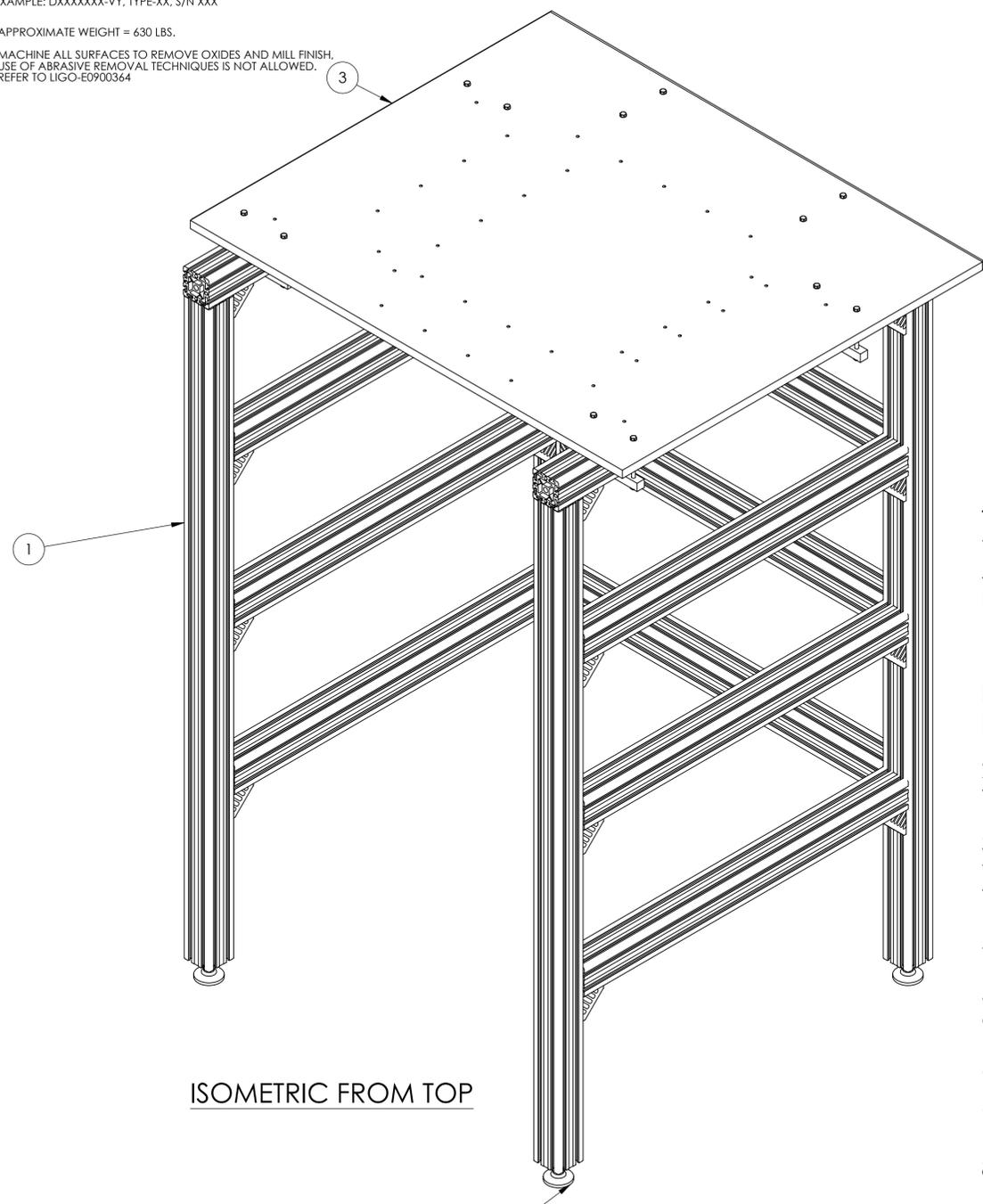


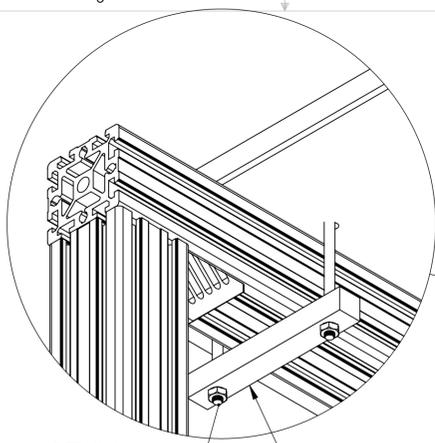
NOTES CONTINUED:
 5. SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER, REVISION (AND VARIANT OR TYPE IF APPLICABLE) ON NOTED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 001 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE MINIMUM 0.12" HIGH CHARACTERS, UNLESS THE SIZE OF THE PART DICTATES SMALLER CHARACTERS. A VIBRATORY TOOL MAY BE USED. EXAMPLE: DXXXXXX-VY, TYPE-XX, S/N XXX

6. APPROXIMATE WEIGHT = 630 LBS.
 7. MACHINE ALL SURFACES TO REMOVE OXIDES AND MILL FINISH. USE OF ABRASIVE REMOVAL TECHNIQUES IS NOT ALLOWED. REFER TO LIGO-E0900364

REV.	DATE	DCN #	DRAWING TREE #
v1	09 JUN 2011	E1100522-v1	-
v2	-	-	-
v3	11-8-12	to follow	-



ISOMETRIC FROM TOP



DETAIL A
SCALE 5 : 16

TMS Bosch Frame

Frame mass ~330 lbs. Table Top mass ~300 lbs. Total ~630 lbs

See Sheet 2 & 3 for Dimensions

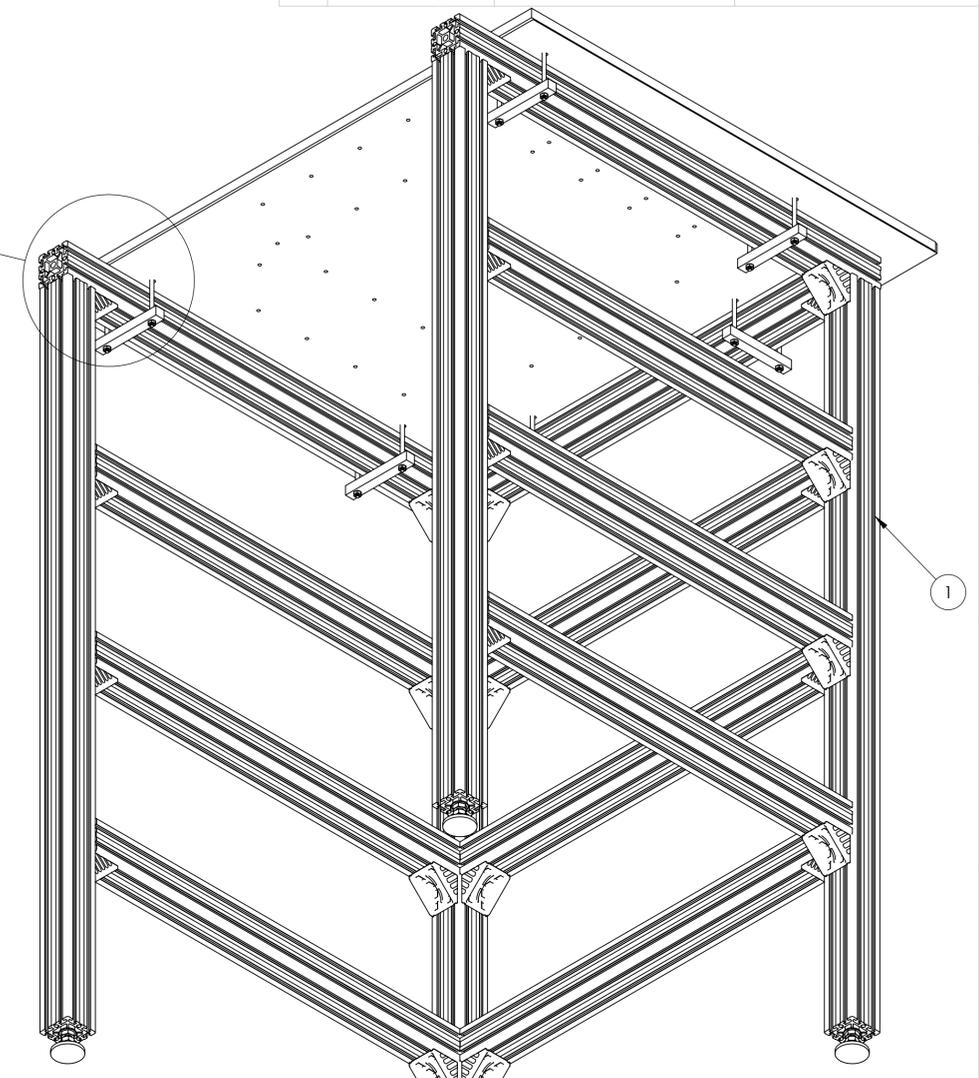
Prep

There must be access in the room for this plate and the genie lift to be alongside the BOSCH frame to then do the lift. Also since this is a "semi dirty" procedure ensure there are no parts or sub-assemblies etc out on the tables.

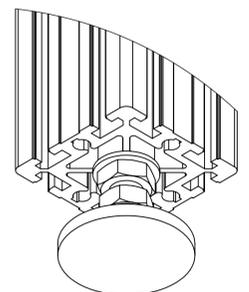
Procedure

1. Adjust feet prior to starting to ensure all 4 legs are equal in height. This should be done prior to cross braces being put in place or table top is installed.
2. One Genie lift (one with adjustable legs), forks reversed (i.e. vertical bars of the forks pointing down).
3. All people in the room lift the plate together by hand and put the plate down on the forks. We might have used C-clamps to fix the plate to the forks but I'm not sure.
4. Lift.
5. Move Genie so the plate goes between Bosch frame and the ceiling. Remove C-clamps if you used them.
6. Maneuver Genie to for finer adjustment.
7. Lower.
8. Move Genie out of the way.
9. Joy. Dance if necessary.
10. If a height adjustment is done after plate is in place then Care should

be taken to adjust height incrementally to avoid twist in plate.
 11. Bubble level should be use to check plate surface.



ISOMETRIC FROM BOTTOM



DETAIL D
SCALE 1 : 2

Adjustable Foot Typ

ITEM NO.	PART NUMBER	DESCRIPTION	MATERIAL	REQ	SPARE	TOTAL
6	N-3816-A	UC COMPONENTS_N-3816-A, HEX NUT, .375-16 UNC, AG PLATING	Plain Carbon Steel	12		12
5	92198A648	MCMMASTER, HEX HEAD CAP SCREW, .375-16 X 6.00 LG, 18-8 SSSL	18-8 SSSL	12		12
4	96861A800	MCMMASTER, VENTED FLAT WASHER, .375 ID X .63 OD X .04 THK, 18-8 SSSL	18-8 SSSL	24		24
3	D1100778	gLIGO TMS TELE-OPT TABLE INSTALL, SUSPENSION PLATE	6061-T6 Al	1		1
2	D1100805	gLIGO TMS TELE-OPT TABLE INSTALL, PLATE CLAMP BAR	6061-T6 Al	6		6
1	D1201236	gLIGO TMS TELE / OPT TABLE INSTALL, SUPPORT FRAME ASSY	N/A	1		1

DIMENSIONS ARE IN INCHES		TOLERANCES:		ANGULAR ± NA °	
.XX	± NA	.XXX	± NA		
MATERIAL		FINISH		NEXT ASSY	
N/A		N/A μinch		Ref Tooling T1100304	

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM: **ADVANCED LIGO** SUB-SYSTEM: **AOS**

PART NAME: **TMS Setup Table Bosch-Frame Assem**

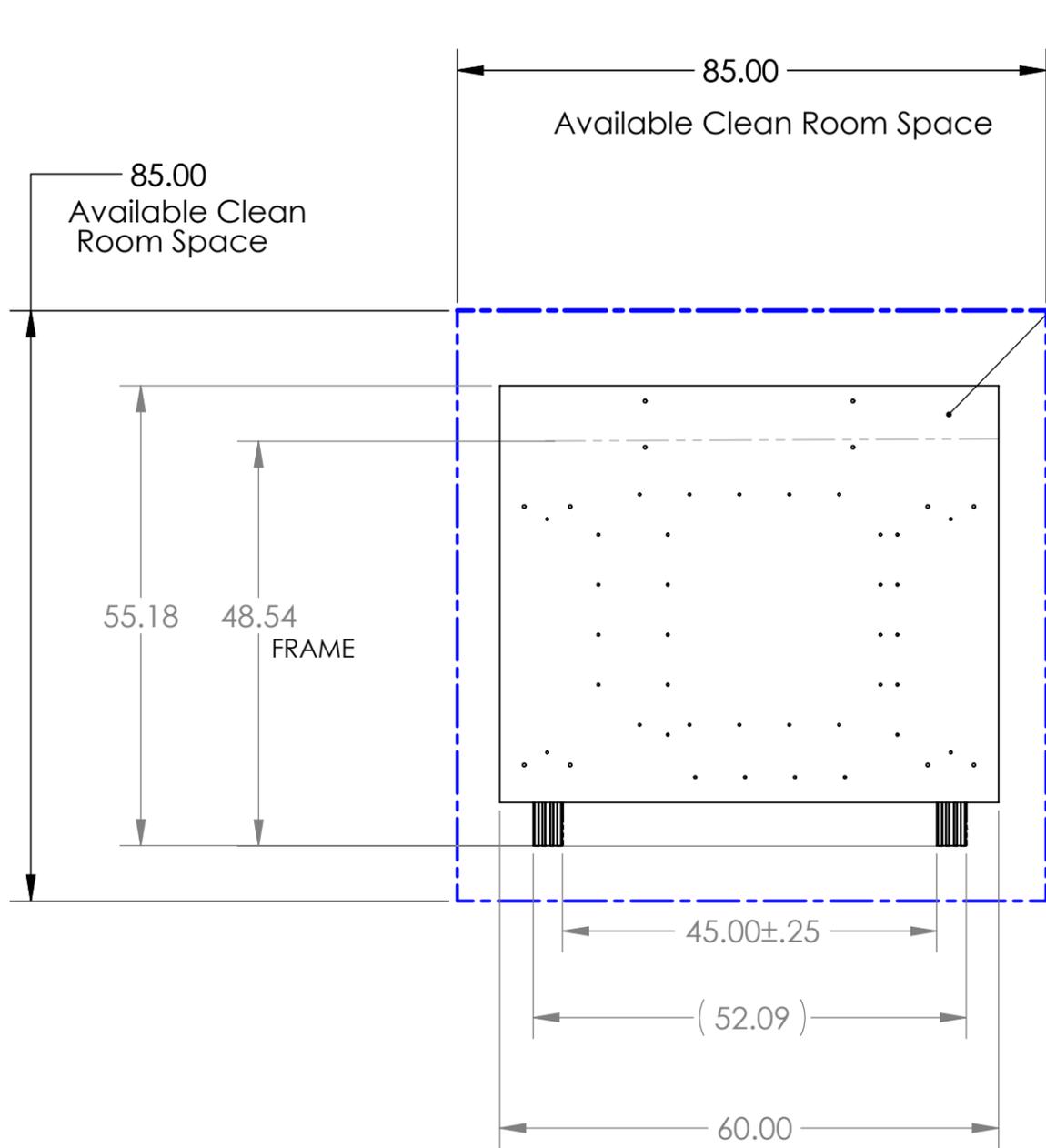
DESIGNER	J. TERRAZAS	27 APR 2011	SIZE	DWG. NO.	REV.
DRAFTER	J. TERRAZAS	29 APR 2011	D	D1100807	v3
CHECKER	k.malland	8-30-12	SCALE: 1:24	PROJECTION:	SHEET 1 OF 3
APPROVAL	k.malland	11-8-12			

D1100807_dLIGO TMS Setup Table Bosch-Frame Assem PART PDM REV: X-000 DRAWING PDM REV: X-000

D1100807_alIGO TMS Setup Table Bosch-Frame Assem, PART PDM REV: X-014, DRAWING PDM REV: X-000

NOTES CONTINUED:

D
C
B
A



Bosch Frame and Table Assembly

ROOM VIEW



D
C
B
A

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

DIMENSIONS ARE IN INCHES	
TOLERANCES: .XX ± NA .XXX ± NA ANGULAR ± NA°	
1. INTERPRET DRAWING PER ASME Y14.5-1994. 2. REMOVE ALL SHARP EDGES, R.02 MIN. 3. DO NOT SCALE FROM DRAWING. 4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.	
MATERIAL	N/A
FINISH	N/A μinch

CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY	
SYSTEM	ADVANCED LIGO
SUB-SYSTEM	AOS
NEXT ASSY	Ref Tooling T1100304

PART NAME		aligo Bosch Frame Dimensions for TMS Setup		
DESIGNER	k mailand	9-7-12	SIZE	DWG. NO.
DRAFTER	J. TERRAZAS	29 APR 2011	B	D1100807
CHECKER	k mailand	8-30-12	SCALE	1:24
APPROVAL	k mailand	11-8-12	PROJECTION:	
			SHEET 3 OF 3	REV. v3

8 7 6 5 4 3 2 1