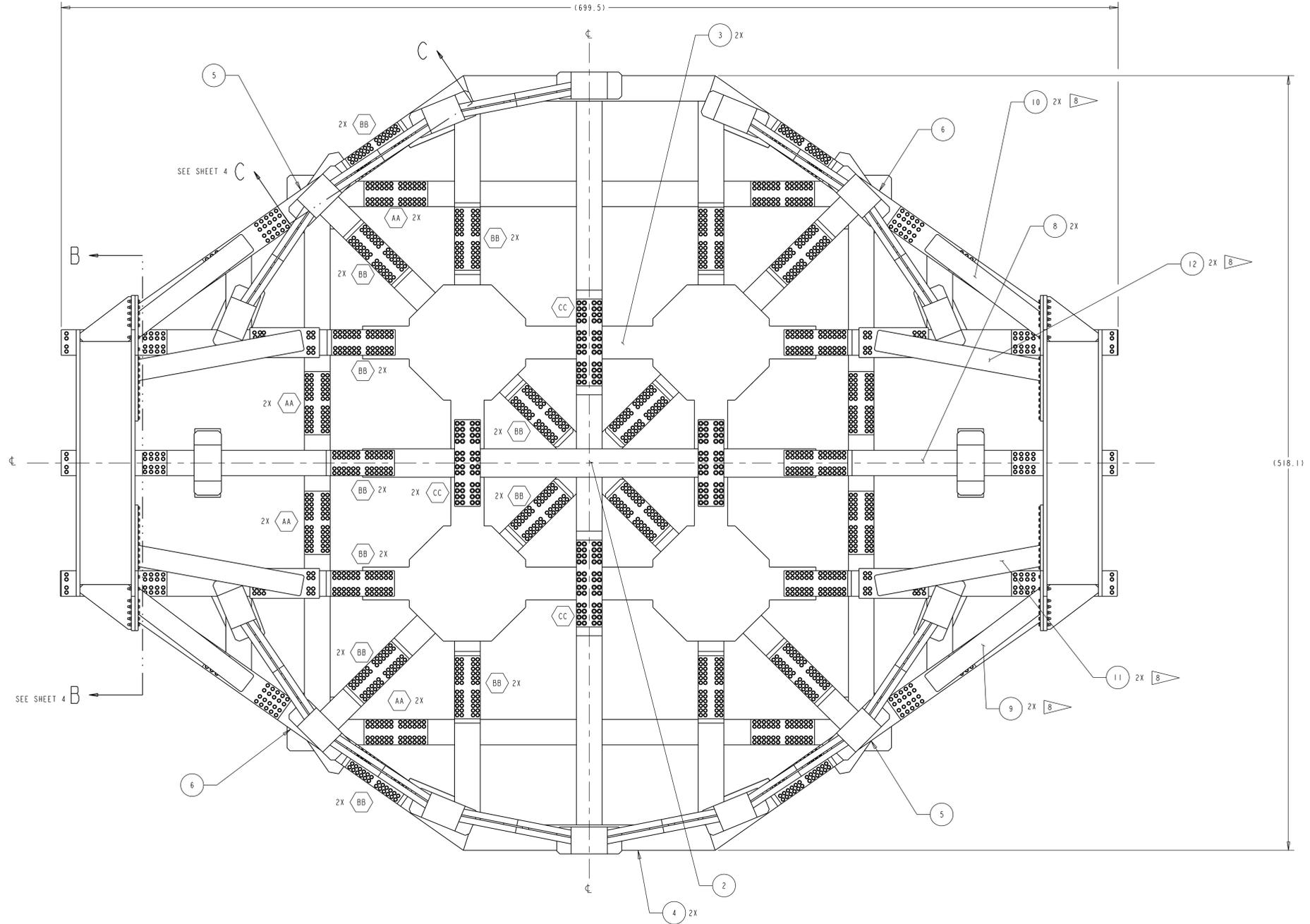
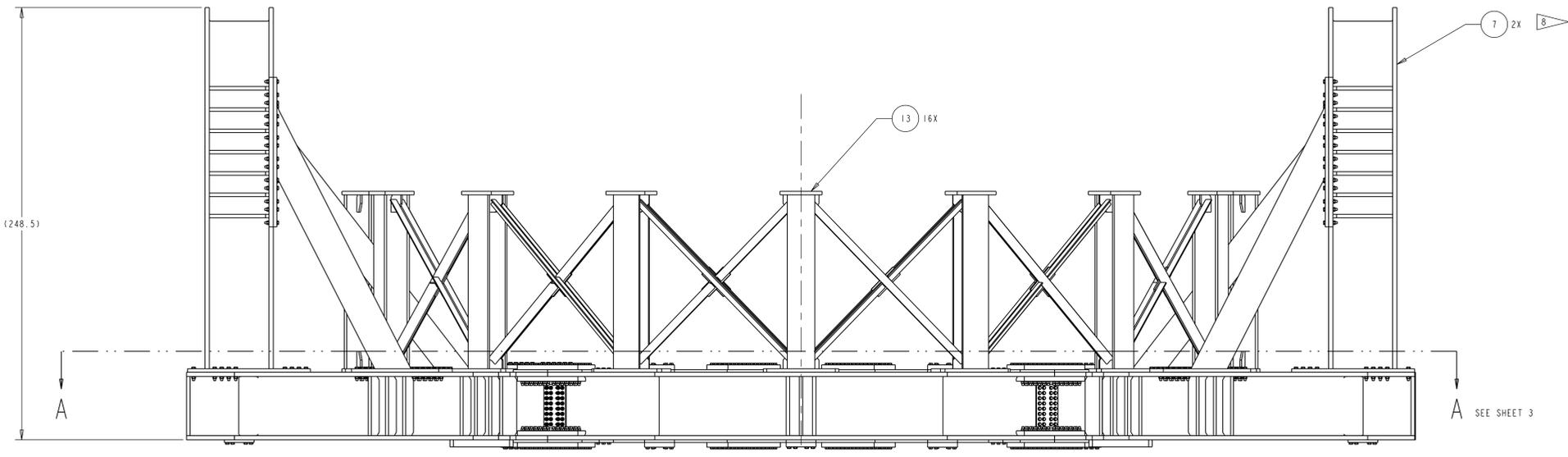


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REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



SEE SHEET 5 FOR JOINT DETAILS AA BB
 SEE SHEET 6 FOR JOINT DETAIL CC



FIND NO. 1
 SCALE 0.033

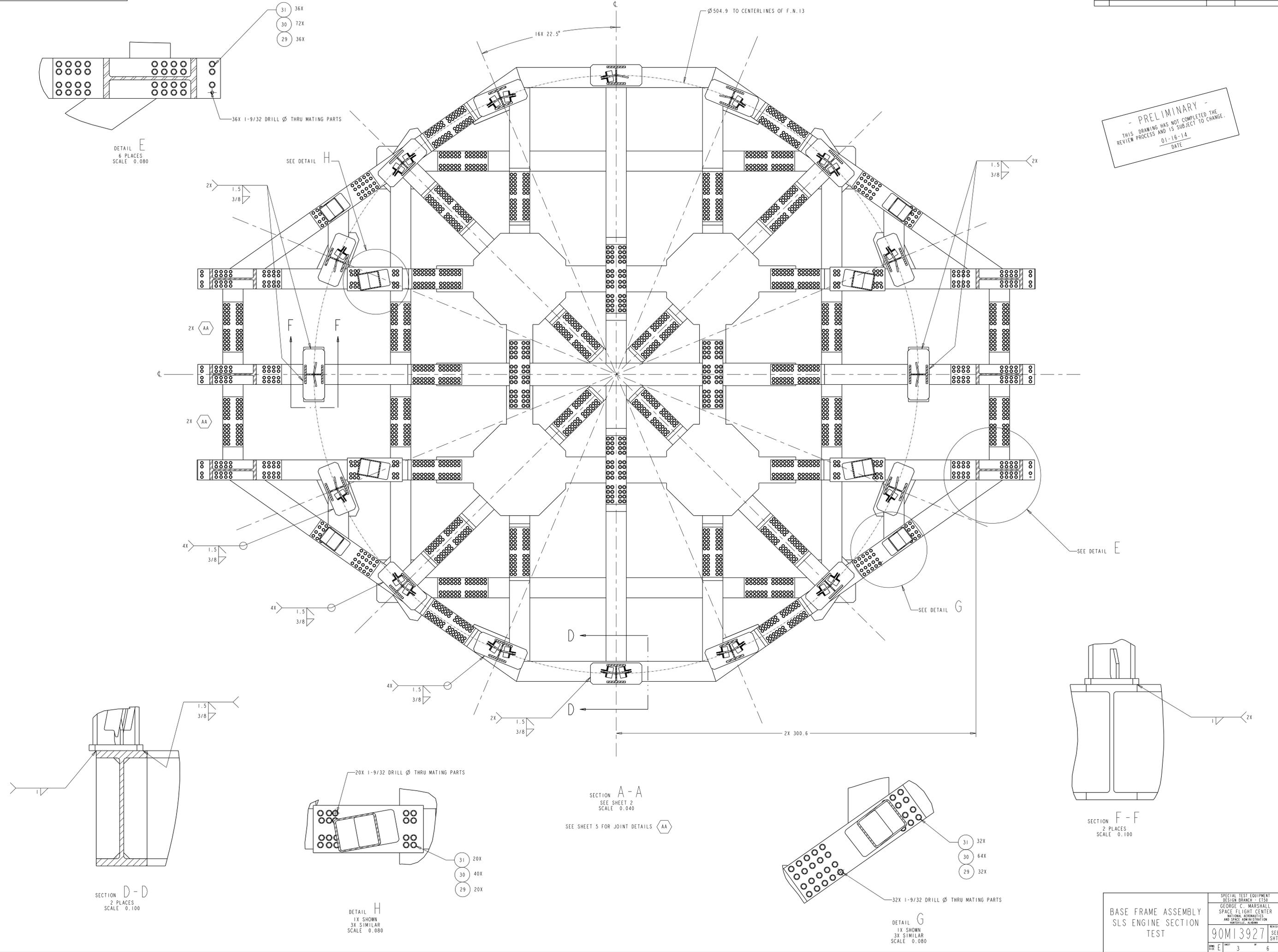
- PRELIMINARY -
 THIS DRAWING HAS NOT COMPLETED THE REVIEW PROCESS AND IS SUBJECT TO CHANGE.
 DATE 01-16-14

BASE FRAME ASSEMBLY SLS ENGINE SECTION TEST		SPECIAL TEST EQUIPMENT DESIGN BRANCH - ETSD GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ASTROLOGICAL LABORATORY	
90M13927	REVISION SEE SHT 1	2	6

NOTICE: THIS DRAWING IS A PRELIMINARY DESIGN. IT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

- PRELIMINARY -
THIS DRAWING HAS NOT COMPLETED THE REVIEW PROCESS AND IS SUBJECT TO CHANGE.
01-16-14
DATE



DETAIL E
6 PLACES
SCALE 0.080

SEE DETAIL H

2X 1.5 3/8

2X AA

2X AA

4X 1.5 3/8

4X 1.5 3/8

4X 1.5 3/8

2X 1.5 3/8

1.5 3/8 2X

SEE DETAIL E

SEE DETAIL G

SECTION A-A
SEE SHEET 2
SCALE 0.040

SEE SHEET 5 FOR JOINT DETAILS AA

31 20X
30 40X
29 20X

DETAIL H
1X SHOWN
3X SIMILAR
SCALE 0.080

SECTION D-D
2 PLACES
SCALE 0.100

SECTION F-F
2 PLACES
SCALE 0.100

DETAIL G
1X SHOWN
3X SIMILAR
SCALE 0.080

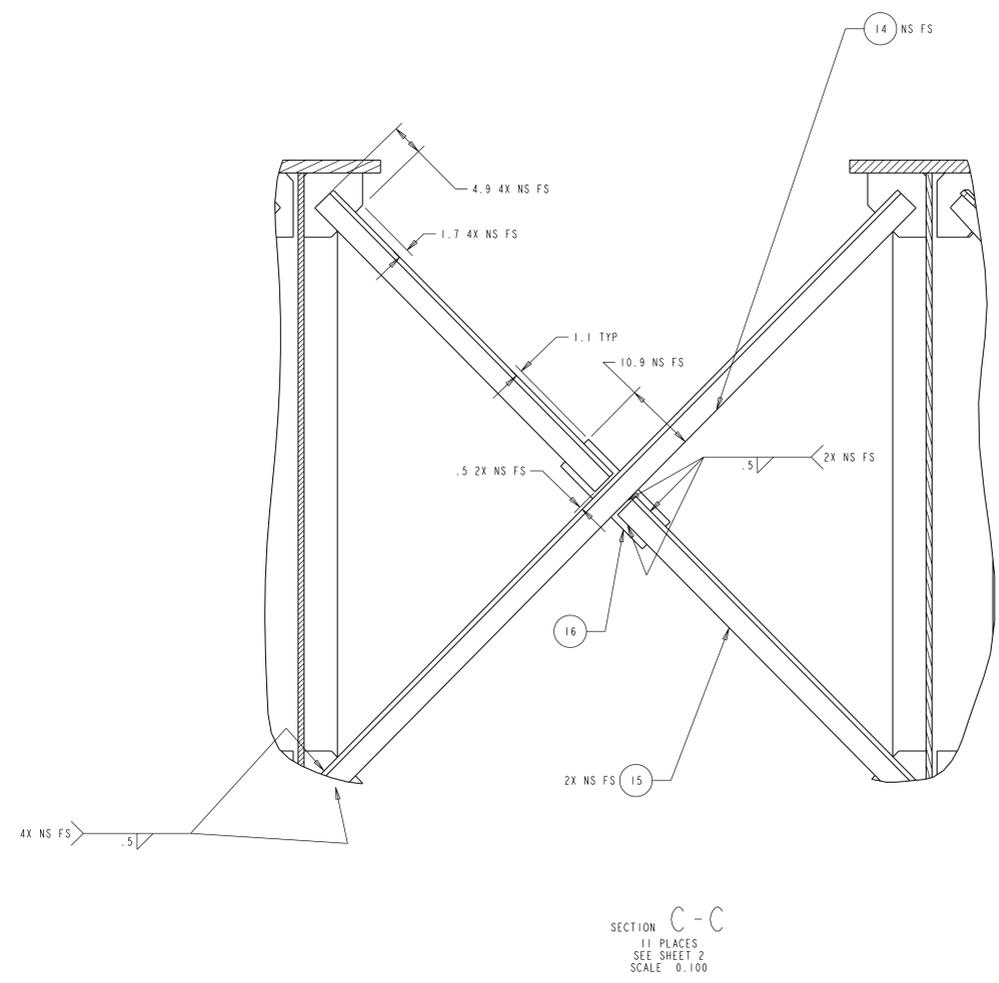
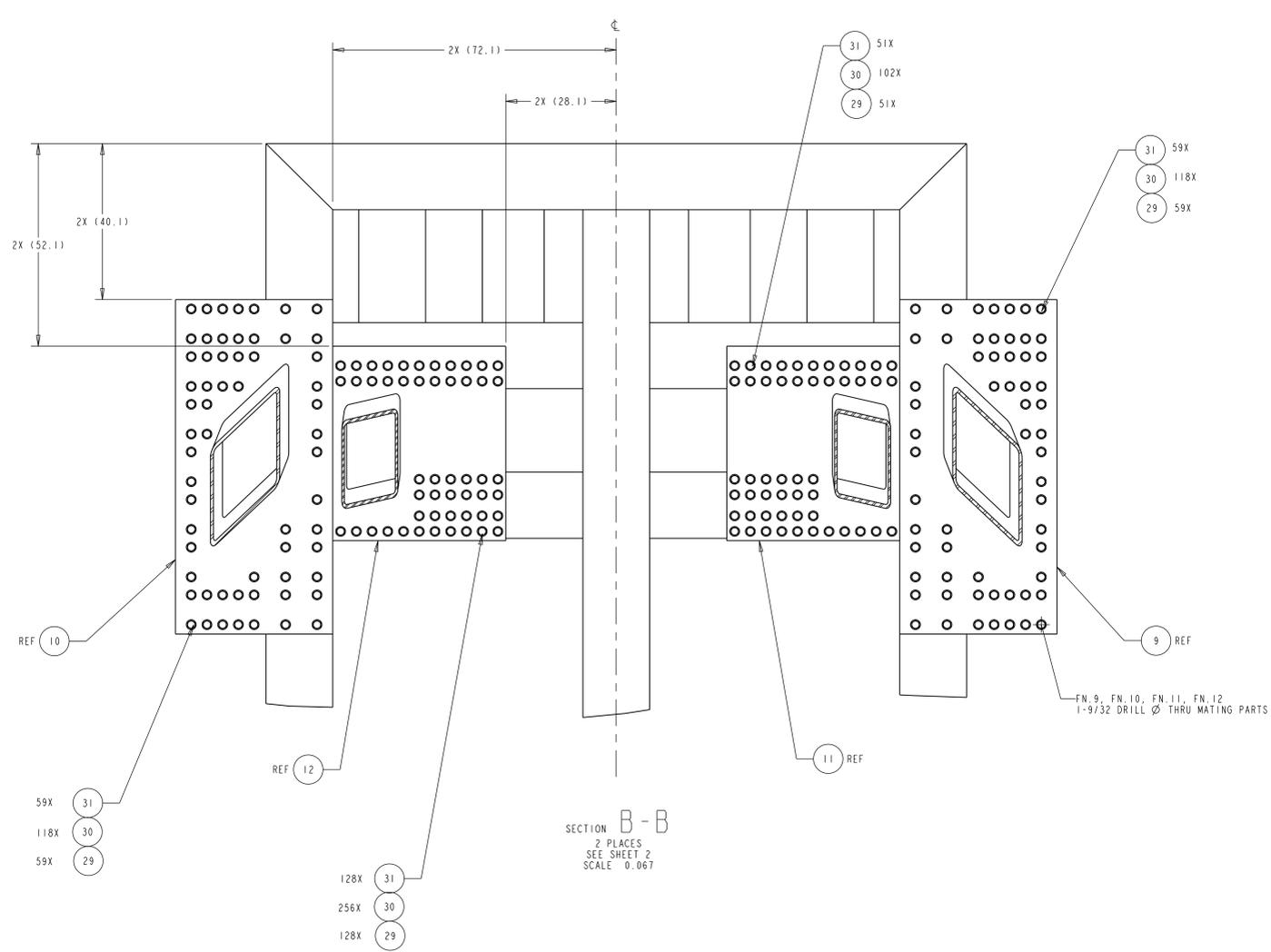
31 32X
30 64X
29 32X

BASE FRAME ASSEMBLY
SLS ENGINE SECTION
TEST

SPECIAL TEST EQUIPMENT DESIGN BRANCH - ET50			
GEORGE C. MARSHALL SPACE FLIGHT CENTER			
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION			
WENTZEL, ALABAMA			
90M13927		REVISION	SEE SHT 1
DATE	REV	BY	APP
01-16-14	3	E	6

NOTICE: THIS DRAWING, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A SPECIFIC SPACE FLIGHT OPERATIONAL OPERATION. THE USER SHALL BE RESPONSIBLE FOR THE PROPER USE OF THIS DRAWING AND FOR THE PROTECTION OF THE USER'S INTERESTS. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE USER'S INTERESTS. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE USER'S INTERESTS.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

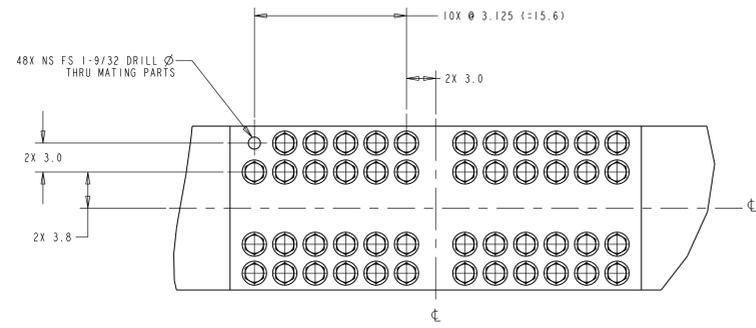
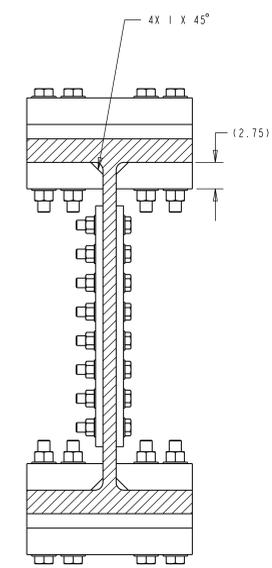
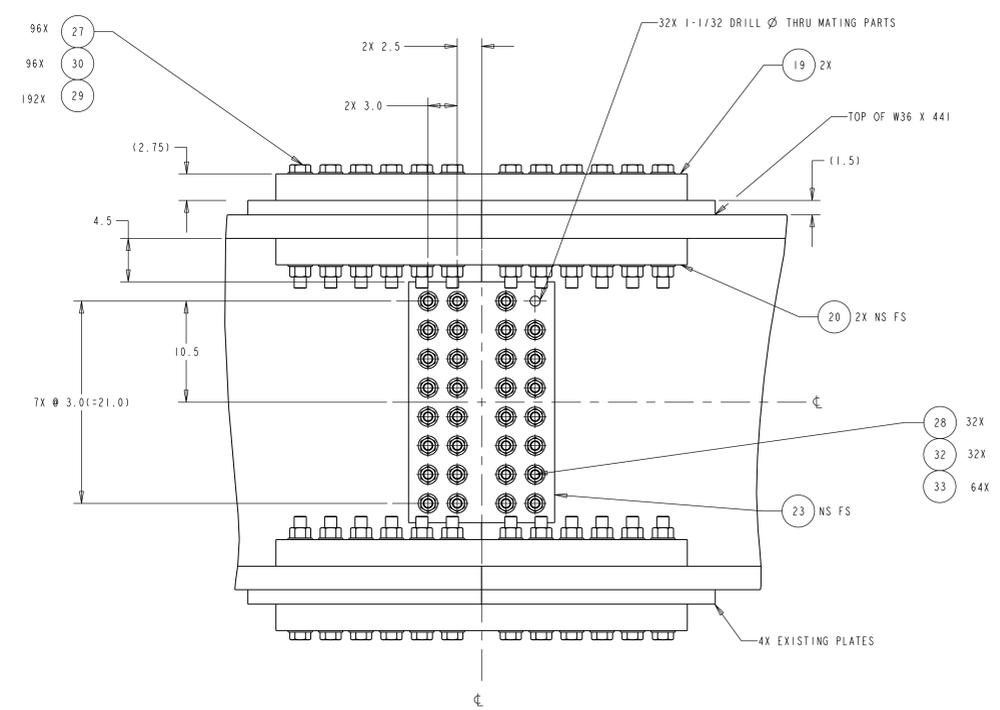
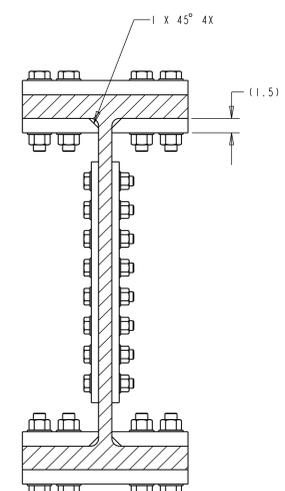
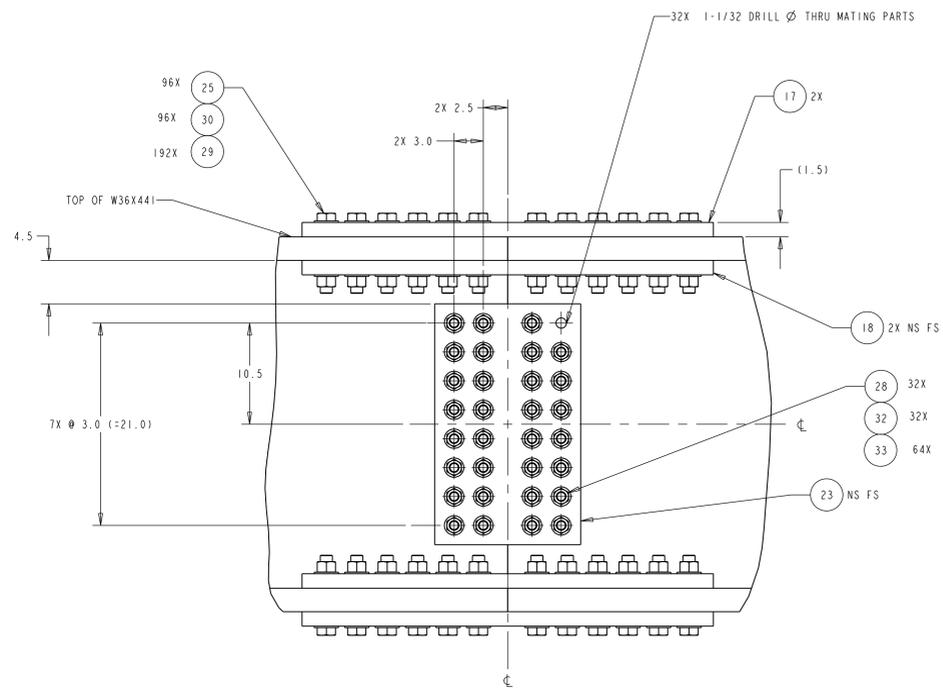


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01-16-14
DATE

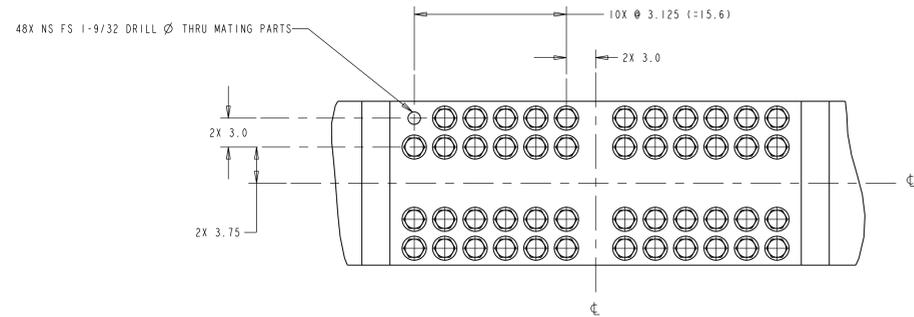
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90M13927		REVISION SEE SHEET 1	6
DATE	01-16-14	REVISED	4

NOTICE: THIS DRAWING IS A PRELIMINARY DESIGN. IT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE DIMENSIONS AND SPECIFICATIONS OF ALL PARTS AND MATERIALS USED IN THE CONSTRUCTION OF THE EQUIPMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND APPROVALS FOR THE CONSTRUCTION OF THE EQUIPMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND APPROVALS FOR THE CONSTRUCTION OF THE EQUIPMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND APPROVALS FOR THE CONSTRUCTION OF THE EQUIPMENT.

REVISIONS			
SM	DESCRIPTION	DATE	APPROVAL



SPLICE JOINT AA
 12 PLACES
 SEE SHEET 2
 SOME HARDWARE REMOVED FOR DIMENSIONING
 SCALE 0.15



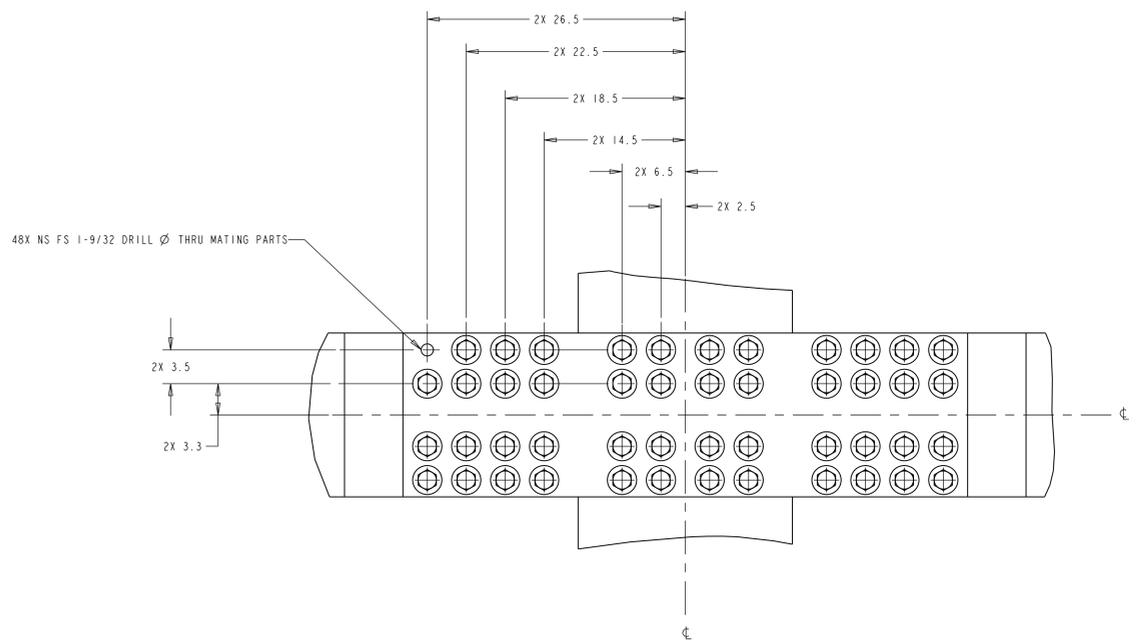
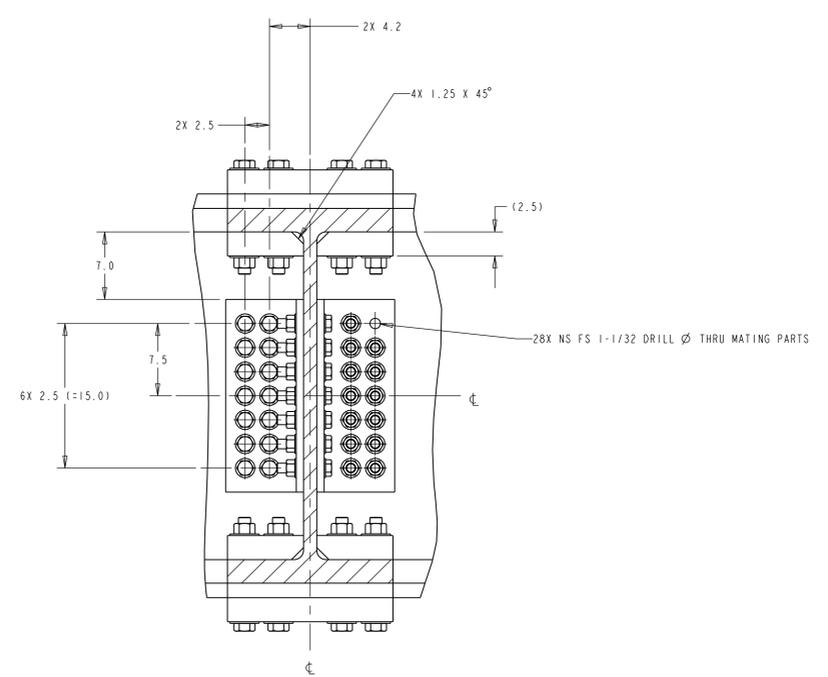
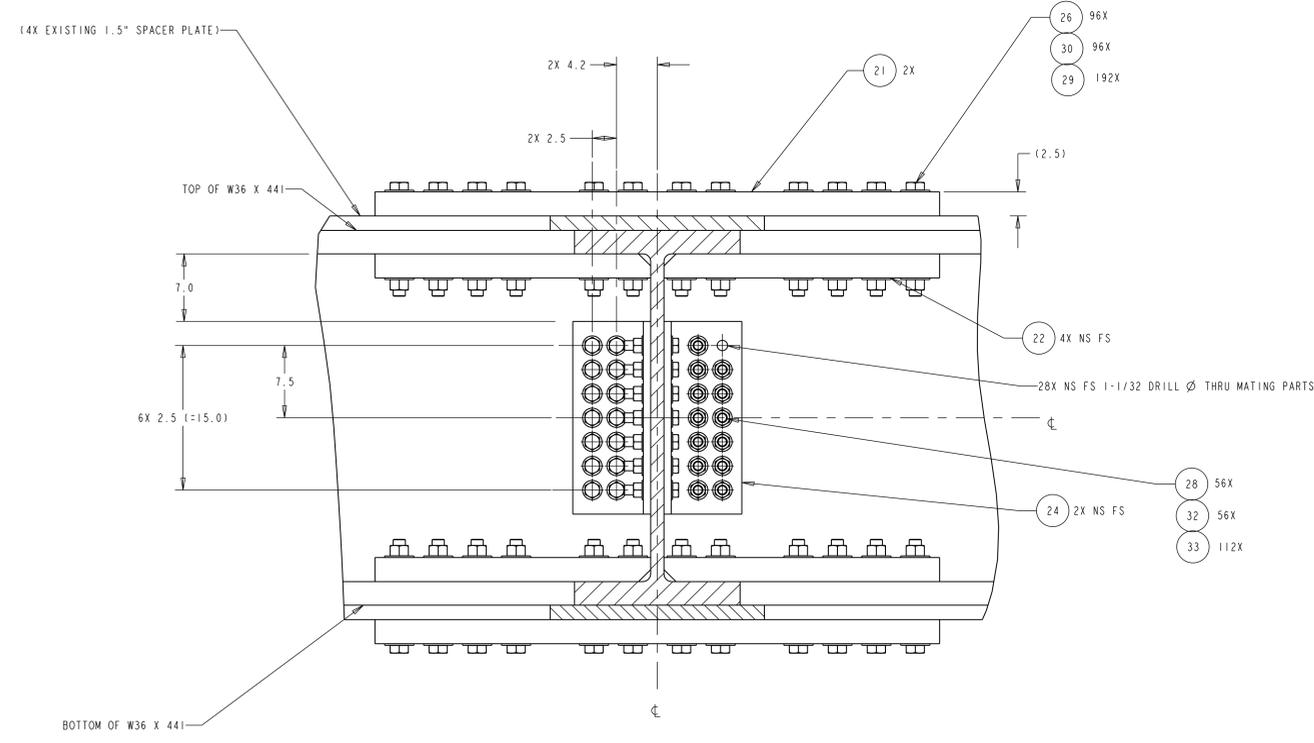
SPLICE JOINT BB
 22 PLACES
 SEE SHEET 2
 SOME HARDWARE REMOVED FOR DIMENSIONING
 SCALE 0.15

- PRELIMINARY -
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 01-16-14
 DATE

BASE FRAME ASSEMBLY SLS ENGINE SECTION TEST		SPECIAL TEST EQUIPMENT DESIGN BRANCH - ET50 GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA	
90M13927		REVISION SEE SHEET 1	6
DATE	5		

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

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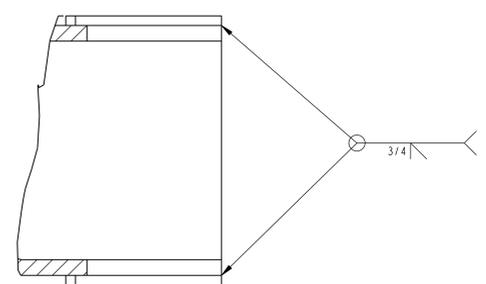
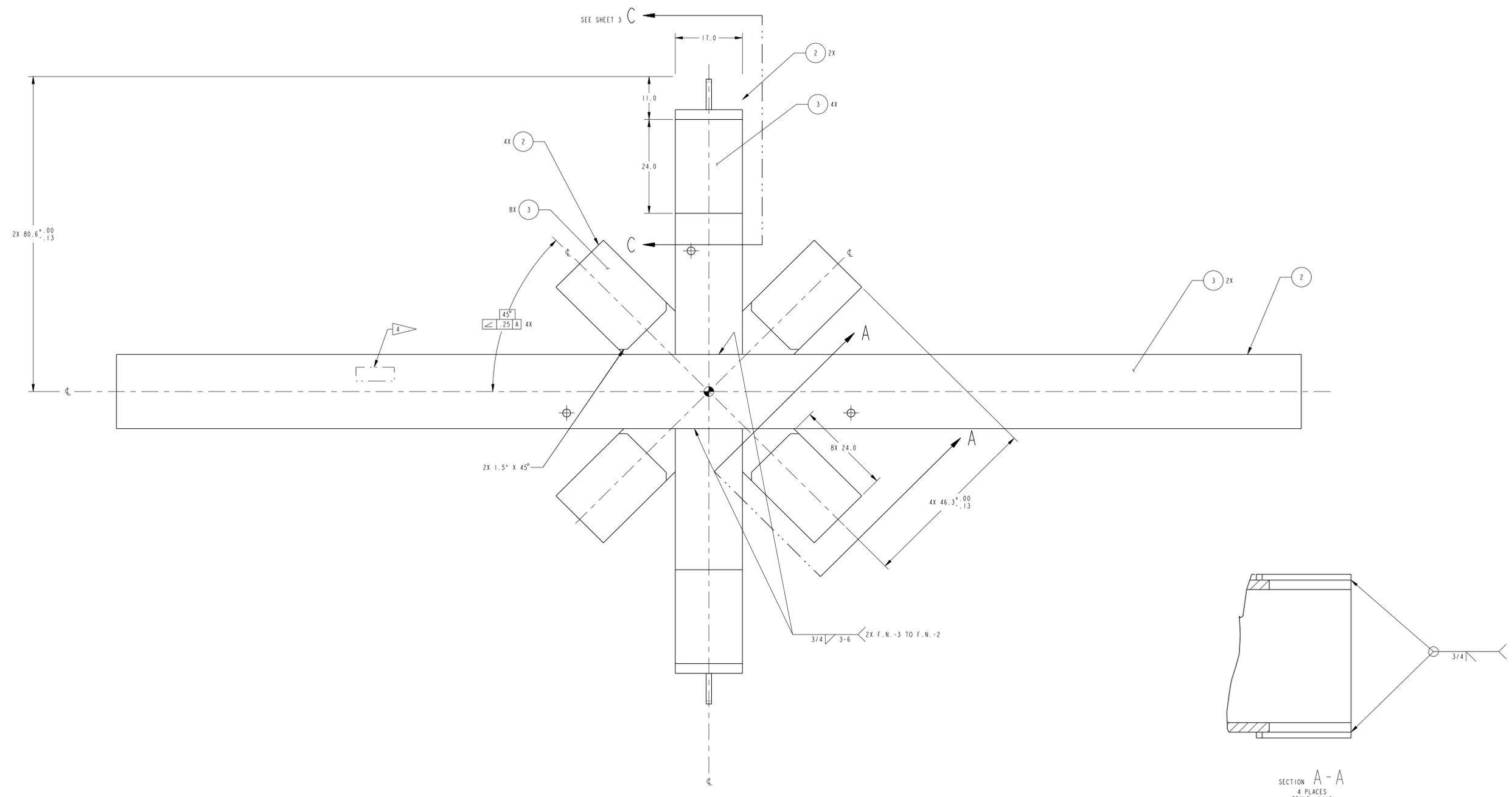
SPLICE JOINT CC
 4 PLACES
 SEE SHEET 2
 SOME HARDWARE REMOVED FOR DIMENSIONING
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- PRELIMINARY -
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 01-16-14
 DATE

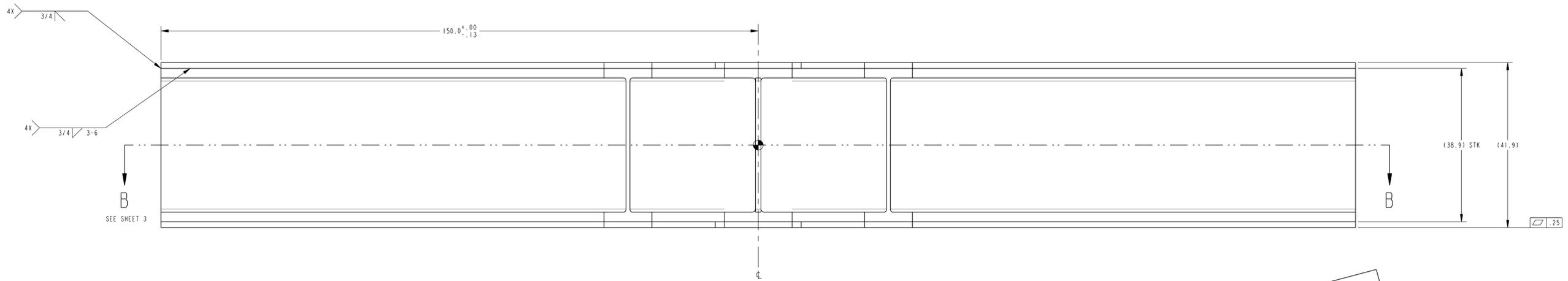
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		90M13927	
REV	DATE	BY	CHK
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NOTICE: THIS DRAWING IS A PRELIMINARY DESIGN. IT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



SECTION A-A
4 PLACES
SCALE 1/10



SEE SHEET 3

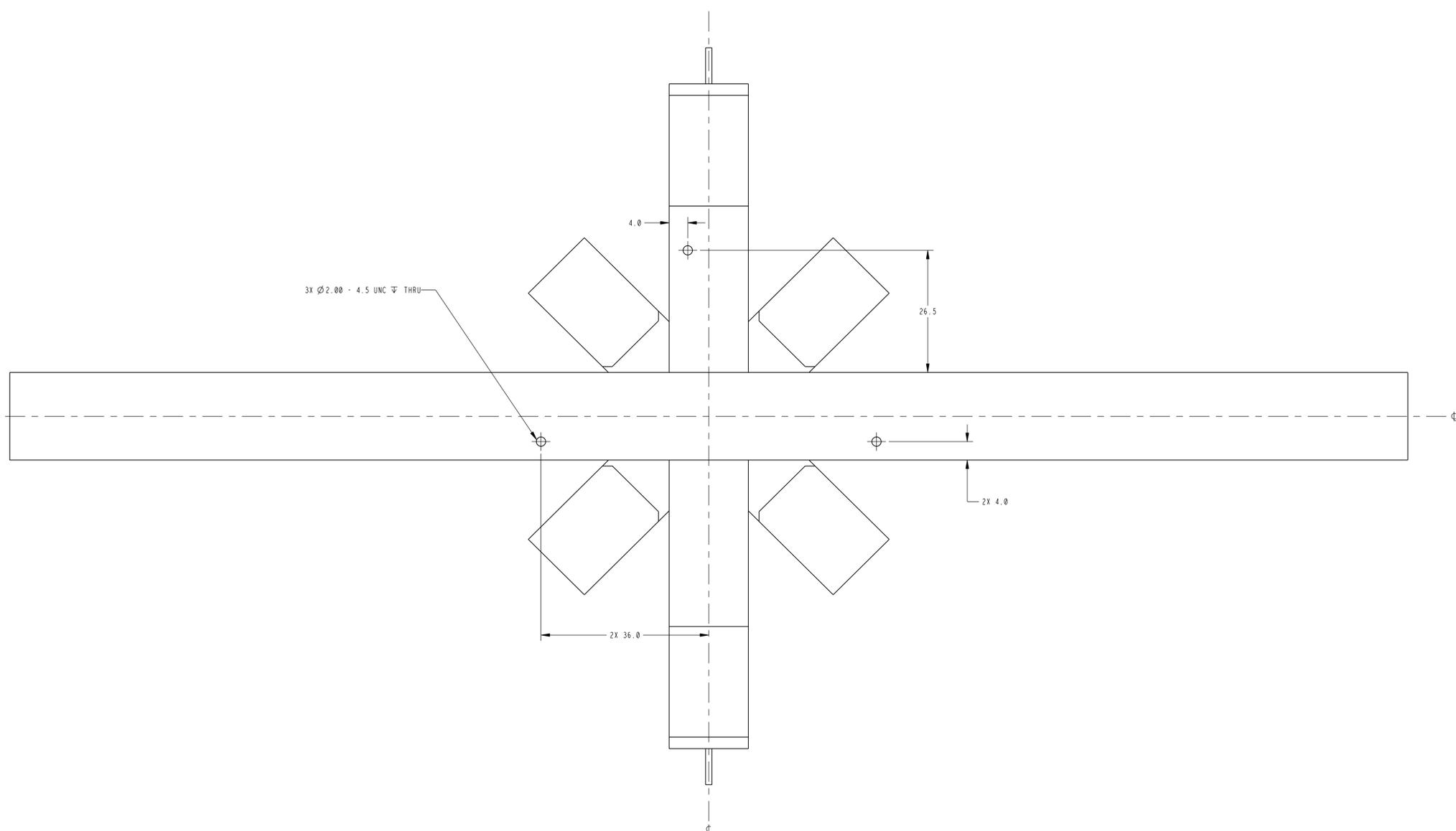
FIND NO. 1 5 7 9
SCALE 1/10

- PRELIMINARY -
THIS DRAWING HAS NOT COMPLETED THE
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02-19-14
DATE

BASE FRAME CENTER SECTION WELDMENT SLS ENGINE SECTION TEST		SPECIAL TEST EQUIPMENT DESIGN BRANCH - ET50 GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ASTROLOGICAL BLDG.	
90M14136		REVISION SEE SHEET 1	4
DATE	02-19-14	REV	2

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REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



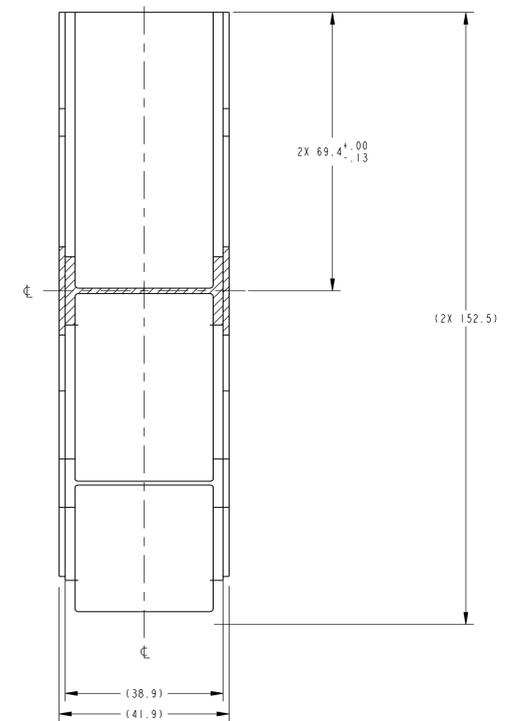
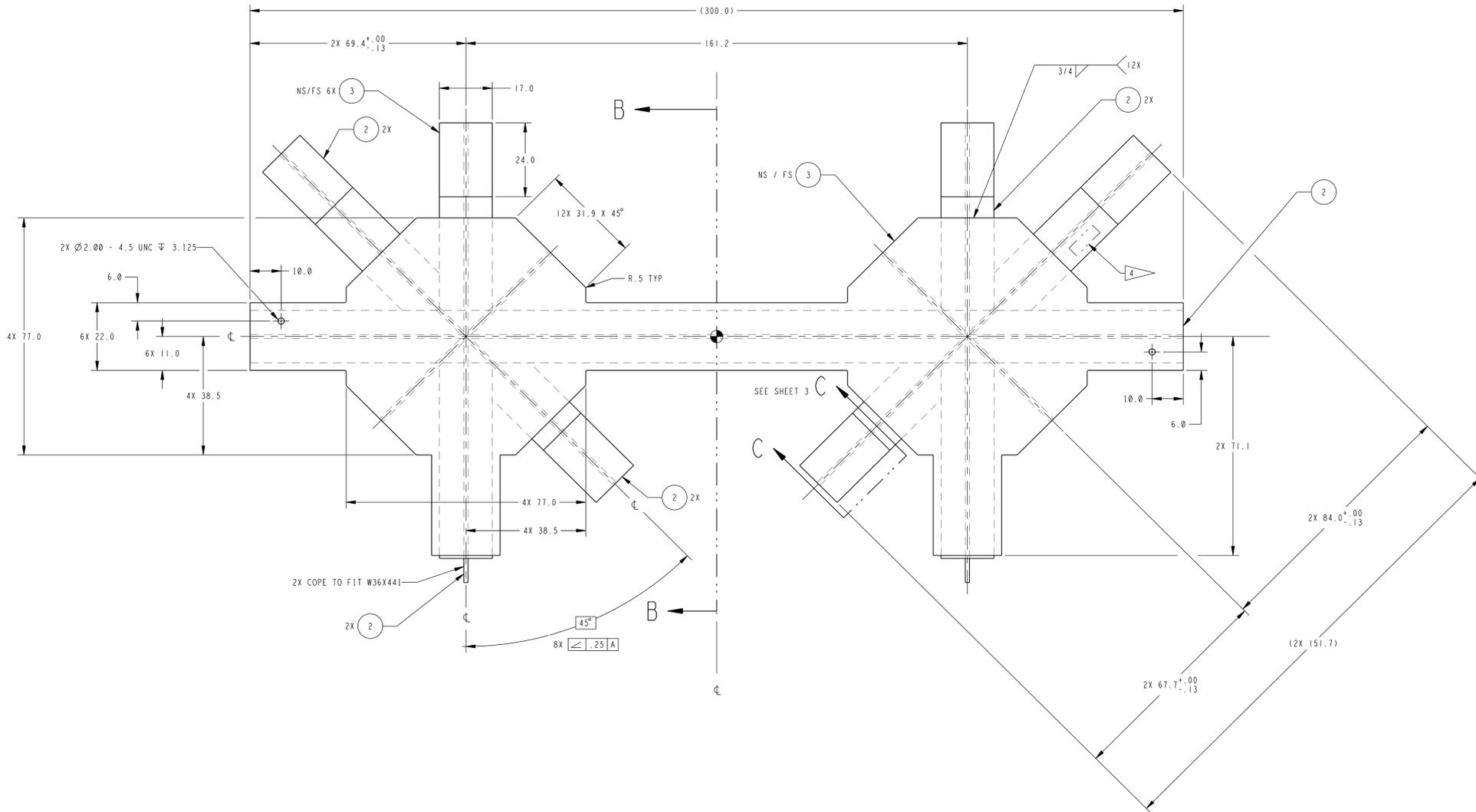
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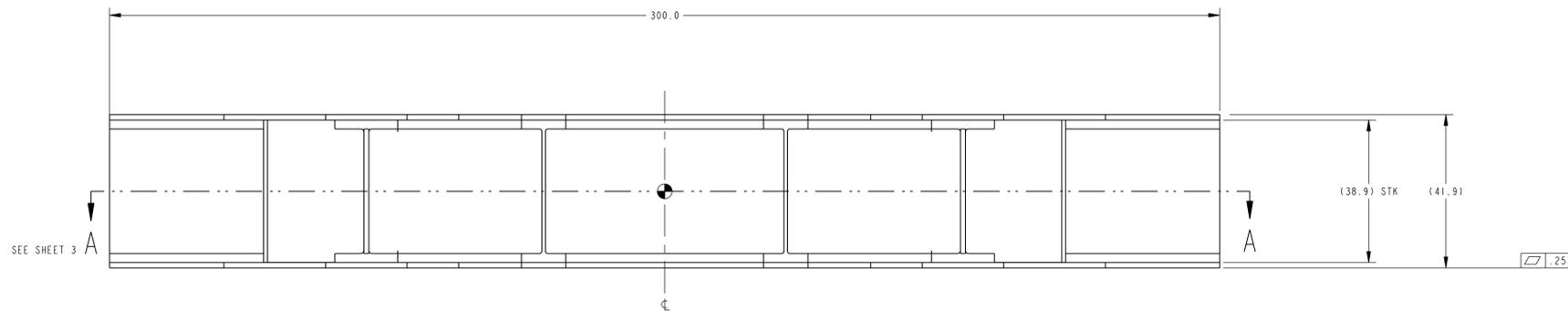
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	90M14136 REVISION SEE SHEET 1

NOTICE: THIS DRAWING IS A PRELIMINARY DESIGN. IT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE DIMENSIONS AND SPECIFICATIONS OF ALL MATERIALS AND COMPONENTS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



SECTION B-B
SOME COMPONENTS NOT DISPLAYED FOR CLARITY



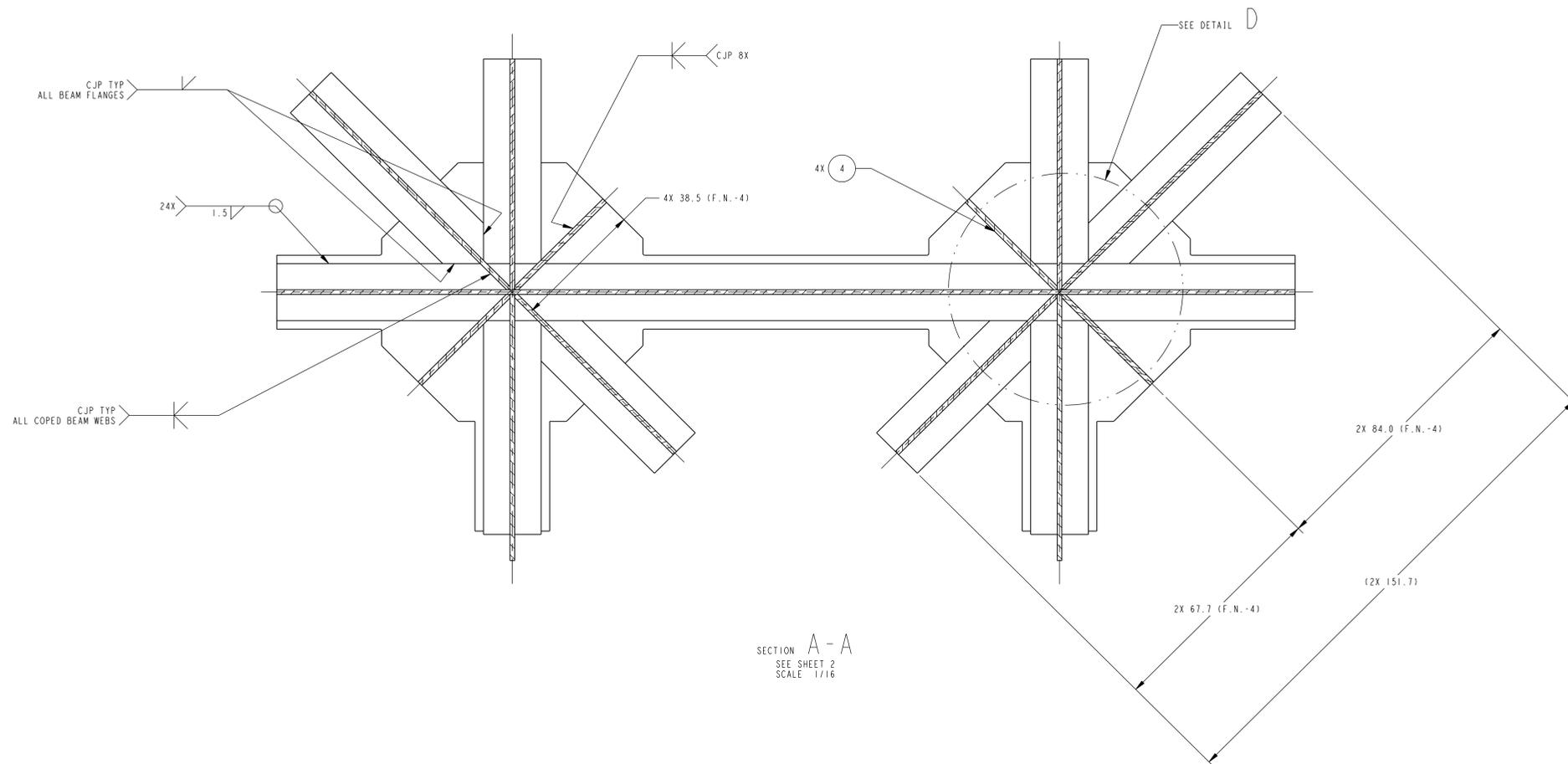
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- PRELIMINARY -
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DATE 02-19-14

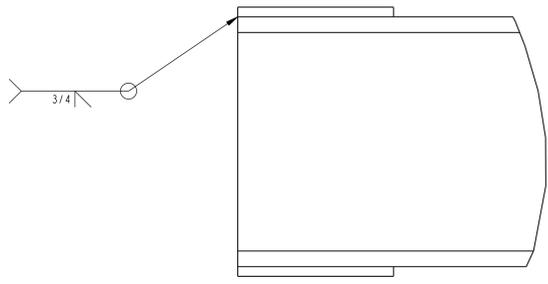
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	90M14137 REVISION SEE SHEET 1 E 2 3

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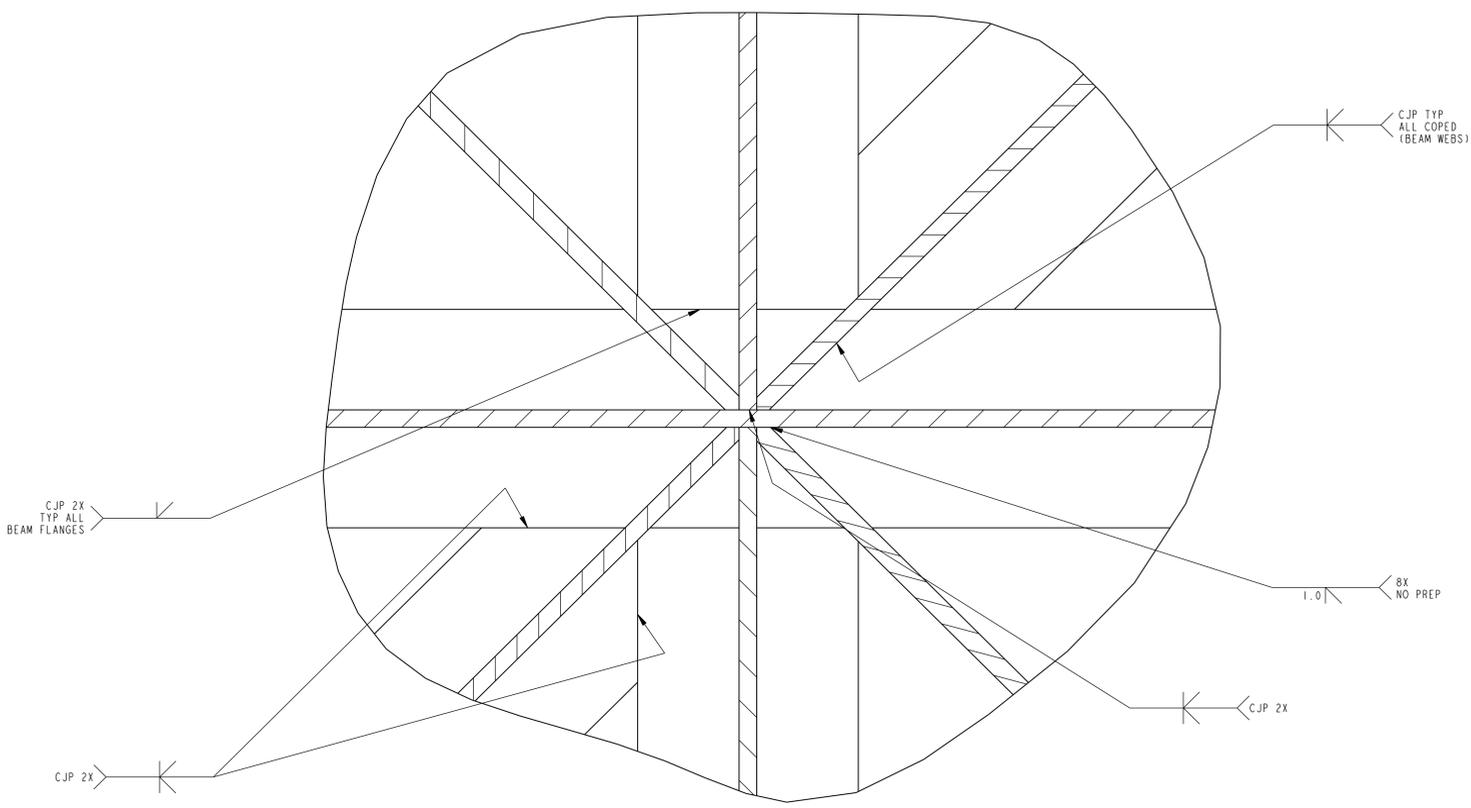
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



SECTION A-A
SEE SHEET 2
SCALE 1/16



SECTION C-C
SEE SHEET 2
SOME COMPONENTS NOT DISPLAYED FOR CLARITY
SCALE 1/10



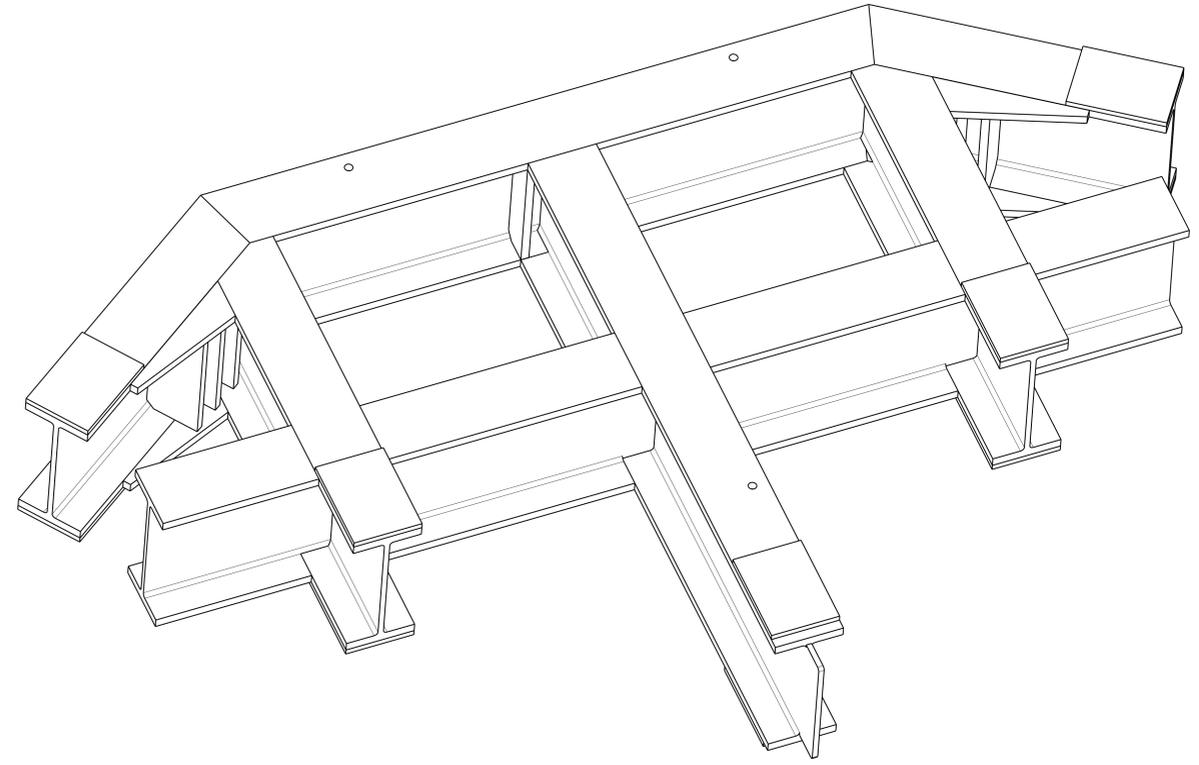
DETAIL D
SCALE 1/5

- PRELIMINARY -
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02-19-14
DATE

BASE FRAME GIMBAL MOUNT WELDMENT SLS ENGINE SECTION TEST	SPECIAL TEST EQUIPMENT DESIGN BRANCH - ET50
	GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ASTROLOGICAL BRANCH
	90M14137 REVISION SEE SHEET 1

NOTICE: THIS DRAWING IS A PRELIMINARY DESIGN. IT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY MATERIALS AND SUPPLIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY LABOR AND SERVICES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY EQUIPMENT AND TOOLS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY TRANSPORTATION AND LOGISTICS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY COMMUNICATIONS AND RECORDS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY TRAINING AND EDUCATION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SAFETY AND HEALTH PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ENVIRONMENTAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SOCIAL AND ECONOMIC PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CULTURAL AND HERITAGE PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SCIENTIFIC AND TECHNICAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ARTISTIC AND CRAFTSMANSHIP PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ETHICAL AND MORAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY LEGAL AND REGULATORY PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY POLITICAL AND GOVERNMENTAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RELIGIOUS AND SPIRITUAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PHILOSOPHICAL AND IDEOLOGICAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PSYCHOLOGICAL AND BEHAVIORAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PHYSIOLOGICAL AND MEDICAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ENVIRONMENTAL AND CLIMATE PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ENERGY AND POWER PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY WATER AND AIR QUALITY PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SOIL AND LAND USE PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY BIODIVERSITY AND ECOSYSTEM PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY CULTURAL AND HERITAGE PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SCIENTIFIC AND TECHNICAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ARTISTIC AND CRAFTSMANSHIP PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ETHICAL AND MORAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY LEGAL AND REGULATORY PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY POLITICAL AND GOVERNMENTAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY RELIGIOUS AND SPIRITUAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PHILOSOPHICAL AND IDEOLOGICAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PSYCHOLOGICAL AND BEHAVIORAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PHYSIOLOGICAL AND MEDICAL PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ENVIRONMENTAL AND CLIMATE PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY ENERGY AND POWER PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY WATER AND AIR QUALITY PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY SOIL AND LAND USE PROTECTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY BIODIVERSITY AND ECOSYSTEM PROTECTION.

REVISIONS			
NO.	DESCRIPTION	DATE	APPROVAL



MAIN VIEW
FOR REFERENCE USE ONLY
NO SCALE

- UNLESS OTHERWISE SPECIFIED:
- REMOVE ALL BURRS AND BREAK ALL SHARP EDGES.
 - 250/ ALL MACHINED SURFACES.
 - DIMENSIONING AND TOLERANCING IN ACCORDANCE WITH ASME Y14.5-1994.
 - STENCIL PART NUMBER IN THE APPROXIMATE LOCATION SHOWN USING A CONTRASTING COLOR AND 2" TALL LETTERS.
 - REFERENCE DRAWING 90M14383 FOR PREDETERMINED BEAM SELECTION, CUT CONFIGURATION, AND FLANGE ORIENTATION RELATIVE TO ASSEMBLY JOINT.
 - STEEL WELDING DESIGN, PROCEDURES, AND NON-DESTRUCTIVE EVALUATION SHALL BE PER ANSI/AWS D1.1/D1.1M:2010, "STRUCTURAL WELDING CODE-STEEL". UNLESS OTHERWISE SPECIFIED, WELDS SHALL BE 100% VISUALLY INSPECTED.
 - PREPARE SURFACES PER PAINT MANUFACTURER'S RECOMMENDATIONS. ABRASIVE CLEANING WHERE NECESSARY. PRIME USING A POLYURETHANE PRIMER AND PAINT USING A POLYURETHANE ENAMEL TOP COAT, FINISH COLOR GRAY NO. 16251 PER FED-STD-595 (OR A SIMILAR GLOSSY SHADE). DO NOT PAINT HOLES, THREADS, OR MACHINED SURFACES. REPAINT AREAS DAMAGED DURING ASSEMBLY OR INSTALLATION.
 - COPE TO FIT AS REQUIRED.
 - WELD AT TOP OF FN.1 SHALL BE GROUND FLAT.
 - AFTER WELDING AND PRIOR TO FINAL MACHINING, STRESS RELIEVE PER SAE AMS2759/11:2005. A BRIGHT OR SCALE-FREE SURFACE IS REQUIRED FOR NOTED FAYING SURFACES.
 - ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE DESIGNATIONS AND DIMENSIONS OF THE AISC "STEEL CONSTRUCTION MANUAL", 14TH EDITION.
 - ESTIMATED WELDMENT WEIGHT = 37,012 LBS

- PRELIMINARY -
THIS DRAWING HAS NOT COMPLETED THE
REVIEW PROCESS AND IS SUBJECT TO CHANGE.
01-22-14
DATE

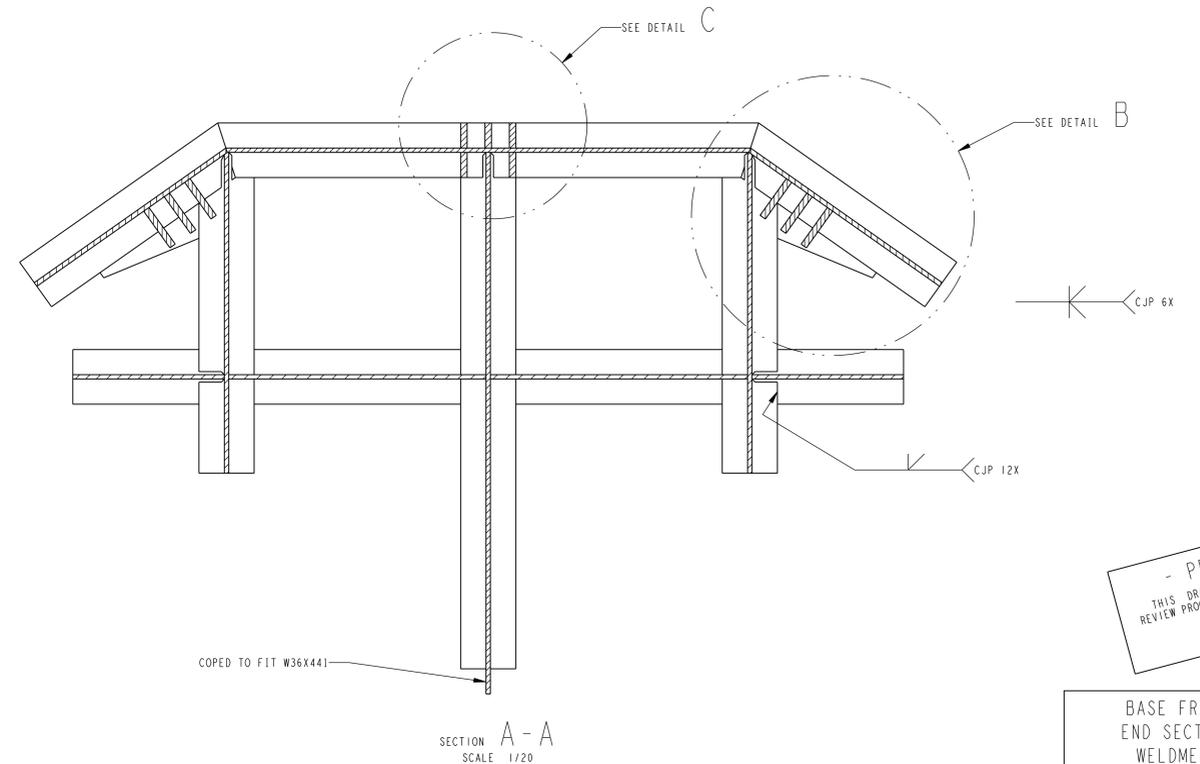
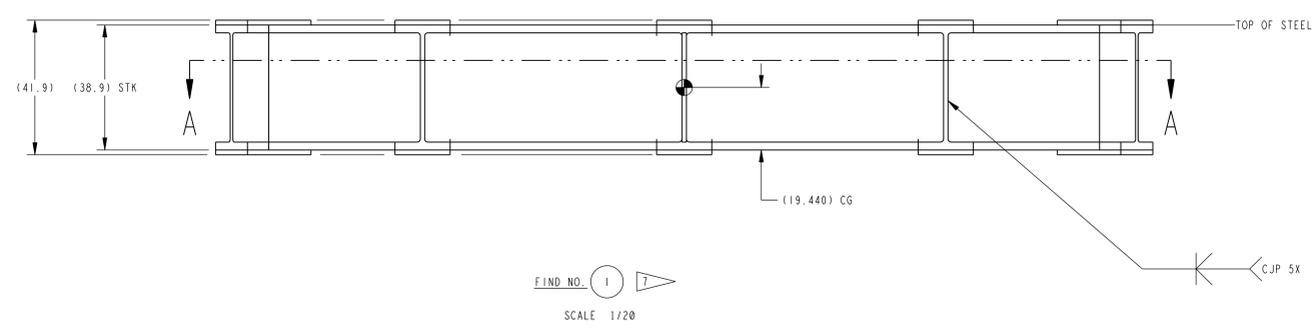
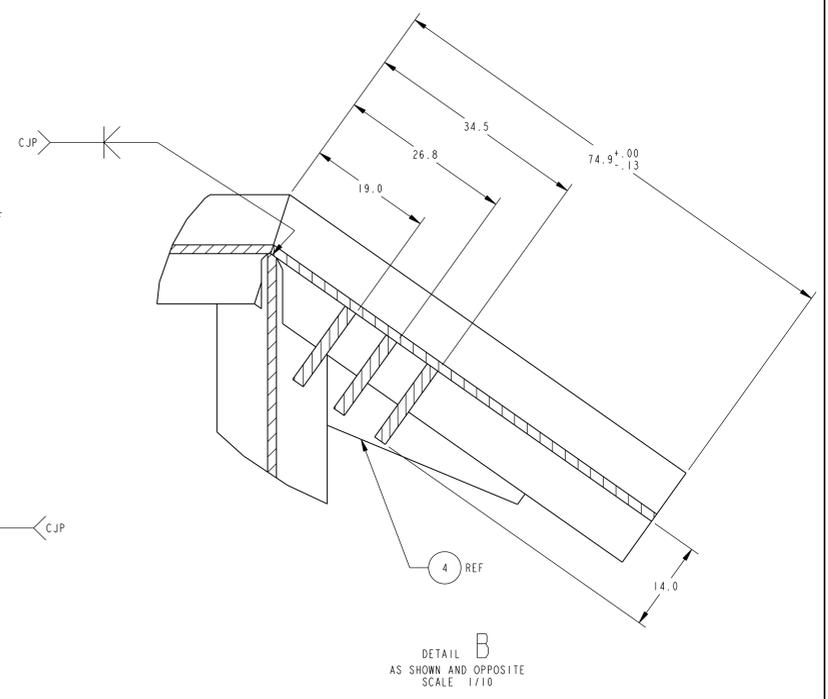
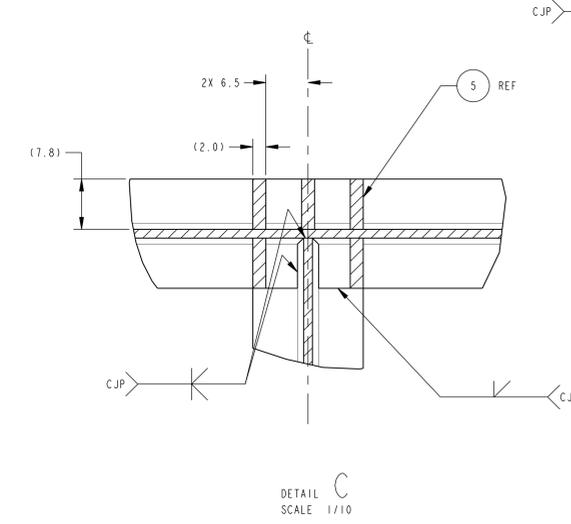
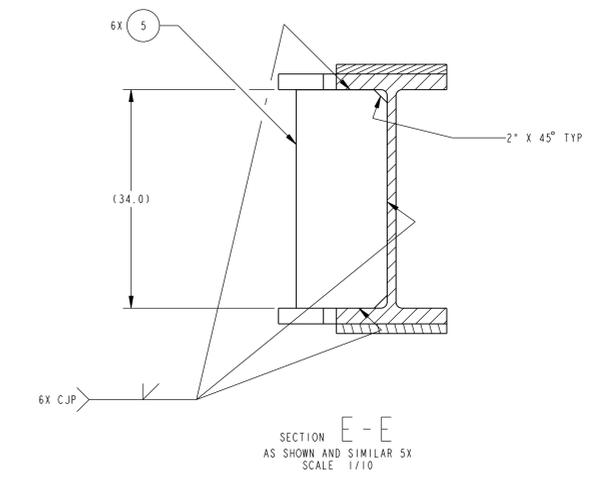
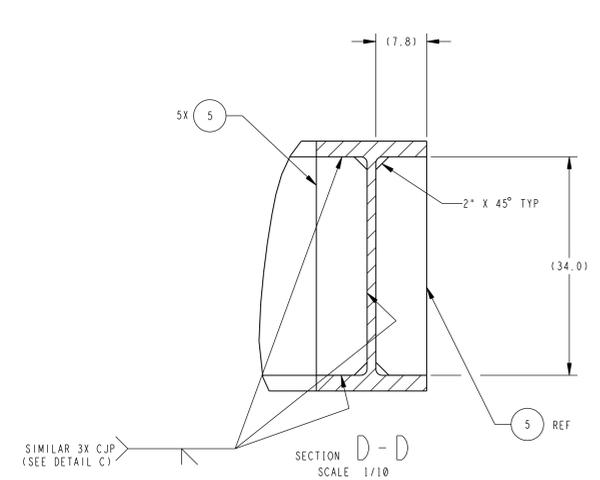
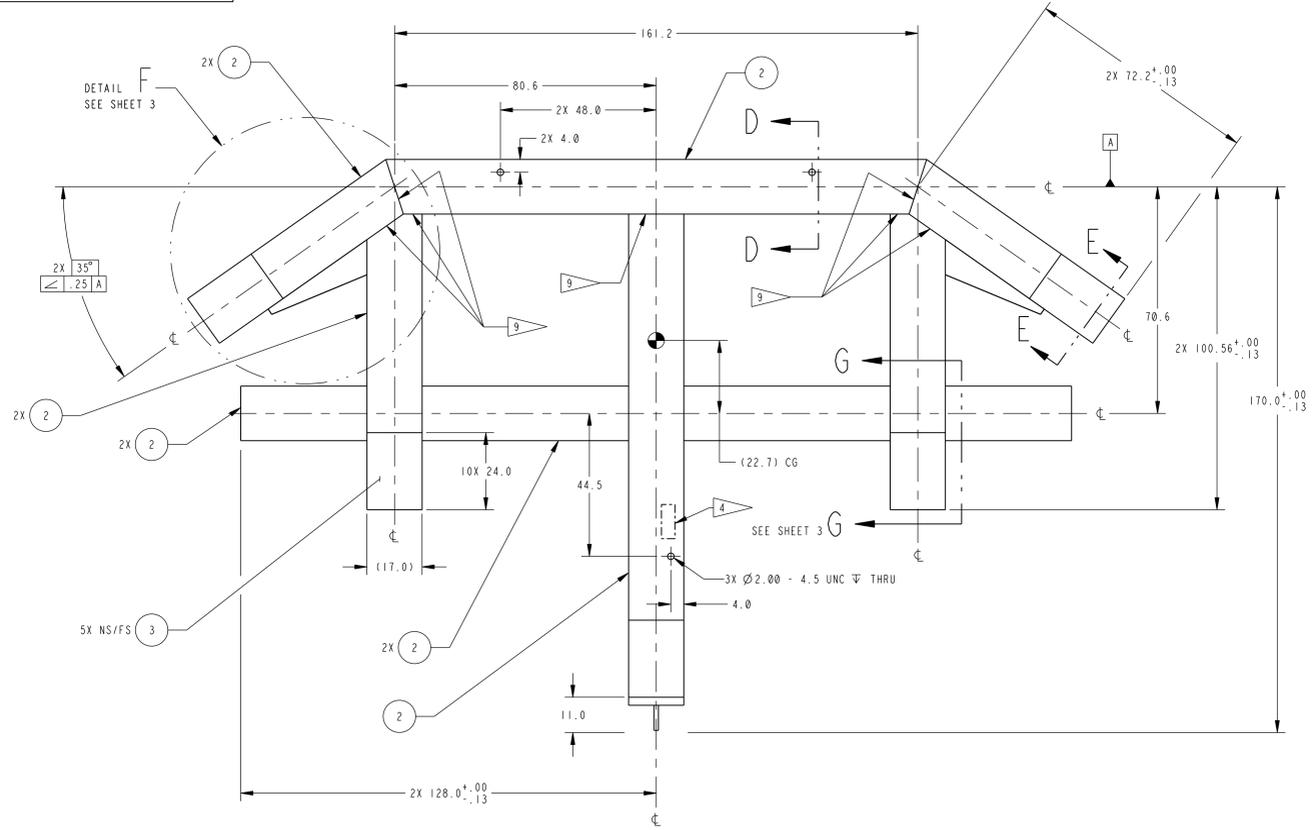
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4	3	-	AR	F	90M14138-5	PLATE 2.44" THICK	MATERIAL: ASTM A572 GRADE 50
3	2	-	AR	F	90M14138-4	PLATE 1.50" THICK	MATERIAL: ASTM A572 GRADE 50
2	2	-	AR	F	90M14138-2	W36 X 441 WIDE FLANGE	MATERIAL: ASTM A992
1	2	-	-	A	90M14138-1	BASE FRAME END SECTION WELDMENT	

STRESS	DATE	PREPARED BY	DATE	UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	SPECIAL TEST EQUIPMENT
MATERIALS	DATE	TEST ENGINEER/REQUESTER	DATE	FRACTIONS	GEORGE C. MARSHALL SPACE FLIGHT CENTER
MANUFACTURING	DATE	CONSTRUCTION REVIEW LEAD	DATE	DECIMALS	NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
SAFETY AND DESIGN PERFORMANCE	DATE	CIVIL SERVICE LEAD	DATE	.X ± .06	ASTROLABORATORY
FLUSH INTERFACES	DATE	CRACKER	DATE	1/16 ± 1/2	90M14138
RESURFACE CERTIFICATION NUMBER	DATE	DON BLEVINS	DATE	.XXX ± .010	REVISION
	DATE	TEST ENGINEER/REQUESTER	DATE	< ± .50"	1
	DATE	CONSTRUCTION REVIEW LEAD	DATE	DIMENSIONS ARE IN INCHES, DO NOT SCALE DRAWING!	3
	DATE	CONSTRUCTION REVIEW LEAD	DATE	BY: JEFF SHEPHERD	
	DATE	CONSTRUCTION REVIEW LEAD	DATE	NO. 90M13927	
	DATE	CONSTRUCTION REVIEW LEAD	DATE	TO-28-13	

BASE FRAME
END SECTION
WELDMENT
SLS ENGINE SECTION
TEST

NOTICE: THIS DRAWING IS A PRELIMINARY DESIGN. IT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVAL

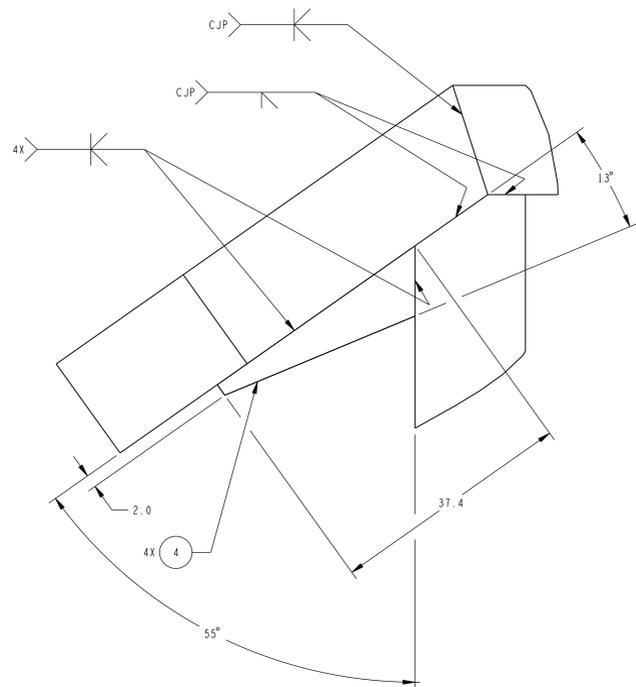


- PRELIMINARY -
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01-22-14
DATE

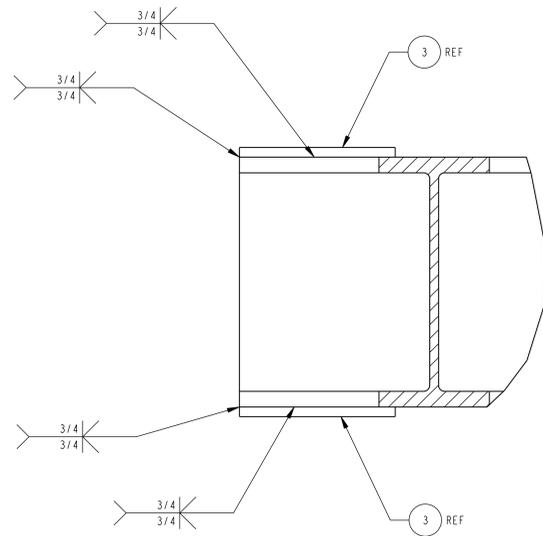
BASE FRAME END SECTION WELDMENT SLS ENGINE SECTION TEST		SPECIAL TEST EQUIPMENT DESIGN BRANCH - ET50 GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ASTROLOGICAL BLDG.	
90M14138		REVISION SEE SHT 1	2 3

NOTICE: THIS DRAWING IS A PRELIMINARY DESIGN. IT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE DIMENSIONS AND MATERIALS SHOWN HEREON. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND APPROVALS FOR THE CONSTRUCTION OF THE ENGINE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND APPROVALS FOR THE CONSTRUCTION OF THE ENGINE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND APPROVALS FOR THE CONSTRUCTION OF THE ENGINE.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



DETAIL F
NS & FS 2X
SEE SHEET 2
SCALE 1/10



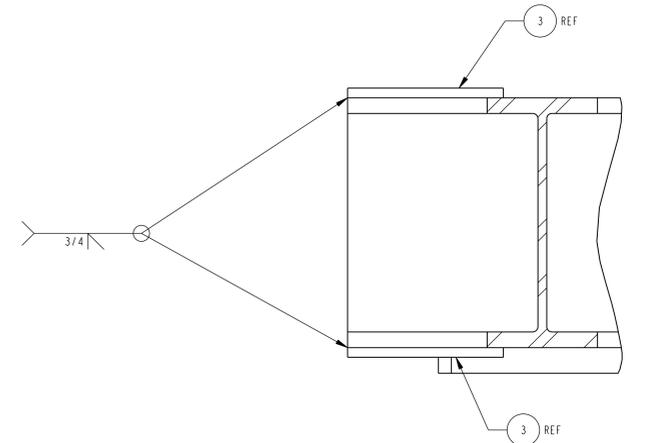
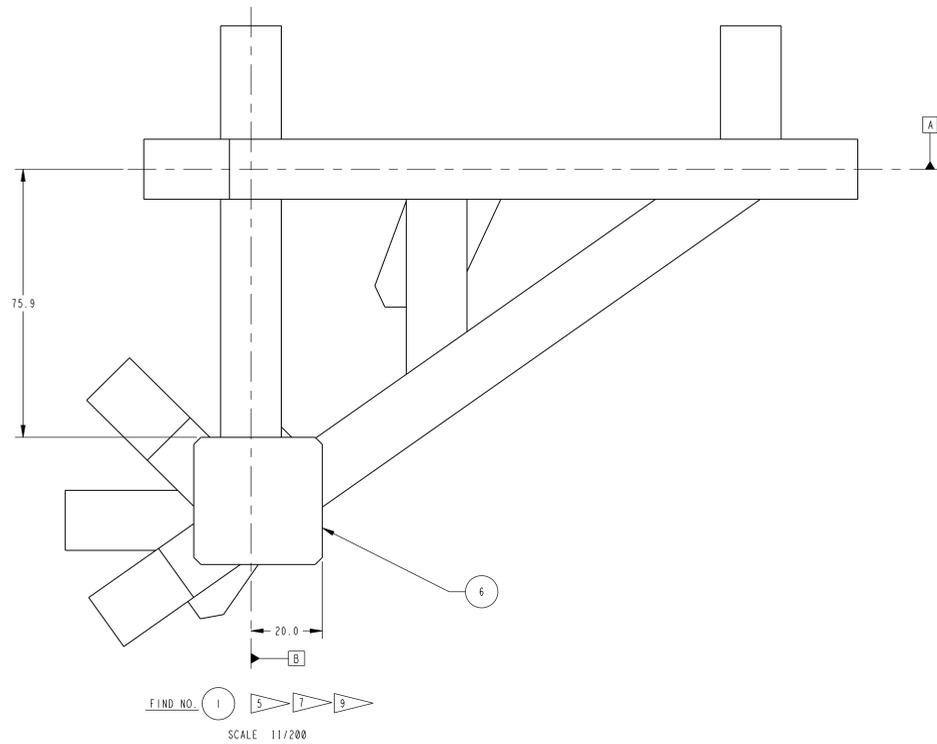
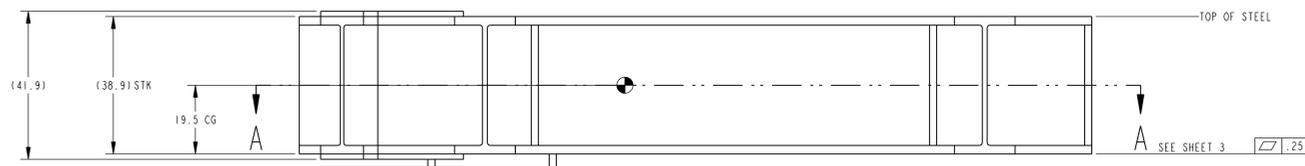
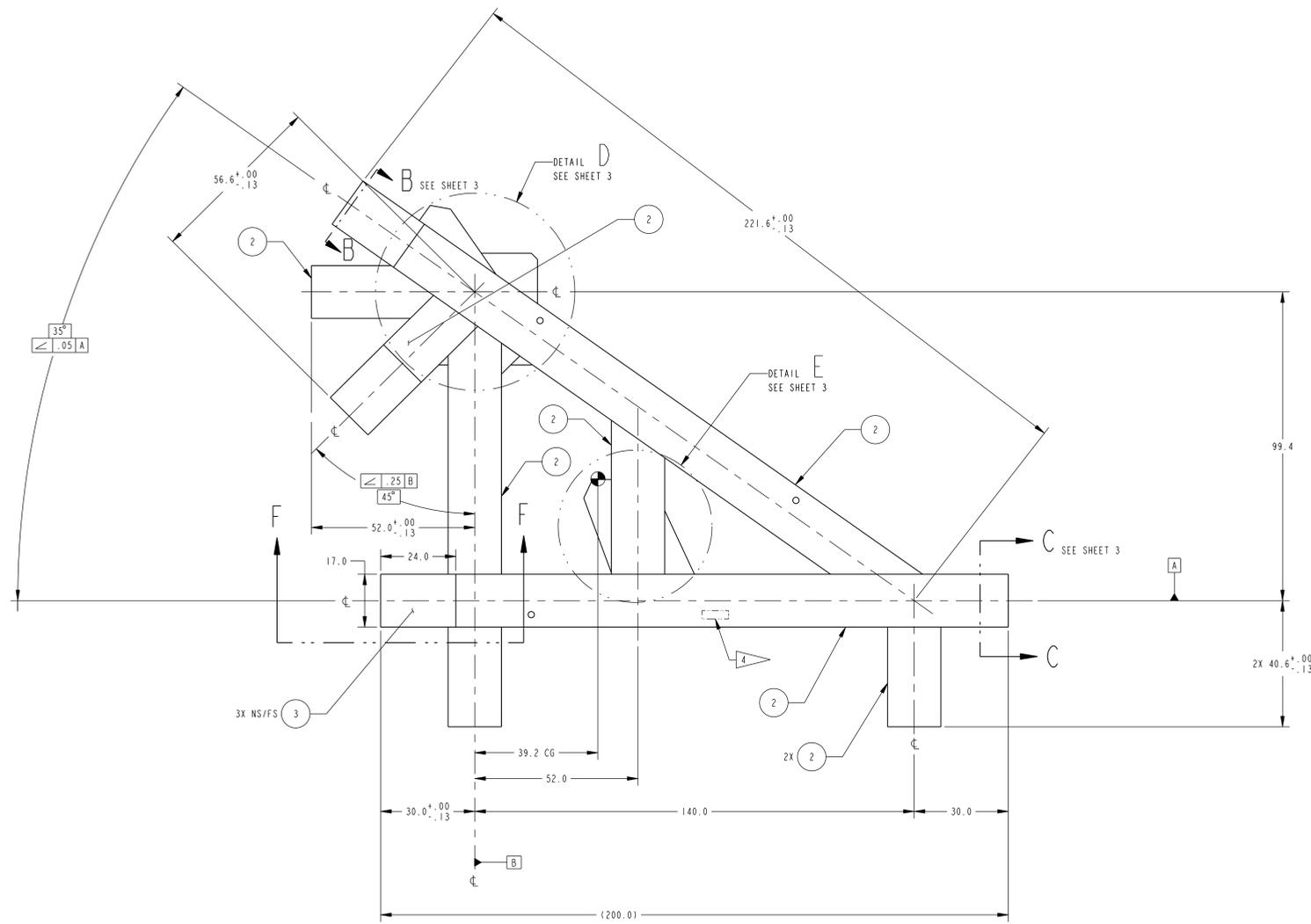
SECTION G-G
SEE SHEET 2
1X AS SHOWN AND 4X SIMILAR
SCALE 1/10

- PRELIMINARY -
THIS DRAWING HAS NOT COMPLETED THE
REVIEW PROCESS AND IS SUBJECT TO CHANGE.
01-22-14
DATE

BASE FRAME END SECTION WELDMENT SLS ENGINE SECTION TEST	SPECIAL TEST EQUIPMENT DESIGN BRANCH - ET50 GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HOUSTON, TEXAS
	90M14138 REVISION 3 SEE SHEET 1

NOTICE: THIS DRAWING IS A PRELIMINARY DESIGN. IT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE USER OF THIS DRAWING SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION CONTAINED HEREIN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES.

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SYM	DESCRIPTION	DATE	APPROVAL



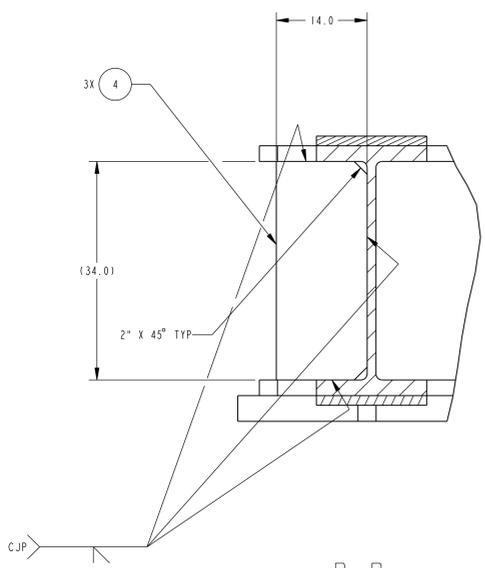
SECTION F-F
 SOME COMPONENTS REMOVED FOR CLARITY
 1X AS SHOWN AND SIMILAR 2X
 SCALE 1/10

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 02-19-14
 DATE

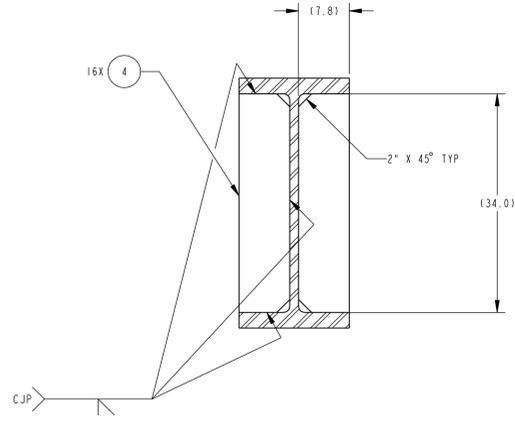
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	90M14139 REVISION SEE SHEET 1 SHEET 2 OF 4

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

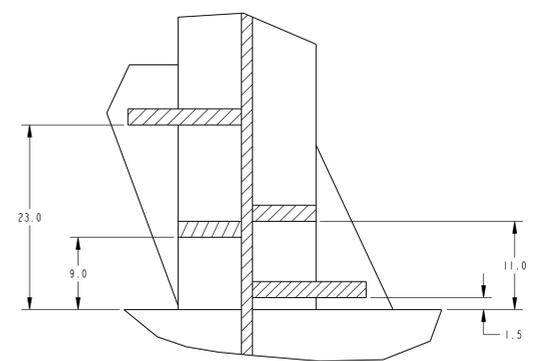
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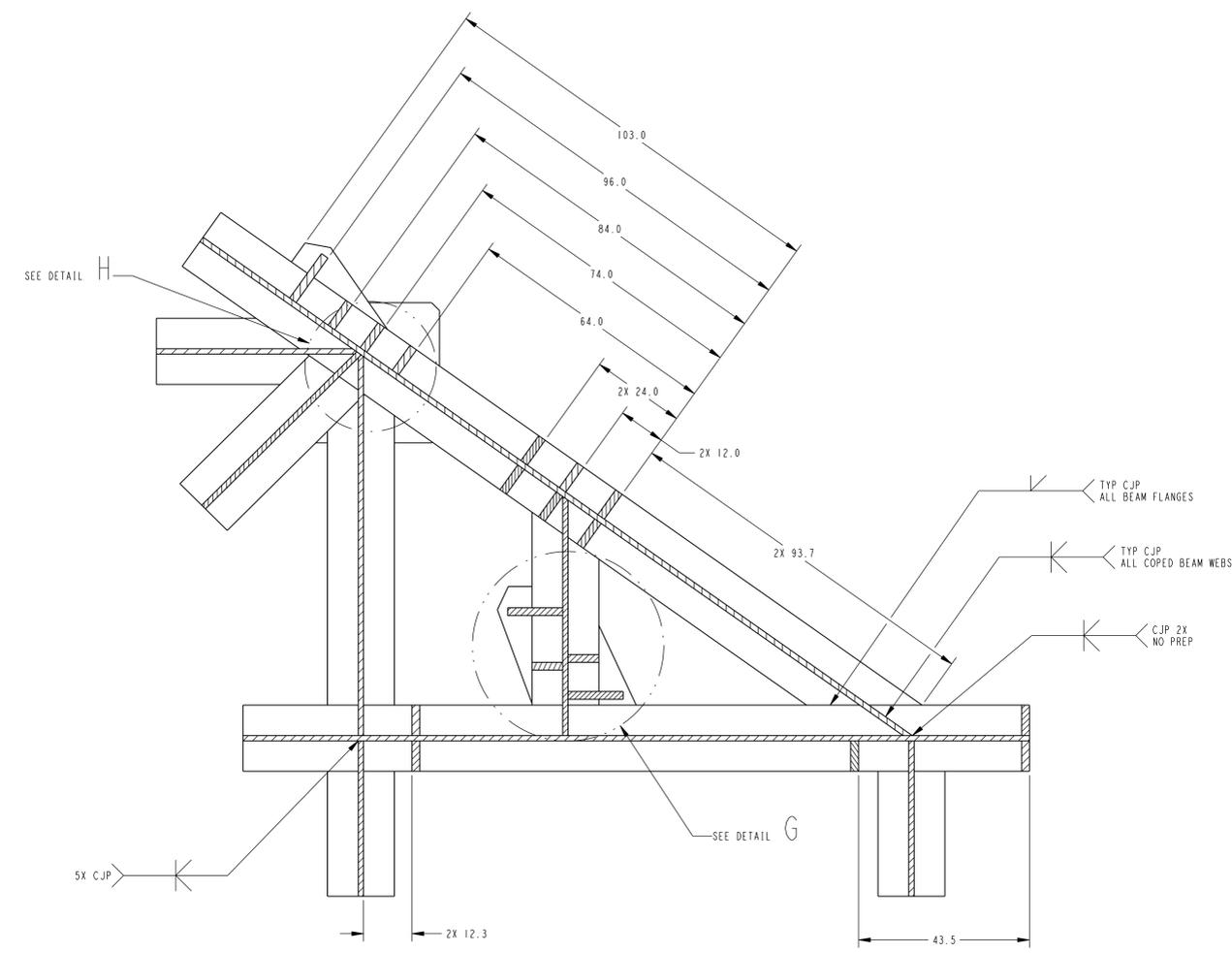
SECTION B-B
SOME COMPONENTS REMOVED FOR CLARITY
SEE SHEET 2
1X AS SHOWN AND SIMILAR 2X
SCALE 1/10



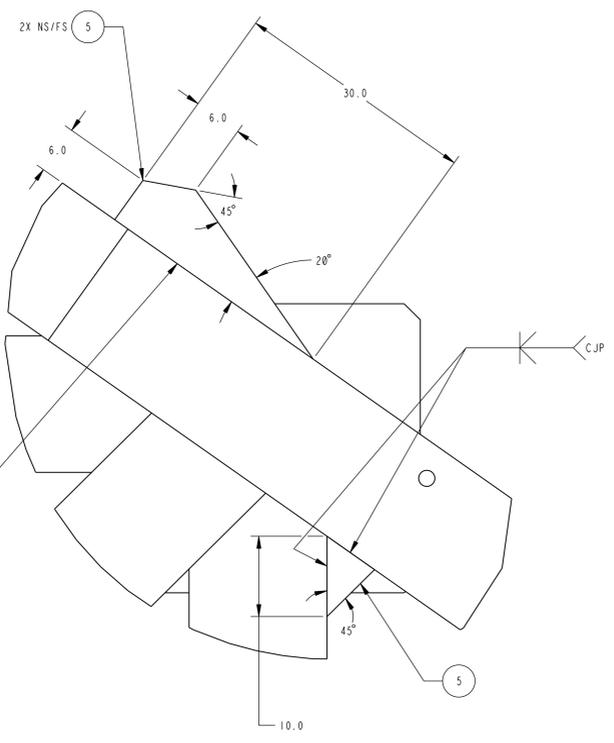
SECTION C-C
SEE SHEET 2
1X AS SHOWN AND 10X SIMILAR
SCALE 1/10



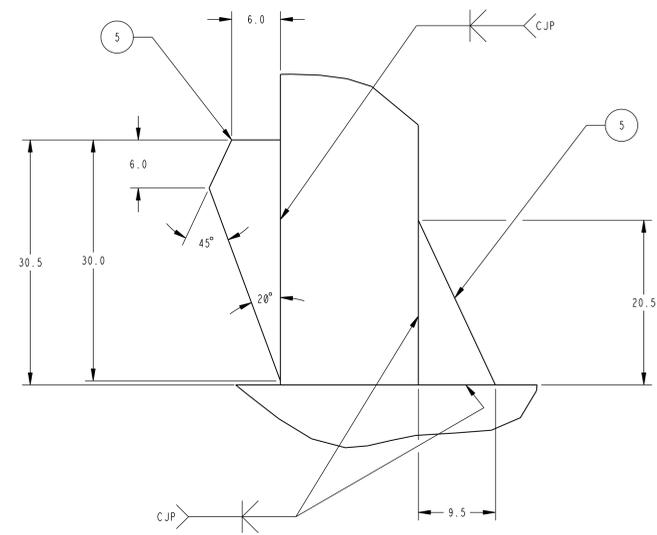
DETAIL G
SCALE 1/8



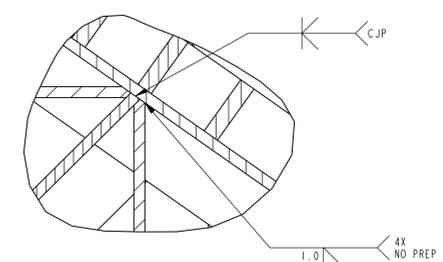
SECTION A-A
SEE SHEET 2
SCALE 1/16



DETAIL D
SEE SHEET 2
SCALE 1/8



DETAIL E
SEE SHEET 2
TYP NS AND FS
SCALE 1/8



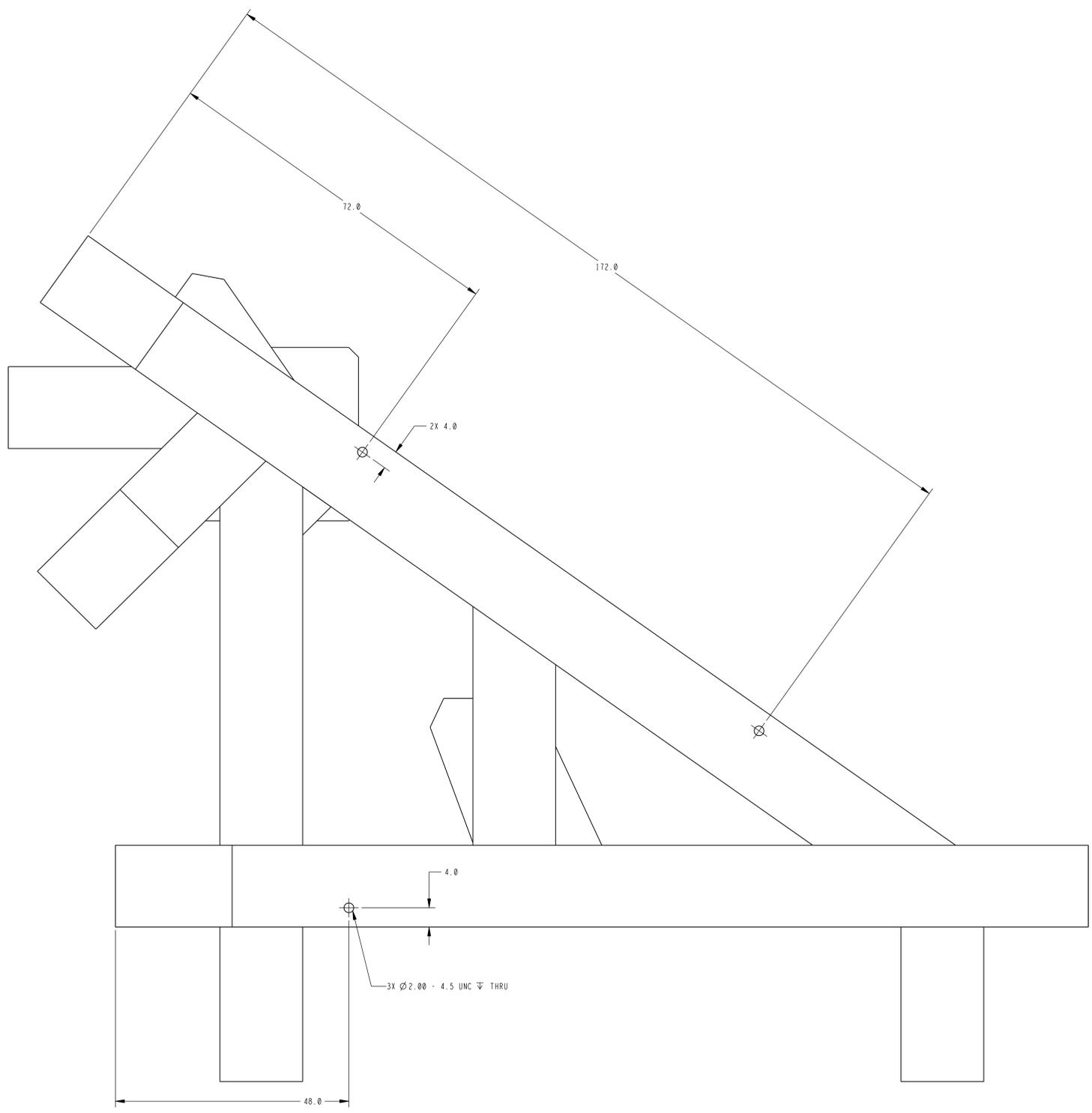
DETAIL H
SCALE 1/8

- PRELIMINARY -
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REVIEW PROCESS AND IS SUBJECT TO CHANGE.
02-19-14
DATE

BASE FRAME CORNER SECTION WELDMENT 1 SLS ENGINE SECTION TEST	SPECIAL TEST EQUIPMENT DESIGN BRANCH - ETSD GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION Huntsville, Alabama
90M14139	REVISION SEE SHEET 1
3	4

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REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



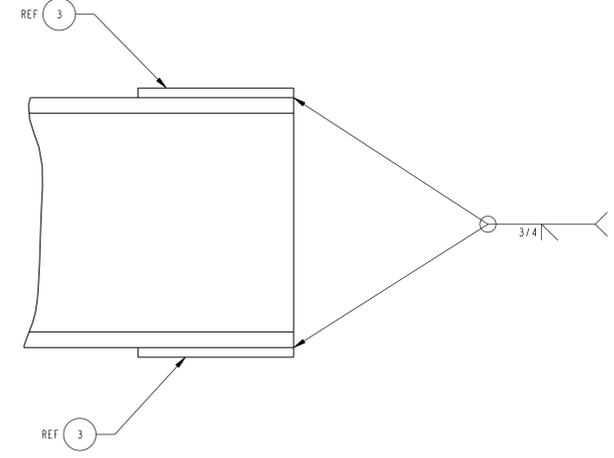
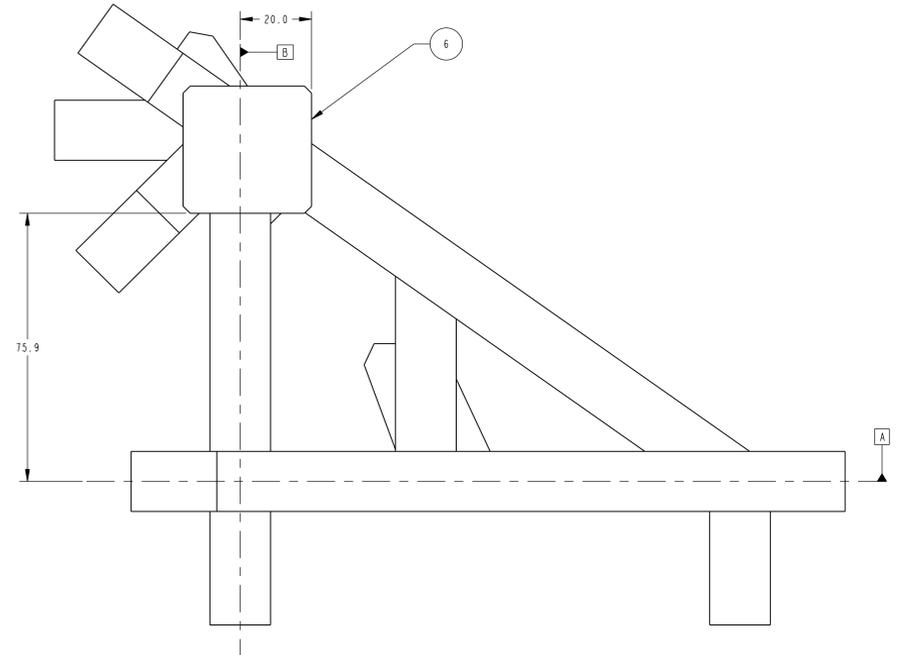
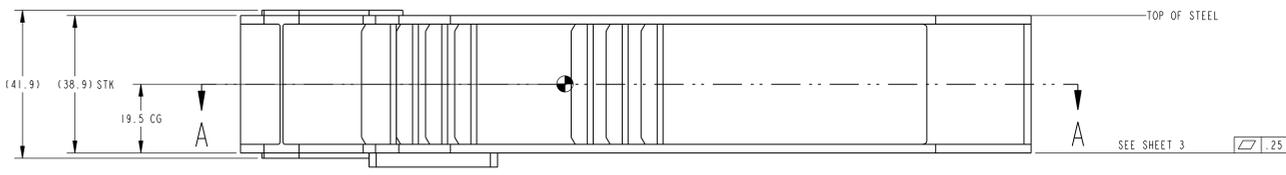
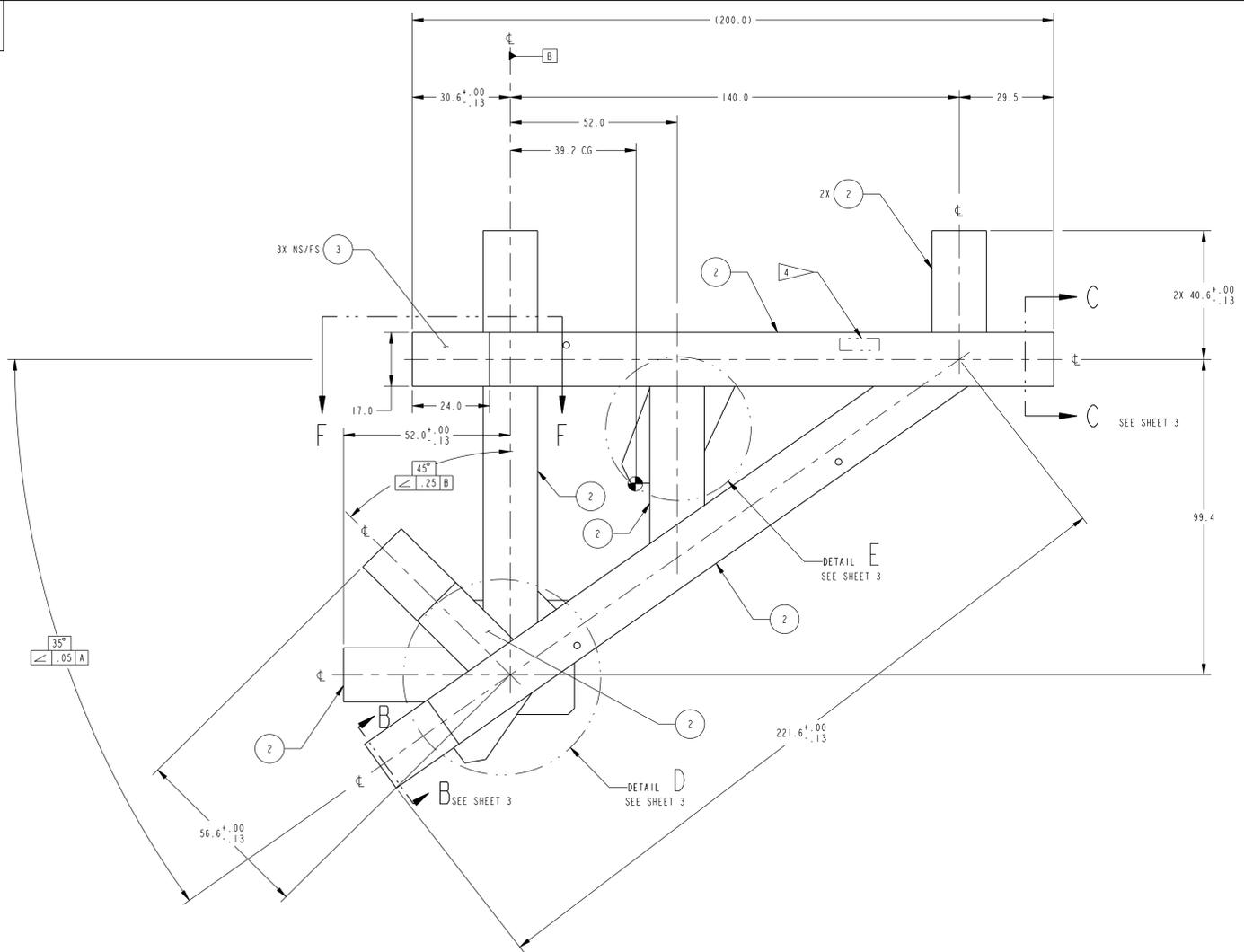
SCALE 1/10

- PRELIMINARY -
 THIS DRAWING HAS NOT COMPLETED THE
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 02-19-14
 DATE

BASE FRAME CORNER SECTION WELDMENT 1 SLS ENGINE SECTION TEST	SPECIAL TEST EQUIPMENT DESIGN BRANCH - ET50 GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA
	90M14139 REVISION SEE SHT 1

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REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



SECTION F-F
 SOME COMPONENTS REMOVED FOR CLARITY
 1X AS SHOWN AND SIMILAR 2X
 3 PLACES
 SCALE 1/10

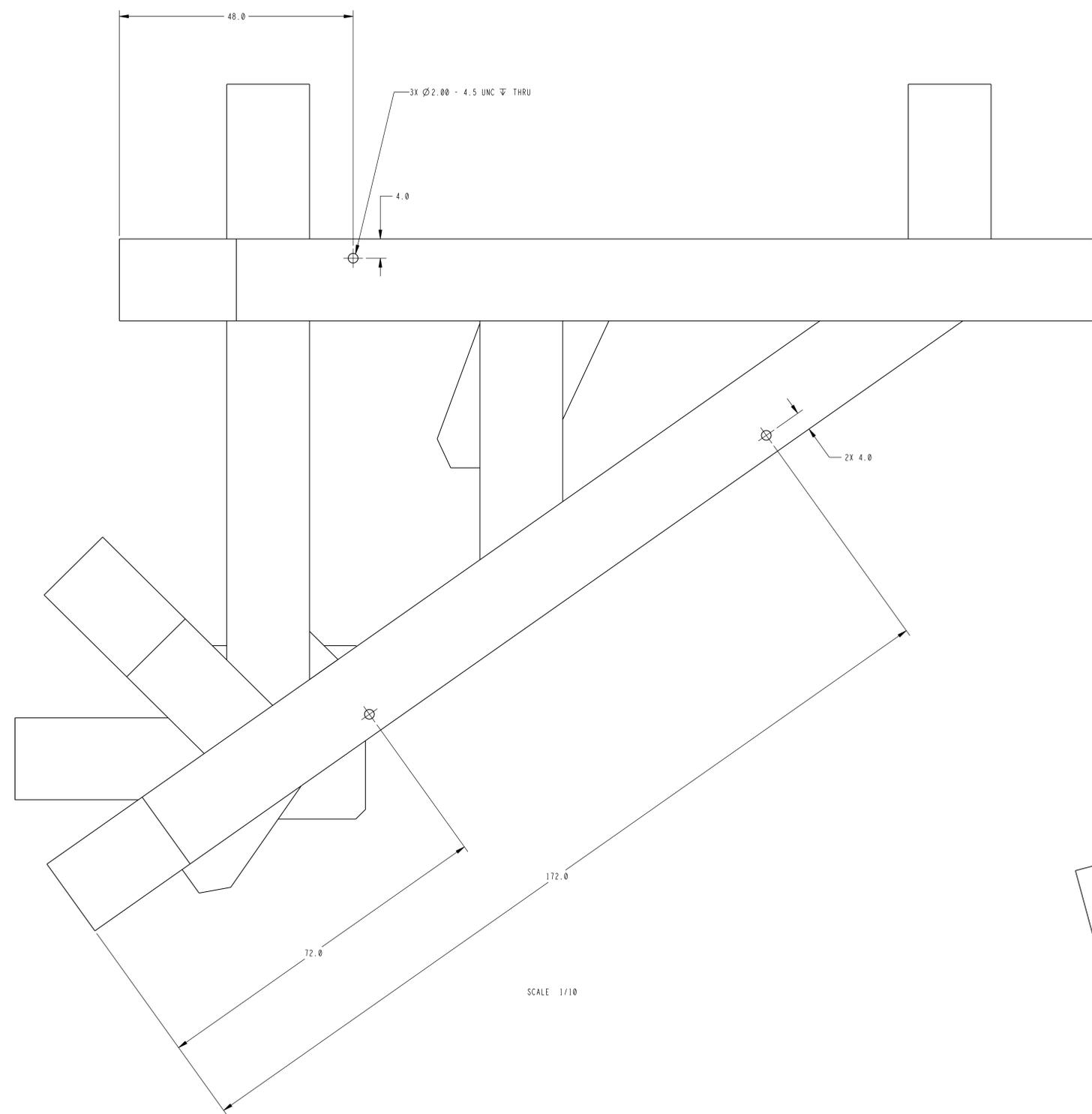
FIND NO. 1 5 7 9
 SCALE 1/1200

- PRELIMINARY -
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 02-19-14
 DATE

BASE FRAME CORNER SECTION WELDMENT 2 SLS ENGINE SECTION TEST	SPECIAL TEST EQUIPMENT DESIGN BRANCH - ET50 GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION HUNTSVILLE, ALABAMA
	90M14140 REVISION SEE SHEET 1 E 2 4

NOTICE: THIS DRAWING, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A SPECIFIC SPACE FLIGHT OPERATIONS. THE USER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ANY PART OF THE SYSTEMS AND FOR THE SAFETY OF THE OPERATIONS. THE USER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ANY PART OF THE SYSTEMS AND FOR THE SAFETY OF THE OPERATIONS. THE USER SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ANY PART OF THE SYSTEMS AND FOR THE SAFETY OF THE OPERATIONS.

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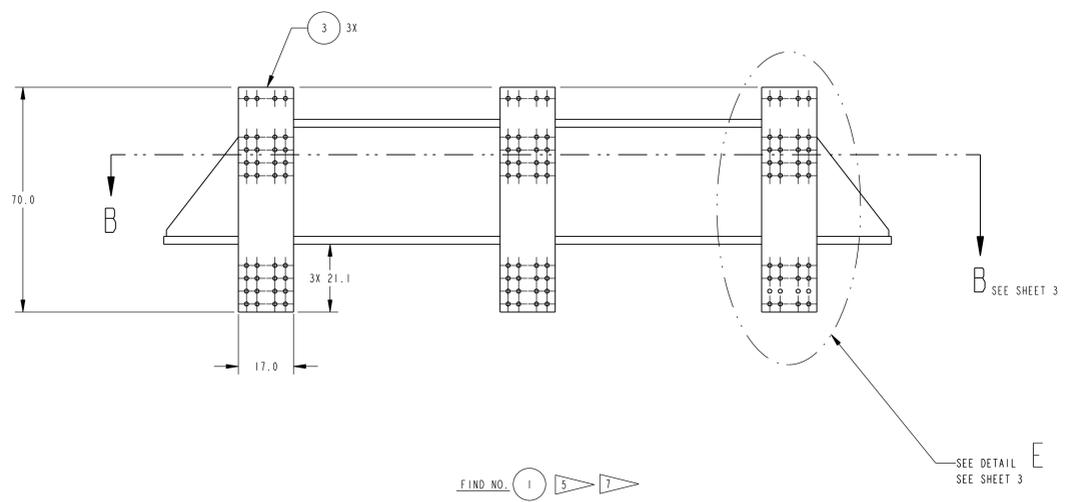
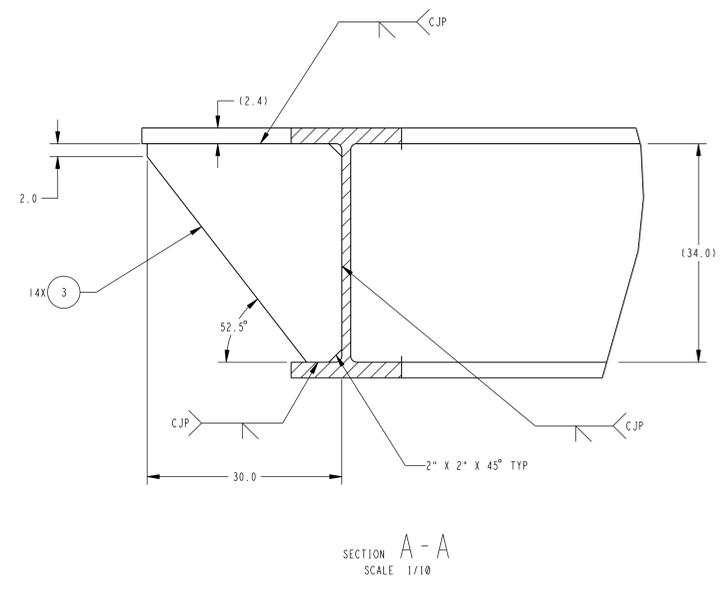
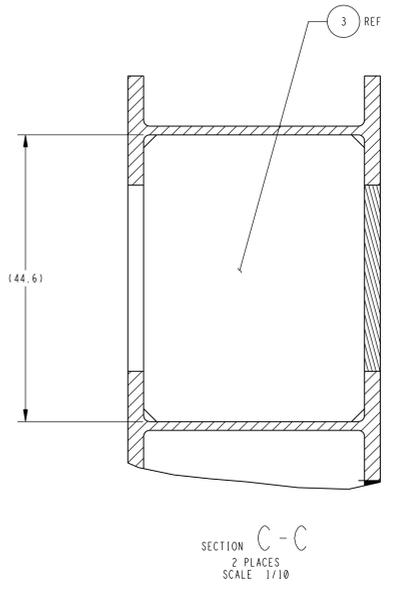
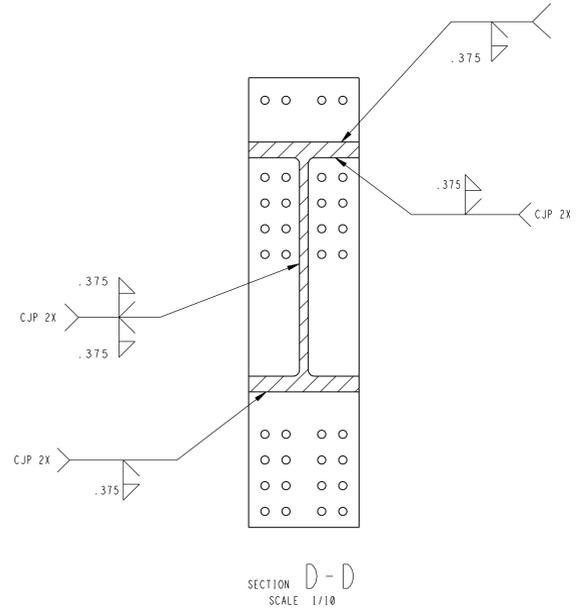
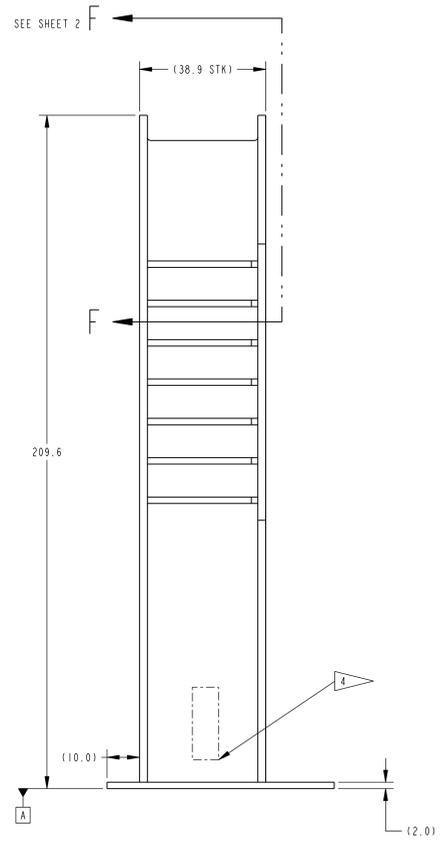
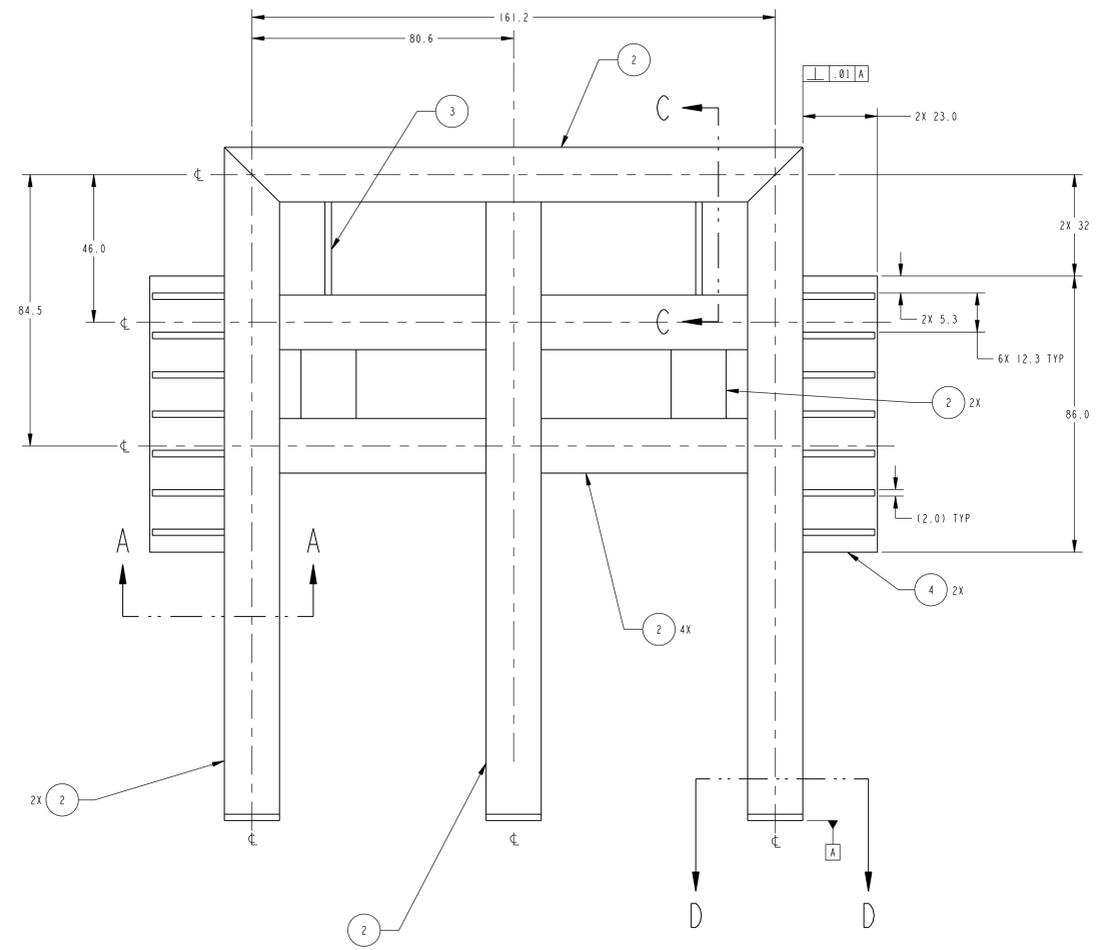


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 02-19-14
 DATE

BASE FRAME CORNER SECTION WELDMENT 2 SLS ENGINE SECTION TEST	SPECIAL TEST EQUIPMENT DESIGN BRANCH - ET50 GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION WETZEL, BLAUM	REVISION 90M14140 SEE SHT1
	SHEET 4 OF 4	DATE

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REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL

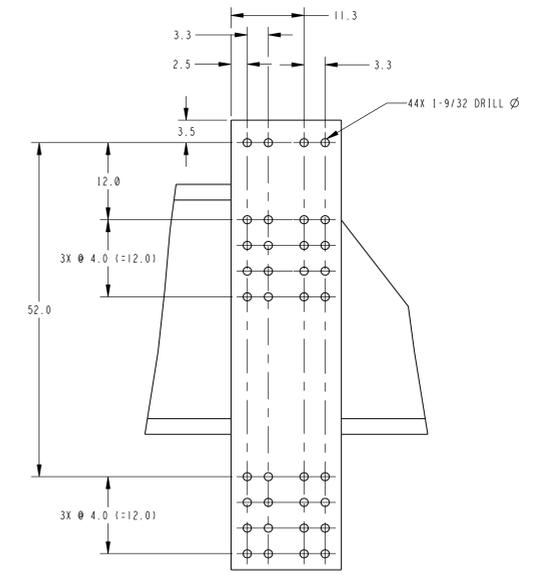
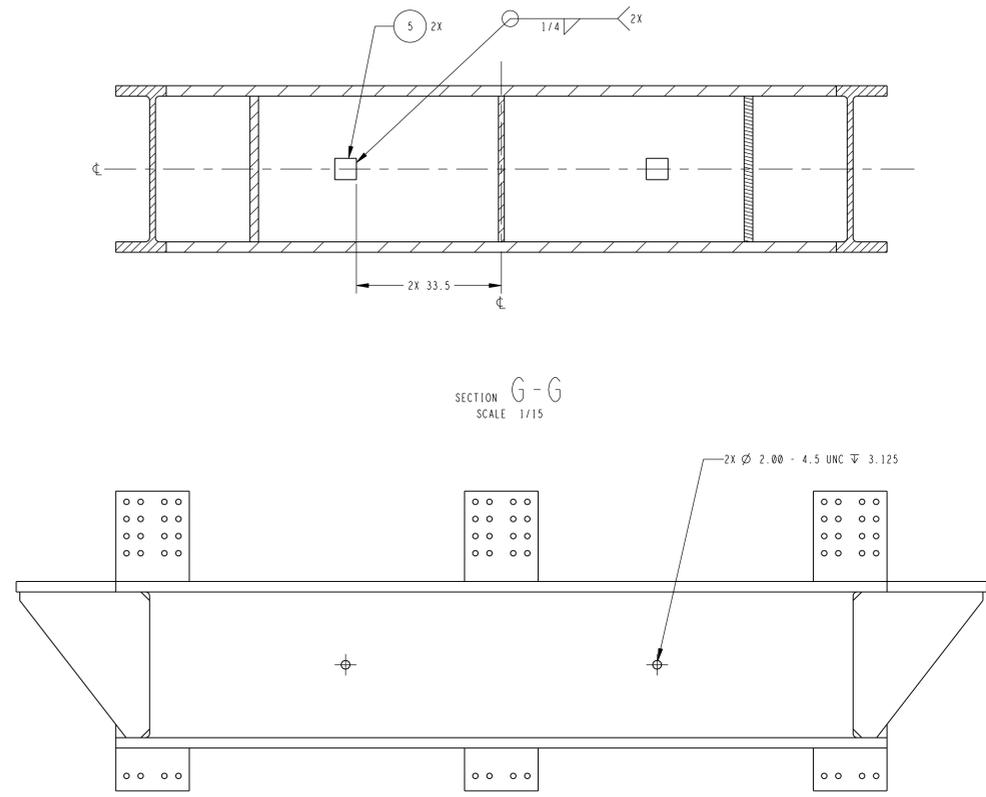


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02-18-14
DATE

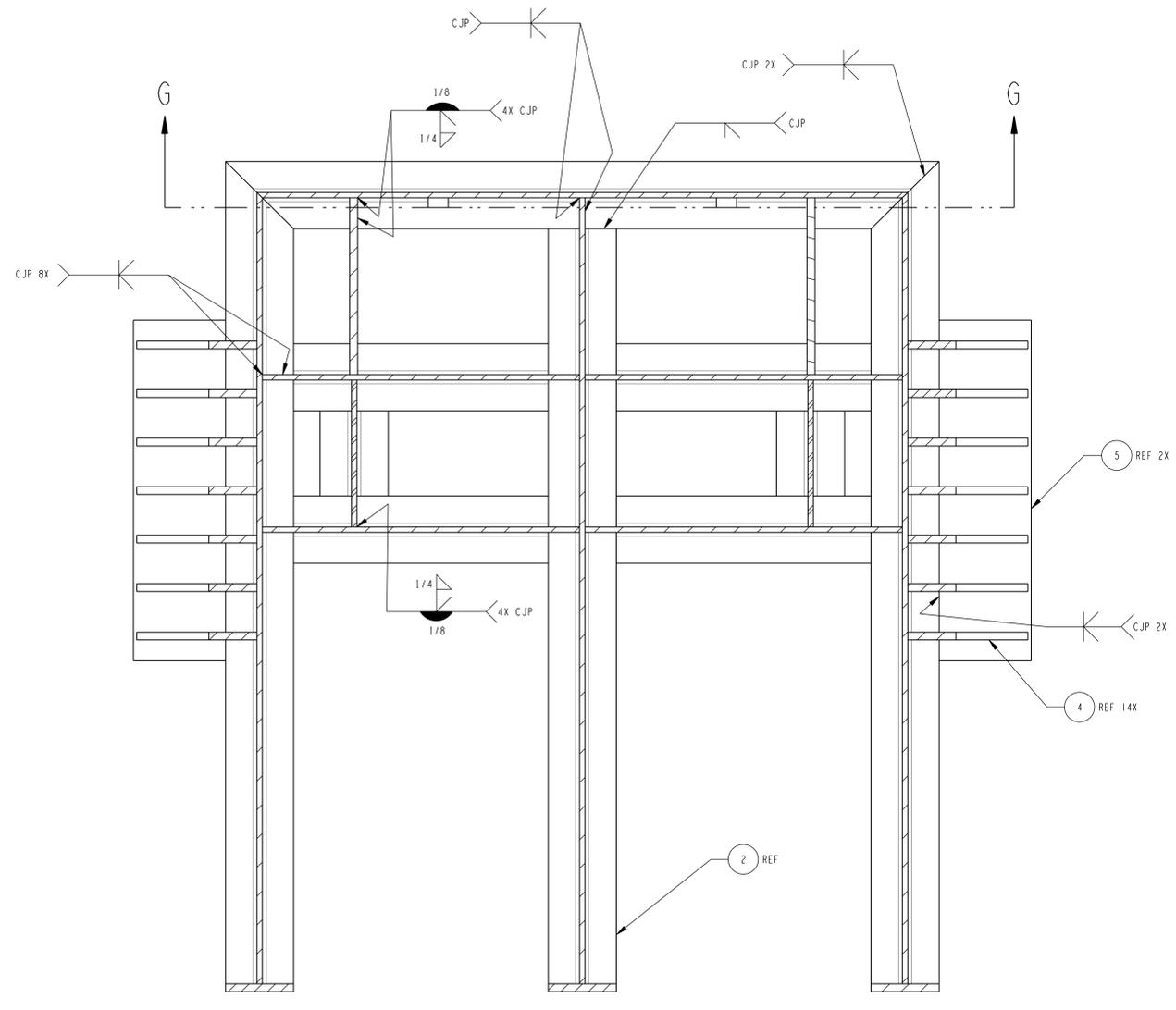
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90M14141		REVISION SEE SHEET 1	DATE 02-18-14
REV	DATE	BY	APP
E	02-18-14	2	3

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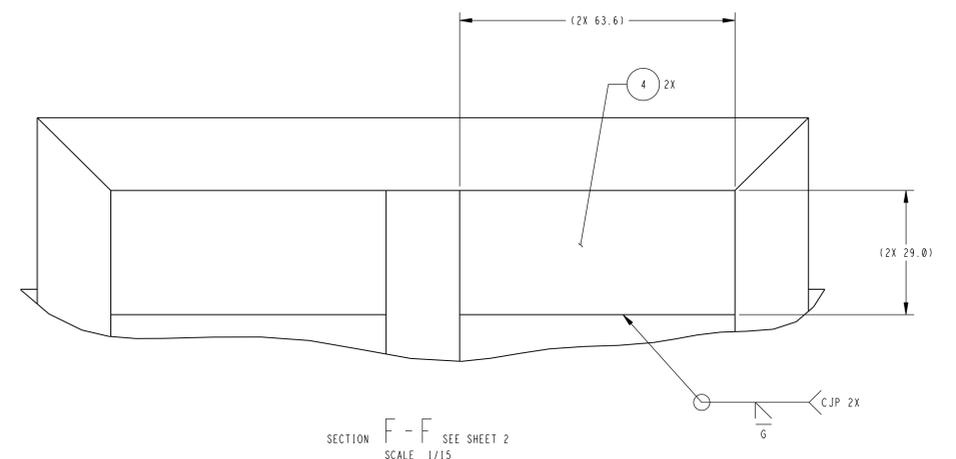
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL



DETAIL E
3X
SEE SHEET 2
SCALE 1/10



SECTION B-B SEE SHEET 2
SCALE 1/15



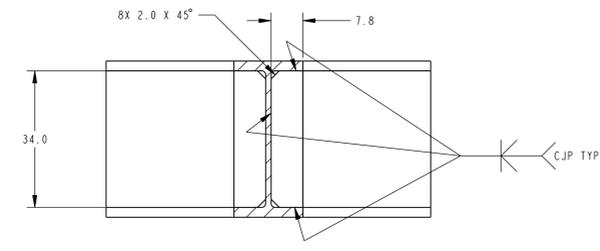
SECTION F-F SEE SHEET 2
SCALE 1/15

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02-18-14
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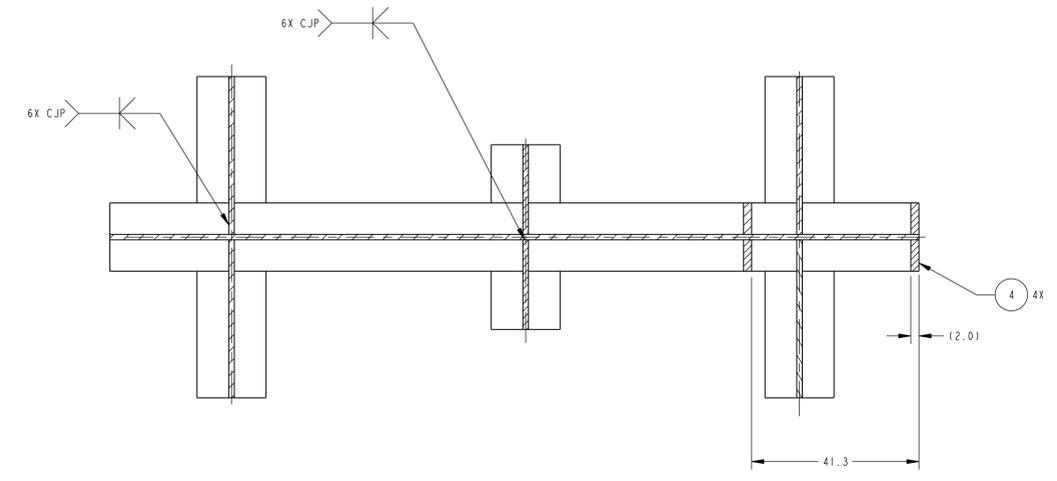
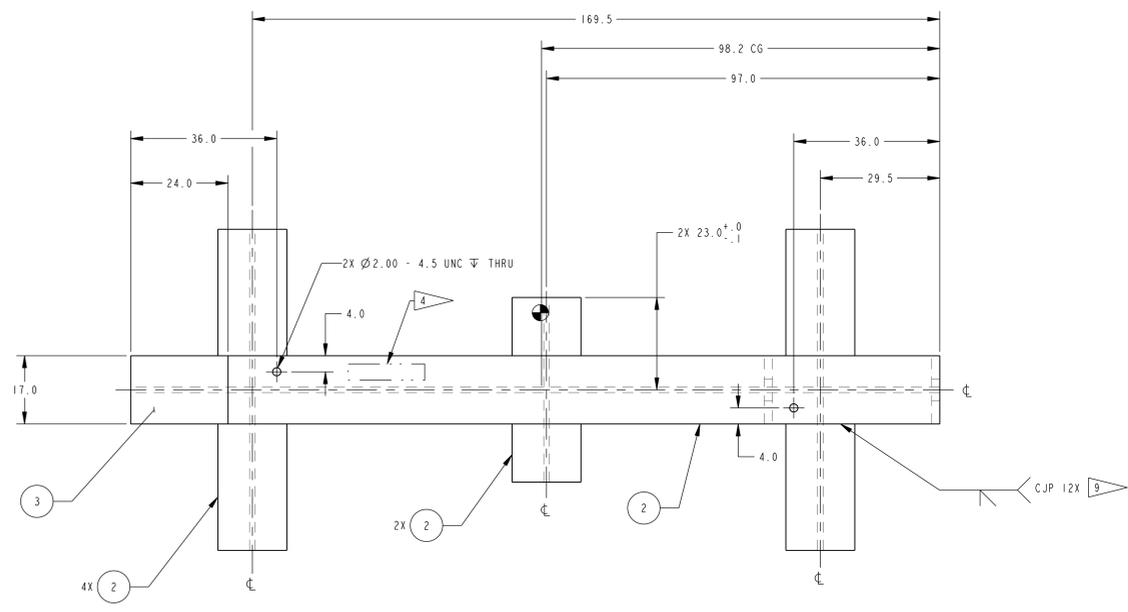
BASE FRAME SRB STANCHION WELDMENT SLS ENGINE SECTION TEST		SPECIAL TEST EQUIPMENT DESIGN BRANCH - ETSO GEORGE C. MARSHALL SPACE FLIGHT CENTER NATIONAL AERONAUTICS AND SPACE ADMINISTRATION ASTROLOGICAL BLDG.	
90M14141		REVISION SEE SHT 1	3
DATE	3		3

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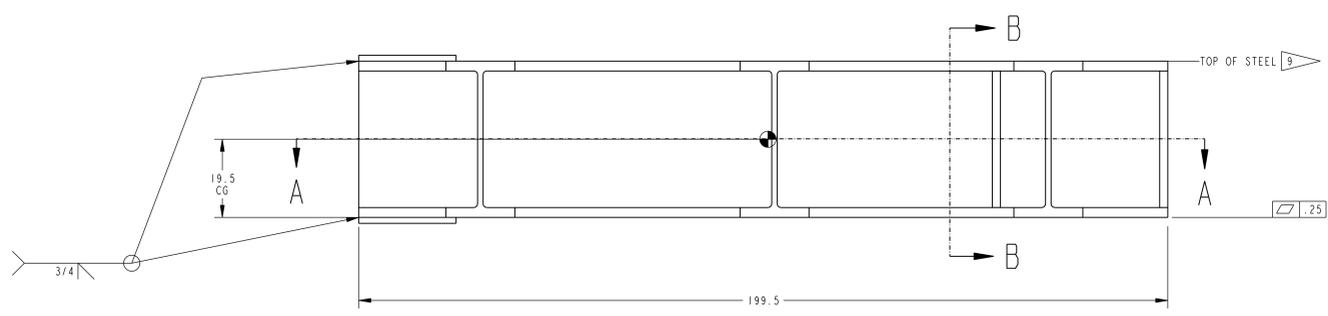
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SYM	DESCRIPTION	DATE	APPROVAL



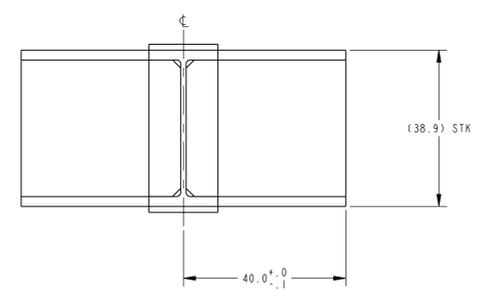
SECTION B-B
SCALE 1/16



SECTION A-A
SCALE 1/16



FIND. NO. 1
SCALE 1/16

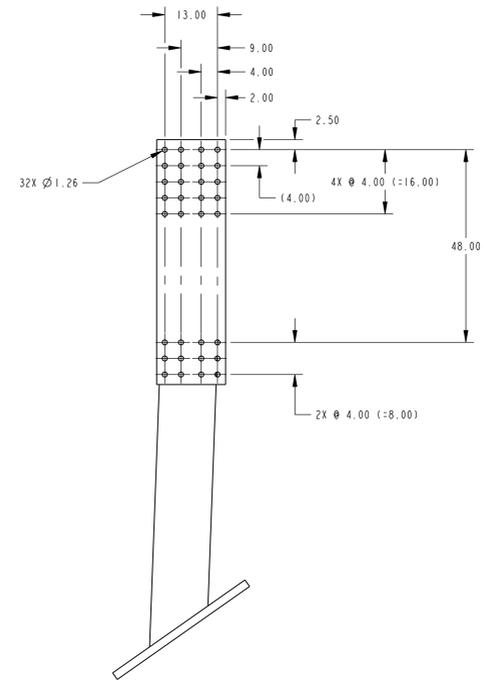
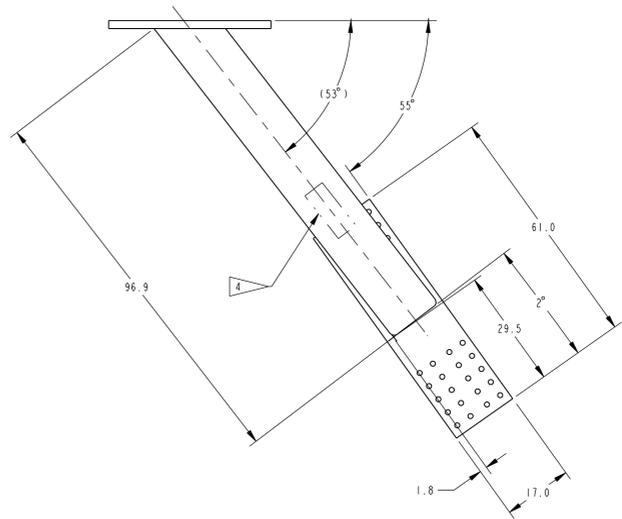


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02-20-14
DATE

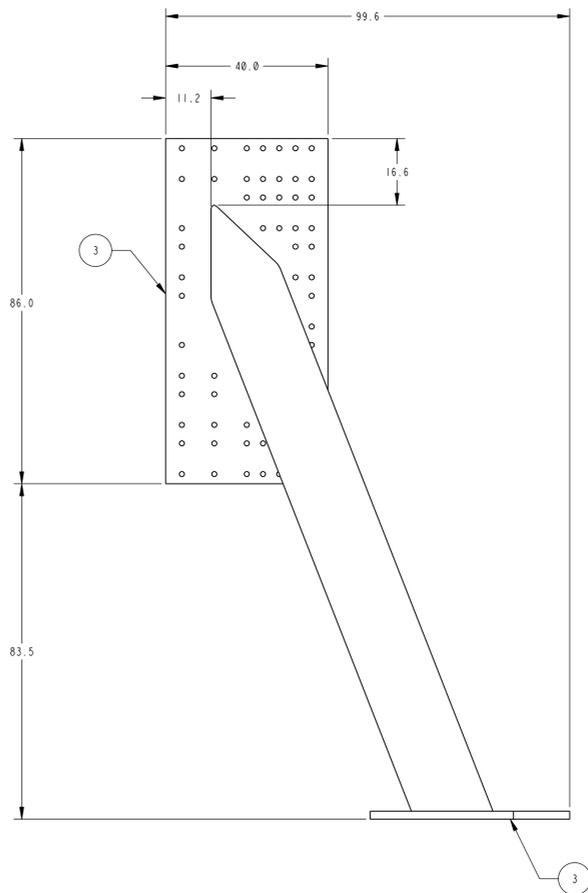
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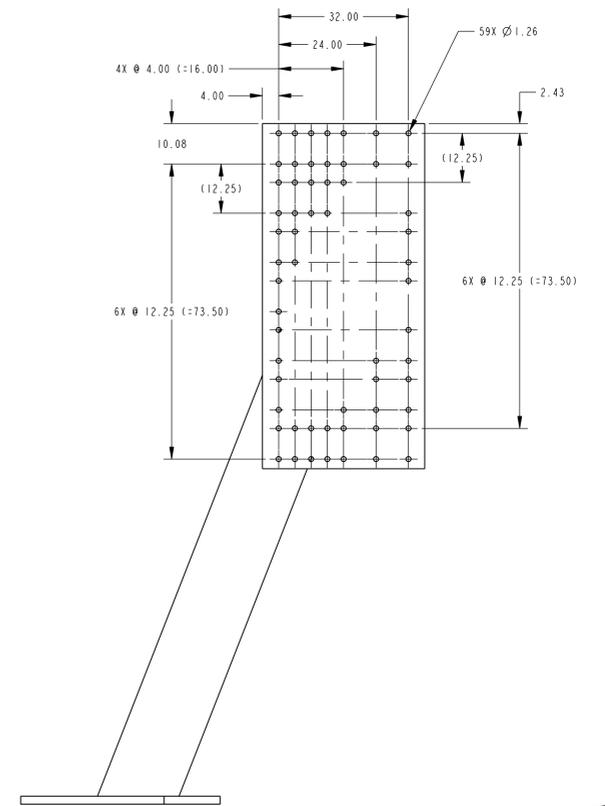
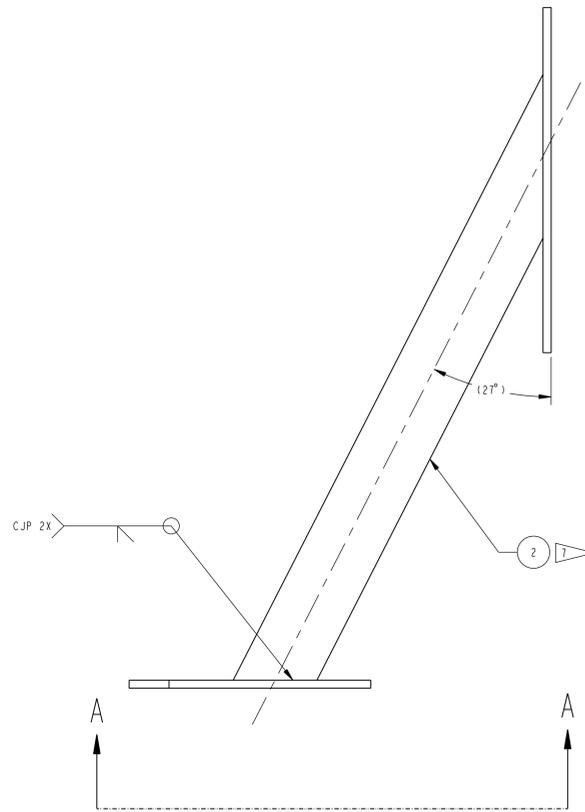
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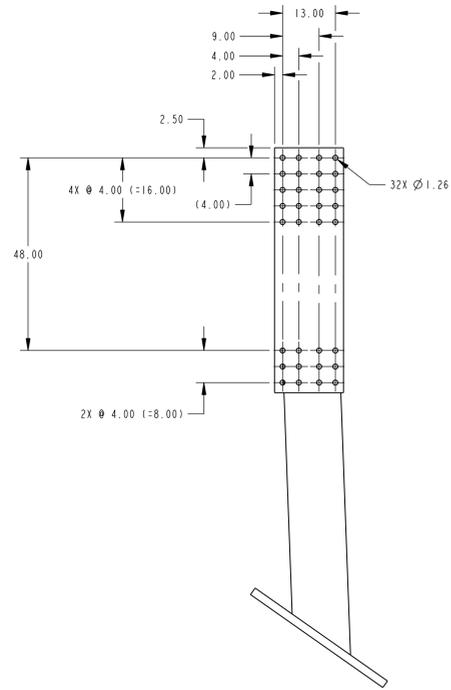
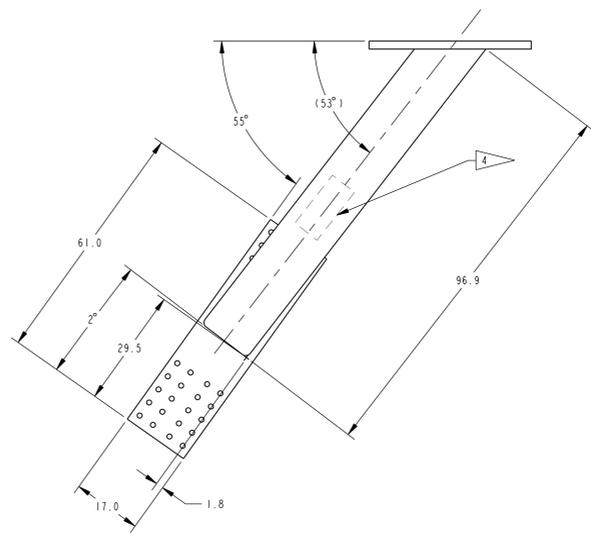


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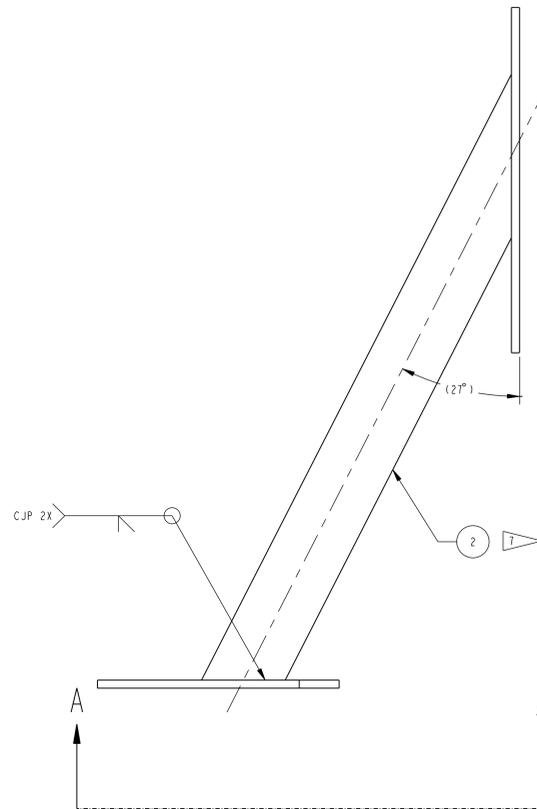
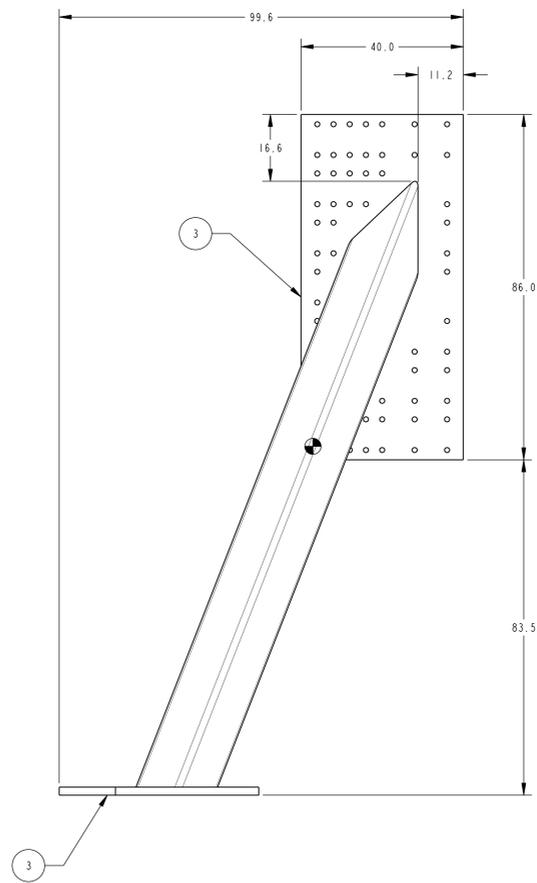
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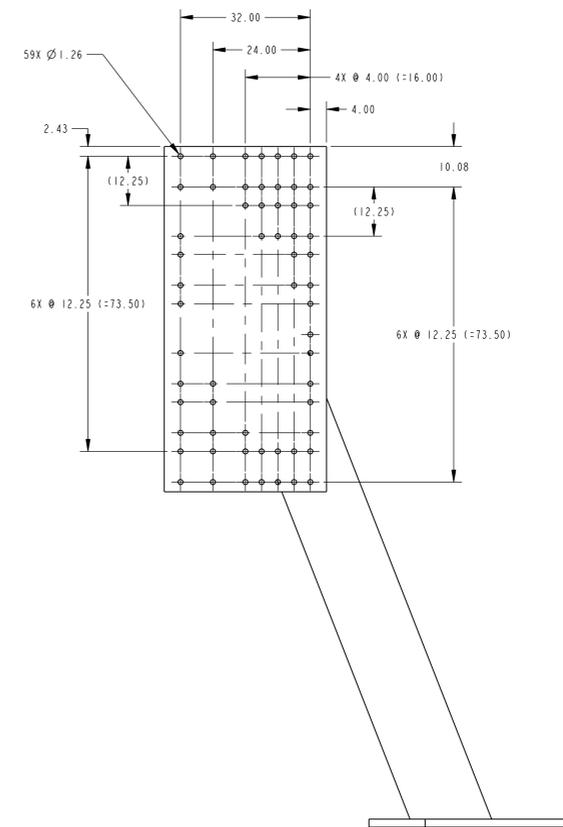
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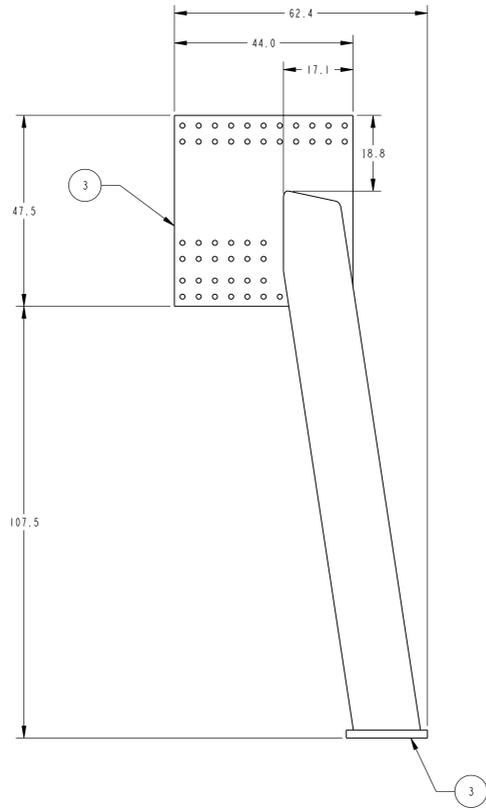
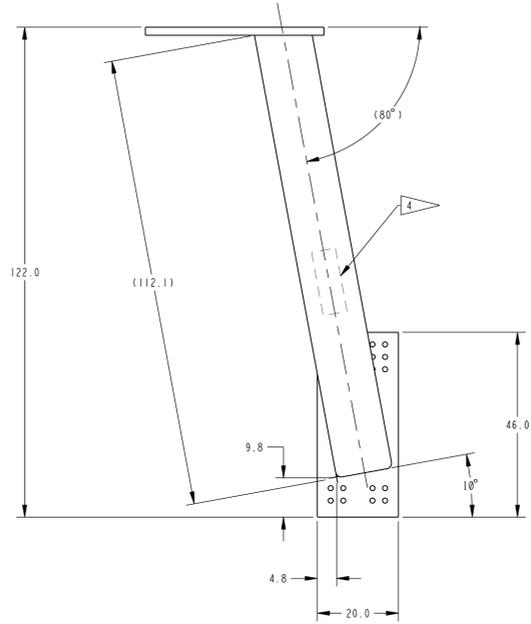


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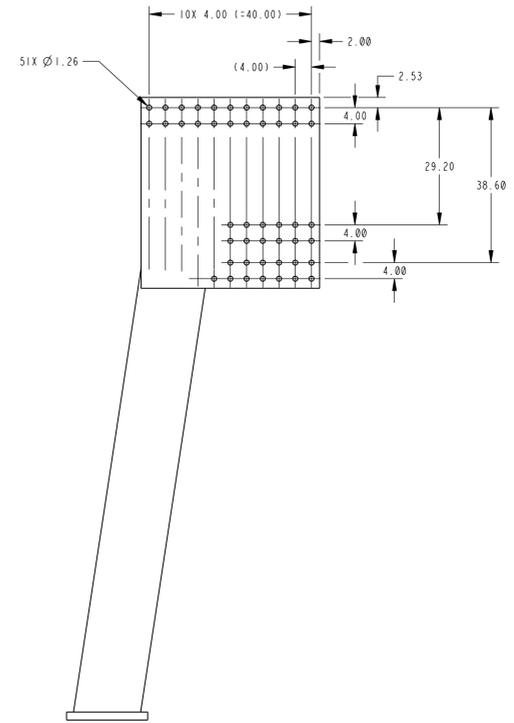
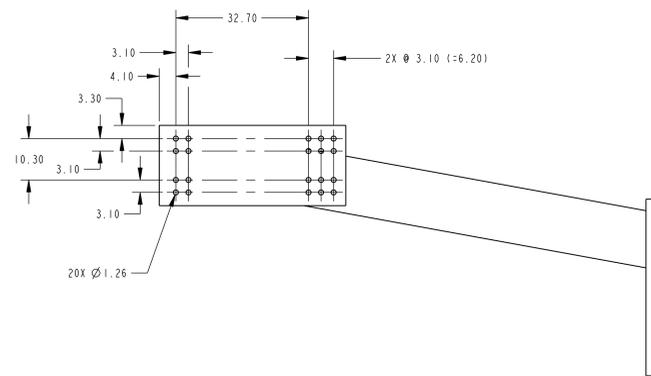
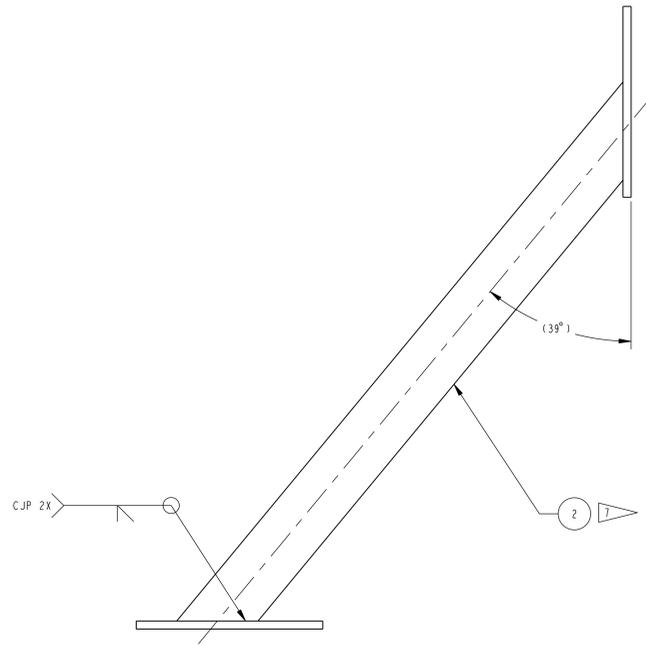
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