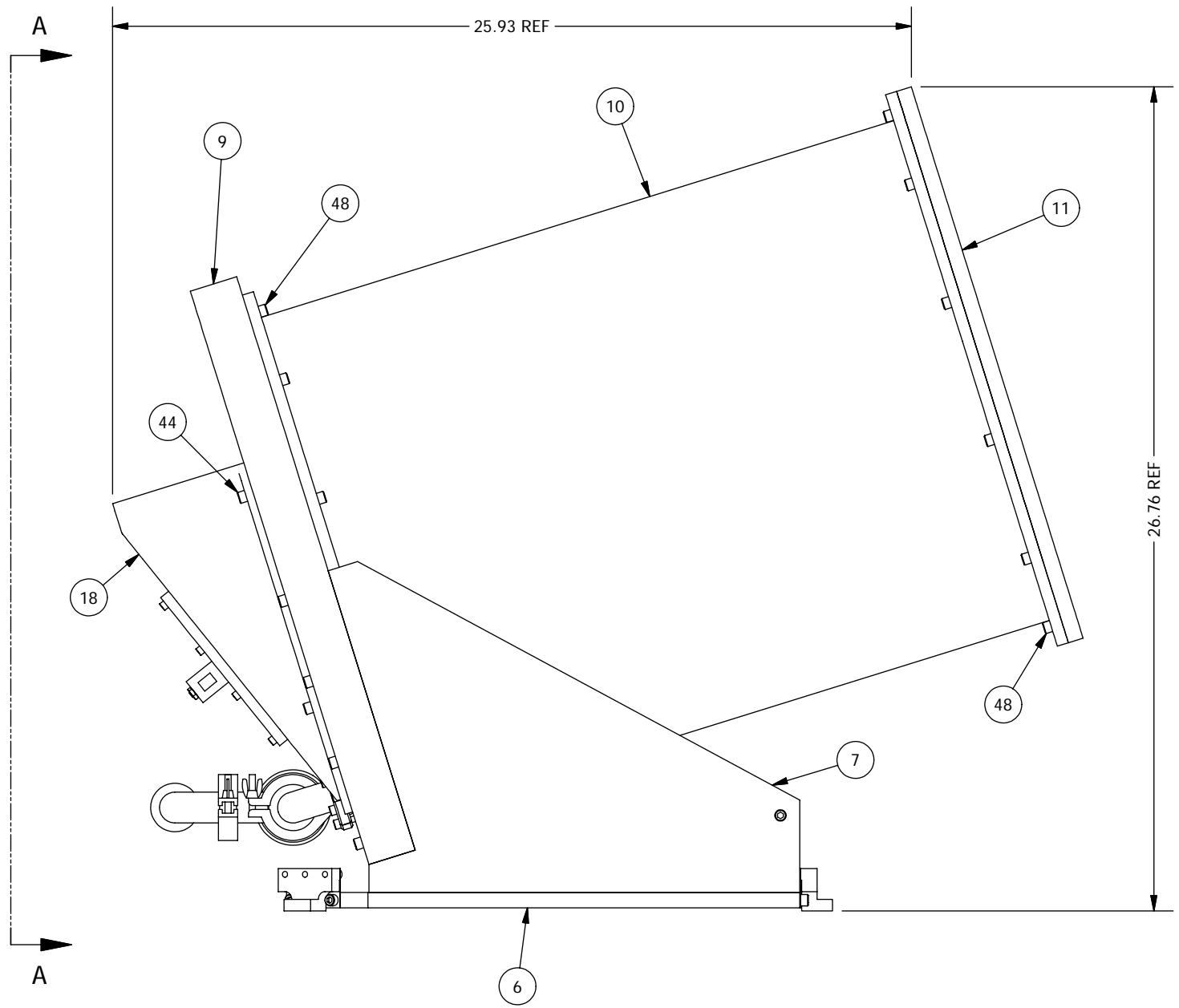


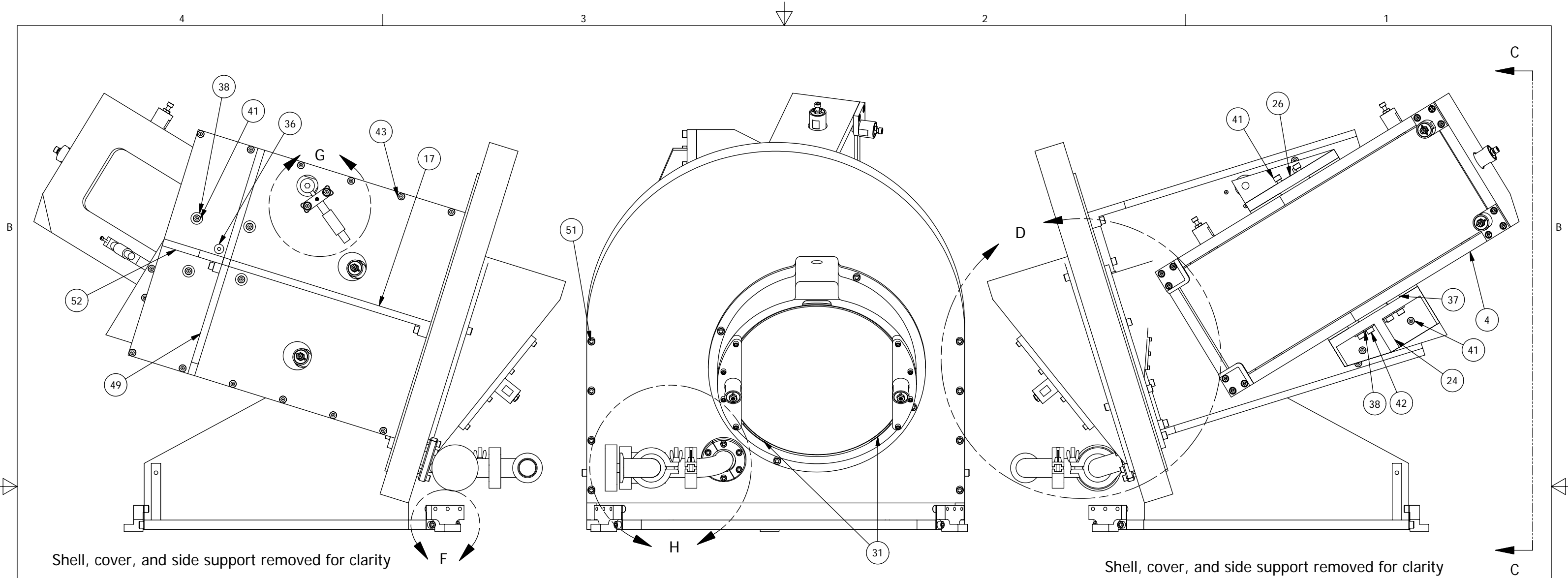
**NOTES**

1. Test fit assembly before anodizing.
2. Test-pump to 0.0001 mbar with a dummy window or metal blank before mounting real grating and prism.
3. Test-pump to 0.0001 mbar with real prism before mounting real grating.
4. Working vacuum pressure should be set to 0.005 mbar target, and always maintained between 0.0002 and 0.012 mbar

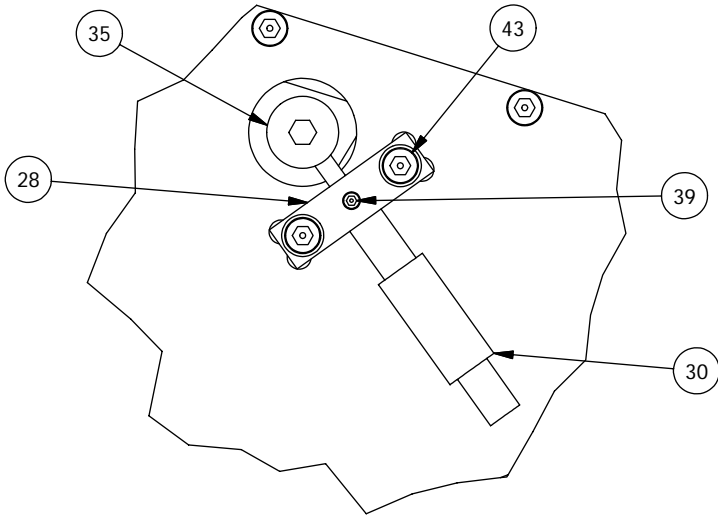
53	2	SHCS 1/4-20x0.75 UNC vented	-				
52	1	Grating Mount Brace 4	PFS11035				
51	8	SHCS 1/4-20 UNCx2	-	19	1	Prism PFSP2 Cell	PFS11019
50	6	SHCS 1/4-20x0.5 UNC vented	-	18	1	Prism PFSP1 Cell	PFS11018
49	1	Grating Mount Side Plate Stiffener	PFS11008	17	1	Grating Mount Brace 2	PFS11009
48	24	SHCS 1/4-20 UNCx0.875	-	16	1	Grating Mount Brace 3	PFS11034
47	8	SHCS 8-32 UNCx0.625	-	15	1	Grating Mount Brace 1	PFS11033
46	2	SHCS 1/4-20 UNCx1	-	14	1	Parker O-ring 2-270	-
45	11	SHCS 1/4-20 UNCx0.75	-	13	2	Parker O-ring 2-386	-
44	4	SHCS 1/4-20 UNCx0.625	-	12	1	Grating Mount Side Plate	PFS11007
43	50	SHCS 1/4-20x1 UNC vented	-	11	1	Prism/Grating Assembly Vacuum Cover	PFS11006
42	6	SHCS 1/4-20x0.625 UNC vented	-	10	1	Prism/Grating Assembly Vacuum Shell	PFS11005
41	12	SHCS 1/4-20x0.875 UNC vented	-	9	1	Prism/Grating Assembly Front Plate	PFS11002
40	2	SHCS 1/4-20x1.25 UNC vented	-	8	1	Prism/Grating Assembly Lateral Stiffener	PFS11004
39	8	SHCS 4-40x0.5 UNC vented	-	7	2	Prism/Grating Assembly Side Support	PFS11003
38	8	Washer, ANSI A, Normal 0.25	-	6	1	Prism/Grating Assembly Base Plate	PFS11001
37	2	Grating Altitude Lock Washer	-	5.3	5	SHCS 1/4-20 UNCx0.5	-
36	1	Shoulder Screw MCM94035A308	-	5.2	1	Table Top Flexure	PFS11037
35	1	Shoulder Screw MCM97345A716	-	5.1	1	Table Top Flexure Base	PFS11036
34	1	Die Spring Screw Cap MCM96235K9	-	5	3	Table Top Flexure	-
33	1	Die Spring MCM9295K13	-	4	1	Grating Mount Assembly	PFS00010
32	3	UHMW Polyethylene Tape MCM76445A723	-	3	2	Prism Axial Spring Plunger Assembly	PFS00006
31	3	Radial pad 4.00 x 1.50	-	2.6	6	SHCS 10-32 UNFx0.75	-
30	2	Micrometer - Starrett 463L	-	2.5	2	Nor-Cal NW 90 Radius Elbow 2E-NW-25B	-
29	1	Prism PFSP1 Radial Preload Block	PFS11022	2.4	1	Nor-Cal Manual Angle Valve ESV-1002-NWB	-
28	1	Grating Azimuth Micrometer Mount	PFS11016	2.3	3	Nor-Cal NW Centering Ring NW-25-CR-SV	-
27	1	Grating Altitude Micrometer Mount	PFS11017	2.2	2	Nor-Cal NW 25 Nut Clamp	-
26	1	Grating Mount Azimuthal Base	PFS11011	2.1	1	Nor-Cal NW Bulkhead Clamp NW-25-BCP	-
25	1	Grating Mount Azimuthal Bushing	PFS11010	2	1	Nor-Cal Vacuum Valve Assembly	-
24	1	Grating Mount Altitude Arm 2	PFS11014	1.5	1	Echelle Grating	PFS01011
23	1	Grating Mount Altitudinal Arm 1	PFS11013	1.4	1	Sylgard-184 RTV	-
22	1	Grating Mount Stiffener	PFS11015	1.3	1	PFSP2 Prism	PFS01010
21	2	Prism PFSP1 Retention Clip	PFS11020	1.2	1	PFSP1 Prism	PFS01009
20	2	Prism PFSP2 Safety Clip	PFS11021	1	1	PFS Dispersive Optics	-
ITEM	QTY	DESCRIPTION	PART NUMBE	ITEM	QTY	DESCRIPTION	PART NUMBE
Bill of Material				Bill of Material			



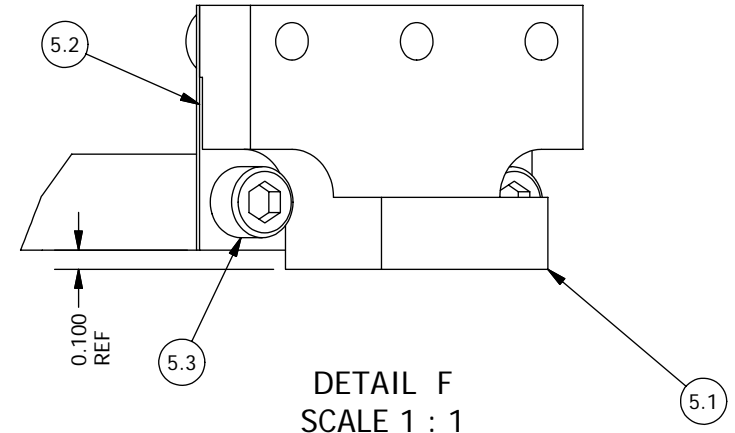
THE OBSERVATORIES OF THE CARNEGIE INSTITUTION OF WASHINGTON 813 Santa Barbara Street Pasadena, CA 91101					
MATERIAL		UNLESS OTHERWISE SPECIFIED FRACTIONAL DECIMAL ANGULAR +/- 1/32 .XX +/- 0.01 +/- 0.1 DEG .XXX +/- 0.002 GOAL .XXX +/- 0.005 REQD BREAK SHARP EDGES MACHINED SURFACES 125			
EST WEIGHT		176 lb (+67 with optics)			
SCALE		1:5		Planet Finder Spectrograph	
DWN	CRANE	5/5/2006		Prism/Grating Mount Assembly	
APVD	BY	DATE	SHEET	DRAWING NUMBER	REV
			B	PFS00011	SHT 1 OF 3



VIEW A-A  
SCALE 1 / 5  
Shell and cover removed for clarity

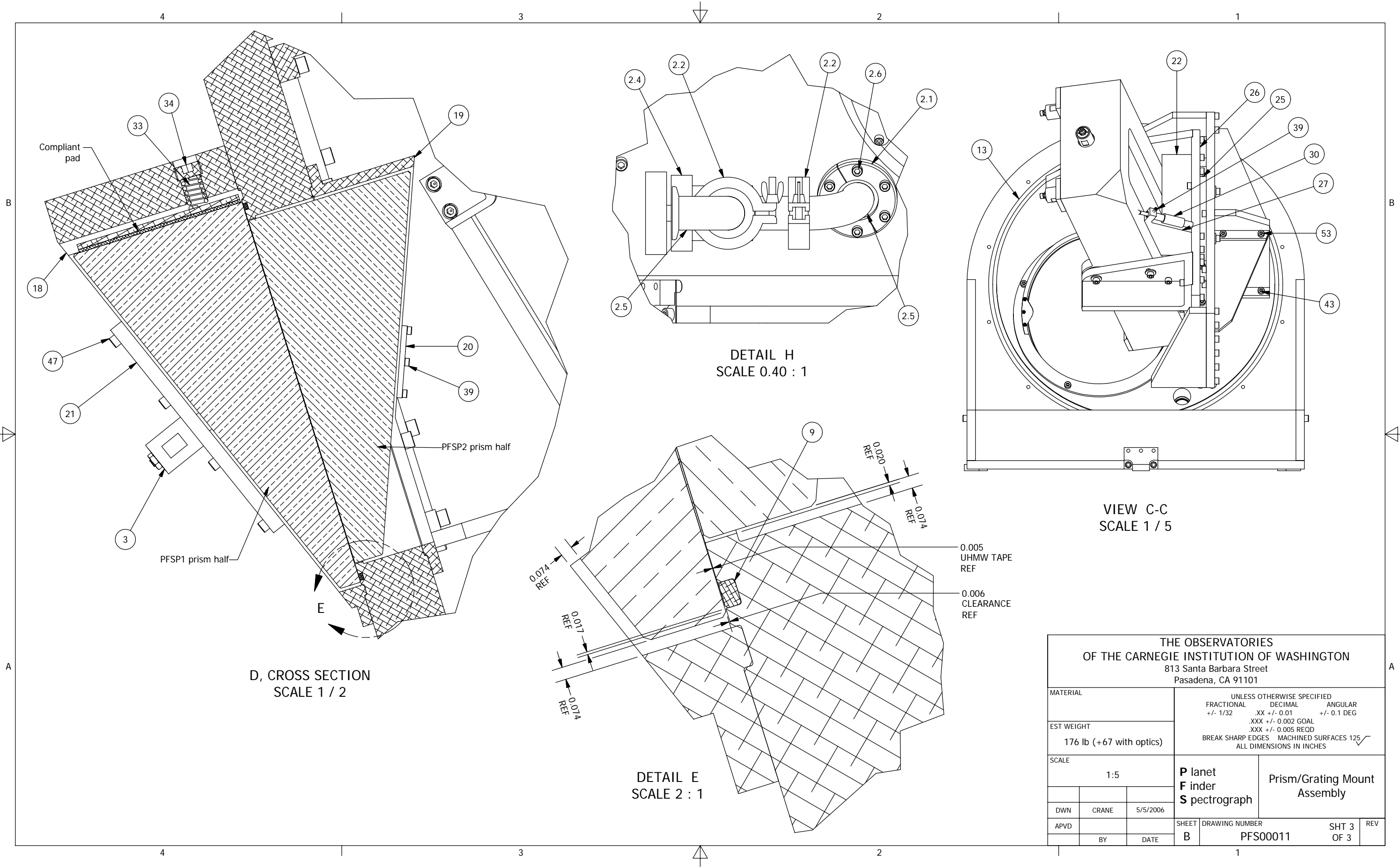


DETAIL G  
SCALE 1 / 2



DETAIL F  
SCALE 1 : 1

THE OBSERVATORIES OF THE CARNEGIE INSTITUTION OF WASHINGTON 813 Santa Barbara Street Pasadena, CA 91101					
MATERIAL		UNLESS OTHERWISE SPECIFIED FRACTIONAL DECIMAL ANGULAR $\pm 1/32$ .XX $\pm 0.01$ $\pm 0.1$ DEG			
EST WEIGHT		.XXX $\pm 0.002$ GOAL .XXX $\pm 0.005$ REQD BREAK SHARP EDGES MACHINED SURFACES 125 $\sqrt{\hspace{1cm}}$ ALL DIMENSIONS IN INCHES			
SCALE		1:5		<b>P</b> lanet <b>F</b> nder <b>S</b> pectrograph Prism/Grating Mount Assembly	
DWN	CRANE	5/5/2006			
APVD	BY	DATE	SHEET	DRAWING NUMBER	REV
			B	PFS00011	SHT 2 OF 3



<b>THE OBSERVATORIES OF THE CARNEGIE INSTITUTION OF WASHINGTON</b> 813 Santa Barbara Street Pasadena, CA 91101					
MATERIAL		UNLESS OTHERWISE SPECIFIED FRACTIONAL DECIMAL ANGULAR +/- 1/32 .XX +/- 0.01 +/- 0.1 DEG			
EST WEIGHT		.XXX +/- 0.002 GOAL .XXX +/- 0.005 REQD BREAK SHARP EDGES MACHINED SURFACES 125 ✓ ALL DIMENSIONS IN INCHES			
SCALE		1:5		<b>P lanet F inder S pectrograph</b>	
DWN	CRANE	5/5/2006		SHEET	DRAWING NUMBER
APVD	BY	DATE		B	PFS00011
				SHT 3 OF 3	REV