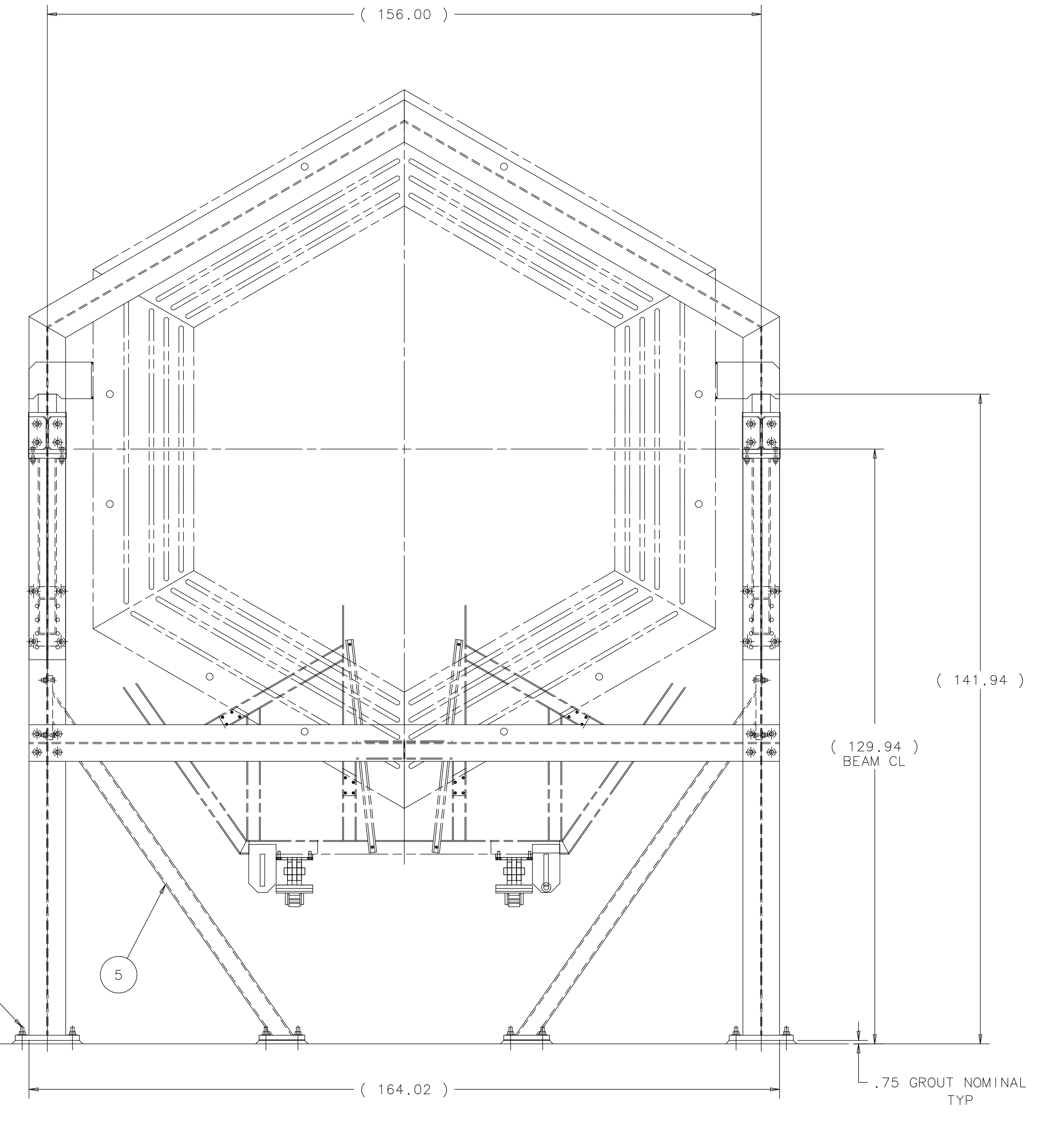
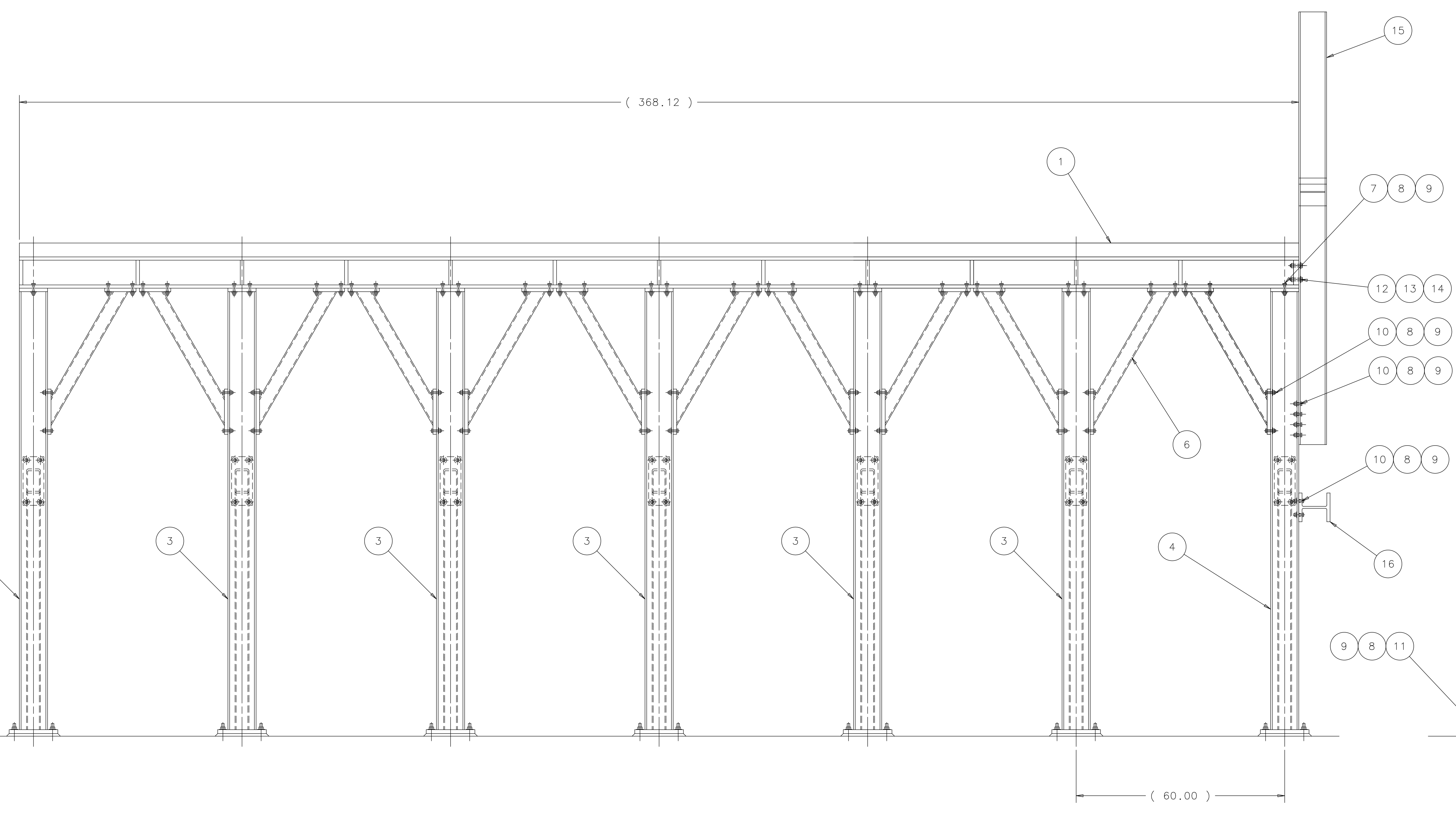
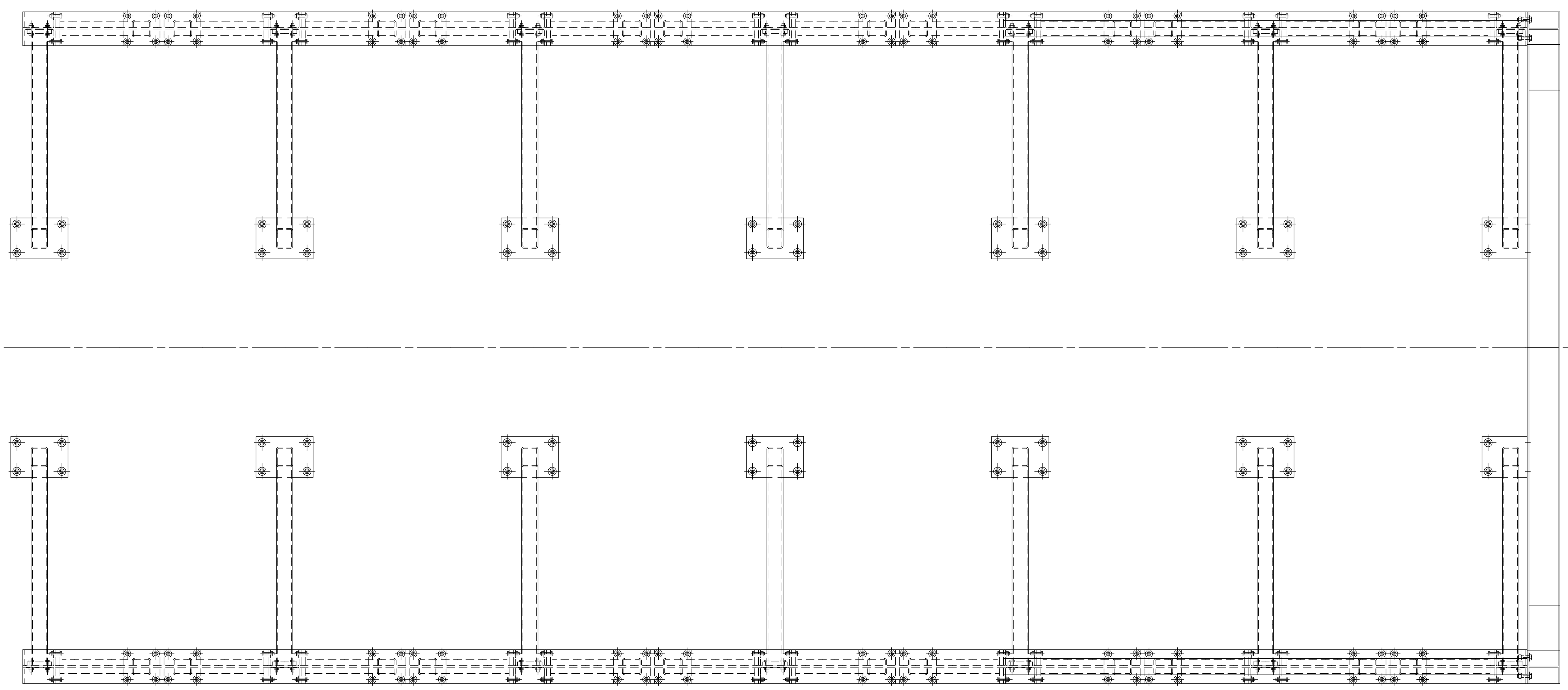


REV	DESCRIPTION	DRAWN APPROVED	DATE
1			



ITEM	PART NO.	DESCRIPTION OR SIZE	QTY.
9	COML	FLAT WASHER-5/8 SCREW SIZE STEEL	416
8	COML	5/8-11 UNC-2B HEX NUT STEEL	416
16	MD-435689	TARGET PLANE SUPPORT WELDMENT	1
15	MC-435682	BOOKEND WELDMENT	1
14	COML	FLAT WASHER-3/4 SCREW SIZE STEEL	8
13	COML	3/4-10 UNC-2B HEX NUT STEEL	8
12	COML	3/4-10 UNC-2B HEX HEAD SCREW 3.00 LG. STEEL	8
11	COML	SUPER HAS ROD 5/8 X 7 5/8, HILTI #0068659	112
10	COML	5/8-11 UNC-2A HEX HD SCREW X 2.50 LG. STEEL	224
7	COML	5/8-11 UNC-2A HEX HD SCREW X 3.00 LG. STEEL	48
6	MC-444222	DIAGONAL SUPPORT WELDMENT	24
5	MC-444164	DIAGONAL STIFFENER WELDMENT	14
4	MC-444250	BOOKEND COLUMN WELDMENT	2
3	MC-444276	COLUMN WELDMENT	10
2	MC-444185	END COLUMN WELDMENT	2
1	MD-444203	SUPPORT BEAM WELDMENT	2

**PARTS LIST**

UNLESS OTHERWISE SPECIFIED

ORIGINATOR	W. CYKO	19-DEC-2006
DRAWN	S. KINDELBERGER	30-OCT-2006
CHECKED	W. CYKO	27-DEC-2006
APPROVED	W. CYKO	27-DEC-2006

1. BREAK ALL SHARP EDGES  
2. DO NOT SCALE DRAWING  
3. DIMENSIONS BASED UPON ASME Y14.5M-1994  
4. MAX. ALL WELD SURFACES  
5. DRAWING UNITS: U.S. INCH

SEE PARTS LIST ABOVE

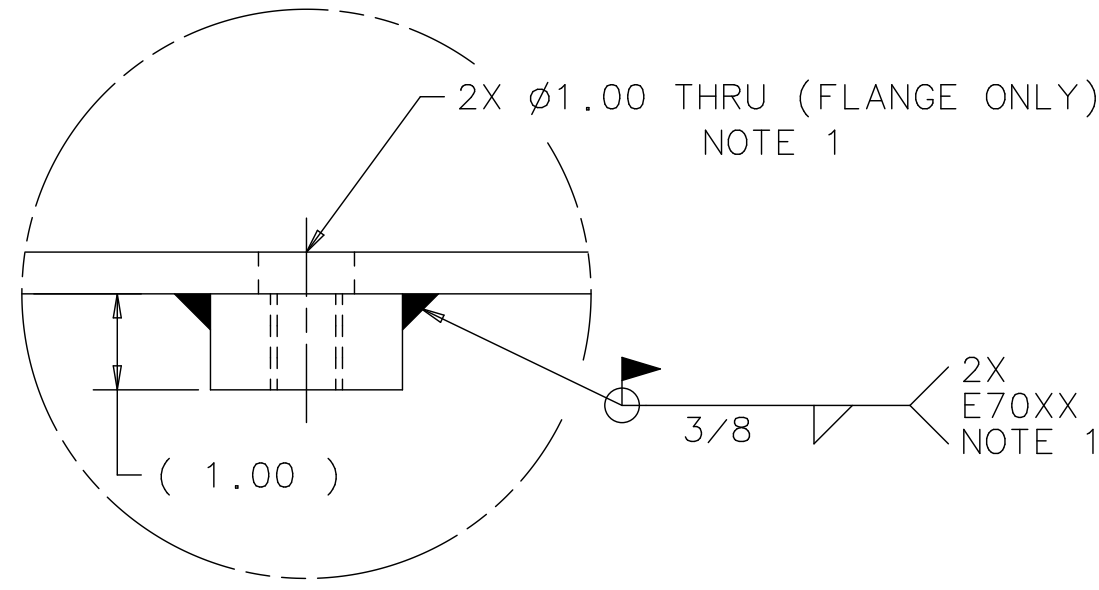
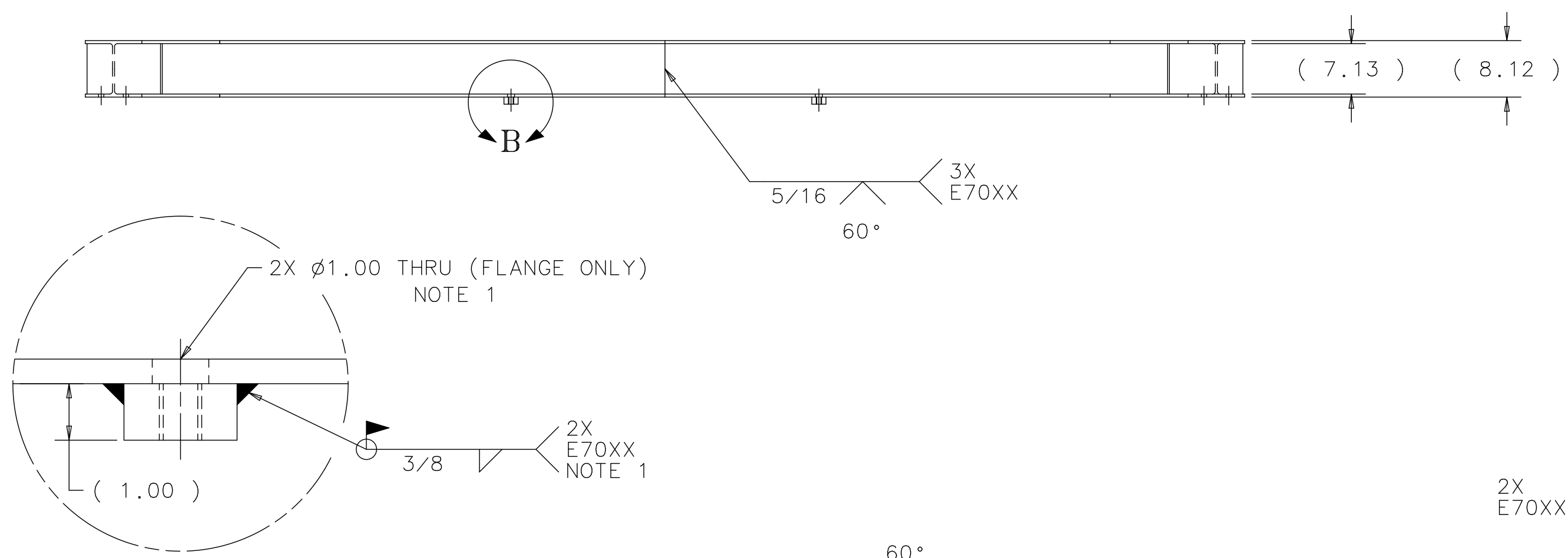
**FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL PLANE SUPPORT FRAME HEAVY BEAM FRAME ASSY**

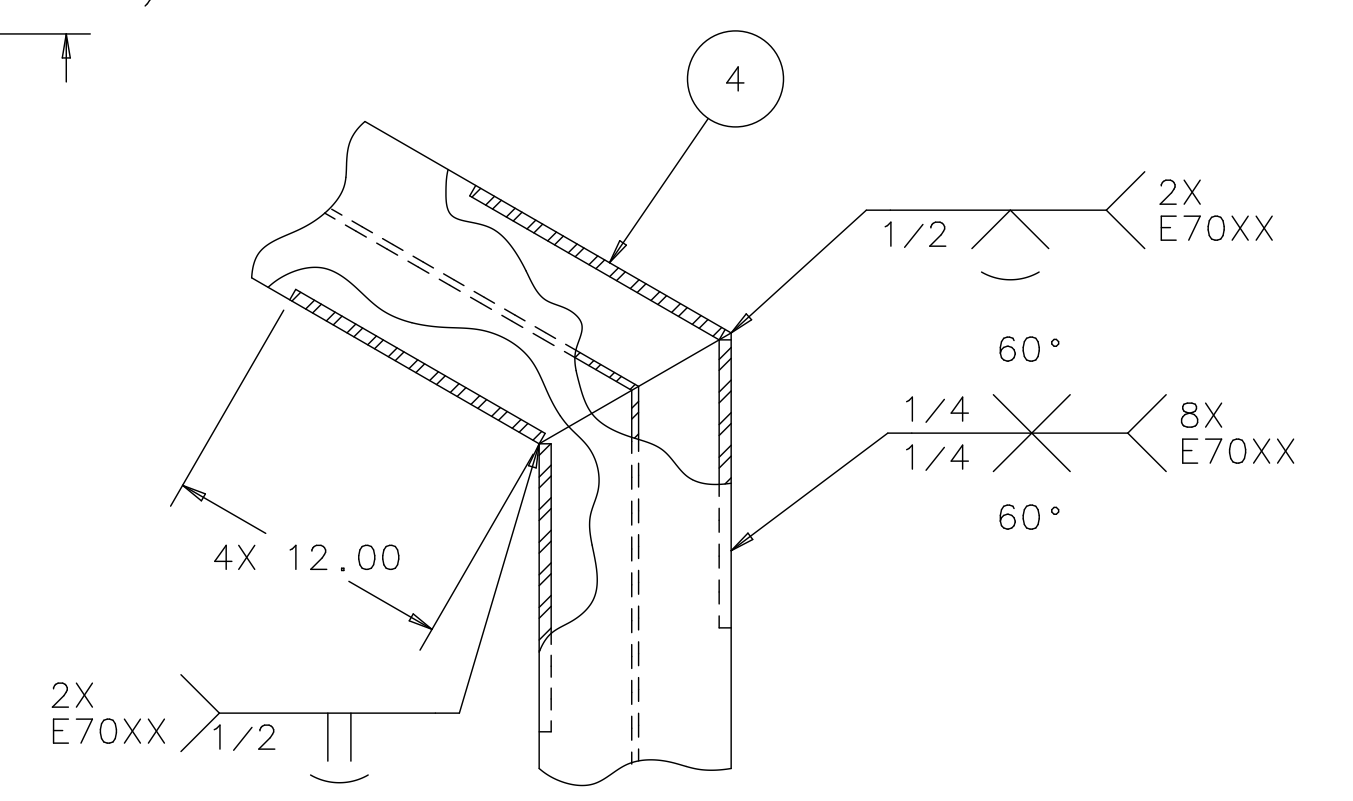
SCALE	DRAWING NUMBER	SHEET	REV
	3938.300-ME-444345	1 OF 1	

CREATED WITH: Ideos12NXSeries | GROUP: PPD/MECHANICAL DEPARTMENT

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE
A	ADDED ITEM 3 P/N, ADDED ITEM 5	G. SMITH	12-27-06
		B. CYKO	12-27-06



**DETAIL VIEW B**  
SCALE : 1/2




**DETAIL A**  
SCALE: 1/8

NOTE :  
1. FINAL LOCATION OF BOSS AND HOLE TO BE DETERMINED AT ASSEMBLY.

ITEM	PART NO.	DESCRIPTION OR SIZE	QTY.
5	MB-444273	BOSS-TARGET SUPPORT FRAME	2
4	COML	STIFFENER PLATE-ASTM A36 STEEL 12 X 7.13 X .50 THICK	8
3	MC-435687	DIAGONAL BEAM, BOOKEND	2
2	MC-435685	L.H. COLUMN	1
1	MC-435683	R.H. COLUMN	1

PARTS LIST			
UNLESS OTHERWISE SPECIFIED		ORIGINATOR	J.KILMER
.XX	.XXX	DRAWN	W.CYKO
± .01	± ---	CHECKED	W.CYKO
1. BREAK ALL SHARP EDGES --- MAX.		APPROVED	J.KILMER
2. DO NOT SCALE DRAWING.		USED ON	
3. DIMENSIONS BASED UPON ASME Y14.5M-1994		ME-444204	
4. MAX. ALL MACH. SURFACES		MATERIAL	
5. DRAWING UNITS: U.S. INCH		SEE PARTS LIST ABOVE	


**FERMI NATIONAL ACCELERATOR LABORATORY**  
 UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
 PLANE SUPPORT FRAME  
 BOOKEND WELDMENT**

SCALE 1/16 & AS NOTED	DRAWING NUMBER <b>3938.330-MC-435682</b>	SHEET 1 OF 1	REV A
CREATED WITH : Ideas12NXSeries		GROUP: PPD/MECHANICAL DEPARTMENT	

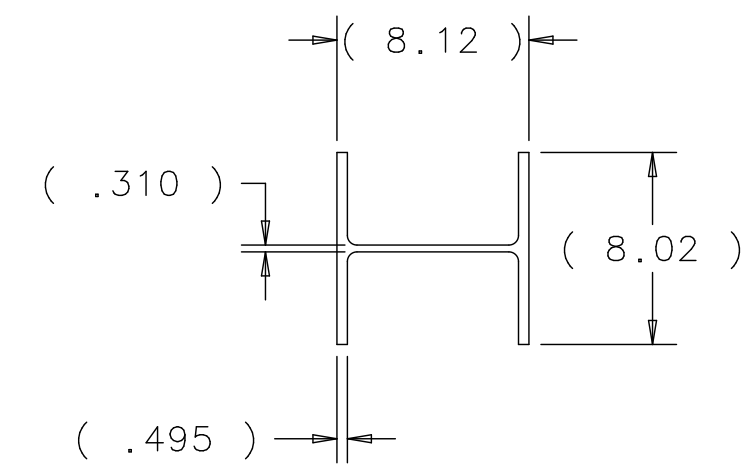
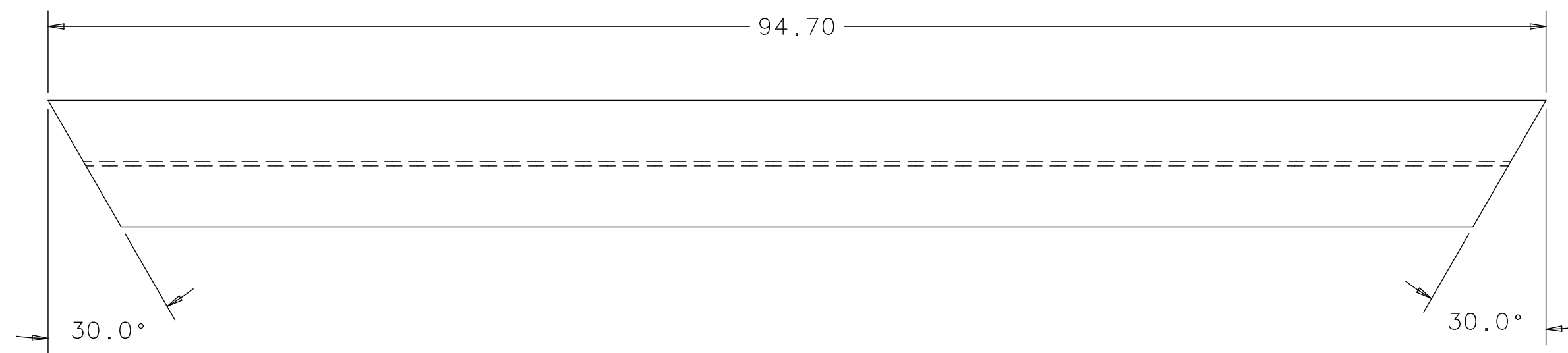
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3

2

1

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	J.KILMER	06-JAN-2006
.XX	.XXX	ANGLES	DRAWN	W.CYKO	06-JAN-2006
± .03	± ---	± 1°	CHECKED	J.RAUCH	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES $\sqrt{250}$ 5. DRAWING UNITS: INCHES			APPROVED	J.RAUCH	27-DEC-2006
			USED ON		MC-435682
			MATERIAL	W BEAM, W8 X 35.0 LB., CARBON SL. ASTM A36	

 **FERMI NATIONAL ACCELERATOR LABORATORY**  
 UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
 PLANE SUPPORT FRAME  
 DIAGONAL BEAM, BOOKEND**

SCALE	DRAWING NUMBER	SHEET	REV
1/8	3938.330-MC-435687	1 OF 1	
CREATED WITH : Ideas12NXSeries		GROUP: PPD/MECHANICAL DEPARTMENT	

4

3

2

1

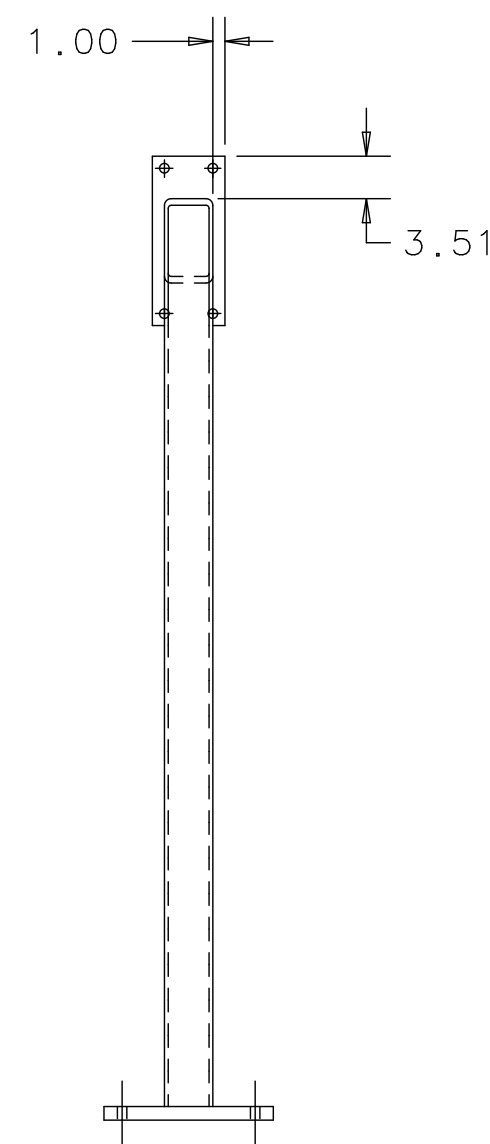
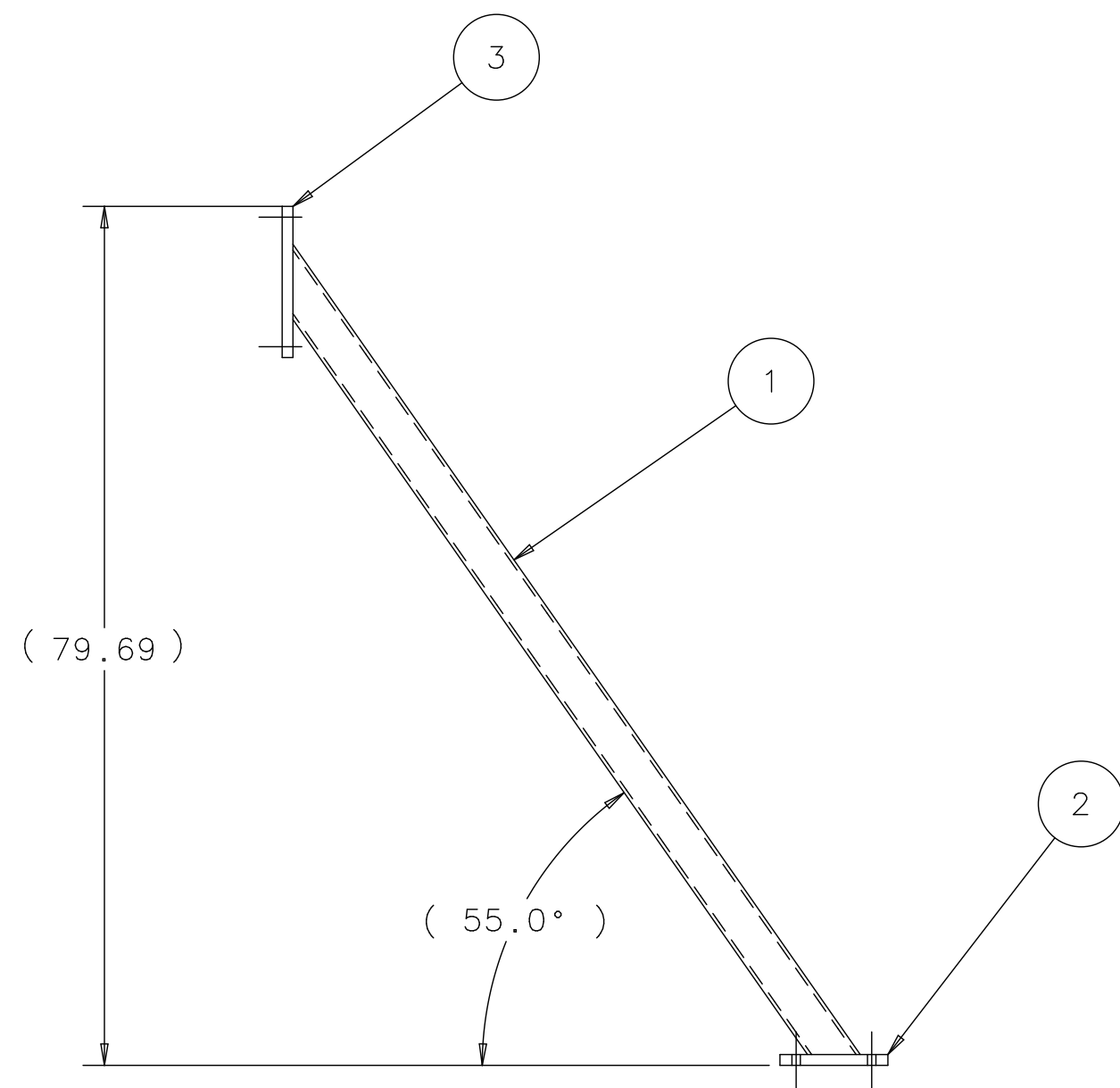
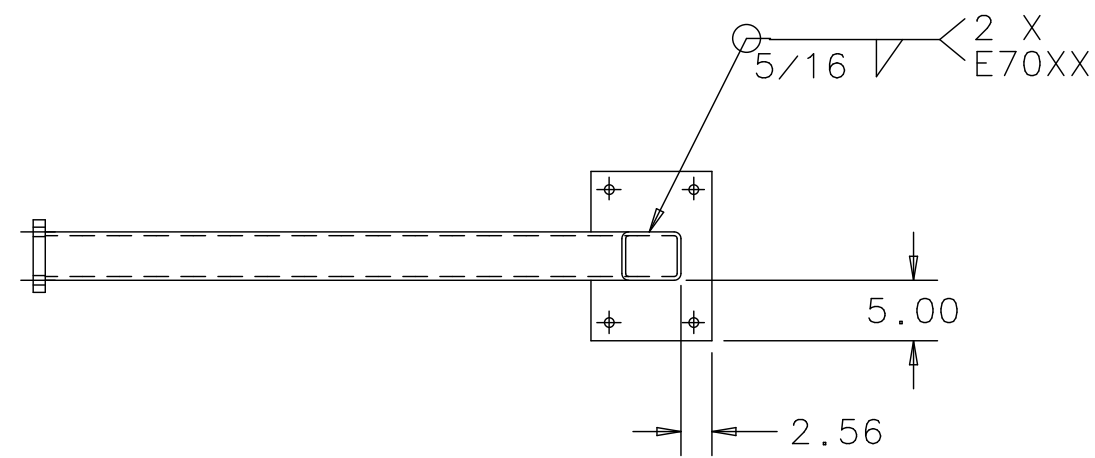
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3

2

1

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



3	MB-444227	DIAGONAL STIFFENER COLUMN PLATE	1
2	MB-444225	DIAGONAL STIFFENER BASE PLATE	1
1	MB-444226	DIAGONAL STIFFENER TUBE	1

UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	23-OCT-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	23-OCT-2006
± .03	± ---	± 1°	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON	ME-444204 & ME-444345	
			MATERIAL	SEE PARTS LIST ABOVE	

**FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
PLANE SUPPORT RAME  
DIAGONAL STIFFENER WELDMENT**

SCALE	DRAWING NUMBER	SHEET	REV
1/16	3938.300-MC-444164	1 OF 1	

CREATED WITH : Ideas12NXSeries GROUP: PPD/MECHANICAL DEPARTMENT

4

3

2

1

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE

D

D

C

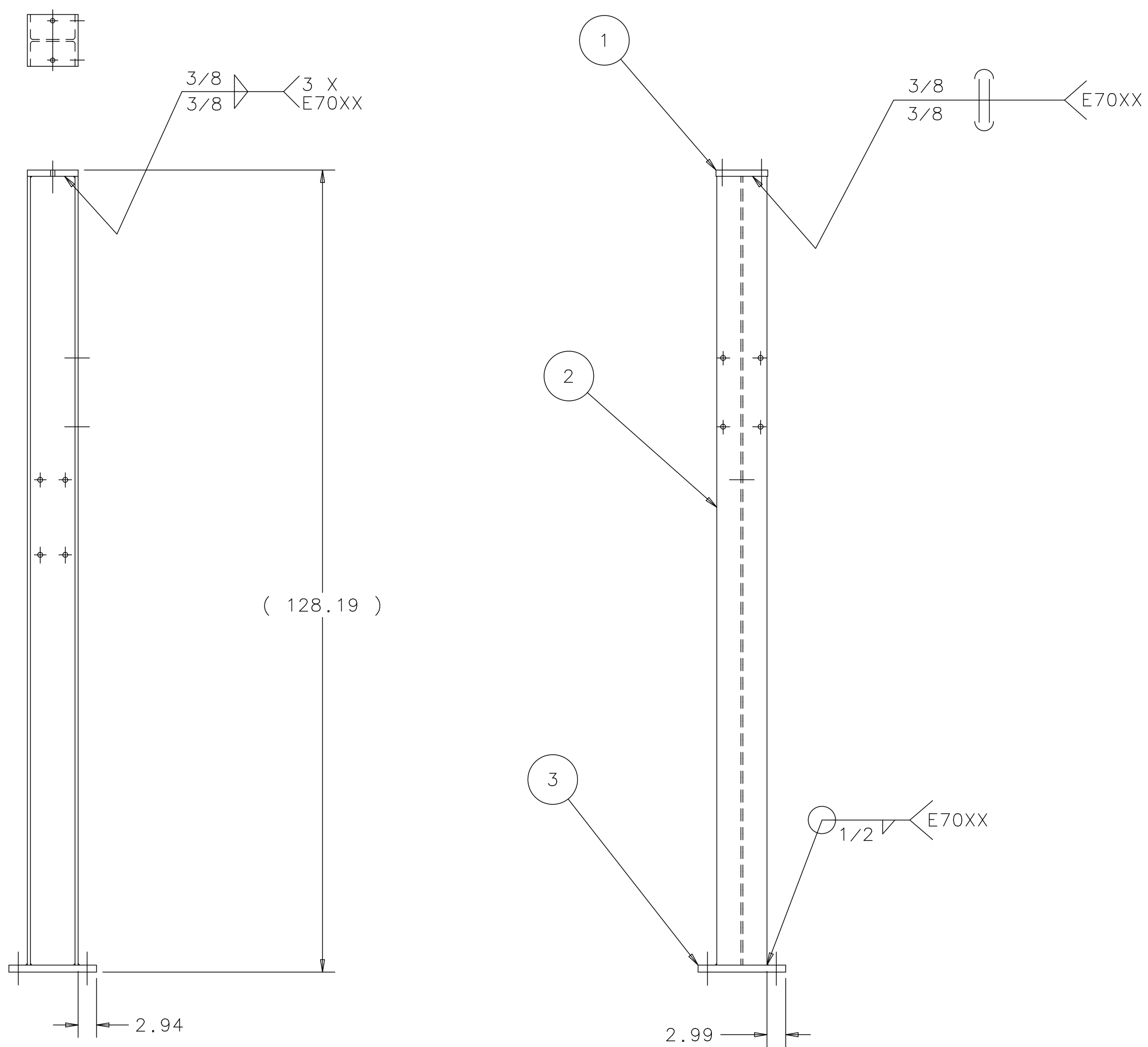
C

B

B

A

A



3	MB-444238	SUPPORT COLUMN BASE PLATE	1
2	MC-444249	END SUPPORT COLUMN	1
1	MB-444237	SUPPORT COLUMN TOP PLATE END	1

UNLESS OTHERWISE SPECIFIED		ORIGINATOR	W.CYKO	30-OCT-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER
± .01	± ---	± ---	CHECKED	W.CYKO
1. BREAK ALL SHARP EDGES .015 MAX.		APPROVED	W.CYKO	27-DEC-2006
2. DO NOT SCALE DRAWING.		USED ON		
3. DIMENSIONS BASED UPON ASME Y14.5M-1994		ME-444204 & ME-444345		
4. MAX. ALL MACH. SURFACES		MATERIAL		
5. DRAWING UNITS: U.S. INCH		SEE PARTS LIST ABOVE		

 **FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL**  
**SUPPORT FRAME PLANE**  
**END COLUMN WELDMENT**

SCALE	DRAWING NUMBER	SHEET	REV
1/16	3938.300-MC-444185	1 OF 1	
CREATED WITH : Ideas12NXSeries		GROUP: PPD/MECHANICAL DEPARTMENT	

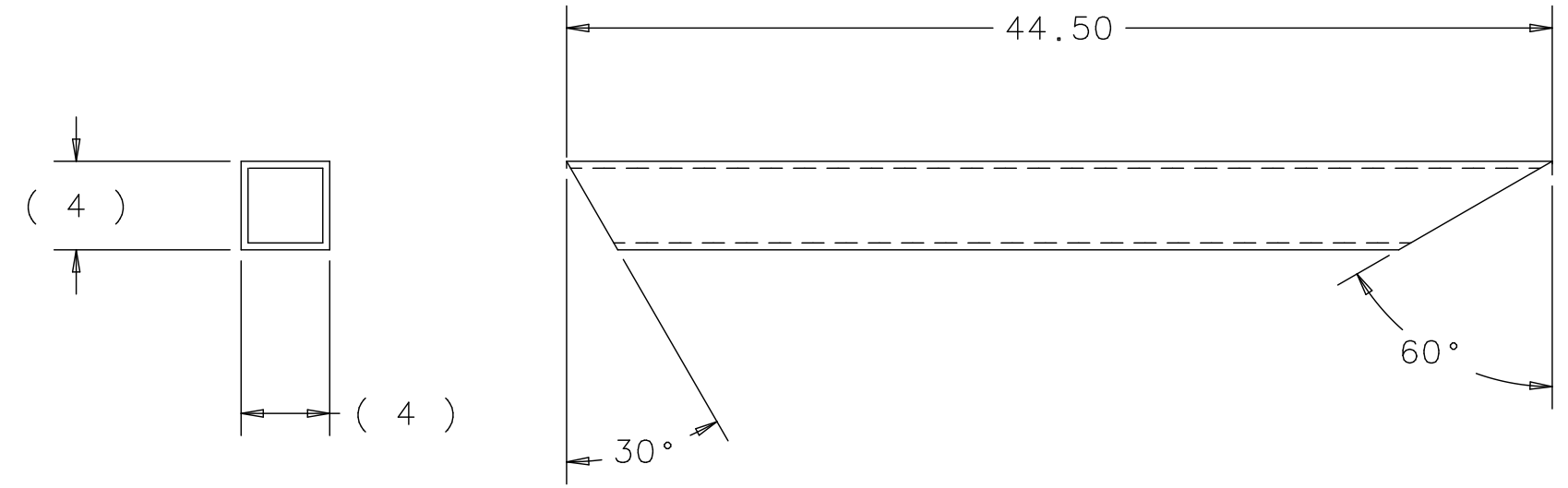
4

3

2

1

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	07-NOV-2006
.XX	.XXXX	ANGLES	DRAWN	S.KINDELBERGER	07-NOV-2006
± .03	± ---	± 1°	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250 / 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON		
			MATERIAL		
			SQUARE STRUCTURAL TUBING 4 x 4 x 5/16 CARBON STEEL A500 GR. B		

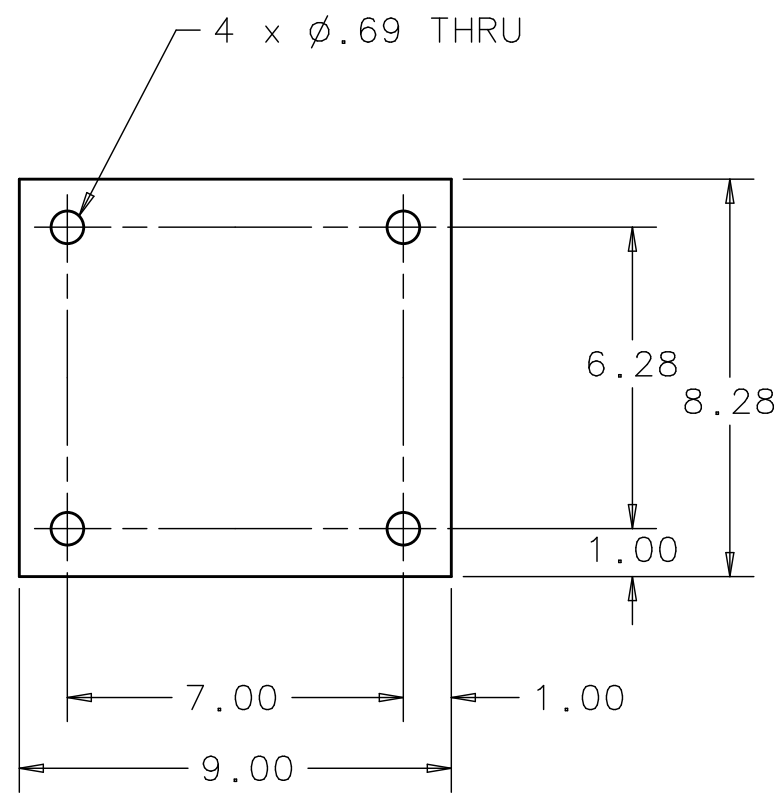
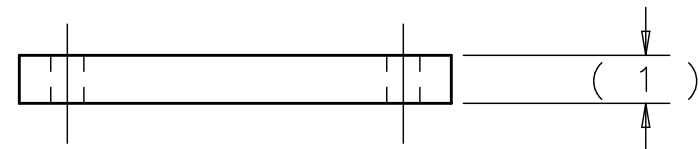

**FERMI NATIONAL ACCELERATOR LABORATORY**  
 UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
 PLANE SUPPORT FRAME  
 DIAGONAL SUPPORT TUBE**

SCALE	DRAWING NUMBER	SHEET	REV
1:8	3938.300-MB-444219	1 OF 1	

CREATED WITH : Ideas12NXSeries    GROUP: PPD/MECHANICAL DEPARTMENT

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	07-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	07-NOV-2006
± .01	± ---	± ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250 / 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON		MC-444222
			MATERIAL		PLATE 1" THK. CARBON STEEL A36

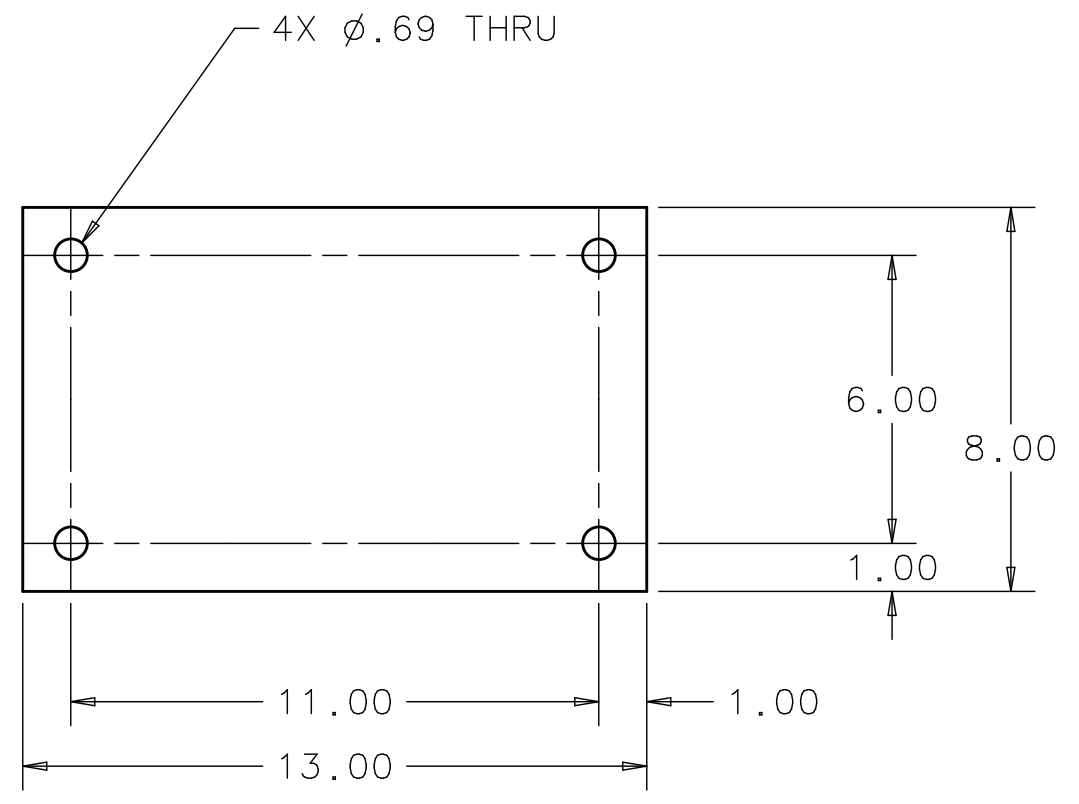
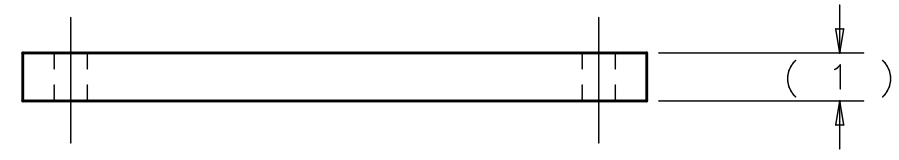
 **FERMI NATIONAL ACCELERATOR LABORATORY**  
 UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
 PLANE SUPPORT FRAME  
 DIAGONAL SUPPORT BEAM PLATE**


SCALE	DRAWING NUMBER	SHEET	REV
1:4	3938.300-MB-444220	1 OF 1	

CREATED WITH : Ideas12NXSeries GROUP: PPD/MECHANICAL DEPARTMENT

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	07-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	07-NOV-2006
$\pm$ .01	$\pm$ ---	$\pm$ ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250 / $\sqrt{\quad}$ 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON		
			MATERIAL		
			PLATE 1" THK. CARBON STEEL A36		

 **FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

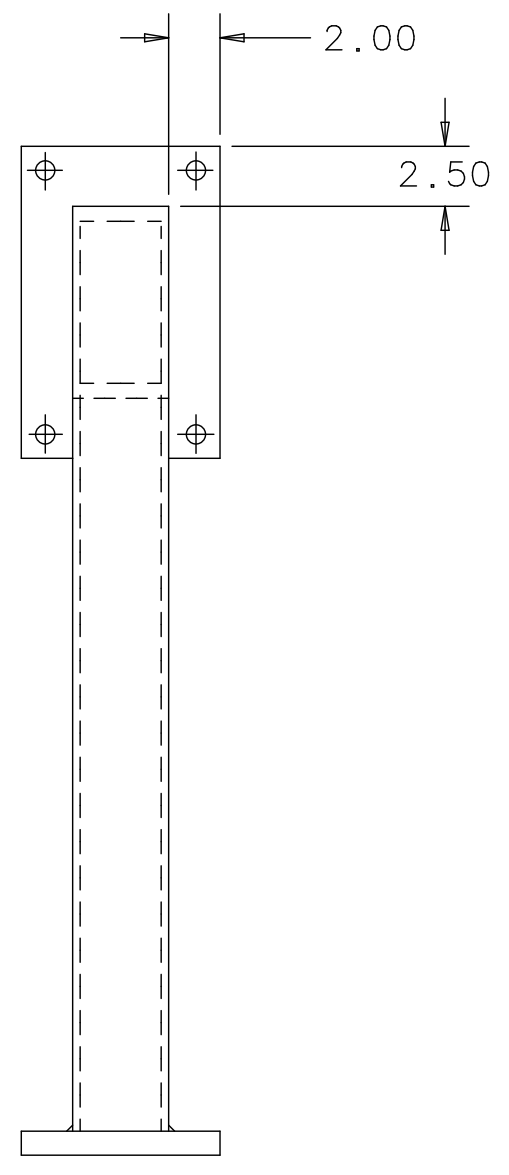
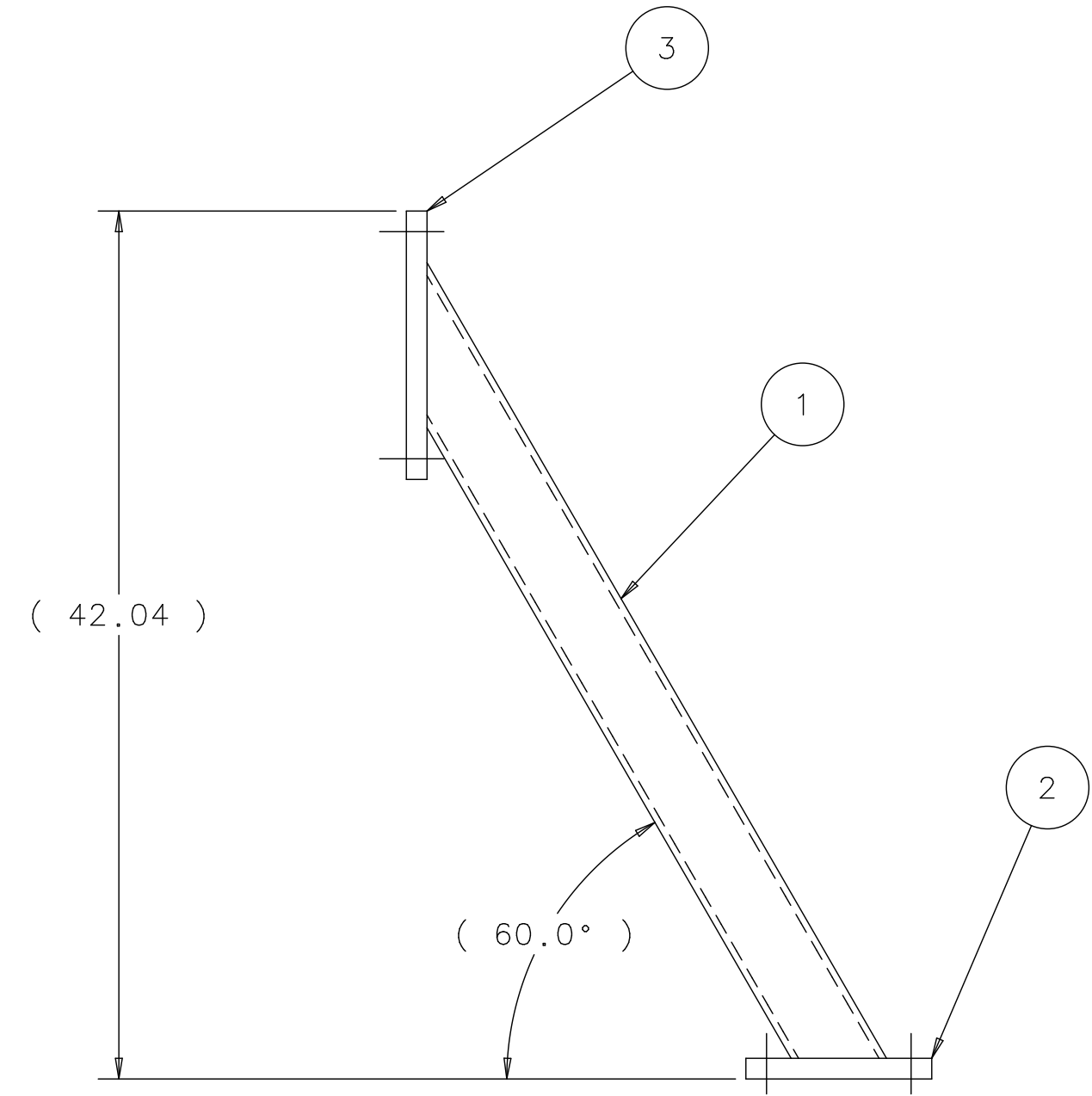
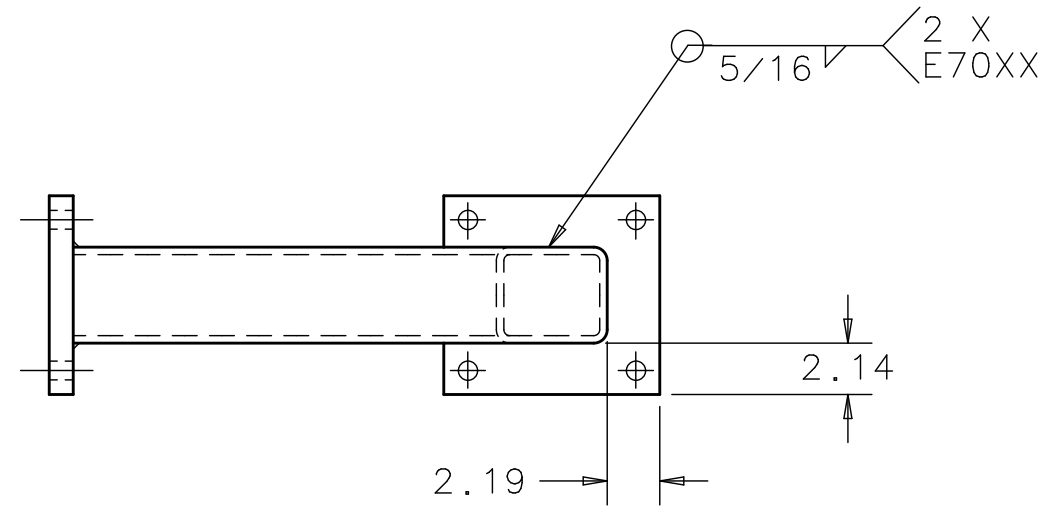
**MINERVA-DETECTOR-MECHANICAL  
PLANE SUPPORT FRAME  
DIAGONAL SUPPORT COLUMN PLATE**

SCALE	DRAWING NUMBER	SHEET	REV
1:4	3938.300-MB-444221	1 OF 1	

CREATED WITH : Ideas12NXSeries GROUP: PPD/MECHANICAL DEPARTMENT



REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



3	MB-444221	DIAGONAL SUPPORT COLUMN PLATE	1
2	MB-444220	DIAGONAL SUPPORT BEAM PLATE	1
1	MB-444219	DIAGONAL SUPPORT TUBE	1

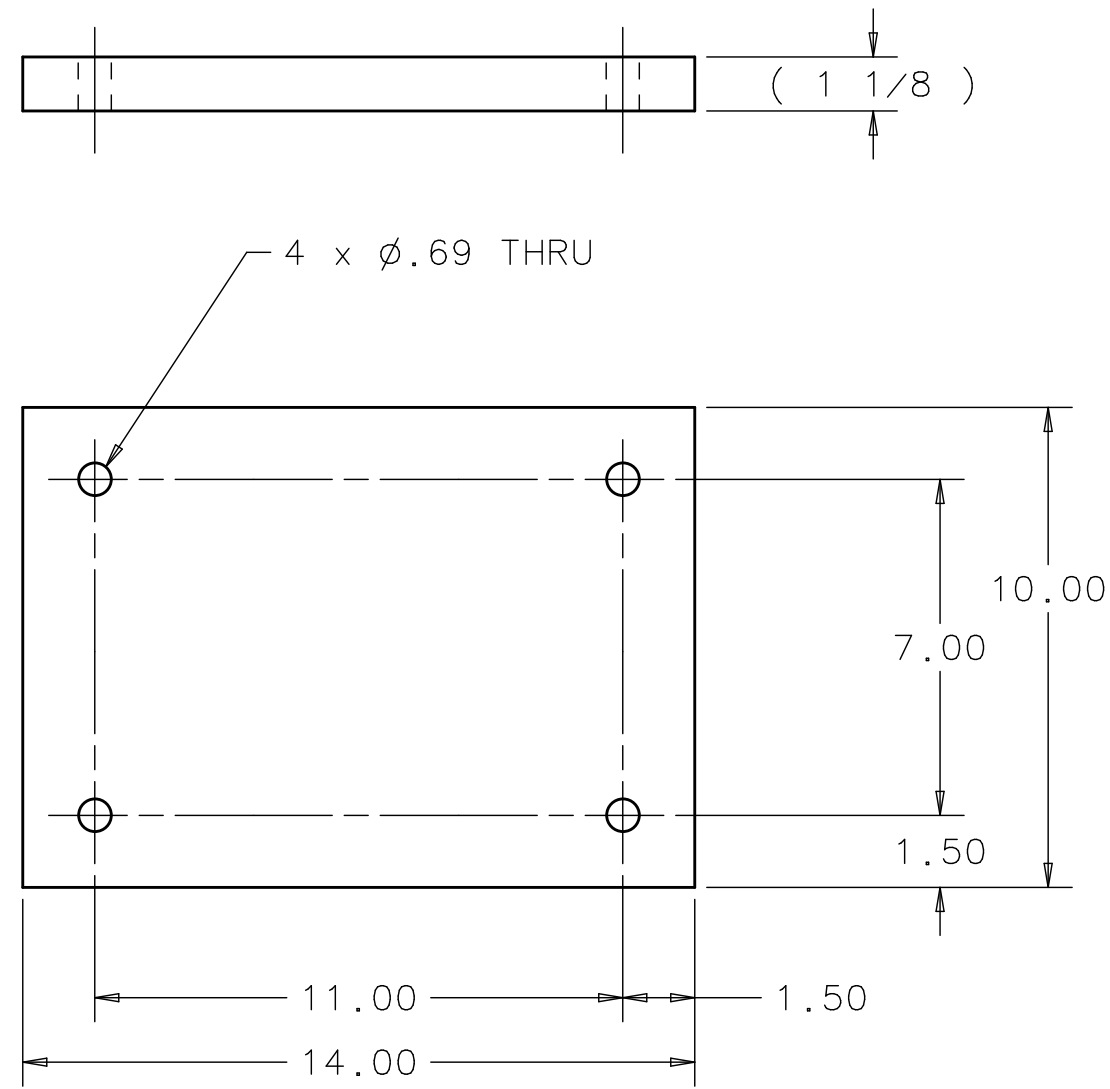
UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	19-OCT-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	19-OCT-2006
± .03	± ---	± 1°	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX.			APPROVED	W.CYKO	27-DEC-2006
2. DO NOT SCALE DRAWING.			USED ON		
3. DIMENSIONS BASED UPON ASME Y14.5M-1994			ME-444204 & ME-444345		
4. MAX. ALL MACH. SURFACES 250 $\sqrt{\quad}$			MATERIAL		
5. DRAWING UNITS: U.S. INCH			SEE PARTS LIST ABOVE		

**FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

MINERVA-DETECTOR-MECHANICAL  
PLANE SUPPORT FRAME  
DIAGONAL SUPPORT WELDMENT

SCALE	DRAWING NUMBER	SHEET	REV
1:8	3938.300-MC-444222	1 OF 1	
CREATED WITH : Ideas12NXSeries		GROUP: PPD/MECHANICAL DEPARTMENT	

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	08-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	07-NOV-2006
± .01	± ---	± ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250 / 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON		MC-444164
			MATERIAL		PLATE 1/8" THK. CARBON STEEL A36

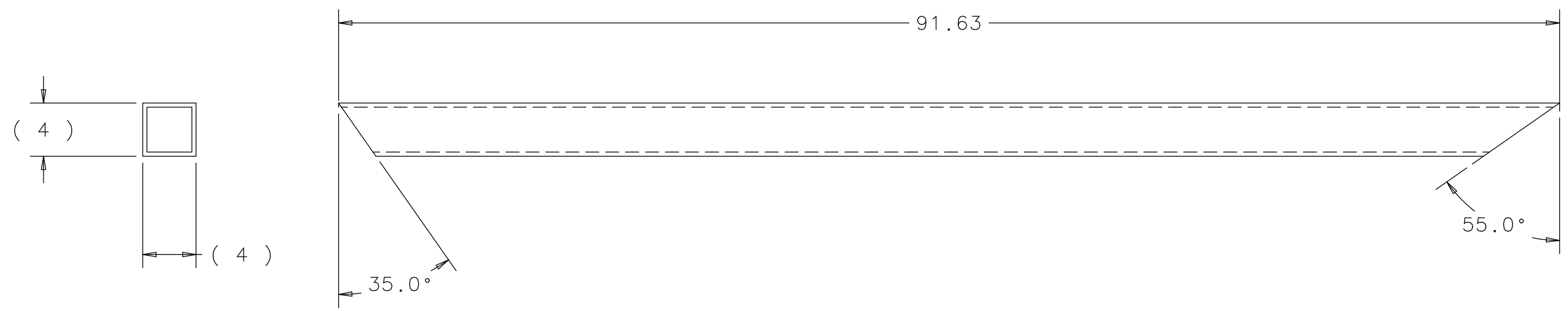

**FERMI NATIONAL ACCELERATOR LABORATORY**  
 UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
 PLANE SUPPORT FRAME  
 DIAGONAL STIFFENER BASE PLATE**

SCALE	DRAWING NUMBER	SHEET	REV
1:4	3938.300-MB-444225	1 OF 1	

CREATED WITH : Ideas12NXSeries    GROUP: PPD/MECHANICAL DEPARTMENT

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	08-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	08-NOV-2006
± .03	± ---	± 1°	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250 / 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON		
MATERIAL			SQUARE STRUCTURAL TUBING 4 x 4 x 5/16 CARBON STEEL A500 GR. B		

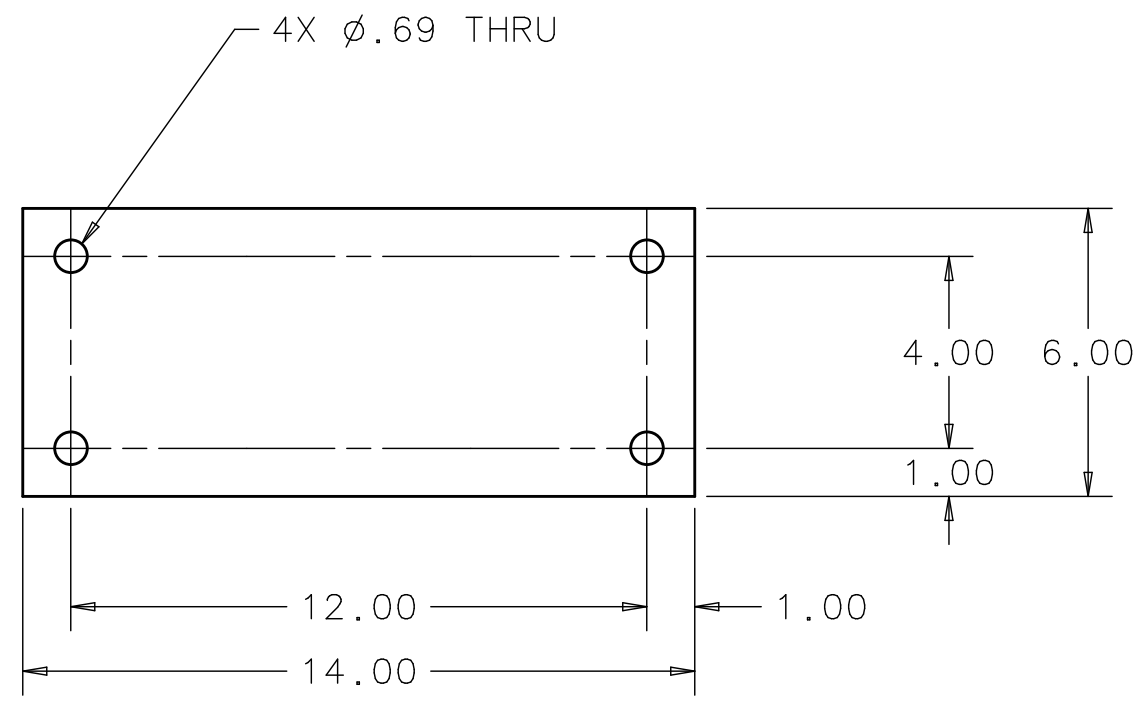
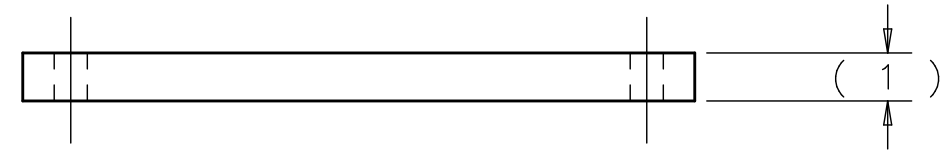

**FERMI NATIONAL ACCELERATOR LABORATORY**  
 UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHCANICAL  
 PLANE SUPPORT FRAME  
 DIAGONAL STIFFENER TUBE**

SCALE	DRAWING NUMBER	SHEET	REV
1:8	3938.300-MB-444226	1 OF 1	

CREATED WITH : Ideas12NXSeries    GROUP: PPD/MECHANICAL DEPARTMENT

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	08-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	07-NOV-2006
$\pm$ .01	$\pm$ ---	$\pm$ ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250 / $\sqrt{\quad}$ 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON		MC-444164
			MATERIAL		PLATE 1" THK. CARBON STEEL A36

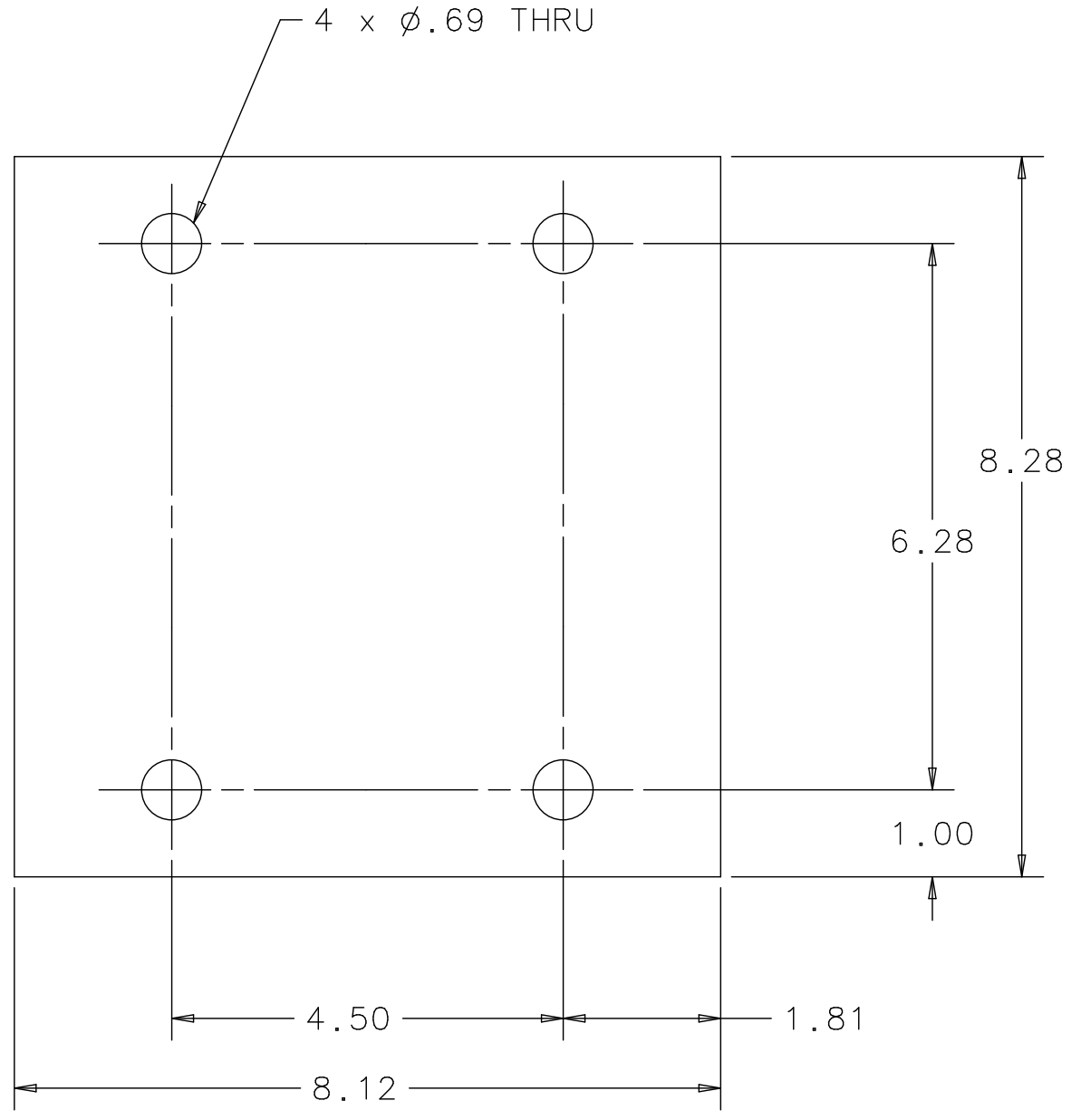
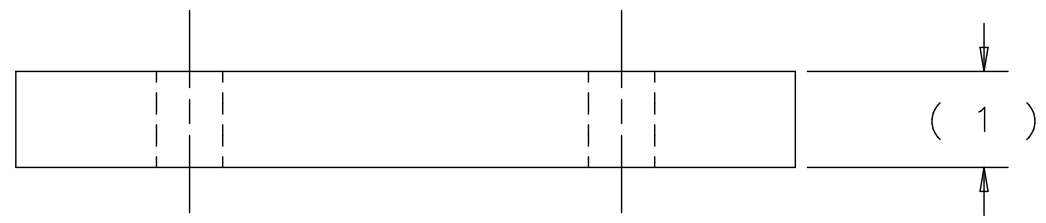
 **FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
PLANE SUPPORT FRAME  
DIAGONAL STIFFENER COLUMN PLATE**


SCALE	DRAWING NUMBER	SHEET	REV
1:4	3938.300-MB-444227	1 OF 1	

CREATED WITH : Ideas12NXSeries GROUP: PPD/MECHANICAL DEPARTMENT

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	13-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	13-NOV-2006
± .01	± ---	± ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250 / 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON		MC-444276
MATERIAL			PLATE, 1" THK. CARBON STEEL A36		

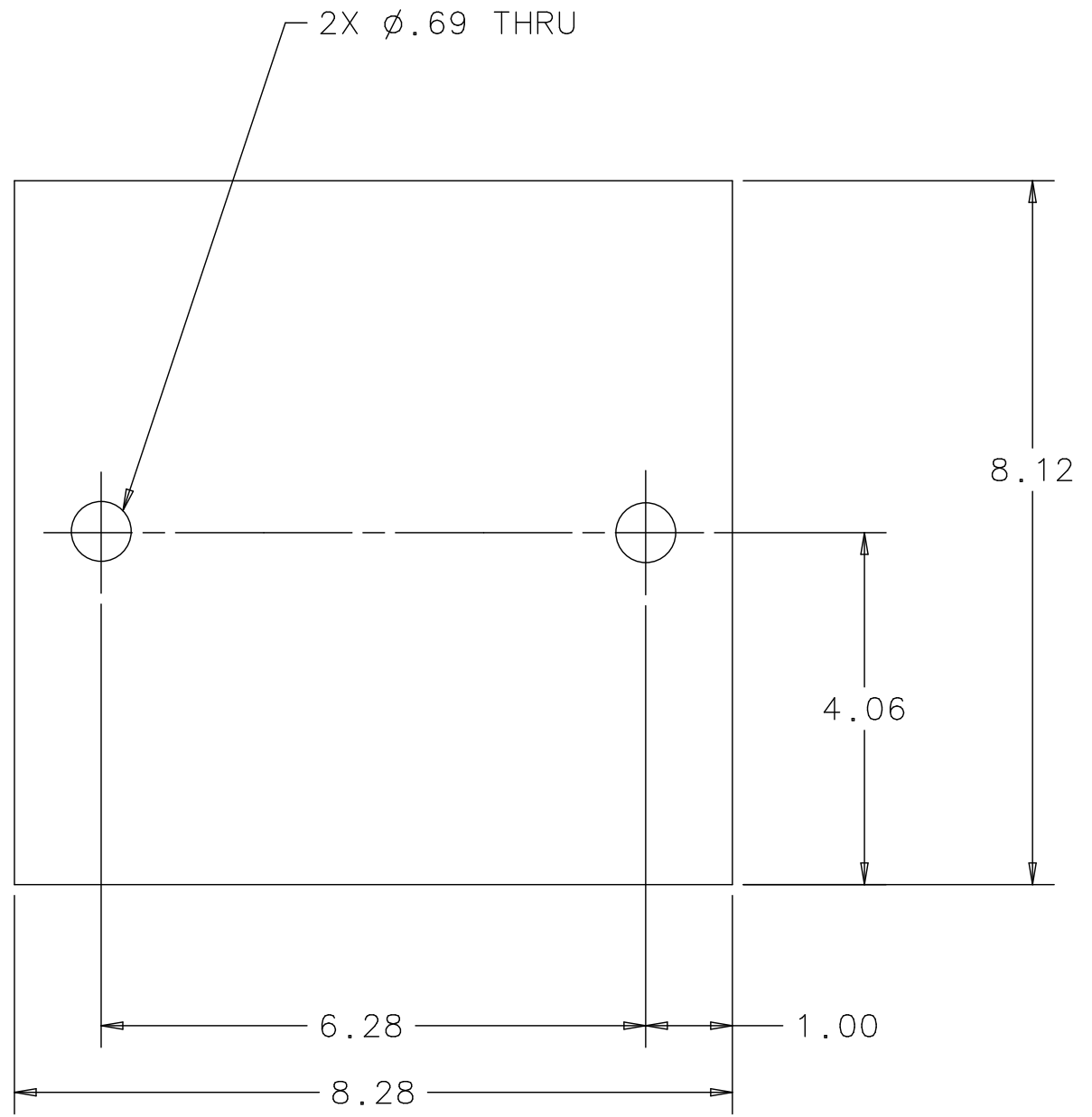

**FERMI NATIONAL ACCELERATOR LABORATORY**  
 UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
 PLANE SUPPORT FRAME  
 SUPPORT COLUMN TOP PLATE**

SCALE	DRAWING NUMBER	SHEET	REV
1:2	3938.300-MB-444236	1 OF 1	

CREATED WITH : Ideas12NXSeries    GROUP: PPD/MECHANICAL DEPARTMENT

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	13-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	13-NOV-2006
± .01	± ---	± ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX.			APPROVED	W.CYKO	27-DEC-2006
2. DO NOT SCALE DRAWING.			USED ON		
3. DIMENSIONS BASED UPON ASSEMBLY 14.5M-1994			MB-444185 & MC-444250		
4. MAX. ALL MACH. SURFACES 250/			MATERIAL		
5. DRAWING UNITS: UNITS			PLATE, 1" THK. CARBON STEEL A36		

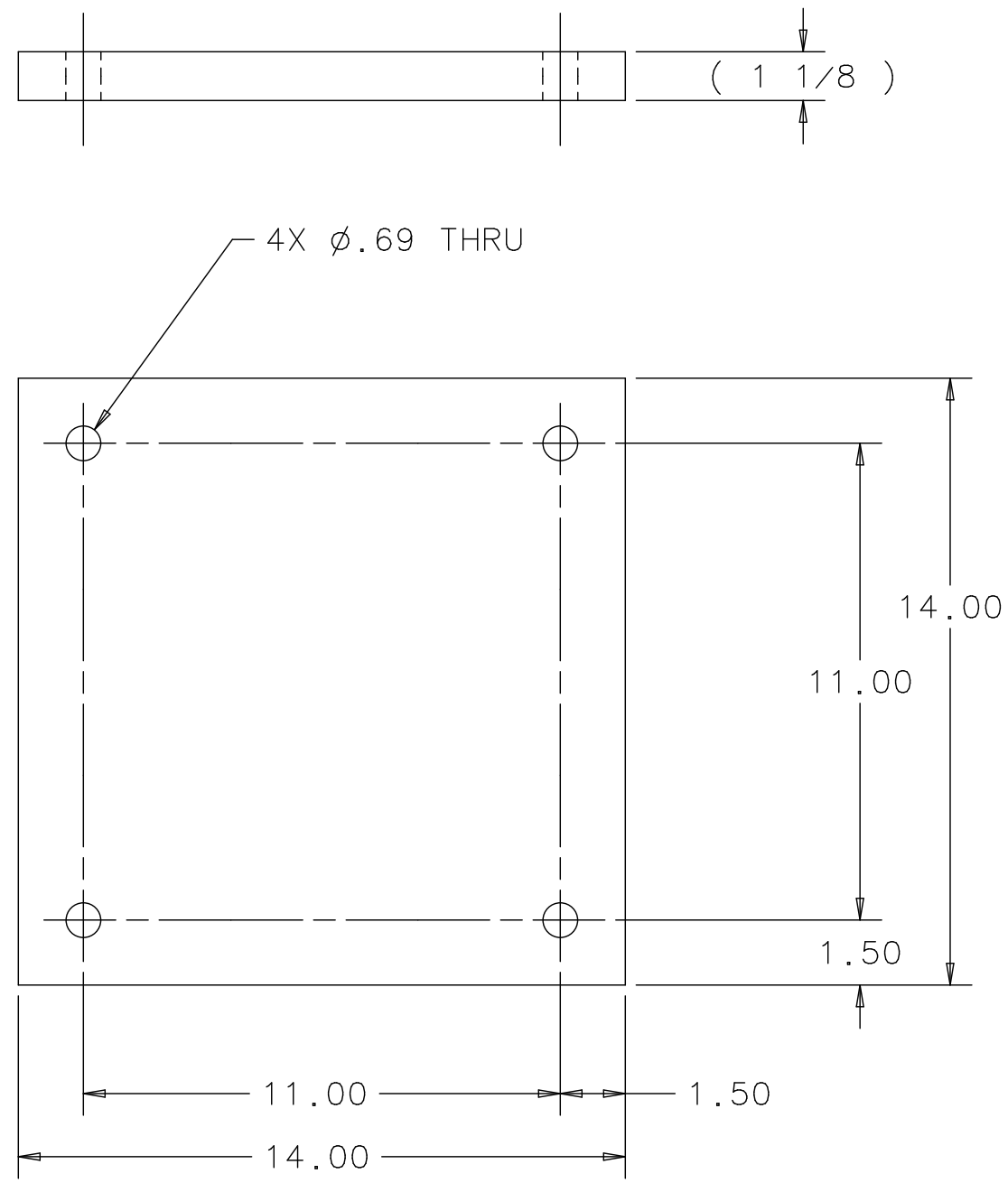
**FERMI NATIONAL ACCELERATOR LABORATORY**  
**UNITED STATES DEPARTMENT OF ENERGY**

**MINERVA-DETECTOR-MECHANICAL  
 PLANE SUPPORT FRAME  
 SUPPORT COLUMN TOP PLATE END**

SCALE	DRAWING NUMBER	SHEET	REV
1:2	3938.300-MB-444237	1 OF 1	

CREATED WITH : Ideas12NXSeries GROUP: PPD/MECHANICAL DEPARTMENT

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	13-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	13-NOV-2006
± .01	± ---	± ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250/ 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON		
			MATERIAL		
			PLATE, 1 1/8 THK. CARBON STEEL A36		

 **FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
PLANE SUPPORT FRAME  
SUPPORT COLUMN BASE PLATE**

SCALE	DRAWING NUMBER	SHEET	REV
1:4	3938.300-MB-444238	1 OF 1	

CREATED WITH : Ideas12NXSeries GROUP: PPD/MECHANICAL DEPARTMENT

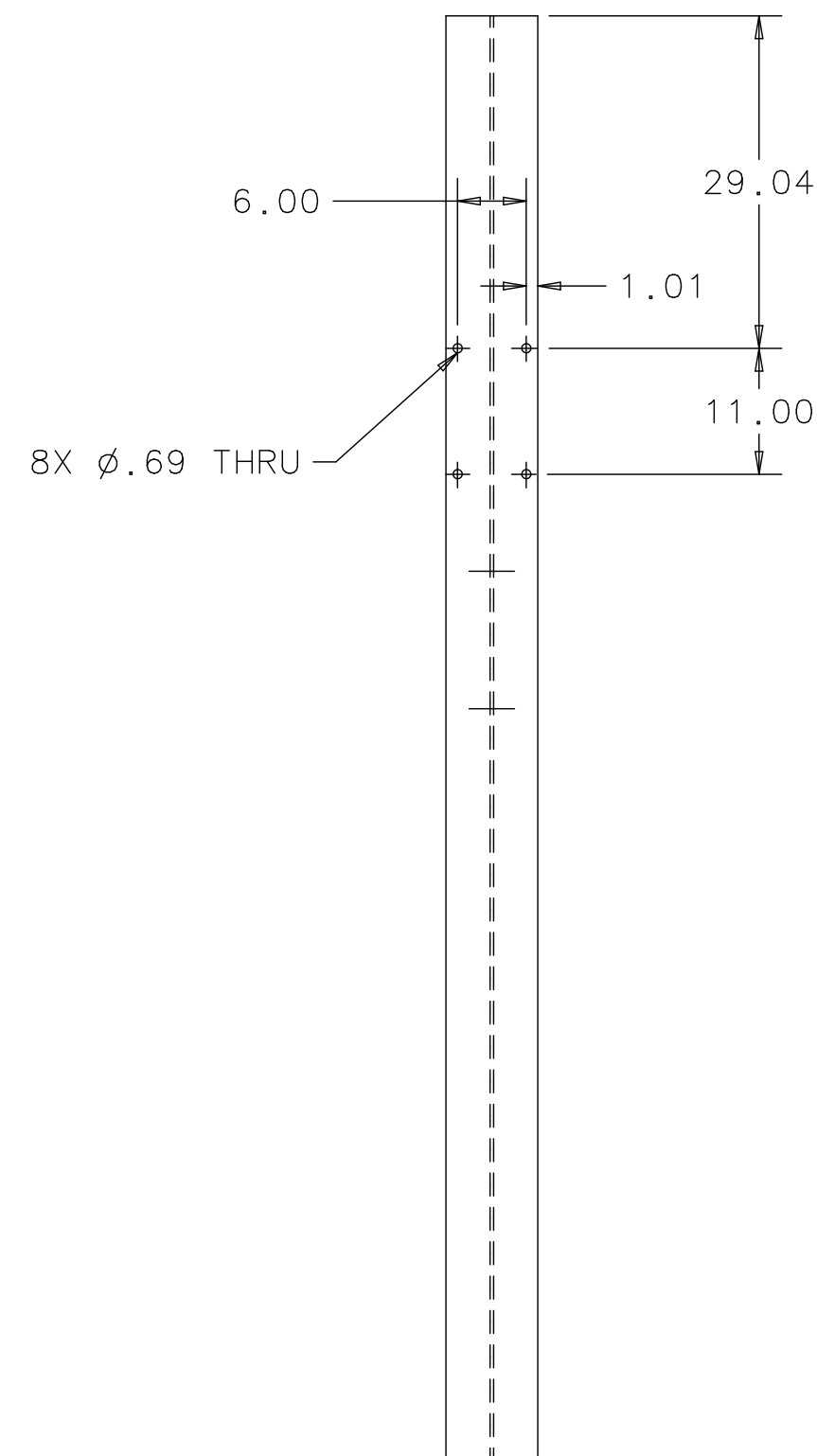
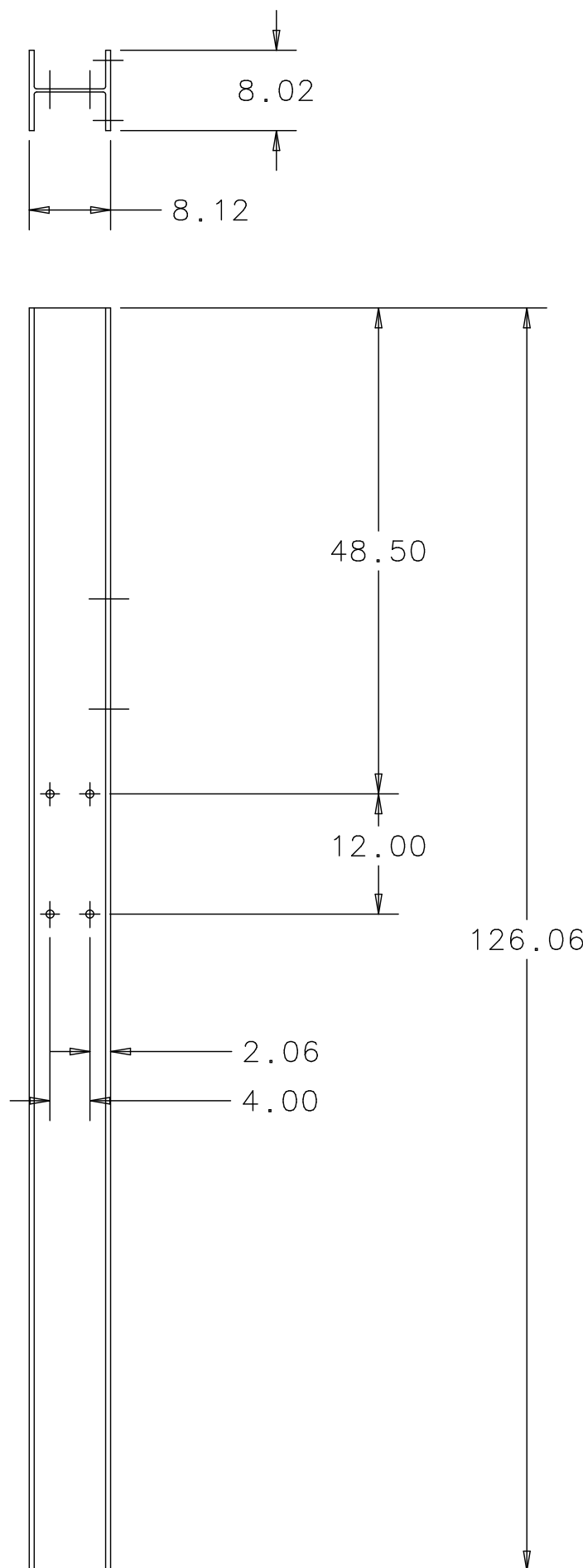
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REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	13-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	13-NOV-2006
± .01	± ---	± ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250/ 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON		
			MATERIAL		
			W8 x 35.0 WIDE FLANGE BEAM		
 <b>FERMI NATIONAL ACCELERATOR LABORATORY</b> UNITED STATES DEPARTMENT OF ENERGY					
<b>MINERVA-DETECTOR-MECHANICAL</b> <b>SUPPORT FRAME PLANE</b> <b>END SUPPORT COLUMN</b>					
SCALE	DRAWING NUMBER			SHEET	REV
1/16	3938.300-MC-444249			1 OF 1	
CREATED WITH :		Ideas12NXSeries	GROUP: PPD/MECHANICAL DEPARTMENT		

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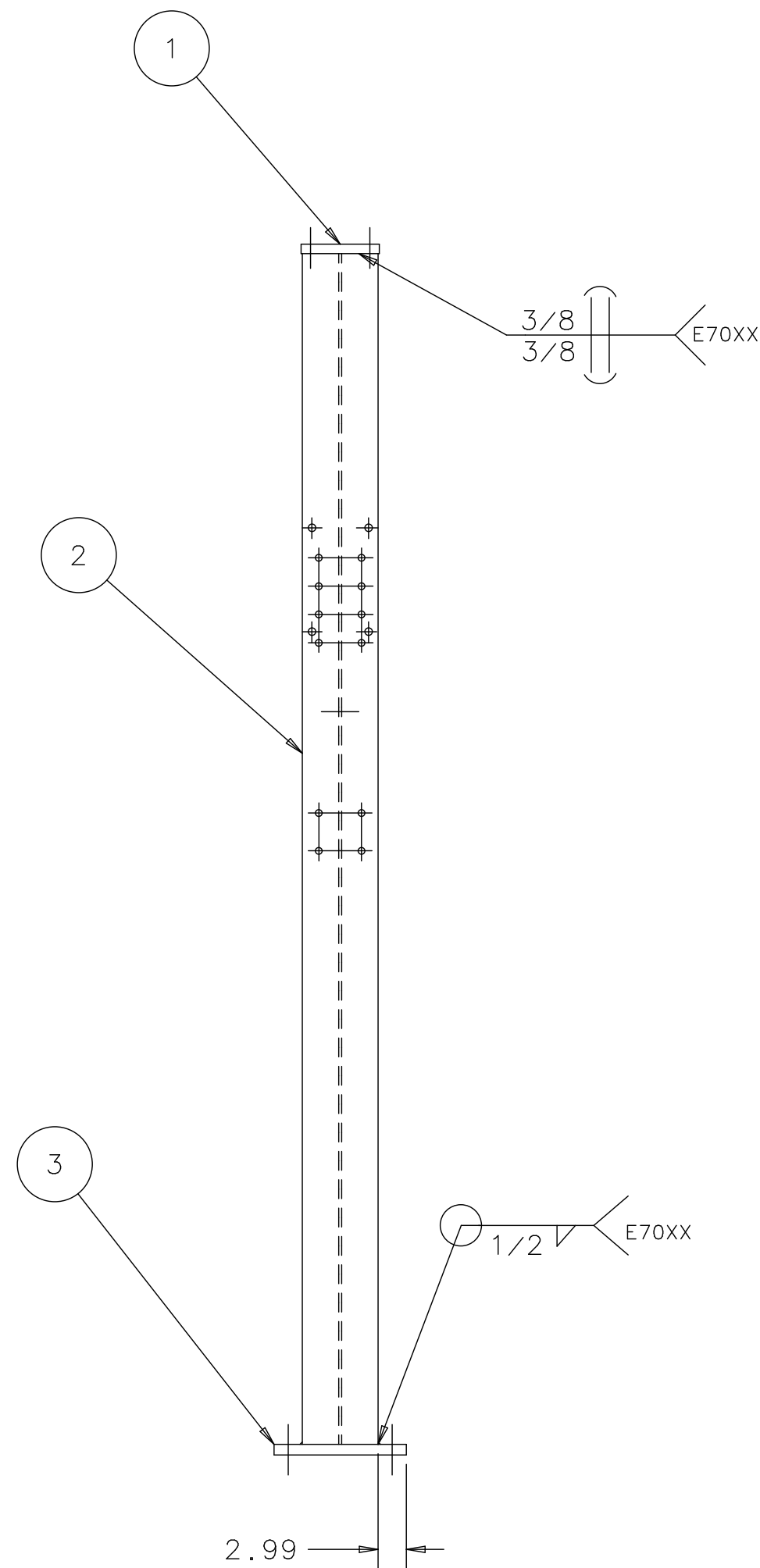
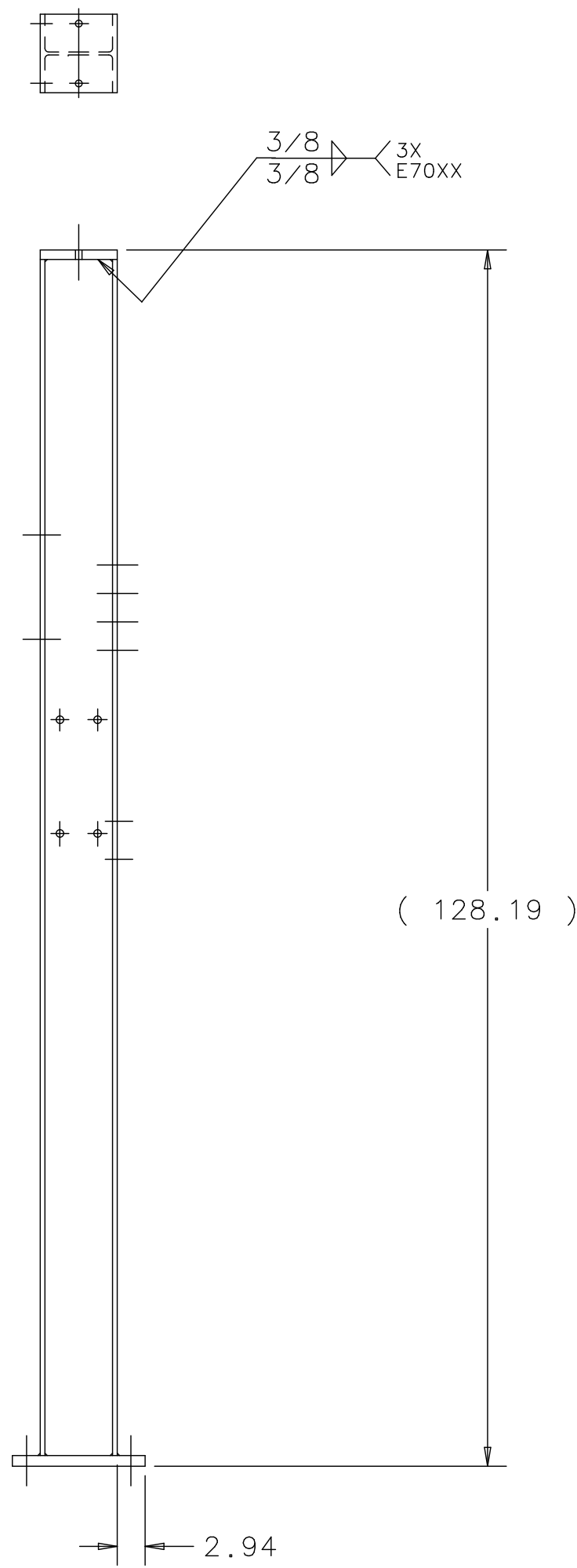
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REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



3	MB-444238	SUPPORT COLUMN BASE PLATE	1
2	MC-444252	BOOKEND SUPPORT COLUMN	1
1	MB-444237	SUPPORT COLUMN TOP PLATE END	1

UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	13-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	30-OCT-2006
± .03	± ---	± ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES			APPROVED	W.CYKO	27-DEC-2006
5. DRAWING UNITS: U.S. INCH			USED ON ME-444204 & ME-444345		
			MATERIAL SEE PARTS LIST ABOVE		

 **FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
PLANE SUPPORT FRAME  
BOOKEND COLUMN WELDMENT**

SCALE	DRAWING NUMBER	SHEET	REV
1/16	3938.300-MC-444250	1 OF 1	
CREATED WITH : Ideas12NXSeries		GROUP: PPD/MECHANICAL DEPARTMENT	

4

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REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE

D

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C

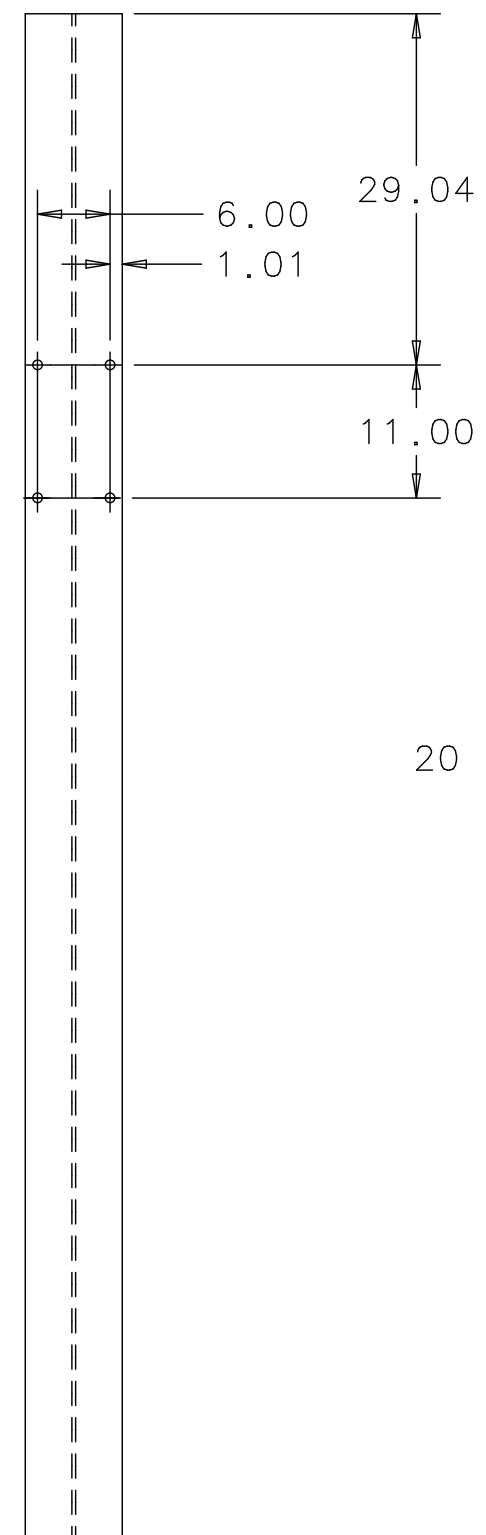
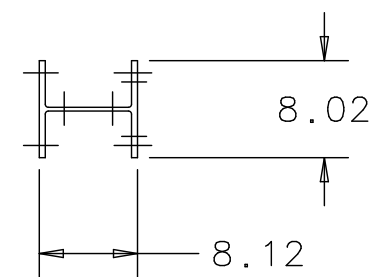
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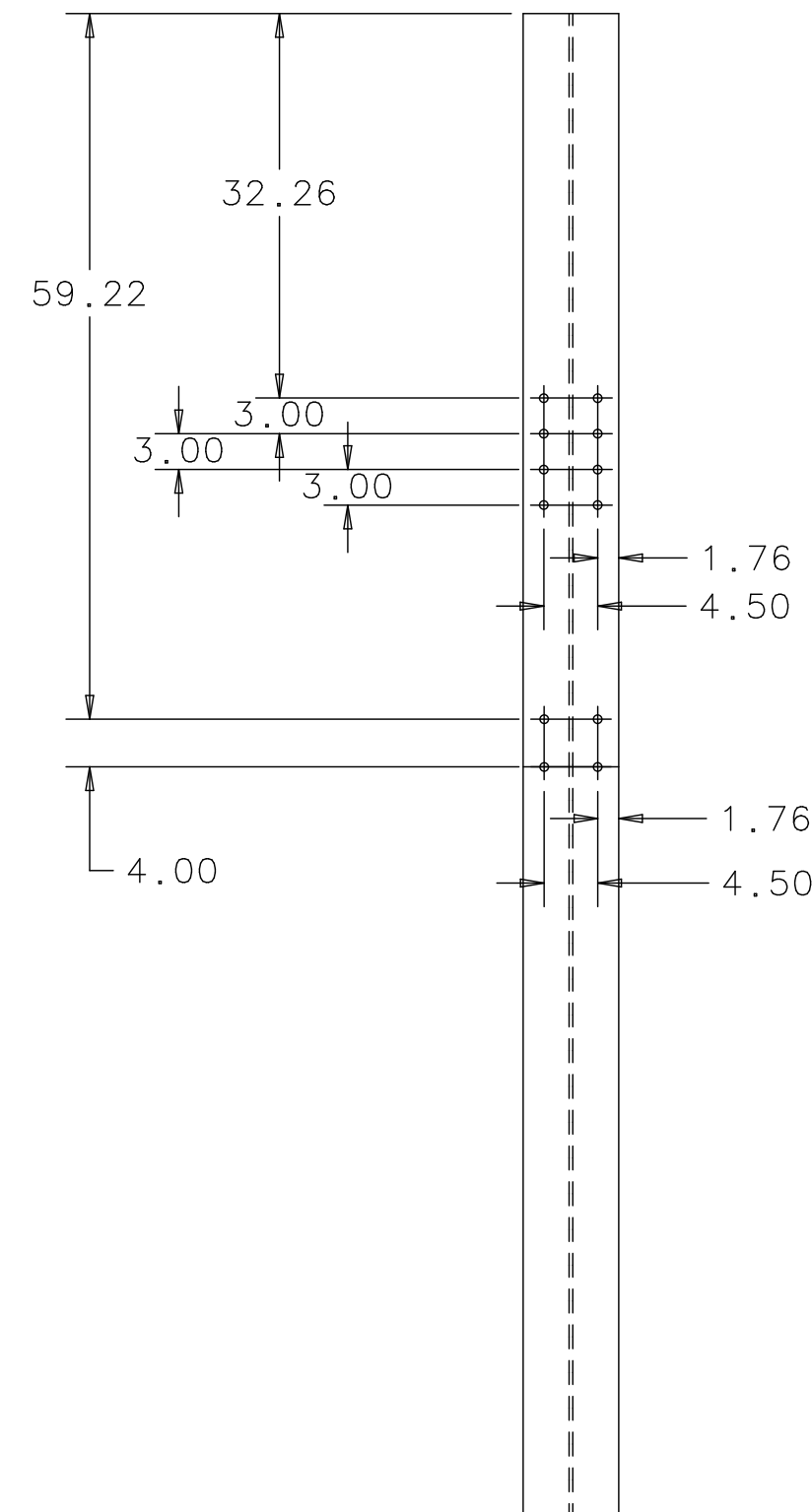
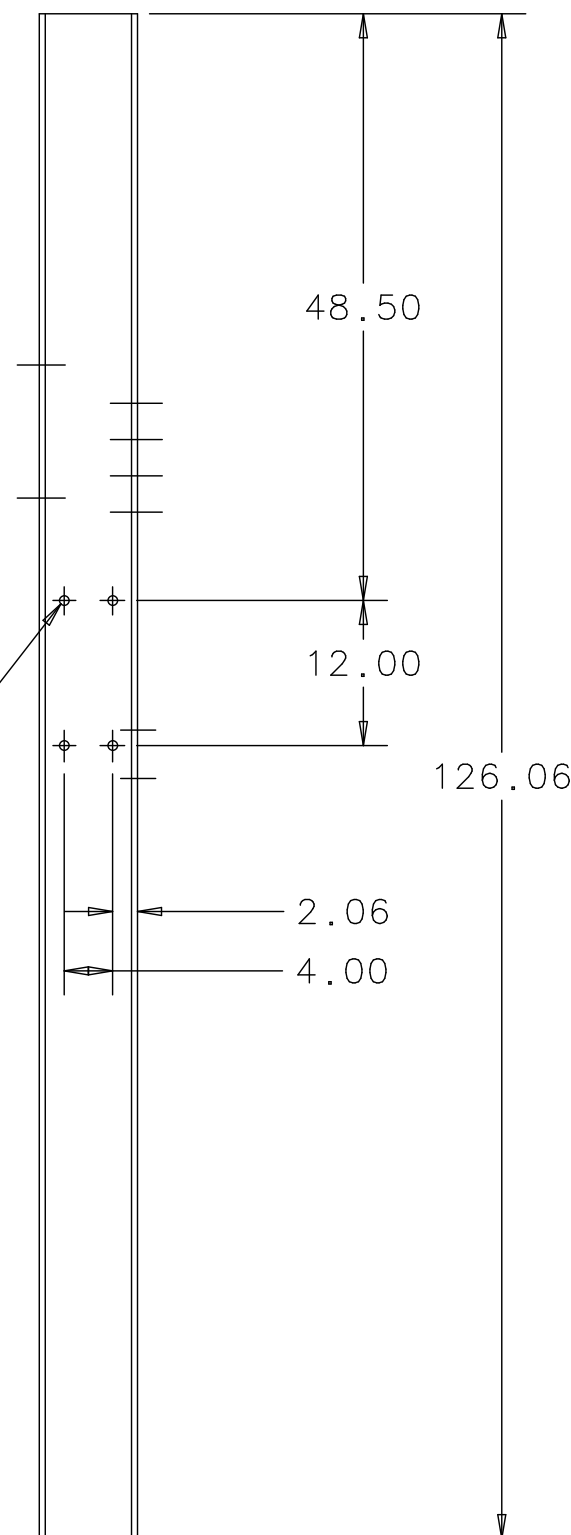
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20 x  $\phi$ .69 THRU



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W. CYKO	13-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S. KINDELBERGER	13-NOV-2006
$\pm$ .01	$\pm$ ---	$\pm$ ---	CHECKED	W. CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250/ 5. DRAWING UNITS: U.S. INCH			APPROVED	W. CYKO	27-DEC-2006
			USED ON		
MATERIAL			W8 x 35.0 WIDE FLANGE BEAM		



FERMI NATIONAL ACCELERATOR LABORATORY  
UNITED STATES DEPARTMENT OF ENERGY

MINERVA-DETECTOR-MECHANICAL  
SUPPORT FRAME PLANE  
BOOKEND COLUMN

SCALE	DRAWING NUMBER	SHEET	REV
1/16	3938.300-MC-444252	1 OF 1	
CREATED WITH : Ideas12NXSeries		GROUP: PPD/MECHANICAL DEPARTMENT	

4

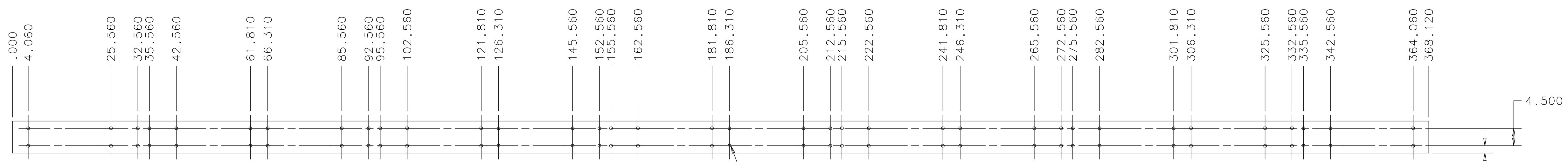
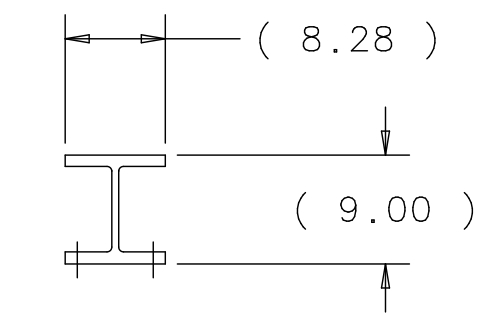
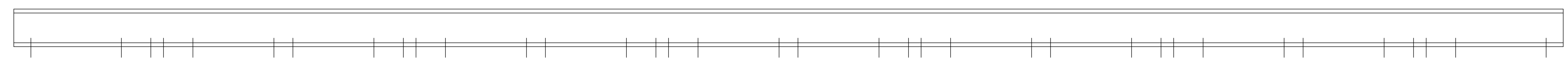
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8 7 6 5 4 3 2 1

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



.000  
4.060  
25.560  
32.560  
35.560  
42.560  
61.810  
66.310  
85.560  
92.560  
95.560  
102.560  
121.810  
126.310  
145.560  
152.560  
155.560  
162.560  
181.810  
186.310  
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241.810  
246.310  
265.560  
272.560  
275.560  
282.560  
301.810  
306.310  
325.560  
332.560  
335.560  
342.560  
364.060  
368.120

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TYP 76 HOLES

UNLESS OTHERWISE SPECIFIED	ORIGINATOR	W.CYKO	14-NOV-2006
.XX .XXX ANGLES	DRAWN	S.KINDELBERGER	14-NOV-2006
$\pm$ .03 $\pm$ .010 $\pm$ 1°	CHECKED		
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250 5. DRAWING UNITS: U.S. INCH	APPROVED	USED ON MD-444203	
	MATERIAL	W8 x 67.0 WIDE FLANGE BEAM	

**FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

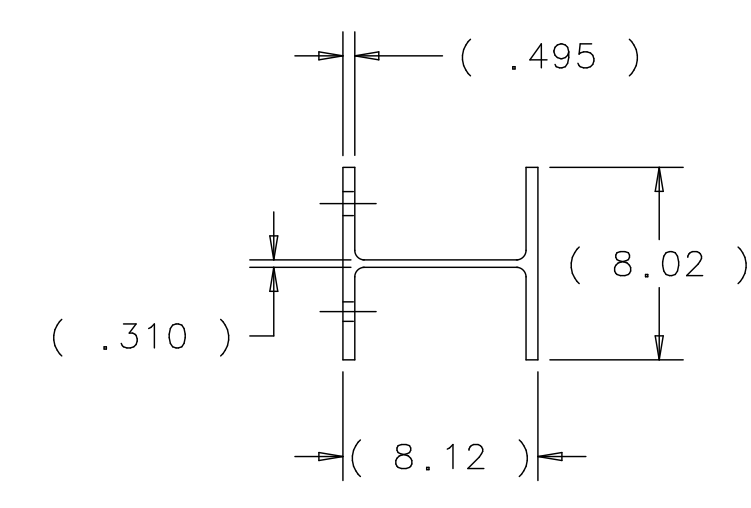
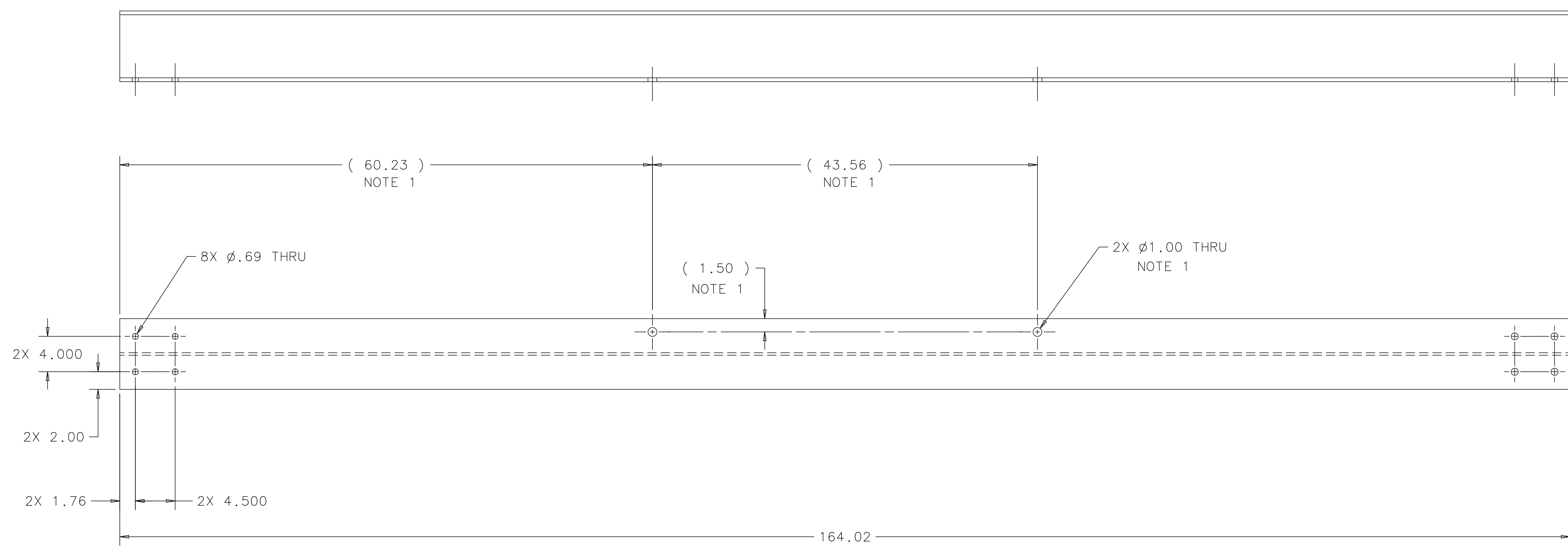
**MINERVA-DETECTOR-MECHANICAL  
PLANE SUPPORT FRAME  
HEAVY SUPPORT BEAM**

SCALE 1/16=1	DRAWING NUMBER 3938.300-MD-444258	SHEET 1 OF 1	REV
CREATED WITH : Ideas12NXSeries		GROUP: PPD/MECHANICAL DEPARTMENT	

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



NOTE:  
1. FINAL HOLE LOCATION TO BE DETERMINED AT ASSEMBLY.

UNLESS OTHERWISE SPECIFIED	ORIGINATOR	J. KILMER	15-NOV-2006
.XX .XXX ANGLES	DRAWN	G. SMITH	15-NOV-2006
$\pm$ .03 $\pm$ .010 $\pm$ ---	CHECKED	W. CYKO	08-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX.	APPROVED	J. KILMER	08-DEC-2006
2. DO NOT SCALE DRAWING.	USED ON	MD-435689	
3. DIMENSIONS BASED UPON ASME Y14.5M-1994	MATERIAL	W BEAM, W8 X 35.0 LB., CARBON STL. ASTM A36	
4. MAX. ALL MACH. SURFACES 250			
5. DRAWING UNITS: U.S. INCH			

**FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL PLANE SUPPORT FRAME**  
TARGET PLANE SUPPORT

SCALE	DRAWING NUMBER	SHEET	REV
1:8	3938.330-MD-444272	1 OF 1	

CREATED WITH : Ideas12NXSeries GROUP: PPD/MECHANICAL DEPARTMENT

8 7 6 5 4 3 2 1

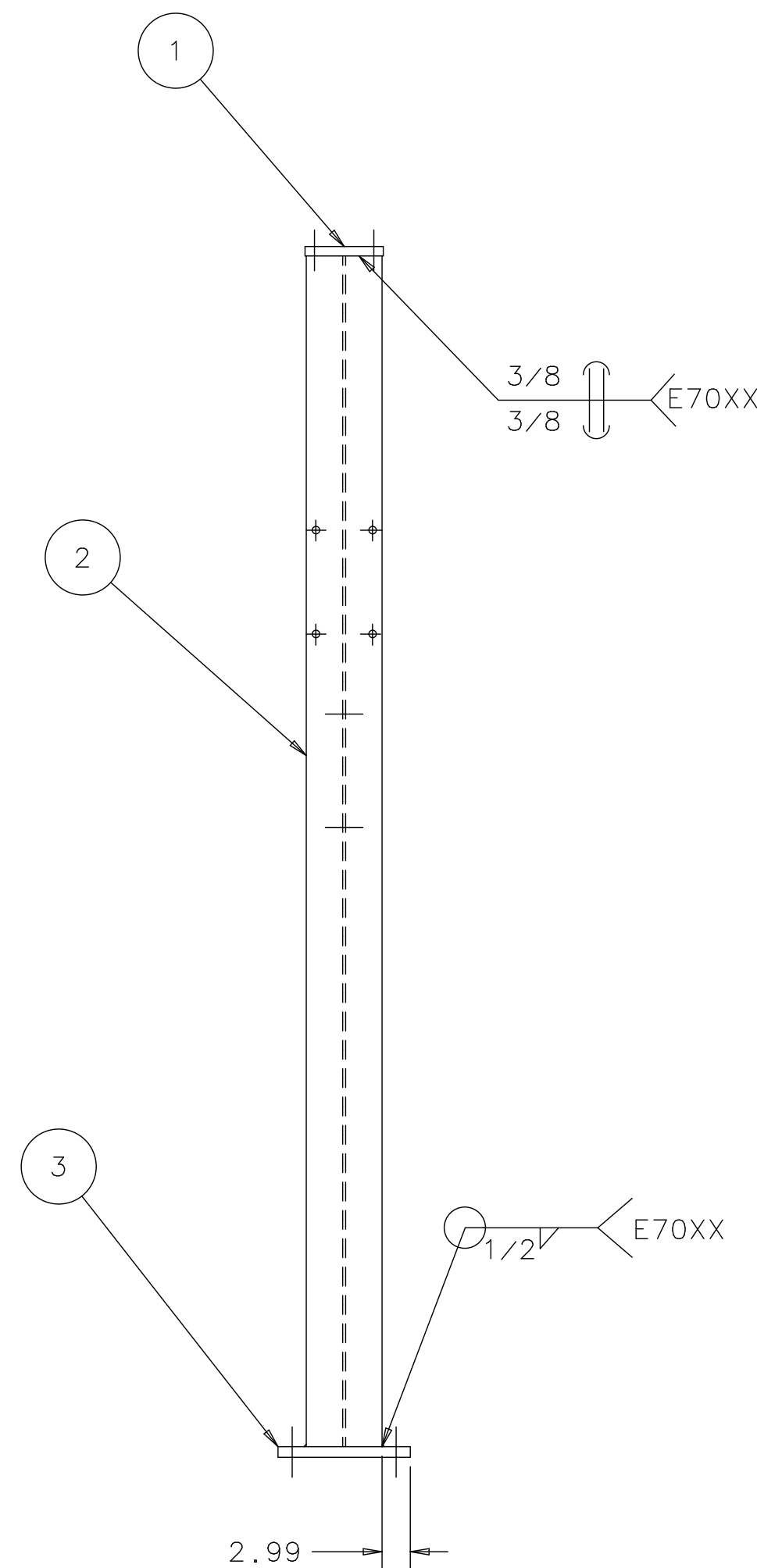
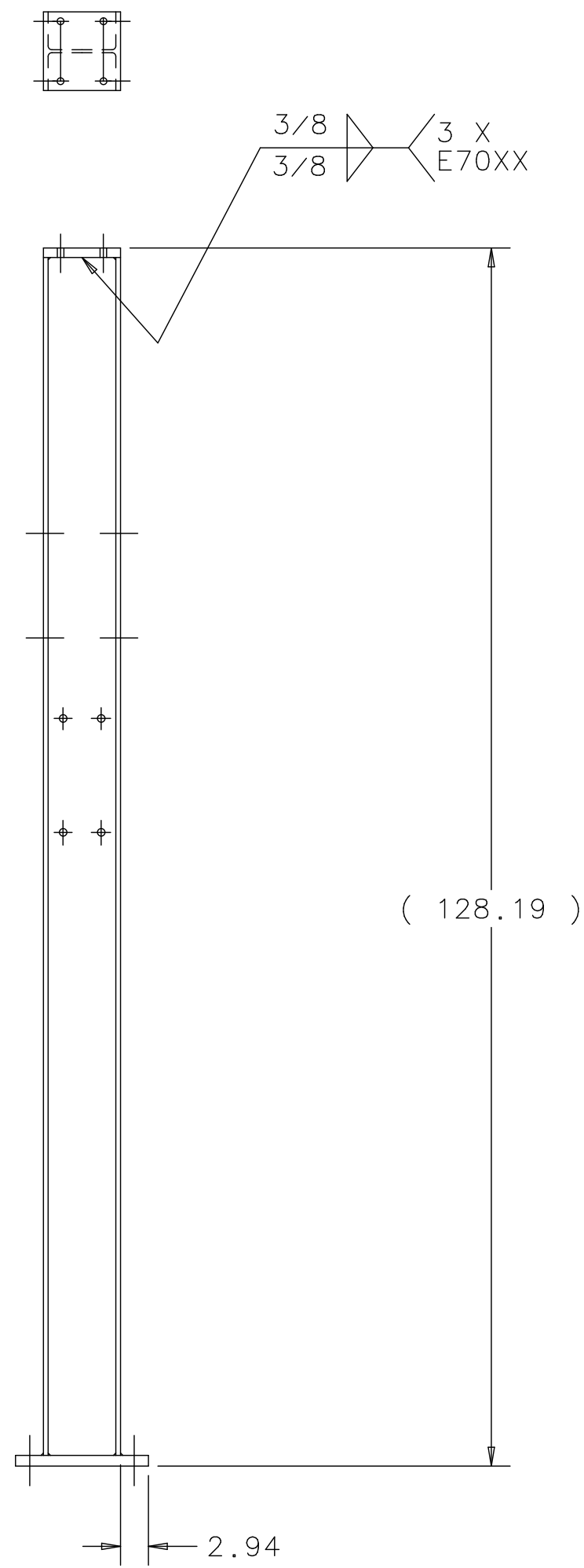
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1

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



3	MB-444238	SUPPORT COLUMN BASE PLATE	1
2	MC-444282	SUPPORT COLUMN	1
1	MB-444236	SUPPORT COLUMN TOP PLATE	1

UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	15-NOV-2006
.XX	.XXXX	ANGLES	DRAWN	S.KINDELBERGER	15-NOV-2006
± .03	± ---	± ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON	ME-444204 & ME-444345	
			MATERIAL	SEE PARTS LIST ABOVE	

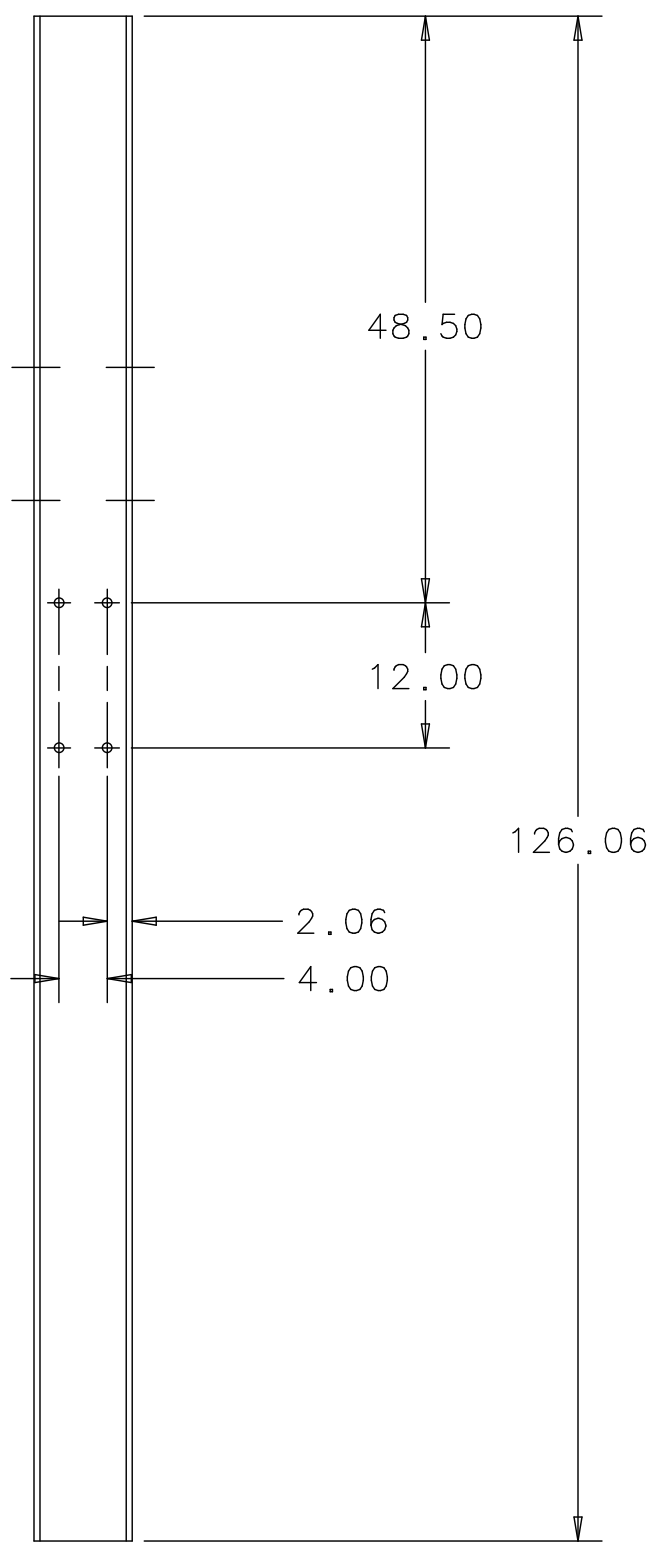
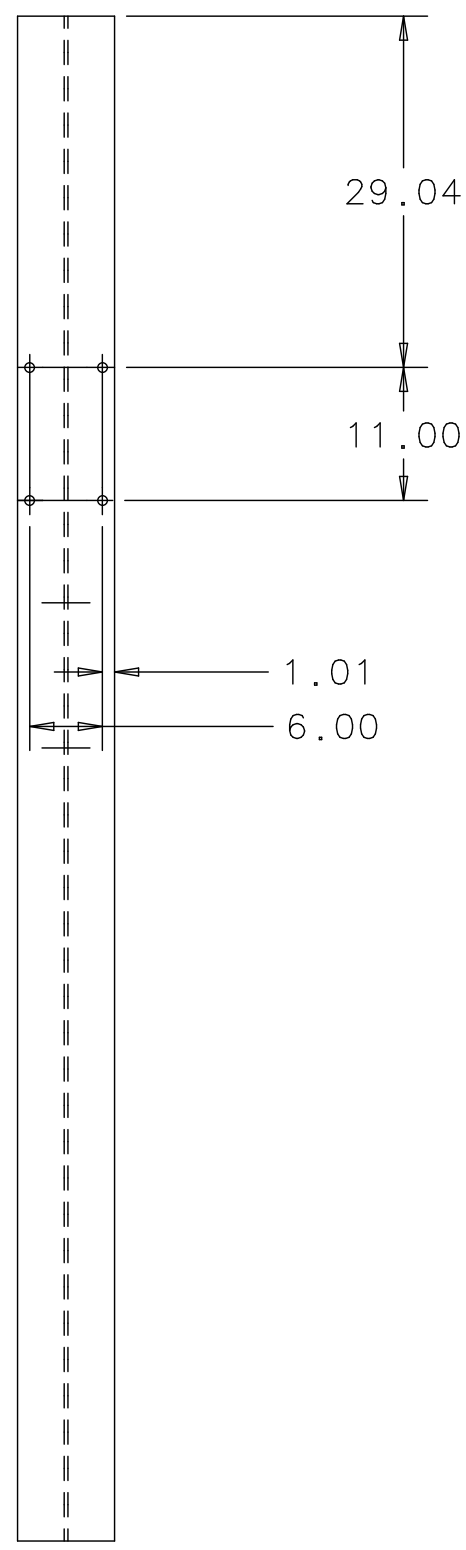
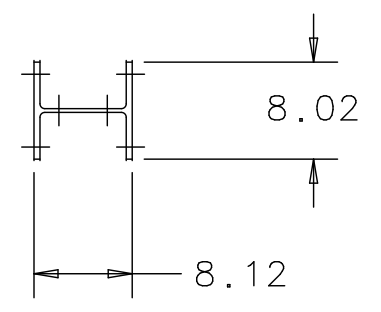
 **FERMI NATIONAL ACCELERATOR LABORATORY**  
UNITED STATES DEPARTMENT OF ENERGY

**MINERVA-DETECTOR-MECHANICAL  
SUPPORT FRAME PLANE  
COLUMN WELDMENT**

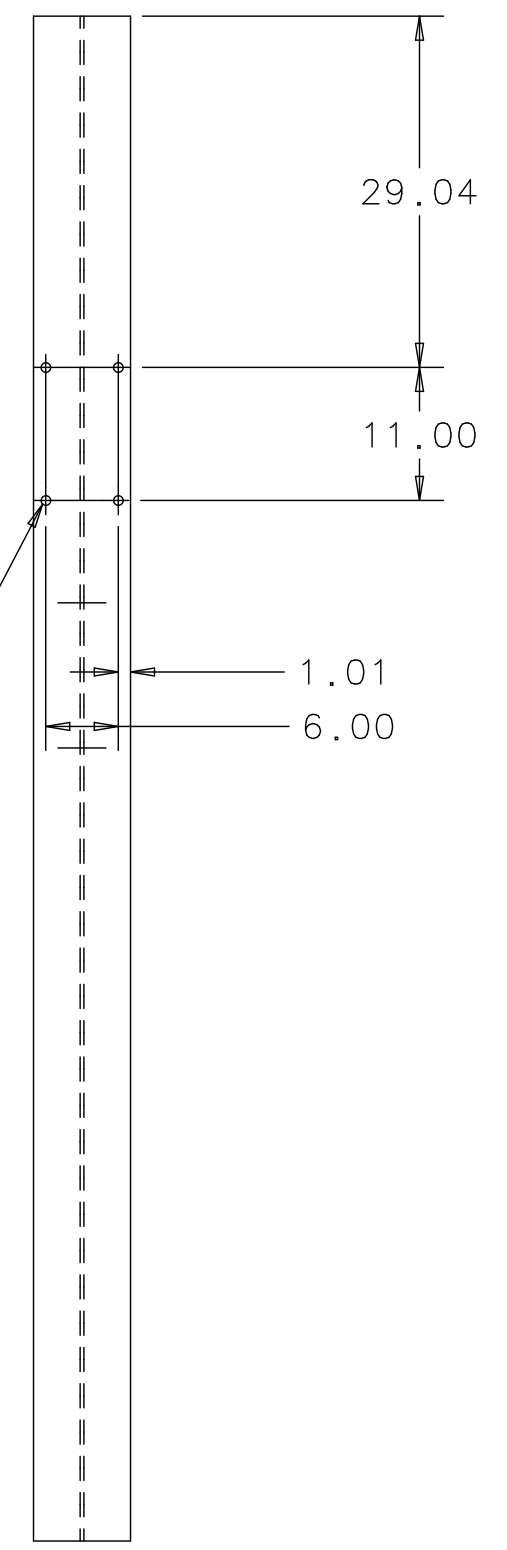
SCALE	DRAWING NUMBER	SHEET	REV
1/16	3938.300-MC-444276	1 OF 1	


CREATED WITH : Ideas12NXSeries GROUP: PPD/MECHANICAL DEPARTMENT

REV	DESCRIPTION	DRAWN	DATE
		APPROVED	DATE



12 x  $\phi$ .69 THRU



UNLESS OTHERWISE SPECIFIED			ORIGINATOR	W.CYKO	16-NOV-2006
.XX	.XXX	ANGLES	DRAWN	S.KINDELBERGER	16-NOV-2006
$\pm$ .01	$\pm$ ---	$\pm$ ---	CHECKED	W.CYKO	27-DEC-2006
1. BREAK ALL SHARP EDGES .015 MAX. 2. DO NOT SCALE DRAWING. 3. DIMENSIONS BASED UPON ASME Y14.5M-1994 4. MAX. ALL MACH. SURFACES 250/ 5. DRAWING UNITS: U.S. INCH			APPROVED	W.CYKO	27-DEC-2006
			USED ON		
			MATERIAL		
			W8 x 35.0 WIDE FLANGE BEAM		
 <b>FERMI NATIONAL ACCELERATOR LABORATORY</b> UNITED STATES DEPARTMENT OF ENERGY					
<b>MINERVA-DETECTOR-MECHANICAL          SUPPORT FRAME PLANE          SUPPORT COLUMN</b>					
SCALE	DRAWING NUMBER			SHEET	REV
1/16	3938.300-MC-444282			1 OF 1	
CREATED WITH :		Ideas12NXSeries		GROUP: PPD/MECHANICAL DEPARTMENT	