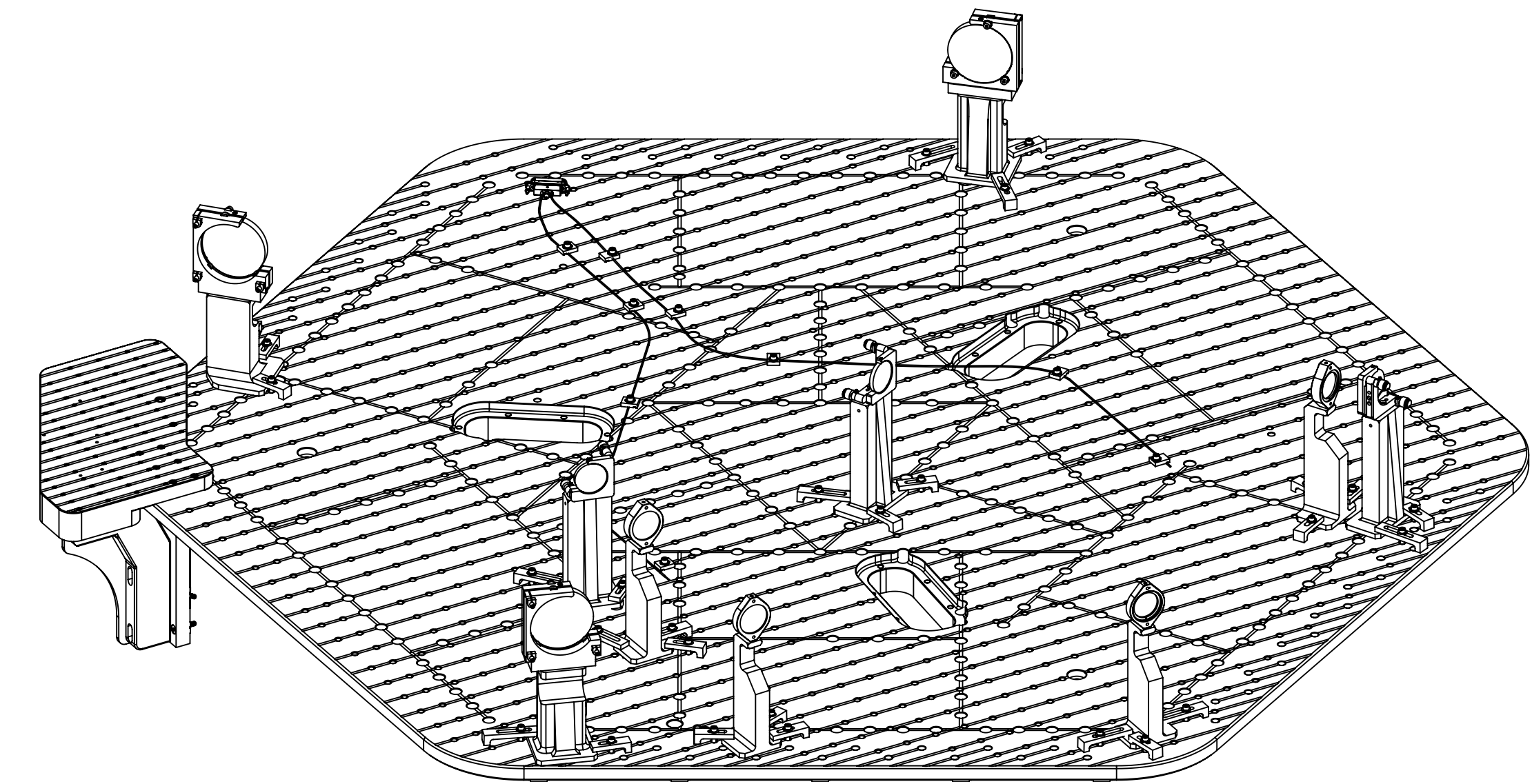
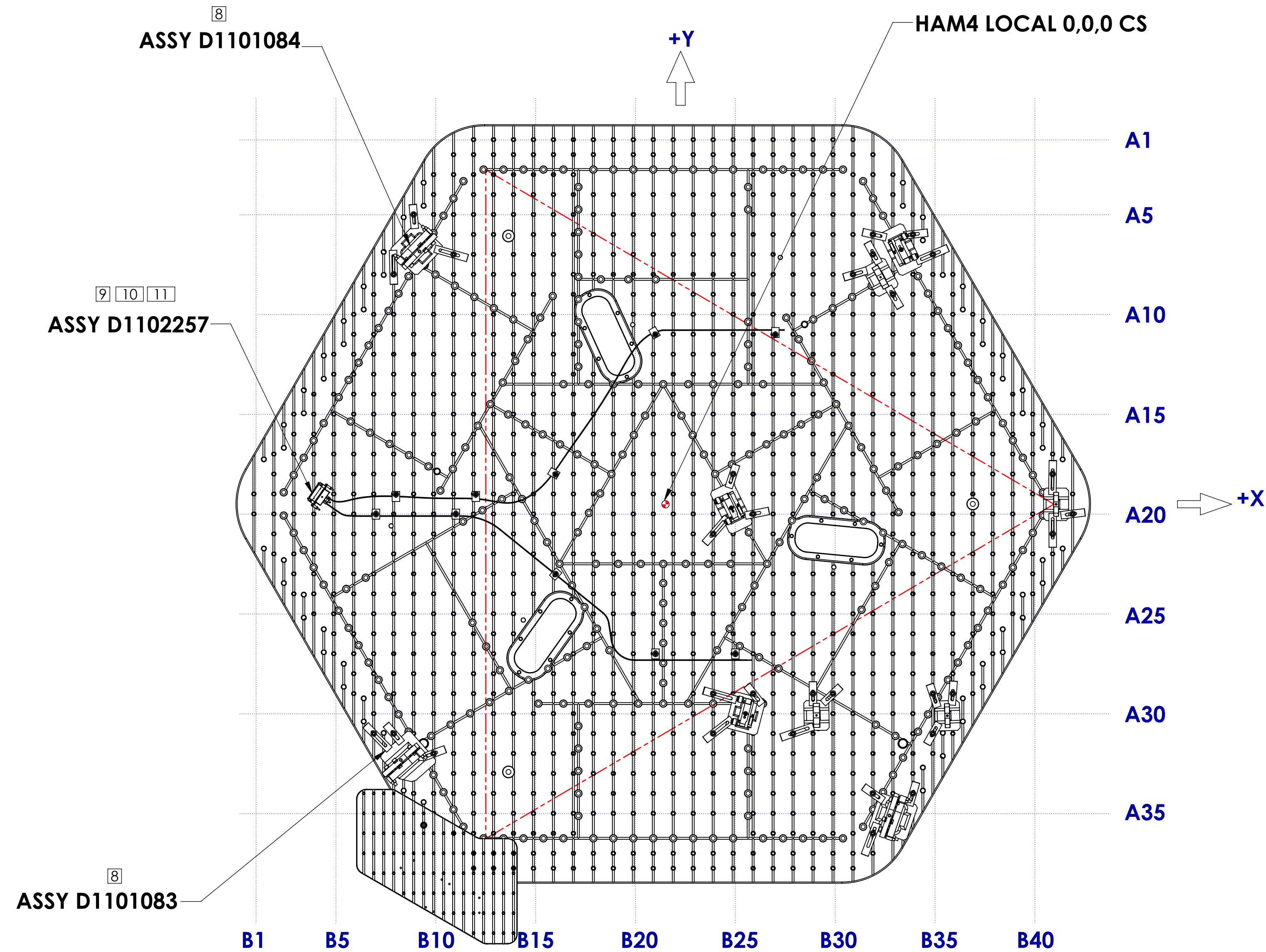


- NOTES CONTINUED:**
5. SEE G1000125 FOR HAM ISI SYSTEM ORIENTATION WRT VACUUM CHAMBER AND IFO GLOBAL COORDINATE SYSTEM.
 6. SEE D1101296 FOR HAM CHAMBER HOLE TAB.
 7. OPTICAL TABLE IS FOR REFERENCE ONLY.
 8. SEE D1101083 AND D1101084 FOR OPTICAL COMPONENTS LOCATION WRT HAM4 TABLE ORIGIN (0,0,0).
 9. SEE D1102257 FOR CABLE DETAIL DRAWING.
 10. ITEM 3 (D1102257-01), MATES WITH D100225. SEE D1101814 FOR DETAIL CABLE ROUTING.
 11. LENGTH OF CABLE BETWEEN CLAMPS SHOULD HAVE ENOUGH SLACKS TO FORM A 'S' SHAPE BUT NOT TOO LOOSE TO MAKE CONTACT WITH OTHER PARTS ON OPTICAL TABLE.
 12. 1/4-20 THREADS TORQUE TO 65 in-lb, MAX
 13. USE CLAMP ITEM 4 TO PRESS SENSOR ONTO TABLE SURFACE. TAKING CARE NOT TO DAMAGE CONDUCTOR JOINT.

REV.	DATE	DCN #	DRAWING TREE #
v1	19-DEC-2012	E1201120	E1201121-v1
v4	16 JUL 2014	E1400331-x0	-
-	-	-	-



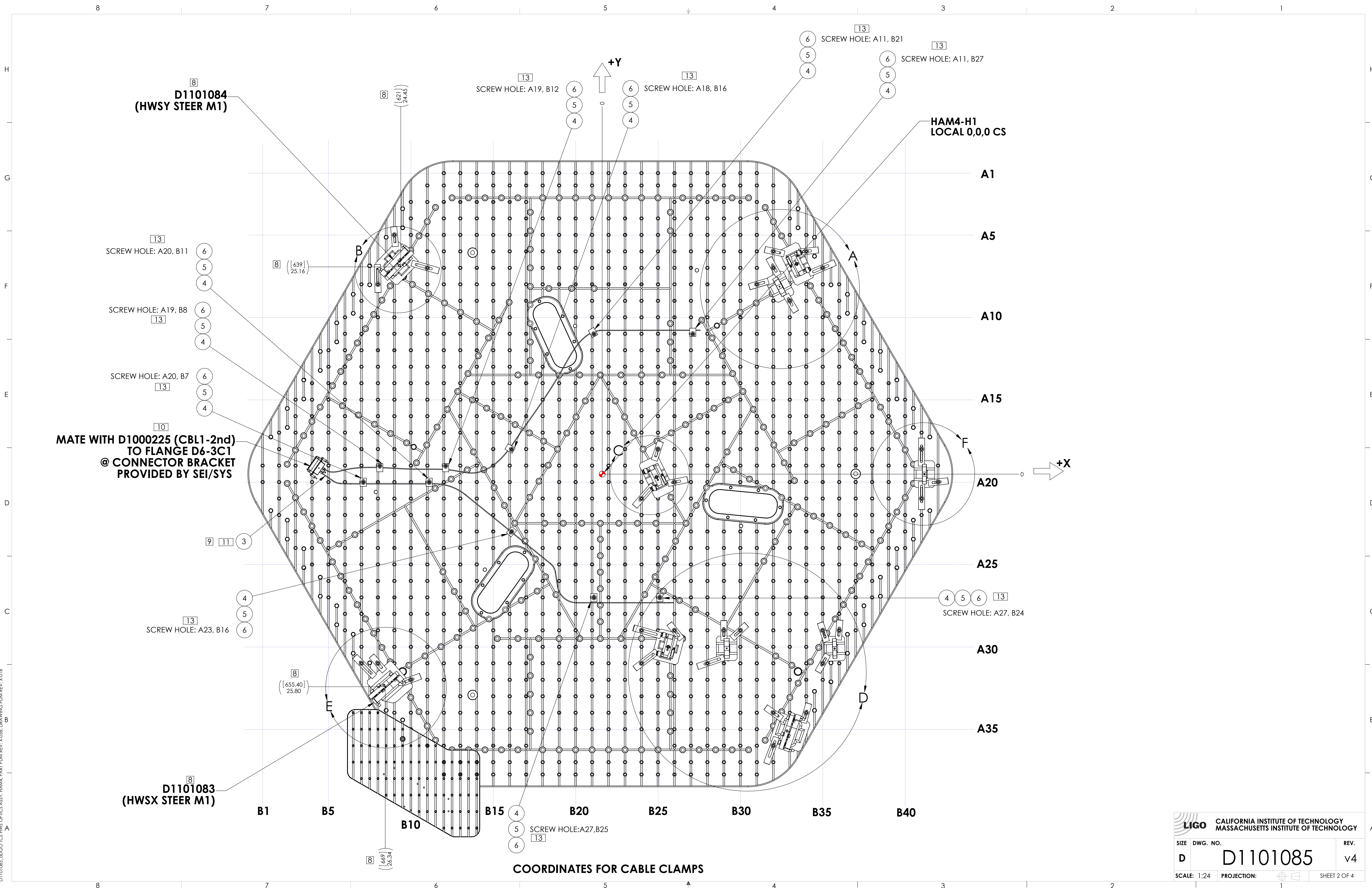
ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	QTY.	SPARE	TOTAL
10	D0901127	AdvLIGO SEI HAM4-H1, XYZ Local CS for ISO Table	N/A	1		0
9	C-2016-N UC COMPONENTS OR EQ.	SCREW, SHC, 1/4-20 x 1" LG.	18-8 S316L	30	10	40
8	D1100640-03	AdvLIGO HAM Optics Table Dog Clamp SOS Suspension .375L	304 S316L	11	4	15
7	D1100640-01	AdvLIGO HAM Optics Table Dog Clamp SOS Suspension .375S	304 S316L	19	5	24
6	C-2012-A	SHCS, 1/4-20 UNC-2A X 3/4 LG, VENTED, SILVER PLATED, UC-COMPONENTS	18-8 S316L	10	5	15
5	WF-25-C	Washer, Flat, .255ID X .468OD X.032TH .25, 18-8 S316L	18-8 S316L	40	5	45
4	D1102296	aLIGO TCS TEMP-SENSOR CABLE CLAMP	6061 Alloy	10	5	15
3	D1102257	aLIGO CABLE, TCS TEMPERATUR SENSOR, ASSY	N/A	1	0	0
2	D1101084	aLIGO TCS HWS OPTO-MECH LAYOUT, ITMY, HAM4, H1	N/A	1	0	0
1	D1101083	aLIGO TCS HWS OPTO-MECH LAYOUT, ITMX, HAM4, H1	N/A	1	0	0

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

MATERIAL N/A FINISH N/A μinch

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		PART NAME aLIGO TCS HWS OPTICS ASSY, HAM4, H1	
SYSTEM ADVANCED LIGO	SUB-SYSTEM AOS	DESIGNER A. BROOKS	DATE 06-JUNE-2011
DRAFTER A. COLE	DATE 30-JAN-2012	SIZE D	DWG. NO. D1101085
CHECKER M. JACOBSON	DATE 19-DEC-2012	SCALE 1:24	PROJECTION
APPROVAL A. BROOKS	DATE 05-DEC-2012	SHEET 1 OF 4	REV. v4

D1101085-aLIGO TCS HWS OPTICS ASSY, HAM4, PART PDM REV. X-05B, DRAWING PDM REV. X-018



D1101084
(HWSY STEER M1)

D1101083
(HWSX STEER M1)

HAM4-H1
LOCAL 0,0,0 CS

MATE WITH D100225 (CBL1-2nd)
TO FLANGE D6-3C1
@ CONNECTOR BRACKET
PROVIDED BY SEI/SYS

COORDINATES FOR CABLE CLAMPS

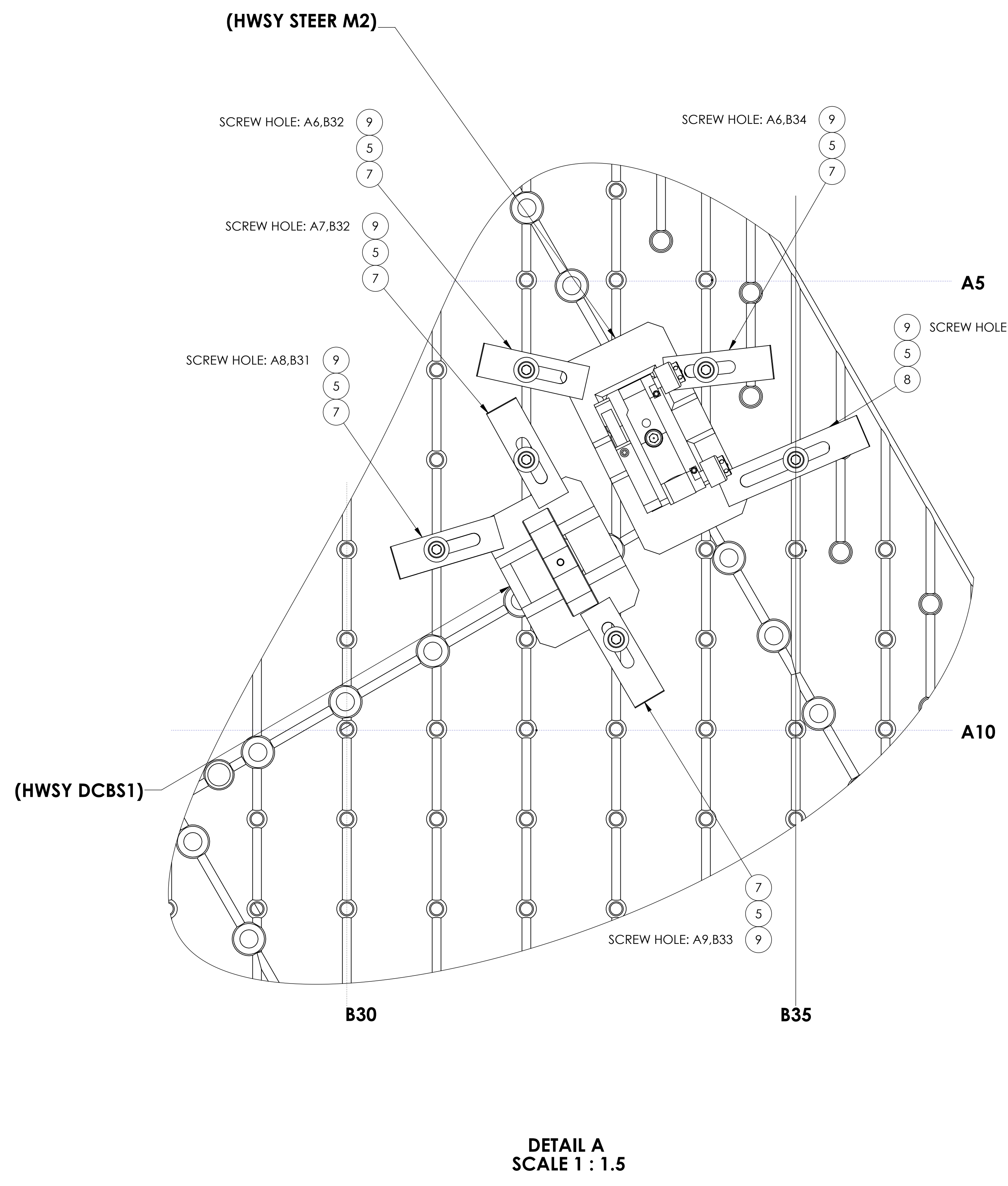
CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		REV.
SIZE	DWG. NO.	REV.
D	D1101085	v4
SCALE: 1:24	PROJECTION:	SHEET 2 OF 4

D1101085.dwg LIGO TCS HWIS OPTICS ASSY: HAM4 PART PDM REV: X-058 DRAWING PDM REV: X-018

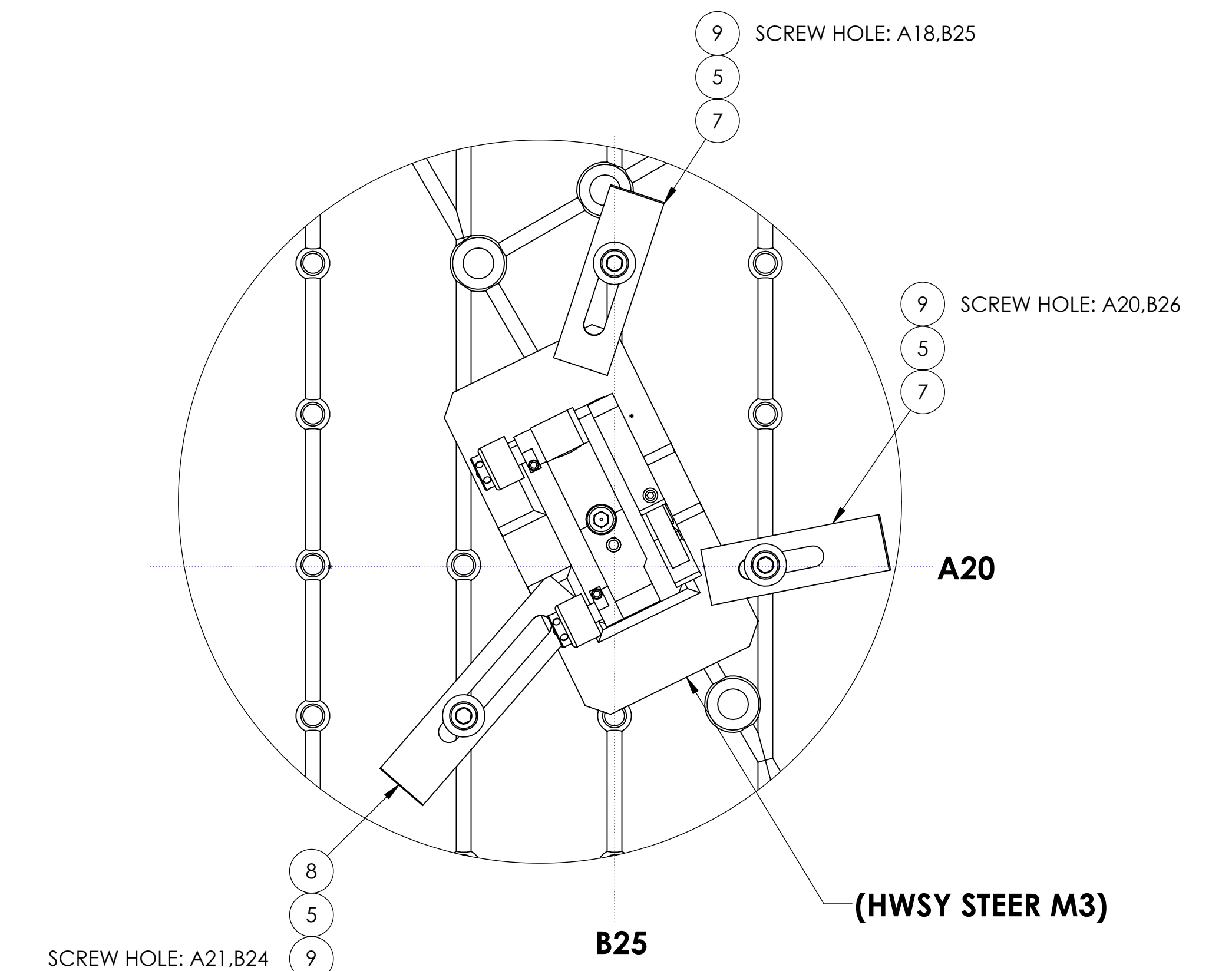
8 7 6 5 4 3 2 1

H
G
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D
C
B
A

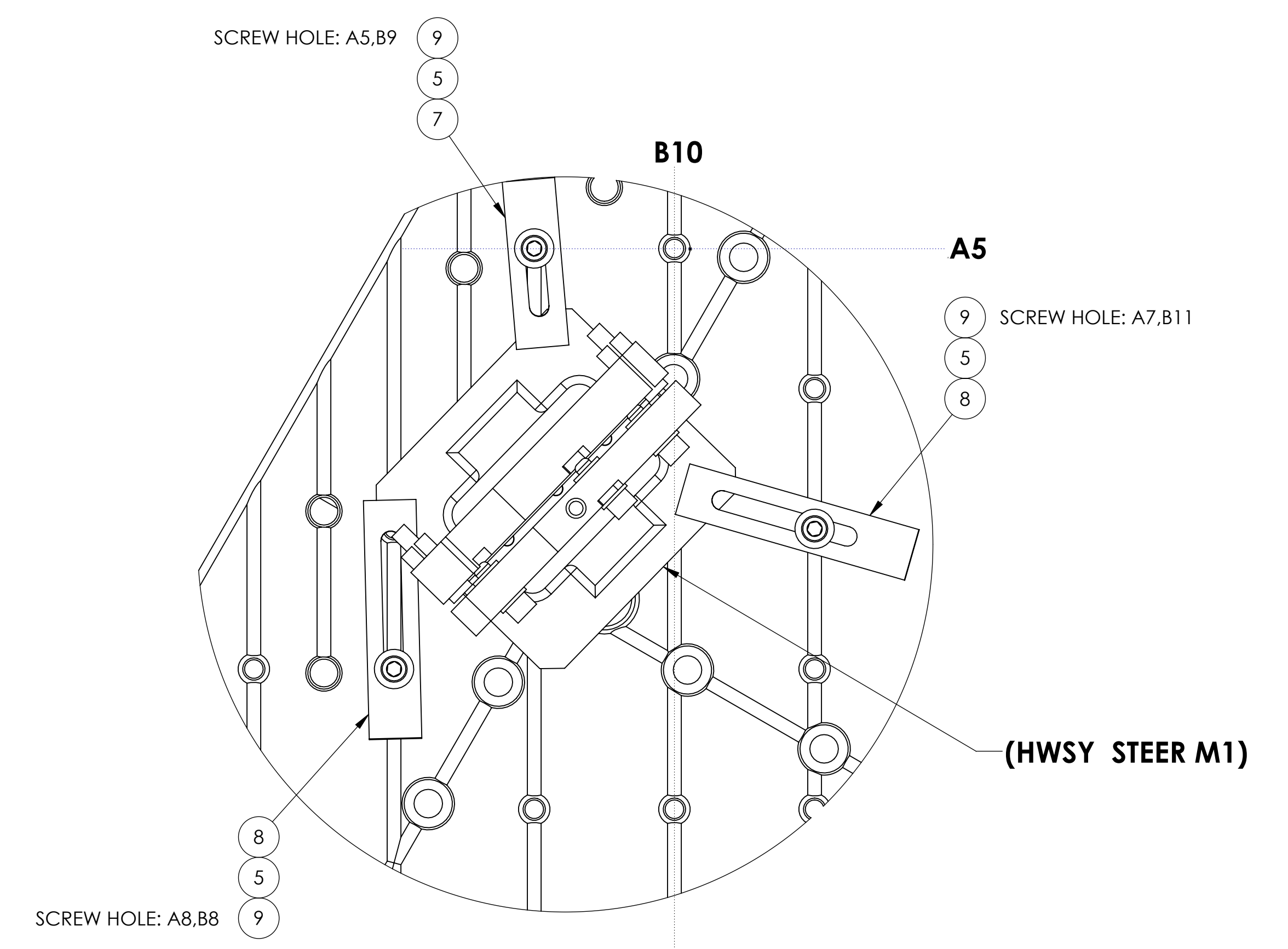
H
G
F
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D
C
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A



DETAIL A
SCALE 1 : 1.5



DETAIL C
SCALE 1 : 1.5



DETAIL B
SCALE 1 : 1.5

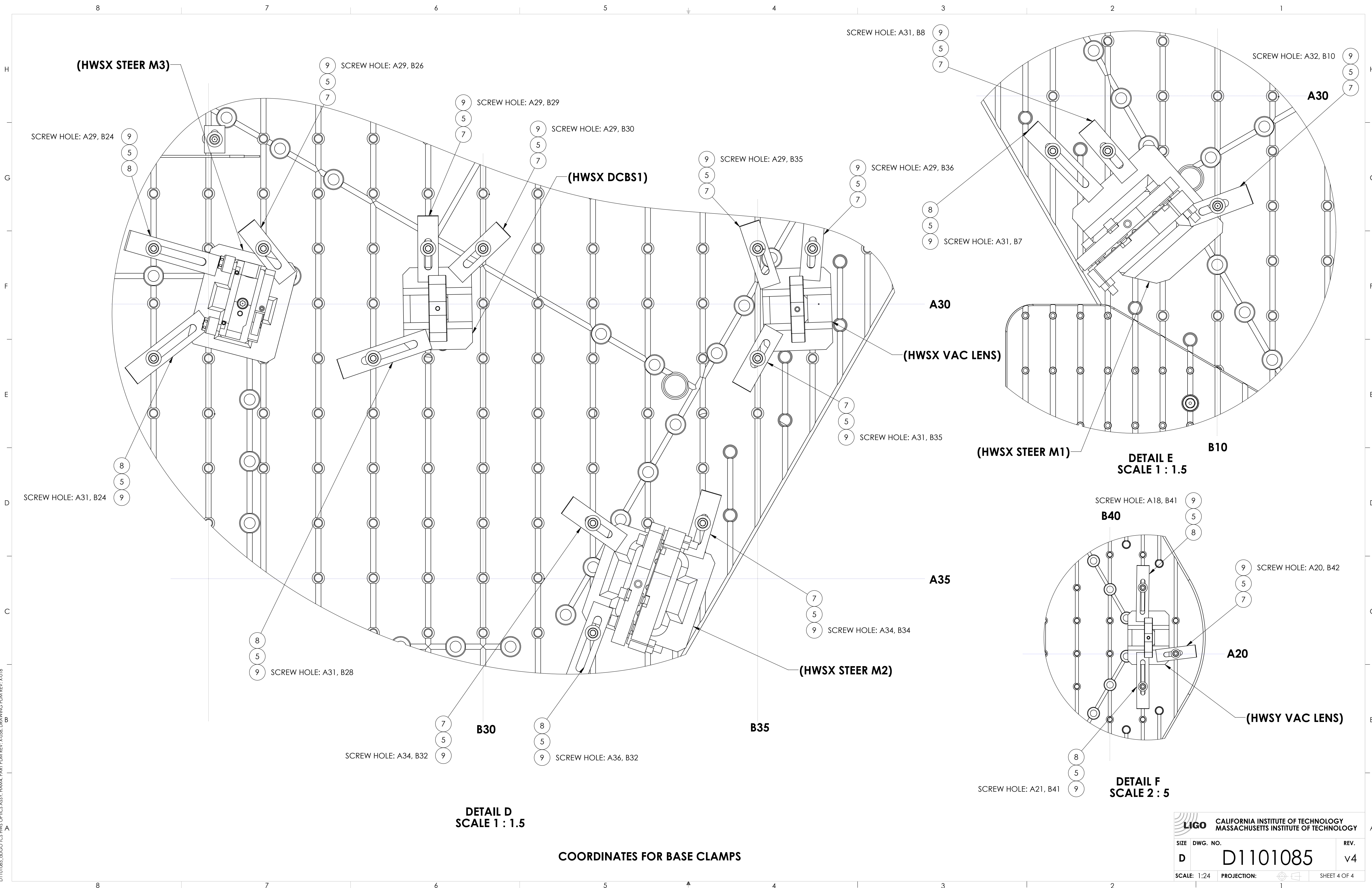
COORDINATES FOR BASE CLAMPS

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SIZE	DWG. NO.	REV.
D	D1101085	v4
SCALE: 1:24	PROJECTION:	SHEET 3 OF 4

D:\11085_ligo\tcs\hws\optics Assy_HAM4_PART PDM REV_X-058_DRAWING PDM REV_X-018

8 7 6 5 4 3 2 1



(HWSX STEER M3)

SCREW HOLE: A29, B26

SCREW HOLE: A29, B29

SCREW HOLE: A29, B30

(HWSX DCBS1)

SCREW HOLE: A29, B35

SCREW HOLE: A29, B36

SCREW HOLE: A31, B7

A30

(HWSX VAC LENS)

SCREW HOLE: A31, B35

(HWSX STEER M1)

**DETAIL E
SCALE 1 : 1.5**

B10

SCREW HOLE: A18, B41

B40

SCREW HOLE: A20, B42

A20

(HWSY VAC LENS)

SCREW HOLE: A21, B41

**DETAIL F
SCALE 2 : 5**

SCREW HOLE: A29, B24

SCREW HOLE: A31, B24

SCREW HOLE: A31, B28

SCREW HOLE: A34, B32

B30

SCREW HOLE: A36, B32

B35

SCREW HOLE: A34, B34

(HWSX STEER M2)

A35

**DETAIL D
SCALE 1 : 1.5**

COORDINATES FOR BASE CLAMPS

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SIZE DWG. NO.	REV.
D	D1101085
SCALE: 1:24	PROJECTION: SHEET 4 OF 4

D:\1101085_LIGO_TCES_HWS_OPTICS_ASSY_HAM4_PART_PDM_REV_X-05B_DRAWING_PDM_REV_X-018