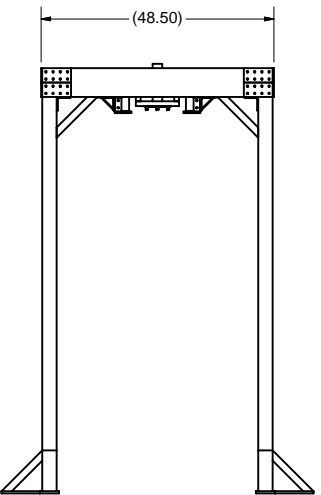
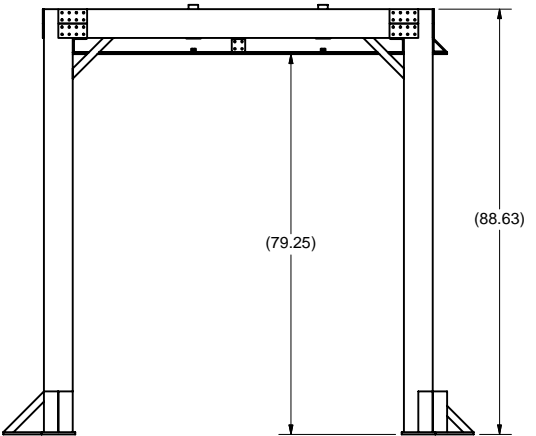
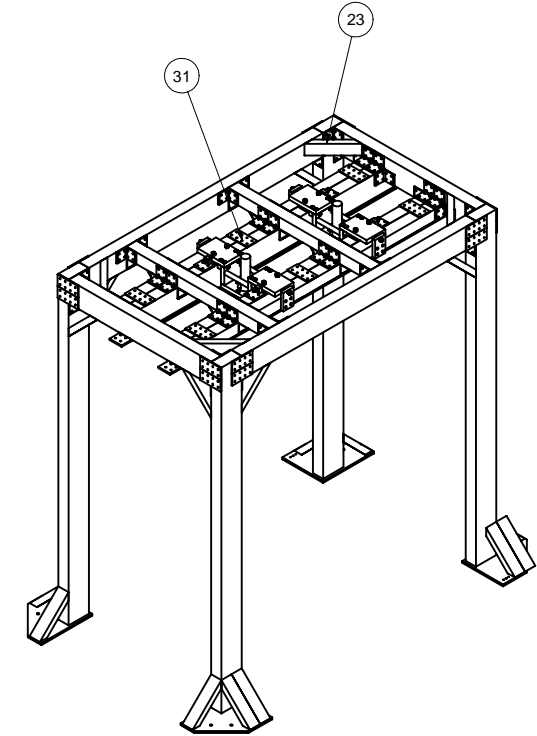
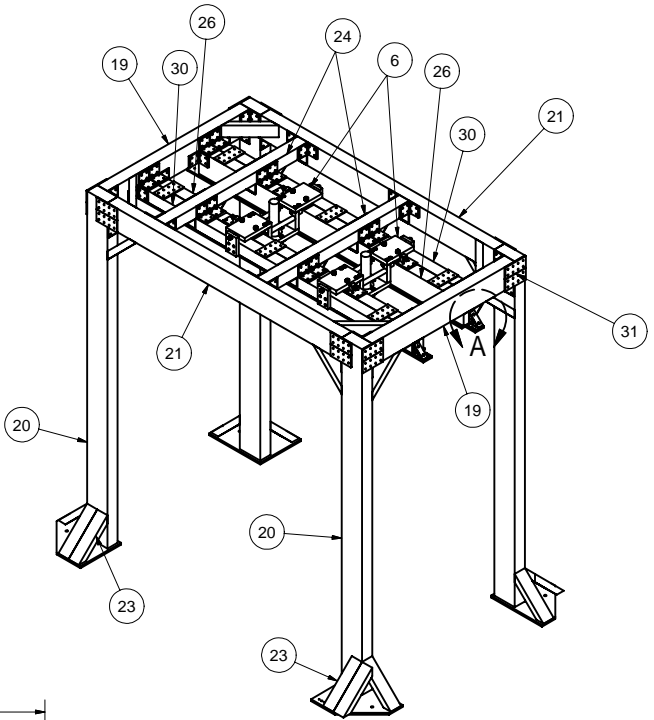
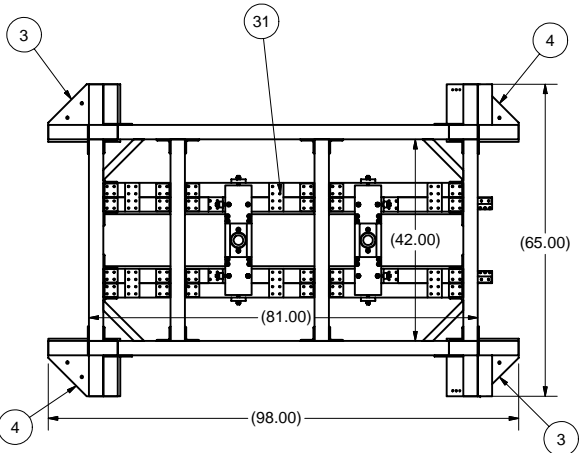
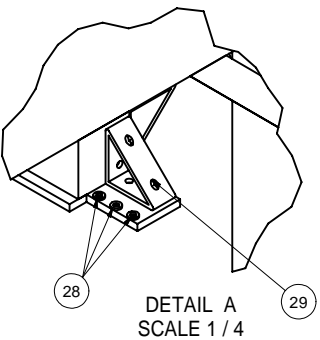
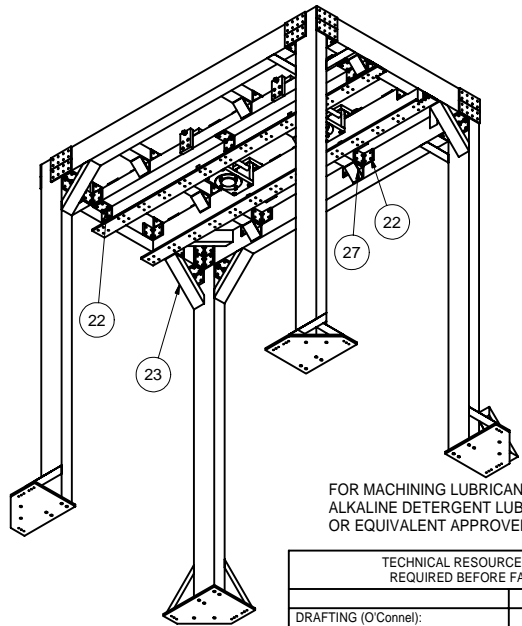
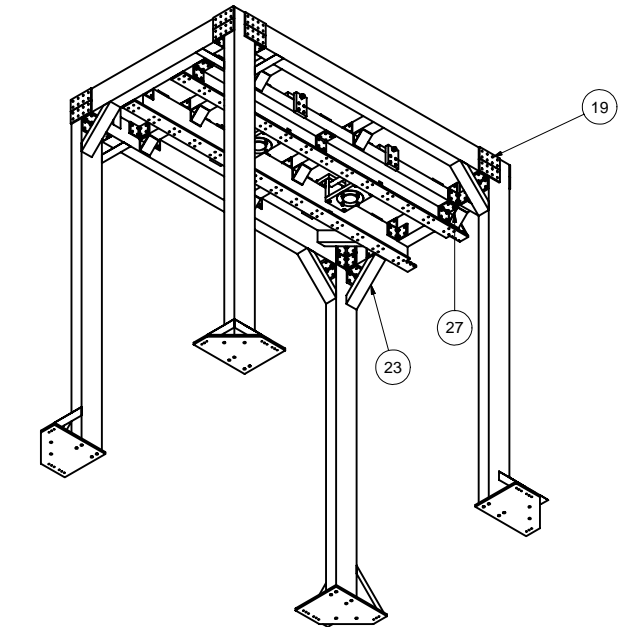
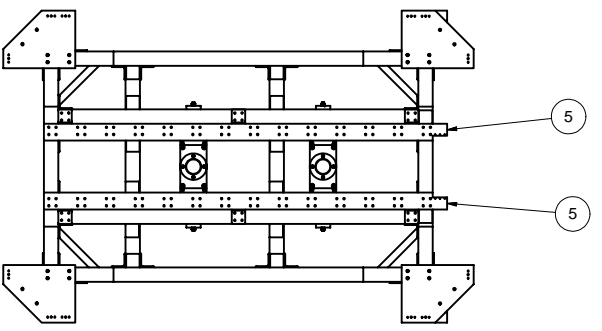


REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A		Revised lenght of items #21 & #30 in parts list. Added sh 5 detailing item #26 modifications from purchase.	2/15/07	TIO
B		Part 23 in P.L. Corrected 8020 Inc. part no. JGL	2/21/07	TIO







FASTENER NOTE: FASTENERS , ITEMS 32,33 & 34 LISTED IN PARTS
LIST ARE NOT SHOWN IN DETAILS.







34	Purchased	5/16-18 UNC X 5/8 Ig Blank Zinc Socket Head Cap Screw	25		80/20 Inc. Part No. 3111	
33	Purchased	Drop in Nut Bolt Assembly	10		80/20 Inc. Part No. 3323	
32	Purchased	Double T-Nut Bolt Assembly	360		80/20 Inc. Part No. 3355	
31	Purchased	8 Hole Joining Plate	22		80/20 Inc. Part No. 4365	
30	Purchased	Frame Rail Support Side Stiffener - 3' X 3" X 75.0" Ig.	2		80/20 Inc. Part No. 3030	
29	Purchased	4 Hole Inside Gusset Corner Brkt.	2		80/20 Inc. Part No. 4336	
28	rail shim	Mat'l & Thkns to be decided at Assy	6			
27	Purchased	8 Hole Inside Gusset Corner Brkt.	14		80/20 Inc. Part No. 4338	
26	Sheet 5 (from Purchased)	Frame Rail Vert. Offset Bar - 3" X 6" X 78.0 Ig.	2		80/20 Inc. Part No. 3060	
24	Purchased	Center Frame Cross Bar - 3" x 3" X 42.0" Ig.	2		80/20 Inc. Part No. 3030	
23	Purchased	Corner Angle Support - 12.0" Ig.	24		80/20 Inc. Part No. 2540	
22	Purchased	8 Hole Inside Corner Bracket	62		80/20 Inc. Part No. 4304	
21	Purchased	Frame Along Axis Bar - 3" X 6" X 69.0" Ig.	2		80/20 Inc. Part No. 3060	
20	Purchased	Frame Support Upright - 3" X 6" X 88.13" Ig. (See 'TAP' Note - Items #3 & 4 on sht. 2)	4		80/20 Inc. Part No. 3060	
19	Purchased	Frame Cross Bar - 3" X 6" X 42.0" Ig.	2		80/20 Inc. Part No. 3060	
6	Sheet 3	Align Fixture Saddle Assy	2			
5	Sheet 2	Frame Rail Plate	2		Strn. Stl.	
4	Sheet 2	Attachment Plate-2	2		Alum.	
3	Sheet 2	Attachment Plate-1	2		Alum.	
1	Sheet 1	HGRP Support Frame Assy	X			

TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION			
	OK	DATE	N/A
DRAFTING (O'Connell):			
MACHINE SHOP (Kaminski):			
CHEMISTRY (Conklin):			
ELECTRONICS SHOP (Barley):			
FURNACE BRAZING (Sherwood):			
BEAM WELDING (Sears):			
WELDING OTHER (Gallagher):			
UTILITIES INTEGRATION (Gallagher):			
STOCKROOMS (Lockwood):			

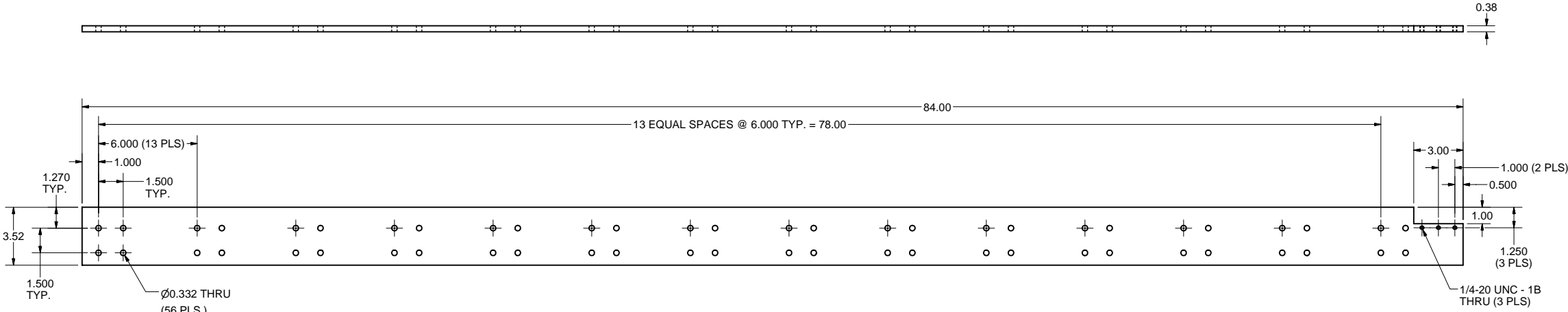
		ITEM	DWG. NO.	DESCRIPTION			G1	G2	G3	REMARKS		REV.	
						QUANTITY							
D	PRINT DISTR.	PLOT DATE: 2/21/2007 CAD FILE NAME: 7110-034.idw											
7110-034 SH. NO. 1 OF 5	CR-1	UNLESS OTHERWISE SPECIFIED:		<div><div><div> CORNELL UNIVERSITY</div><div> LEPP</div><div>LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS</div></div><div>CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853</div></div>									
		DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES 											
		HGRP align fixture frame assy Frame Assembly Details											
B	REV.	CHECKED BY: A. Pauling		DRAWN BY JGL		DRAWN FOR A. Pauling		DATE 1/18/2007		SCALE	D	7110-034 SH. NO. 1 OF 5	REV. B
		APPROVED BY: A. Pauling											

1 HGRP SUPPORT FRAME ASSEMBLY
 FILE NAME: 7110-034
 SHEET NO.: 1
 DFT. SCALE: 1:20
 MATERIAL: AS NOTED
 QTY: AS REQ'D
 NOTES:

FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

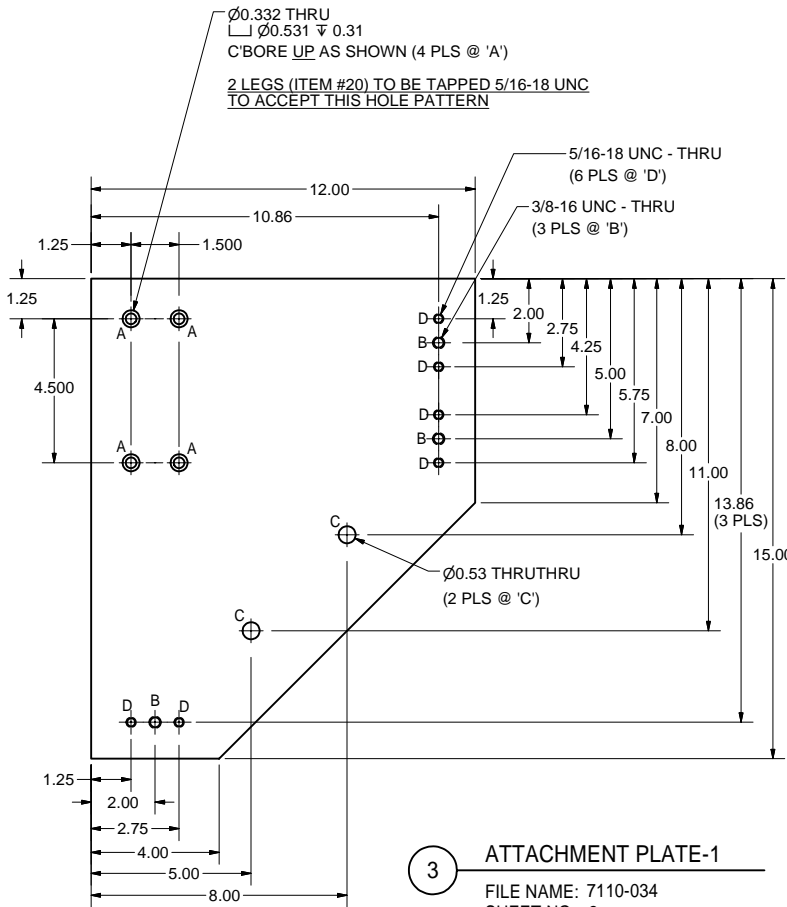
	ITEM	DWG. NO.	DESCRIPTION			G1	G2	G3	REMARKS	REV.
							QUANTITY			
D	PRINT DISTR.	PLOT DATE: 2/21/2007 CAD FILE NAME: 7110-034.idw								
7110-034 SH. NO. 1 OF 5	CR-1	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES 			<div style="display: flex; align-items: center;"> <div style="text-align: center;">  CORNELL UNIVERSITY <small>LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS</small> </div> <div style="margin-left: 20px;">  LEPP <small>LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS</small> </div> <div style="margin-left: 20px;"> CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853 </div> </div>					
		HGRP align fixture frame assy Frame Assembly Details								
		B	REV.	CHECKED BY: A. Pauling APPROVED BY: A. Pauling	DRAWN BY JGL	DRAWN FOR A. Pauling	DATE 1/18/2007	SCALE	D	7110-034 SH. NO. 1 OF 5

REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A	A-9	Item 3, Added 4.00 Dim. & Item 5, Dia .332 was Dia. 266 C'bore JGL	2/12/07	TIO
B	B-6,9	Part 3 & 4: Added 'D' Holes to Reflect 'As Built' JGL	2/21/07	TIO



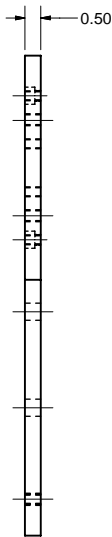
5 FRAME RAIL PLATE

FILE NAME: 7110-034
SHEET NO.: 2
DFT. SCALE: 1:4
MATERIAL: 304 STN. STL.
QTY: 2 REQ'D
NOTES:



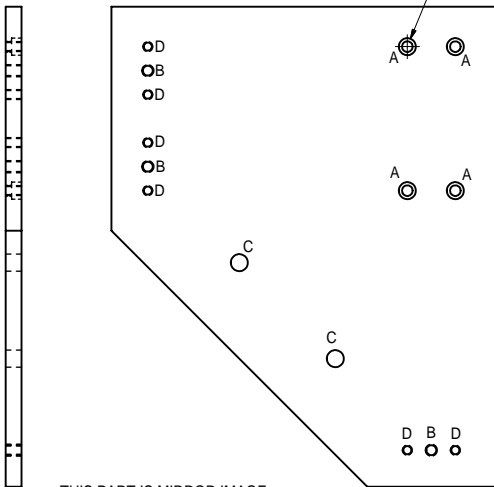
3 ATTACHMENT PLATE-1

FILE NAME: 7110-034
SHEET NO.: 2
DFT. SCALE: 1:3
MATERIAL: 6061 ALUMINUM
QTY: 2 REQ'D
NOTES:



4 ATTACHMENT PLATE-2



FILE NAME: 7110-034
SHEET NO.: 2
DFT. SCALE: 1:3
MATERIAL: 6061 ALUMINUM
QTY: 2 REQ'D
NOTES:



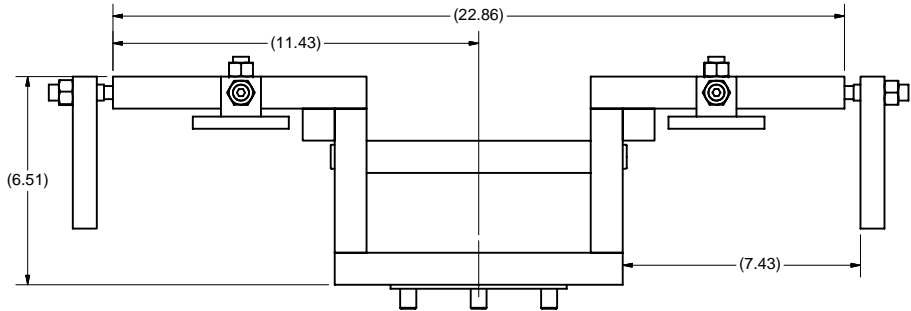
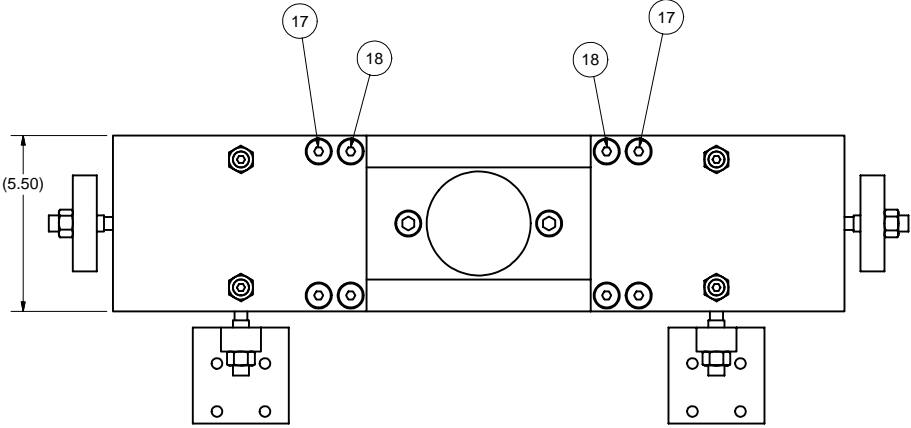
THIS PART IS MIRROR IMAGE
OF PART NO. 3, BUT WITH
C'BORE UP AS SHOWN.

FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION			
	OK	DATE	N/A
DRAFTING (O'Connell):			
MACHINE SHOP (Kaminski):			
CHEMISTRY (Conklin):			
ELECTRONICS SHOP (Barley):			
FURNACE BRAZING (Sherwood):			
BEAM WELDING (Sears):			
WELDING OTHER (Gallagher):			
UTILITIES INTEGRATION (Gallagher):			
STOCKROOMS (Lockwood):			

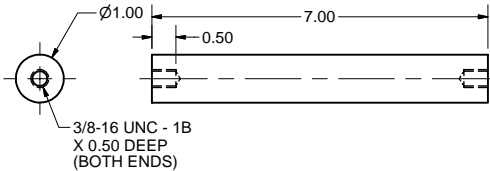
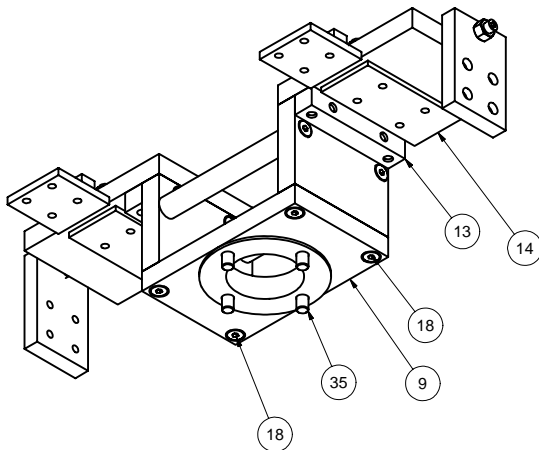
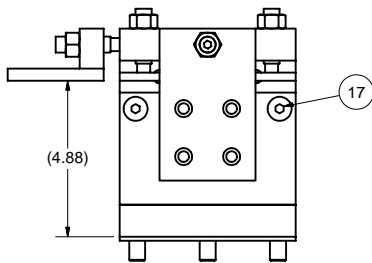
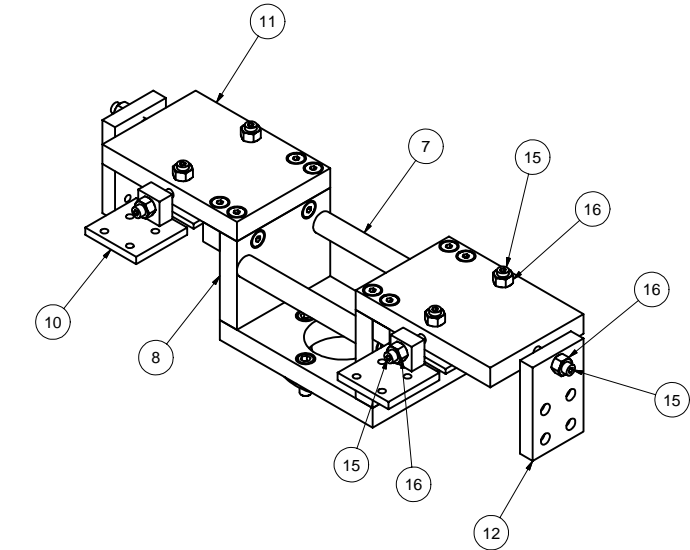
	ITEM	DWG. NO.	DESCRIPTION			G1	G2	G3	REMARKS	REV.
						QUANTITY				
D	PRINT DISTR.	PLOT DATE: 2/21/2007 CAD FILE NAME: 7110-034.idw								
SH. NO. 2 OF 5	7110-034	CR-1	UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓	<div><div>CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853</div></div> <div>HGRP align fixture frame assy Frame Details</div>						
				CHECKED BY: A. Pauling						
				APPROVED BY: A. Pauling						
B	REV.	DRAWN BY	DRAWN FOR	DATE	SCALE	D	7110-034		REV. B	
		JGL	A. Pauling	1/18/2007			SH. NO. 2 OF 5			

REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A	B-9	Part 10: 1/2-13 Helicoil was 1/2-20 to reflect "As Built" JGL	2/21/07	TIO



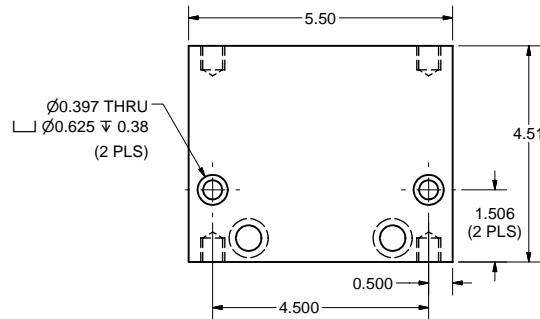
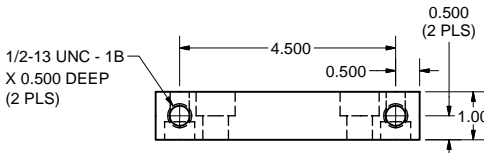
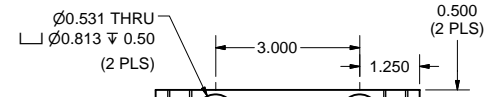
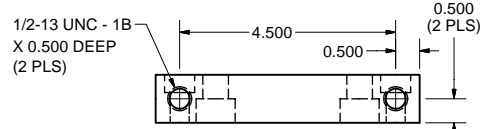
6 ALIGN FIXTURE SADDLE ASSY

FILE NAME: 7110-034
SHEET NO.: 3
DFT. SCALE: 1:4
MATERIAL: AS NOTED
QTY: 2 REQ'D
NOTES:



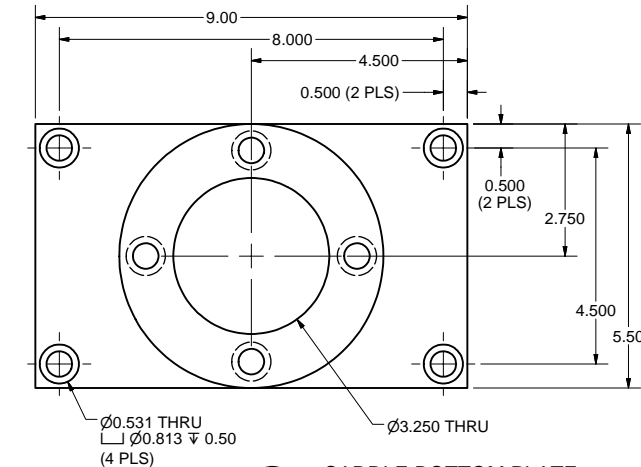
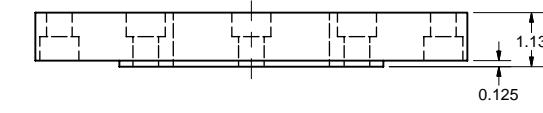
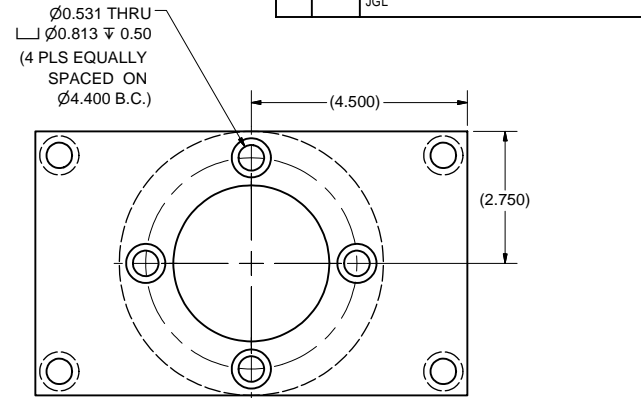
7 SADDLE STIFFNER ROD

FILE NAME: 7110-034
SHEET NO.: 3
DFT. SCALE: 1:2
MATERIAL: 6061 ALUMINUM
QTY: 2 PER SADDLE ASSY (4 TOTAL)
NOTES:



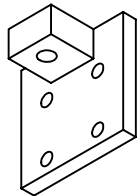
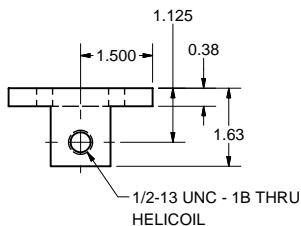
8 SADDLE VERTICAL PLATE

FILE NAME: 7110-034
SHEET NO.: 3
DFT. SCALE: 1:2
MATERIAL: 6061 ALUMINUM
QTY: 2 PER SADDLE ASSY (4 TOTAL)
NOTES:



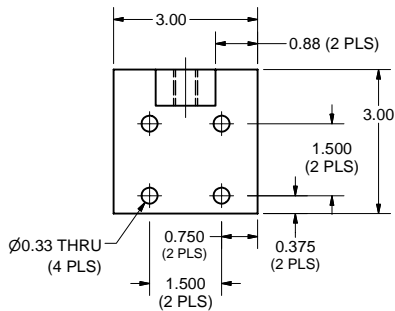
9 SADDLE BOTTOM PLATE

FILE NAME: 7110-034
SHEET NO.: 3
DFT. SCALE: 1:2
MATERIAL: 6061 ALUMINUM
QTY: 1 PER SADDLE ASSY (2 TOTAL)
NOTES:



10 SADDLE PUSHER PLATE

FILE NAME: 7110-034
SHEET NO.: 3
DFT. SCALE: 1:2
MATERIAL: 6061 ALUMINUM
QTY: 2 PER SADDLE ASSY (4 TOTAL)
NOTES:



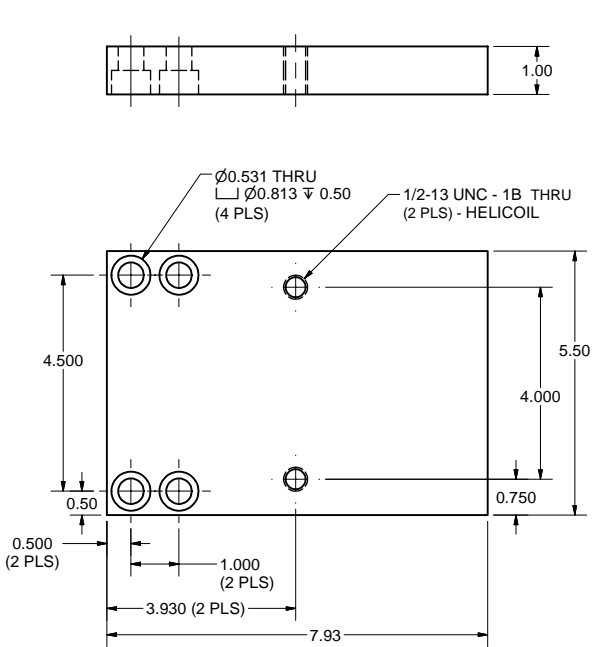
FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION			
	OK	DATE	N/A
DRAFTING (O'Connell):			
MACHINE SHOP (Kaminski):			
CHEMISTRY (Conklin):			
ELECTRONICS SHOP (Barley):			
FURNACE BRAZING (Sherwood):			
BEAM WELDING (Sears):			
WELDING OTHER (Gallagher):			
UTILITIES INTEGRATION (Gallagher):			
STOCKROOMS (Lockwood):			

7110-034	REV. A
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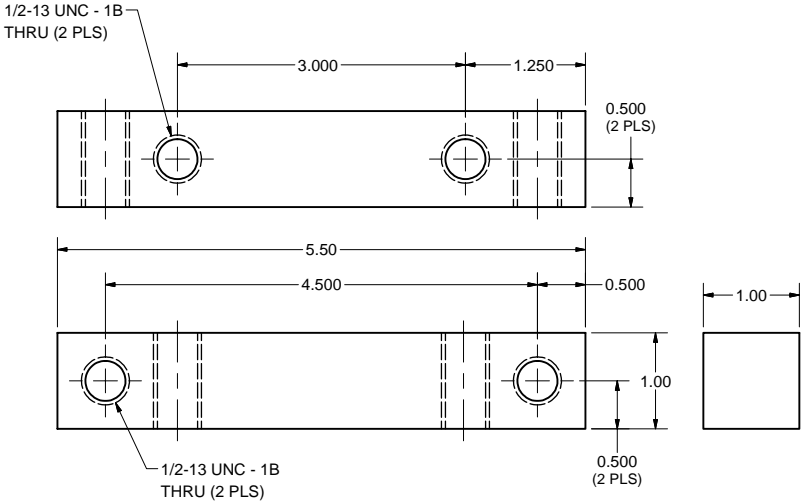
ITEM	DWG. NO.	DESCRIPTION	QUANTITY	REMARKS	REV.
35	Purchased	Hexagon Socket Head Cap Screw 1/2-20 UNF - 1.25 Stn. Stl.	4		
18	Purchased	Hex Socket Head Cap Screw 1/2-13 UNC X 1.0" lg. Stn. Stl.	8		
17	Purchased	Hex Socket Head Cap Screw 1/2-13 UNC X 1 3/8" lg. Stn. Stl.	8		
16	Purchased	Hex Nut 1/2-13 UNC Stn. Stl.	8		
15	Purchased	1/2" x 13 Swivel Pad Hex Socket Screw Black-Oxide 41L40 Stl.	8	McMaster Carr no. 92432A484	
14	Sheet 4	Protective Plate	2		
13	Sheet 4	Saddle Stiffener	2		
12	Sheet 4	Saddle Lateral Pusher	2		
11	Sheet 4	Saddle Top Plate	2		
10	Sheet 3	Saddle Pusher Plate	2		
9	Sheet 3	Saddle Bottom Plate	1		
8	Sheet 3	Saddle Vertical Plate	2		
7	Sheet 3	Saddle Stiffner Rod	2		
6	Sheet 3	Align Fixture Saddle Assy	2	X	
PLOT DATE: 2/21/2007 CAD FILE NAME: 7110-034.idw					
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES		CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853			
HGRP align fixture frame assy Align Fixture Saddle Assy & Details					
CHECKED BY: A. Pauling APPROVED BY: A. Pauling		DRAWN BY JGL	DRAWN FOR A. Pauling	DATE 1/18/2007	SCALE D
		7110-034 SH. NO. 3 OF 5		REV. A	

REVISIONS				
SYM.	ZONE	DESCRIPTION	DATE	APP.
A	C9,F8	Part 11 & 12: 1/2-13 Helicoil was 1/2-20 to reflect "As Built" JGL	2/21/07	TIO



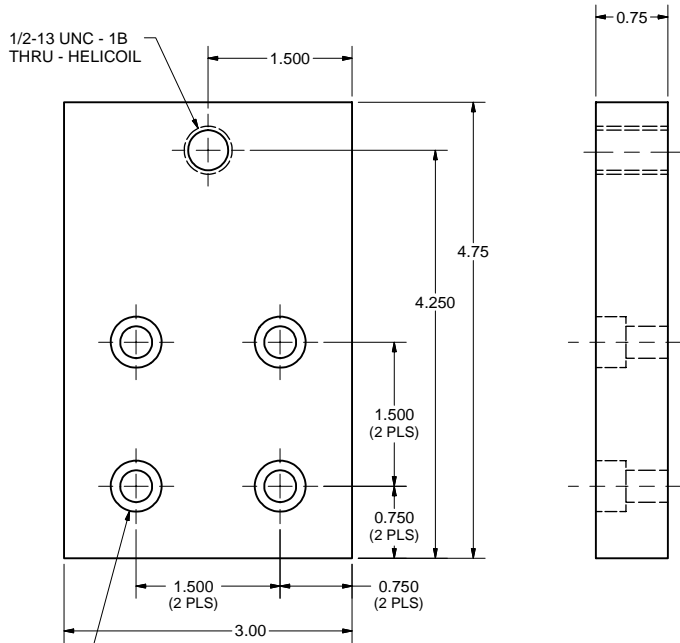
11 SADDLE TOP PLATE

FILE NAME: 7110-034
SHEET NO.: 4
DFT. SCALE: 1:2
MATERIAL: 6061 ALUMINUM
QTY: 2 PER SADDLE ASSY (4 TOTAL)
NOTES:



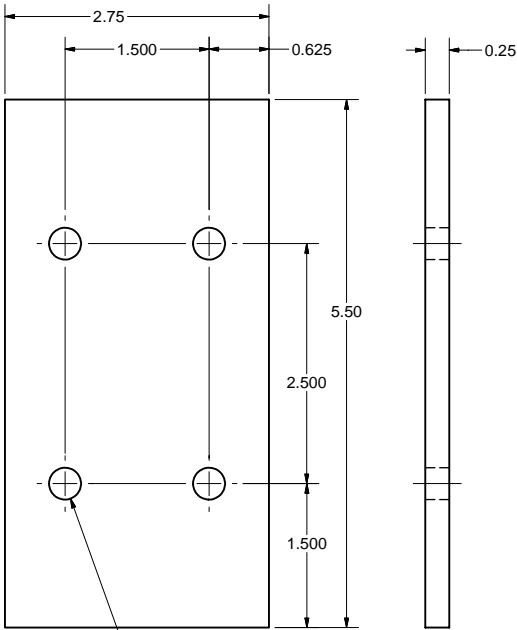
13 SADDLE STIFFENER

FILE NAME: 7110-034
SHEET NO.: 4
DFT. SCALE: 1:1
MATERIAL: 6061 ALUMINUM
QTY: 2 PER SADDLE ASSY (4 TOTAL)
NOTES:



12 SADDLE LATERAL PUSHER

FILE NAME: 7110-034
SHEET NO.: 4
DFT. SCALE: 1:1
MATERIAL: 6061 ALUMINUM
QTY: 2 PER SADDLE ASSY (4 TOTAL)
NOTES:



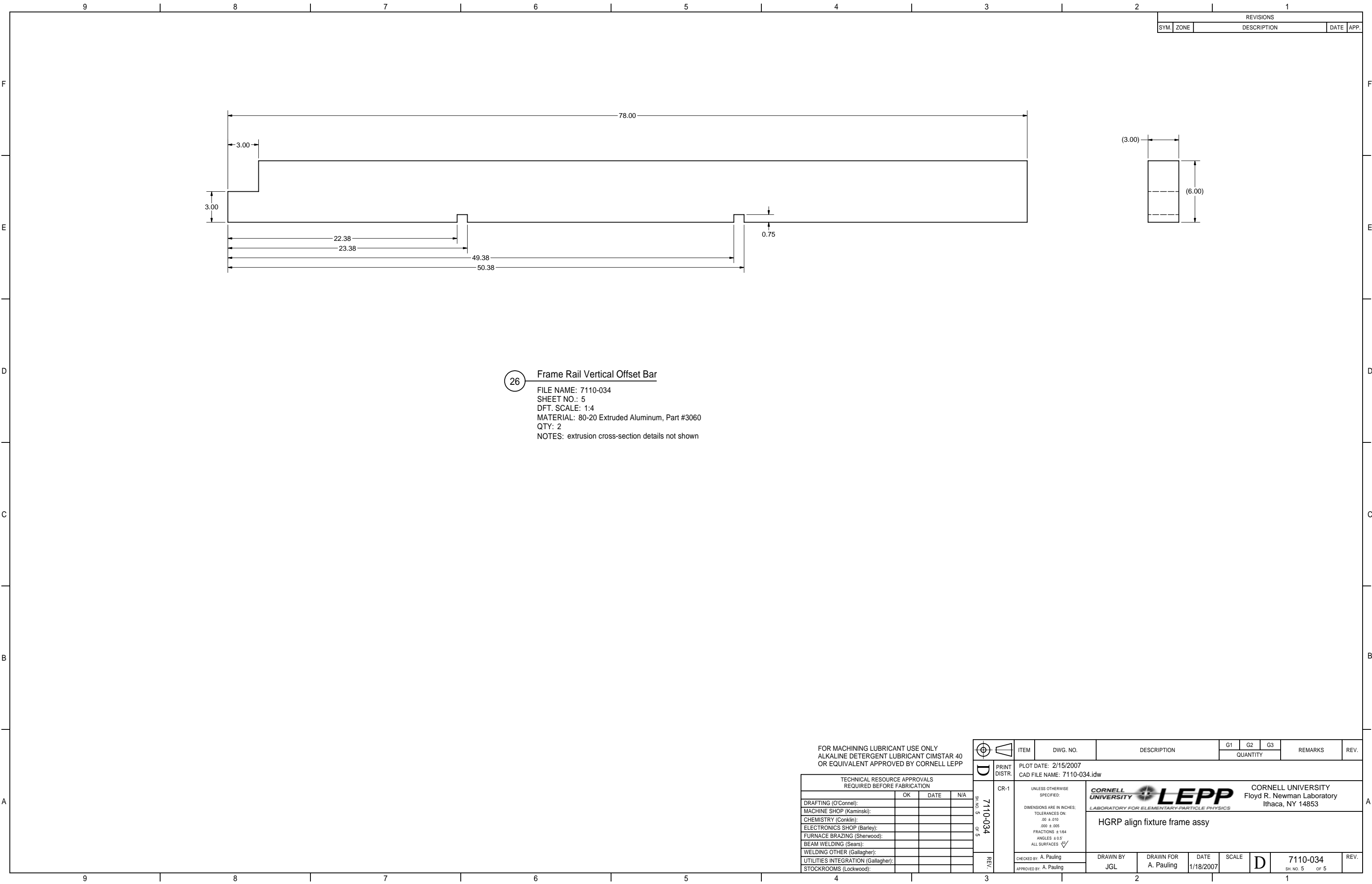
14 PROTECTIVE PLATE

FILE NAME: 7110-034
SHEET NO.: 4
DFT. SCALE: 1:1
MATERIAL: 316LN STN. STL.
QTY: 2 PER SADDLE ASSY (4 TOTAL)
NOTES:

FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION			
	OK	DATE	N/A
DRAFTING (O'Connell):			
MACHINE SHOP (Kaminski):			
CHEMISTRY (Conklin):			
ELECTRONICS SHOP (Barley):			
FURNACE BRAZING (Sherwood):			
BEAM WELDING (Sears):			
WELDING OTHER (Gallagher):			
UTILITIES INTEGRATION (Gallagher):			
STOCKROOMS (Lockwood):			

ITEM	DWG. NO.	DESCRIPTION	G1	G2	G3	REMARKS	REV.
PRINT DISTR.	7110-034	CR-1					
PLOT DATE: 2/21/2007 CAD FILE NAME: 7110-034.idw							
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES: TOLERANCES ON: .00 ± .010 .000 ± .005 FRACTIONS ± 1/64 ANGLES ± 0.5° ALL SURFACES ✓							
CORNELL UNIVERSITY LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS HGRP align fixture frame assy Align Fixture Saddle Details							
CORNELL UNIVERSITY Floyd R. Newman Laboratory Ithaca, NY 14853							
CHECKED BY: A. Pauling APPROVED BY: A. Pauling	DRAWN BY JGL	DRAWN FOR A. Pauling	DATE 1/18/2007	SCALE D	7110-034 SH. NO. 4 OF 5	REV. A	



26 **Frame Rail Vertical Offset Bar**
FILE NAME: 7110-034
SHEET NO.: 5
DFT. SCALE: 1:4
MATERIAL: 80-20 Extruded Aluminum, Part #3060
QTY: 2
NOTES: extrusion cross-section details not shown

FOR MACHINING LUBRICANT USE ONLY
ALKALINE DETERGENT LUBRICANT CIMSTAR 40
OR EQUIVALENT APPROVED BY CORNELL LEPP

TECHNICAL RESOURCE APPROVALS REQUIRED BEFORE FABRICATION			
	OK	DATE	N/A
DRAFTING (O'Connel):			
MACHINE SHOP (Kaminski):			
CHEMISTRY (Conklin):			
ELECTRONICS SHOP (Barley):			
FURNACE BRAZING (Sherwood):			
BEAM WELDING (Sears):			
WELDING OTHER (Gallagher):			
UTILITIES INTEGRATION (Gallagher):			
STOCKROOMS (Lockwood):			

7110-034

SH. NO. 5 OF 5

REV.

PRINT
DISTR.

CR-1

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES:
TOLERANCES ON:
.00 ± .010
.000 ± .005
FRACTIONS ± 1/64
ANGLES ± 0.5°
ALL SURFACES

CHECKED BY: A. Pauling
APPROVED BY: A. Pauling

ITEM

DWG. NO.

DESCRIPTION

G1G2G3

QUANTITY

REMARKS

REV.

PLOT DATE: 2/15/2007
CAD FILE NAME: 7110-034.idw

CORNELL UNIVERSITY
LABORATORY FOR ELEMENTARY-PARTICLE PHYSICS

CORNELL UNIVERSITY
Floyd R. Newman Laboratory
Ithaca, NY 14853

HGRP align fixture frame assy

CHECKED BY: A. Pauling
APPROVED BY: A. Pauling

DRAWN BY
JGL

DRAWN FOR
A. Pauling

DATE
1/18/2007

SCALE
D

7110-034
SH. NO. 5 OF 5

REV.