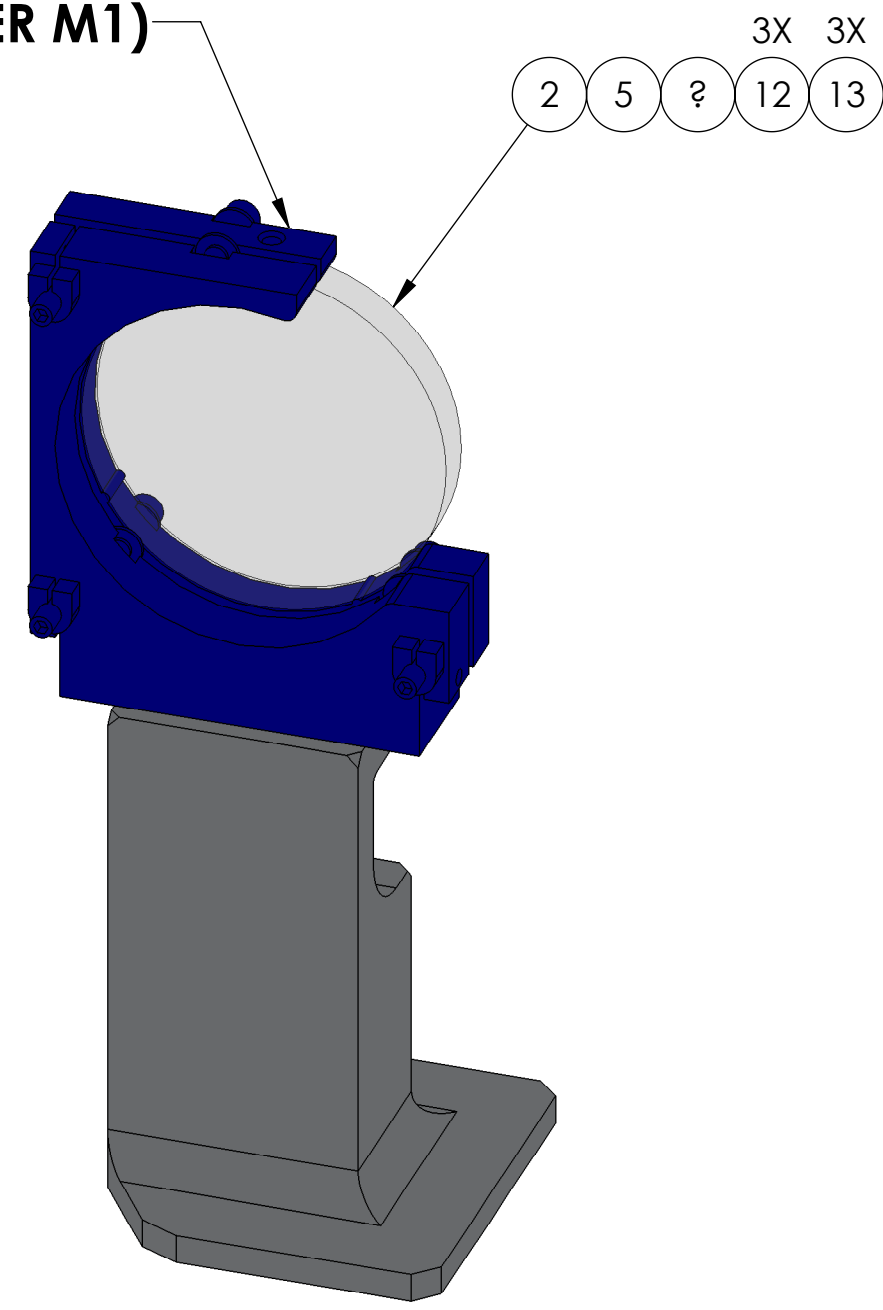


NOTES CONTINUED:
 5. SEE SHEET 2 AND 3 FOR LAYOUT DIMENSIONS
 6. ALL DIMENSIONS ARE WRT HAM4 0,0,0 LOCAL CS.
 7. #8-32 TORQUE TO 20 in-lb, MAX
 8. 1/4-20 TORQUE TO 65 in-lb, MAX

REV.	DATE	DCN #	DRAWING TREE #
v1	19 DEC 2012	E1201120	E1201121
v2	16 JUL 2014	E1400331-x0	-
-	-	-	-

(HWSX STEER M1)



HWSX STEER M3

12 10 1 6

HWSX DCBS1

8 3 11 14 15

(HWSX STEER M2)

13 12 9 2 5

HWSX VAC LENS

7 4 11 14 15

OPTICAL TABLE OMMITED FOR CLARITY

ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	REQ	SPARE	TOTAL
17	D1201558	WHAM4 HWSX 4IN MIRROR MOUNT	6061 Alloy	1		1
7	15	WFV-08 WASHER, VENTED FLAT, #8 .169ID X .304OD X .032THK. UC-COMPONENTS	Alloy Steel (SS)	2	1	3
14	C-812-A	SSHC #8-32 UNC-3A 3/4LG, VENTED . UC COMPONENTS	18-8 SSSL	2	1	3
8	13	WFV-25 WASHER,FLAT,VENTED, .26ID X .47OD X .032TK. UC COMPONENTS	18-8 SSSL	6	2	8
12	C-2012-A	SHCS, 1/4-20 UNC-2A X 3/4LG, VENTED, SILVER PLATED. UC-COMPONENTS	18-8 SSSL	7	1	8
11	D1101840	ALIGO PESDESTAL HWSX 2IN OPTIC MOUNT	6061 Alloy	2	0	2
10	D1101844	ALIGO, PESDESTAL,HAM4,HWSY, 2IN MIRROR MOUNT	6061 Alloy	1	0	1
9	D1101898	ALIGO PESDESTAL HAM4 HWSX-M2 4IN MIRROR MOUNT	6061 Alloy	1	0	1
8	D1102166	ISC Fixed Optic Holder- custom size for LIGO . Siskiyou	6061 Alloy	1	0	1
7	FOH-2.00	FIXED OPTIC HOLDER. SISKIYOU	6061 ALLOY	1	0	1
6	IXM200.C	MOUNT, 100TPI, 2IN OPTIC CUTAWAY,RH. SISKIYOU	6061 Alloy	1	0	1
5	IXM400.A3-VC	LIGO 4IN OPTIC MOUNT.SISKIYOU	6061 Alloy	2	0	2
4	PLCC-50.8-772.6-UV-830	LASER QUALITY_CONCAVE LENSE. CVI MELLER GRIOT	Glass	1	0	1
3	D1200214	ALIGO TCS HWS DICHOIC BEAM SPLITTER. PRECISION PHOTONICS	Glass	1	0	1
2	TBD	4IN METALLIC MIRROR.THOR LABS	TBD	2	0	2
1	TBD	2IN METALLIC MIRROR. THOR LABS	TBD	1	0	1

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

1. INTERPRET DRAWING PER ASME Y14.5-1994.
2. REMOVE ALL SHARP EDGES, .005-.015. FOR MACHINED PARTS.
3. DO NOT SCALE FROM DRAWING.
4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.

DIMENSIONS ARE IN INCHES
 TOLERANCES:
 .XX ± .01
 .XXX ± .005
 ANGULAR ± 1.0°

MATERIAL N/A FINISH N/A μinch NEXT ASSY D1101085

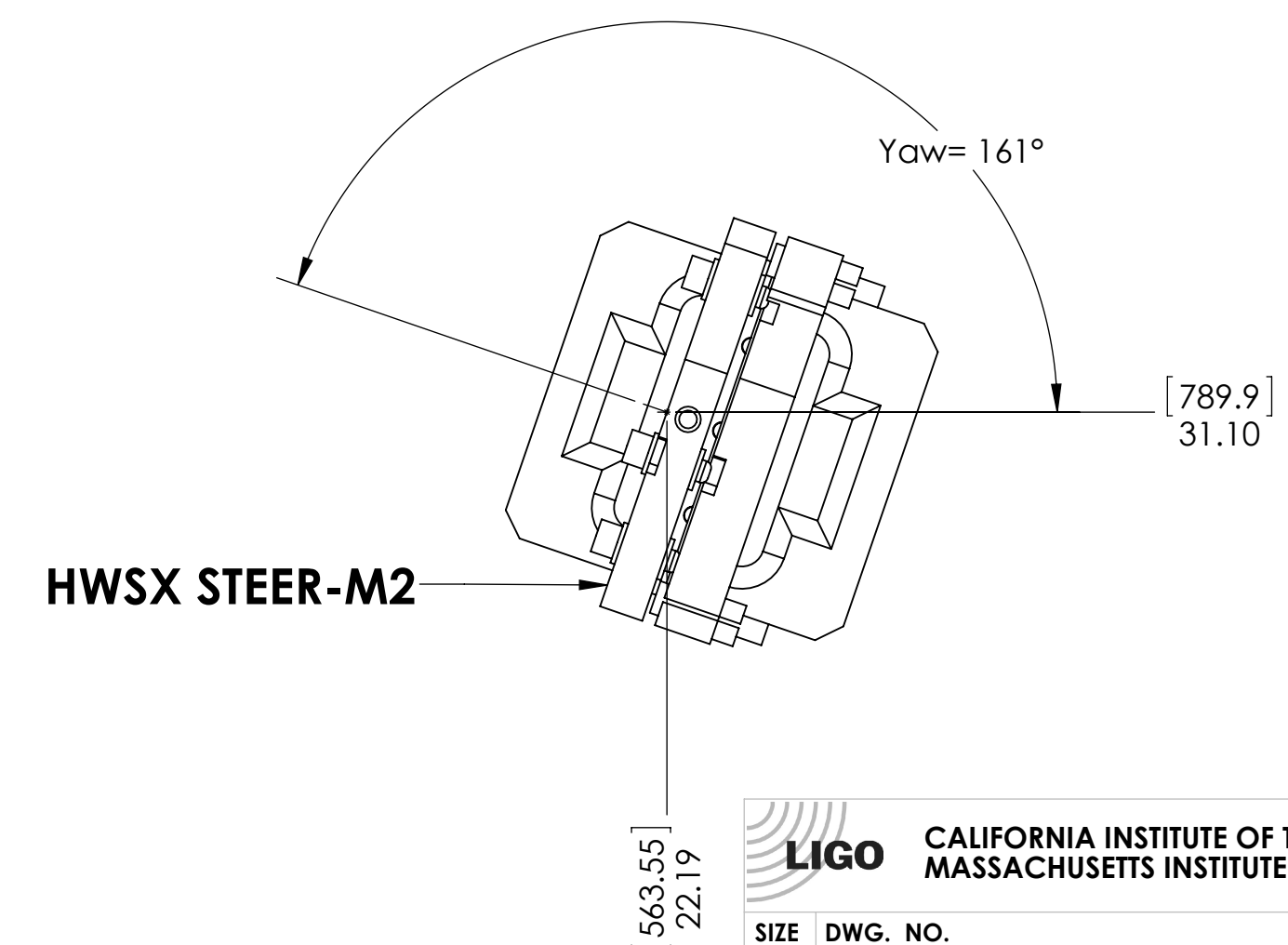
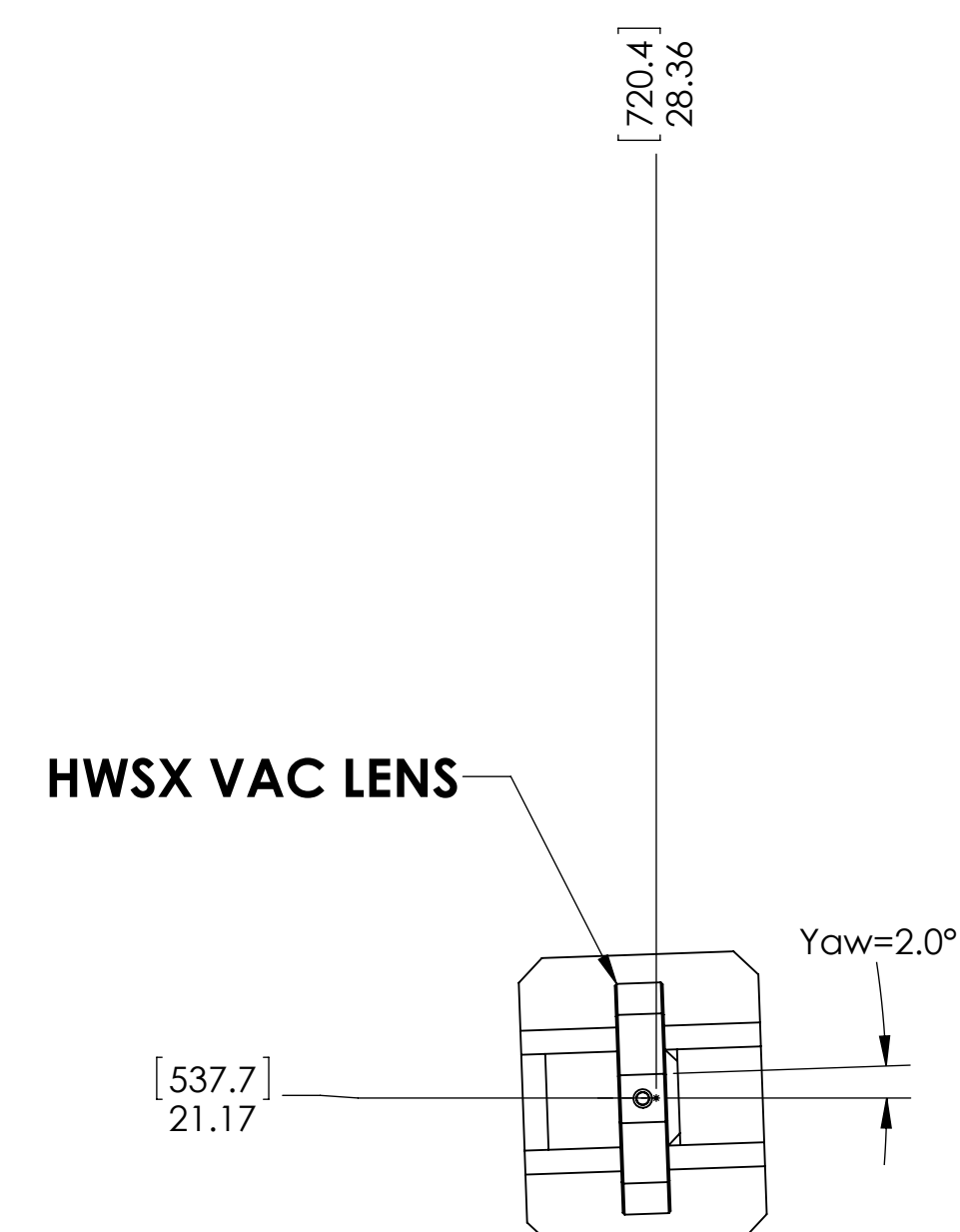
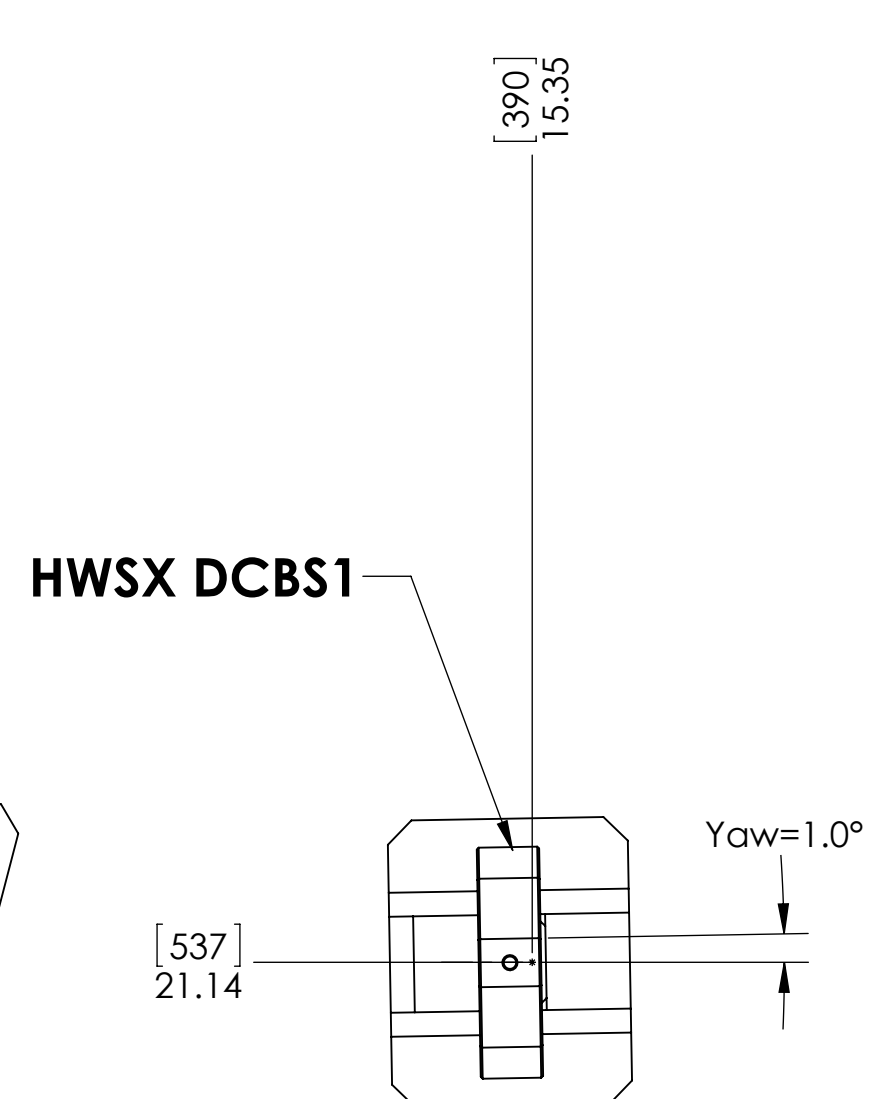
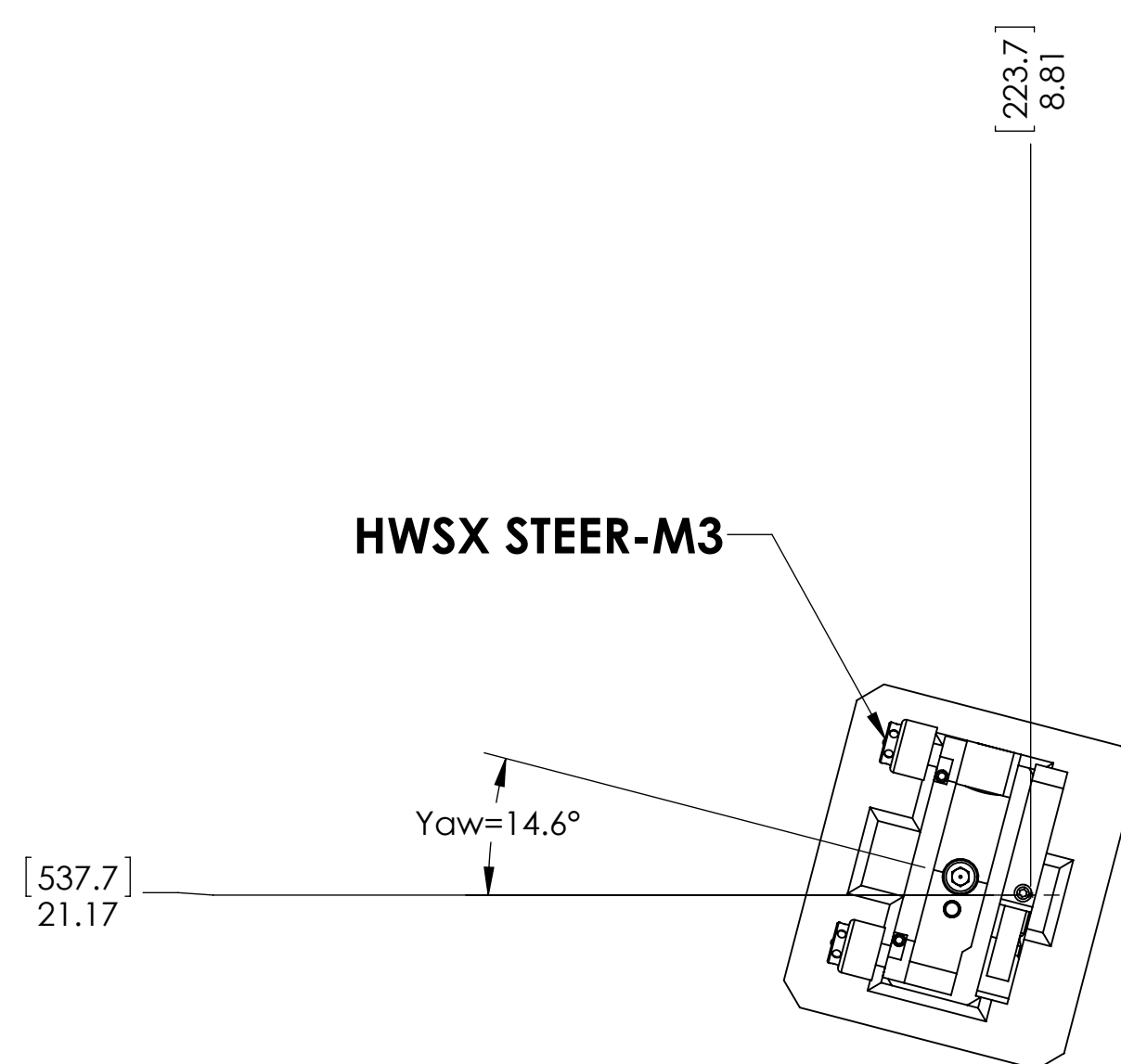
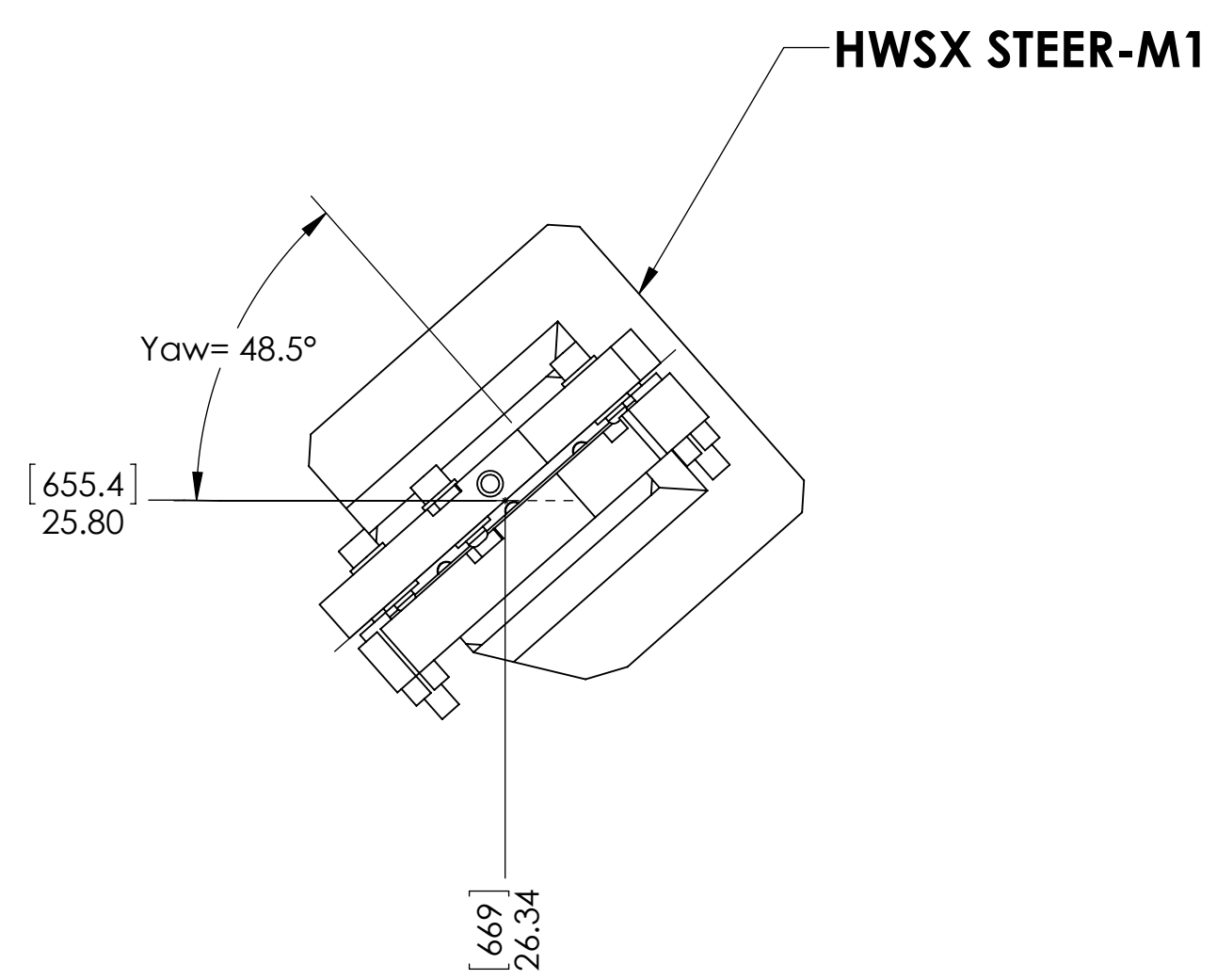
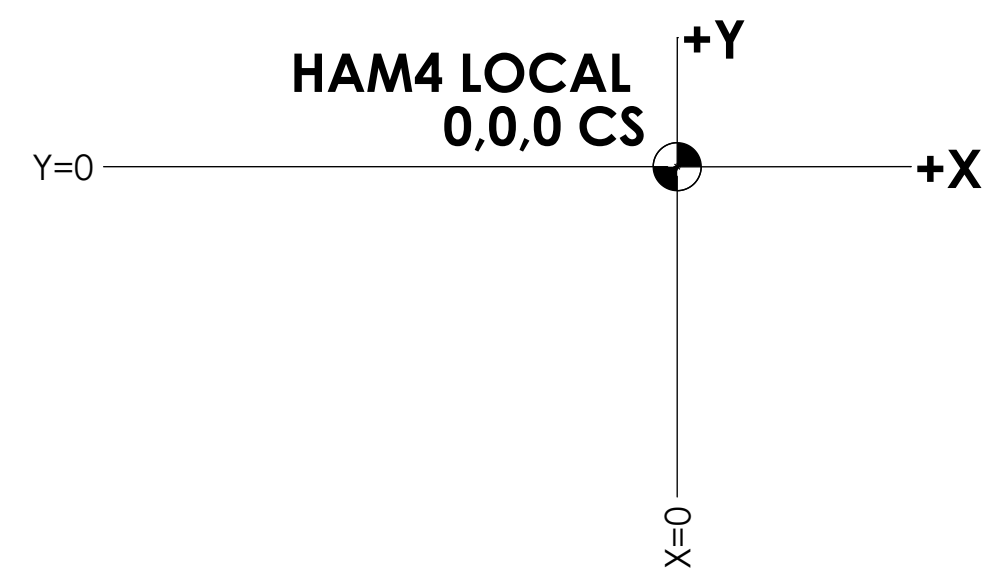


SYSTEM ADVANCED LIGO SUB-SYSTEM AOS

PART NAME ALIGO TCS HWS OPTO-MECH LAYOUT, ITMX, HAM4, H1

DESIGNER	A. BROOKS	05 DEC 2012	SIZE	DWG. NO.	REV.
DRAFTER	A. COLE	5-JAN-2012	D	D1101083	v2
CHECKER	M. JACOBSON	5-JAN-2012	SCALE: 1:4	PROJECTION:	SHEET 1 OF 3
APPROVAL	A. BROOKS	5-JAN-2012			

D1101083_HWS OPTO MECHANICAL LAYOUT, ITMX, HAM4, PART PDM REV: X-011, DRAWING PDM REV: X-019

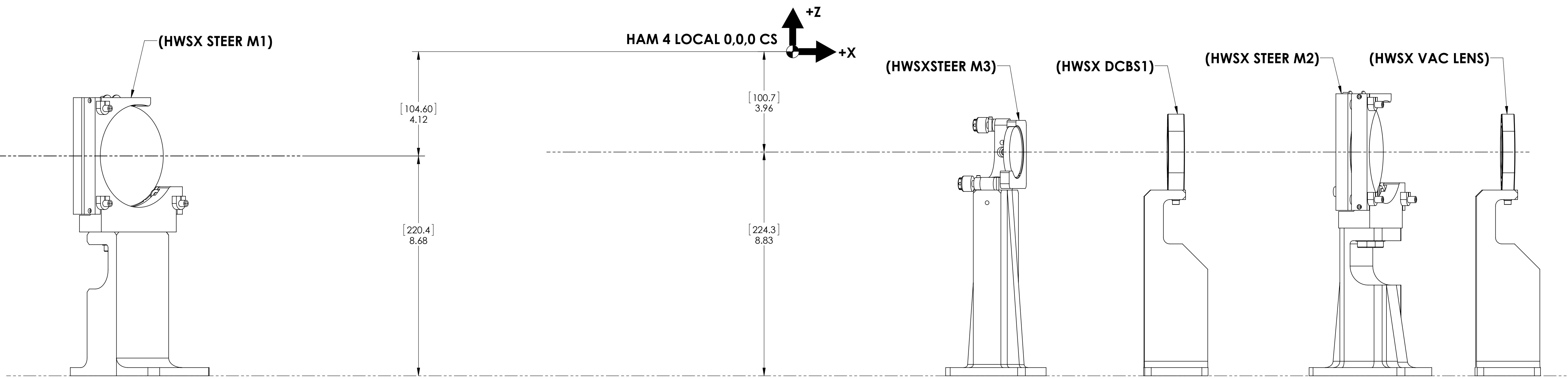


LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE DWG. NO.	REV.
D D1101083	v2
SCALE: 1:4	PROJECTION:
SHEET 2 OF 3	

D:\101083_HWS OPTO MECHANICAL LAYOUT.ITMX.HAM4_PARE.FDM.REV.3-061.DRAWING.PDM.REV.X-019

8 7 6 5 4 3 2 1

H
G
F
E
D
C
B
A



LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SIZE	DWG. NO.	REV.
D	D1101083	v2
SCALE: 1:4	PROJECTION:	SHEET 3 OF 3

D:\101083_HWS_OPTO_MECHANICAL_LAYOUT.ITMX_HAM4_PAREFDW\REV.3-061_DRAWING_PDM_REV.X-DTP

8 7 6 5 4 3 2 1