




- Notes:
1. Material: 1/4" thick, clear polycarbonate.
 2. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	  			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Panel, Portal</h1>			
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			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18004			
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NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING							

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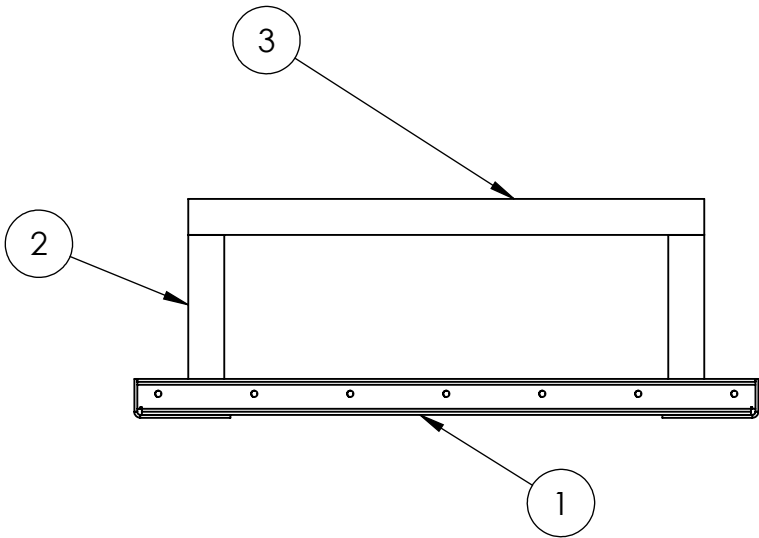
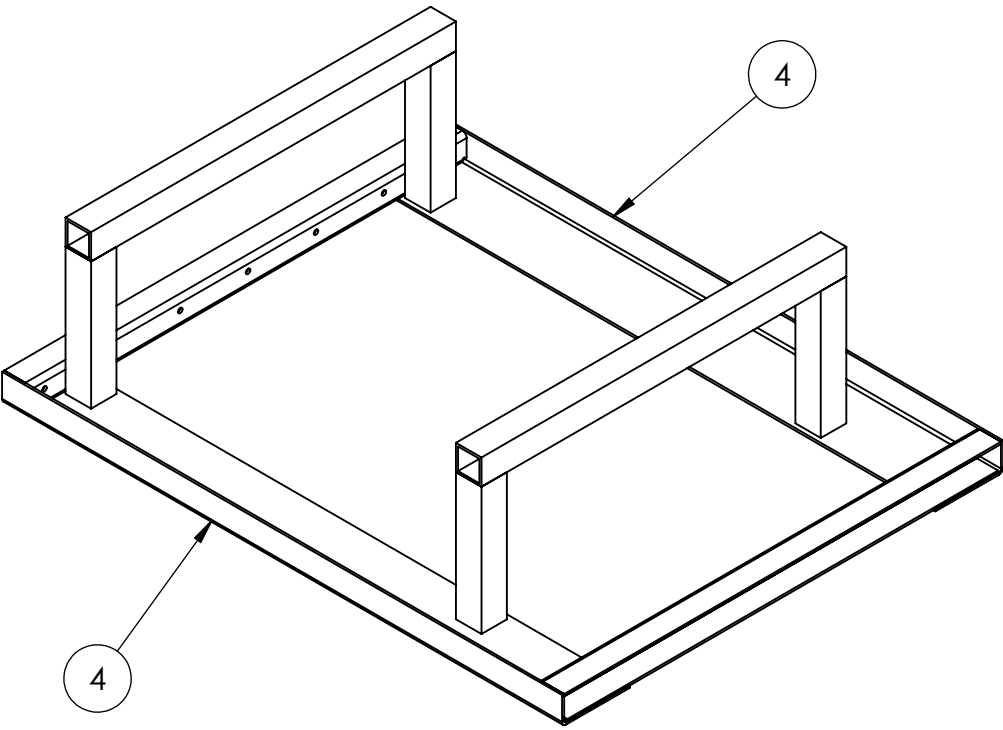
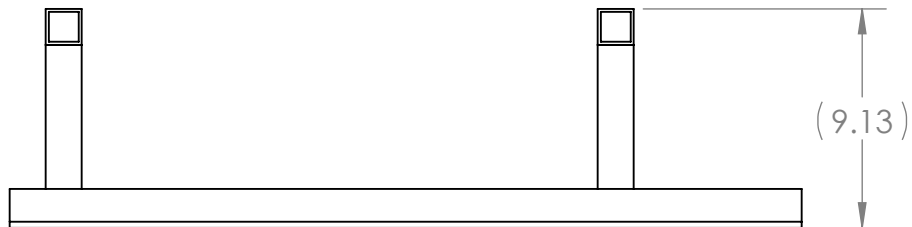
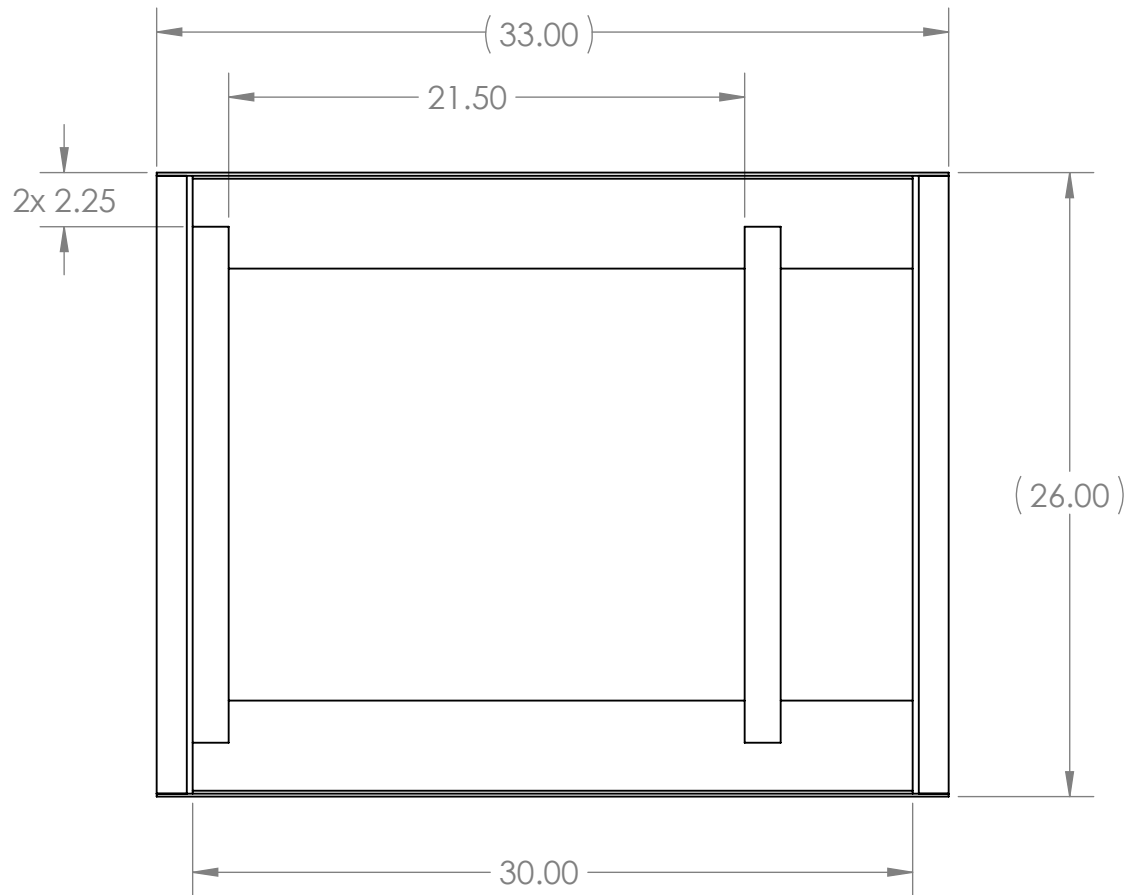
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2

1

B

B





A

A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18006-01	1/8" thk., 5052 Aluminum Sheet	2
2	GE-18006-02	1.5" x .125" thk. Square Tubing, 6063 Aluminum	4
3	GE-18006-03	1.5" x .125" thk. Square Tubing, 6063 Aluminum	2
4	GE-18006-04	1/8" thk., 5052 Aluminum Sheet	2

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Roller Base</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18006		
		MATERIAL						
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NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8 WEIGHT: SHEET 1 OF 3		

4

3

2

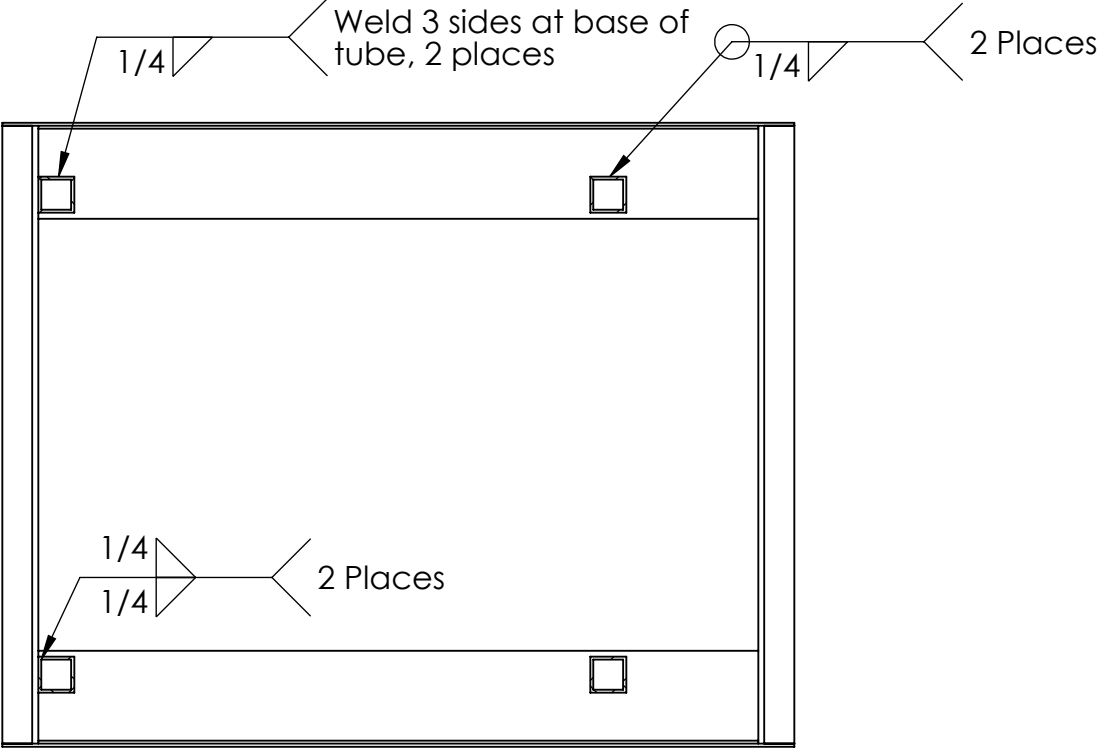
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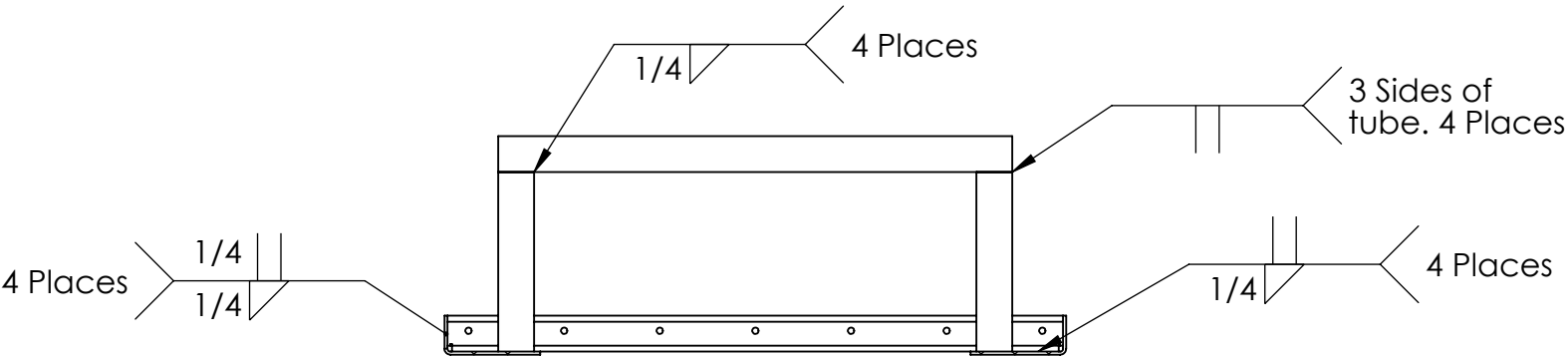
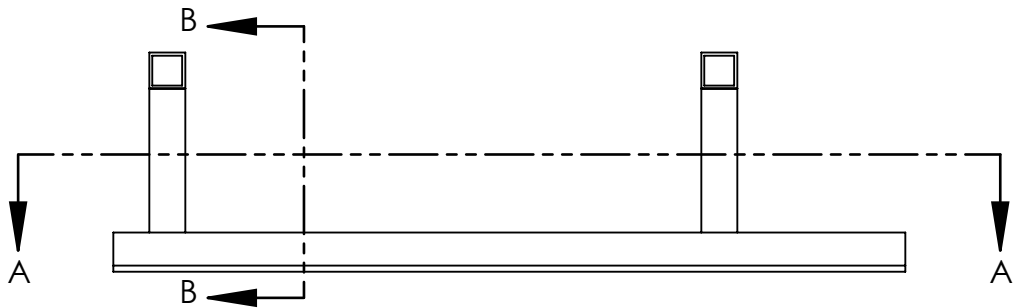
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2

1





SECTION A-A



SECTION B-B

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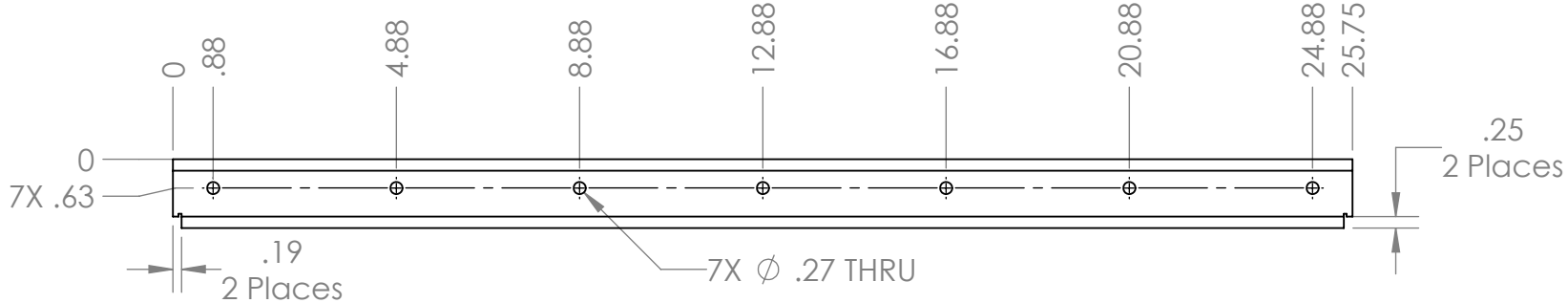
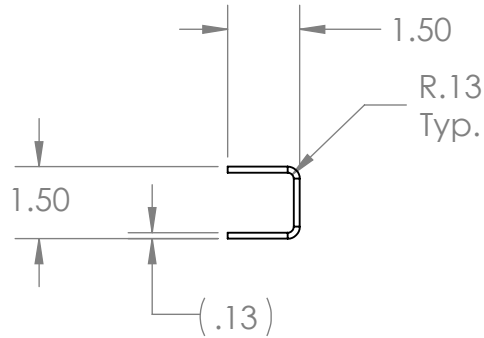
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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	ENG APPR.						
		TWO PLACE DECIMAL $\pm .01$	MFG APPR.						
		THREE PLACE DECIMAL $\pm .001$	Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18006			
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING	SCALE: 1:8			WEIGHT:		SHEET 2 OF 3	

4

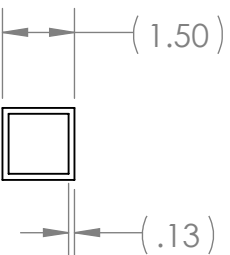
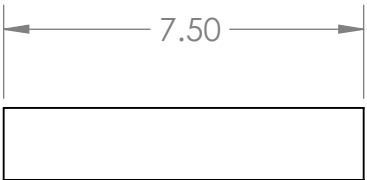
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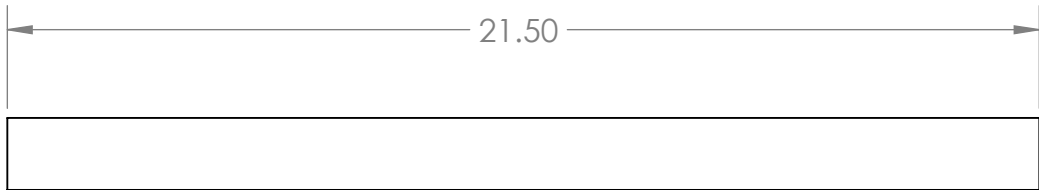
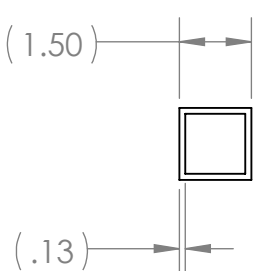
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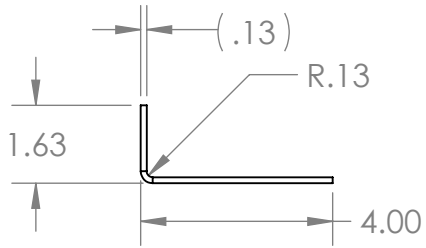
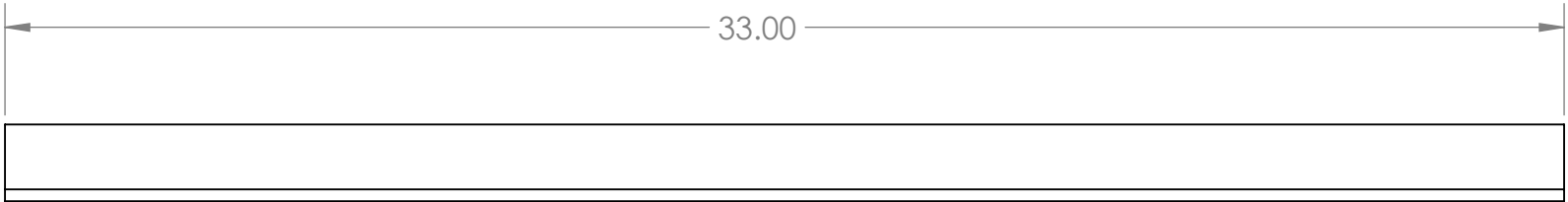
Item 1: GE-18006-01
Quantity: 2
Material: 1/8" Thick, 5052 Aluminum Sheet



Item 2: GE-18006-02
Quantity: 4
Material 1-1/2" x .125" thick. Square Tubing, 6063 Aluminum



Item 3: GE 18006-03
Quantity: 4
Material 1-1/2" x .125" thick. Square Tubing, 6063 Aluminum



Item 4: GE18006-04
Quamtity: 2
Material: 1/8" Thick, 5052 Aluminum Sheet

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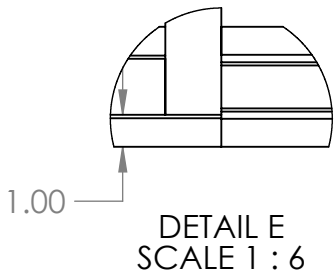
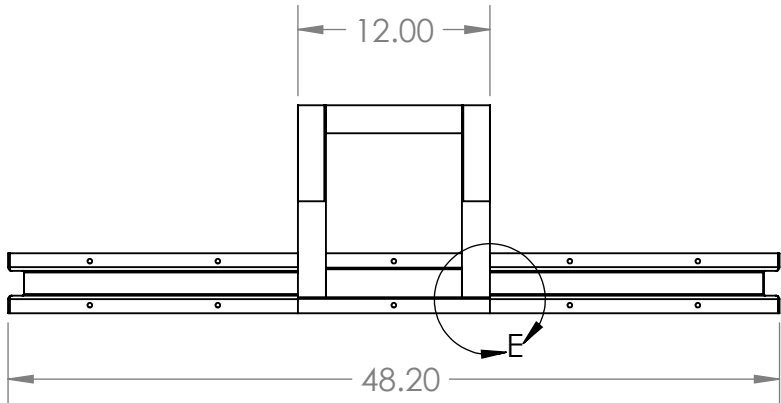
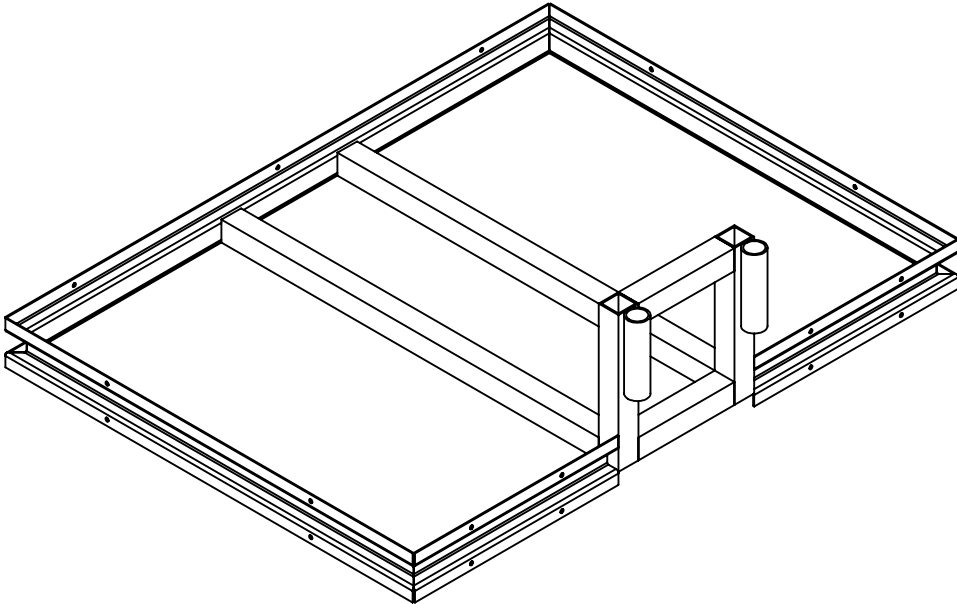
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		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.		
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		THREE PLACE DECIMAL ±.001			
		INTERPRET GEOMETRIC		Q.A.	
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



TITLE: Roller Base		
SIZE B	DWG. NO. GE-18006	REV
SCALE: 1:8	WEIGHT:	SHEET 3 OF 3



REVISIONS

ZONE	REV.	DESCRIPTION	DATE	APPROVED
2-B1	A	Weld note added	12/7/2017	CPO



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18007-1	1.75" x .125" thk. Square Tube, 6063 Aluminum	2
2	GE-18007-2	1.75" x .125" thk. Square Tube, 6063 Aluminum	2
3	GE-18007-3	1.75" x .125" Thk. Square Tube, 6063 Aluminum	2
4	GE-18007-4	1.25" Schedule 40 Pipe, 6061 Aluminum	2
5	GE-18007-5	10 Gauge 5052 Aluminum Sheet	2
6	GE-18007-6	10 Gauge 5052 Aluminum Sheet	2
7	GE-18007-7	10 Gauge 5052 Aluminum Sheet	1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 			
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <h1>Scale Plate</h1>			
		TOLERANCES:	CHECKED						
		FRACTIONAL $\pm 1/16$	ENG APPR.						
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.						
		TWO PLACE DECIMAL $\pm .01$	Q.A.						
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18007 A			
		INTERPRET GEOMETRIC TOLERANCING PER:							
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON					SCALE: 1:12		WEIGHT:	SHEET 1 OF 7
APPLICATION		DO NOT SCALE DRAWING							

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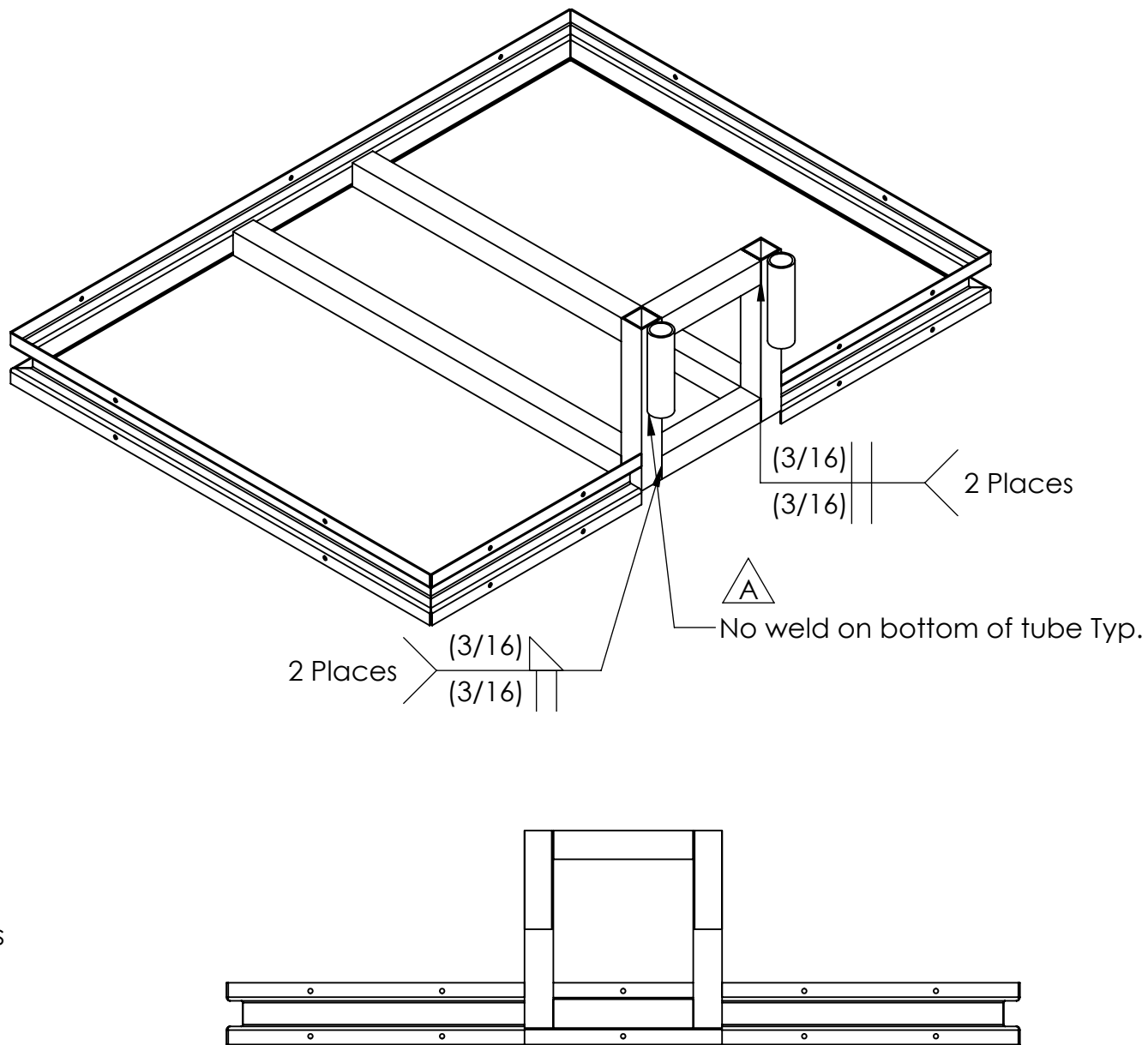
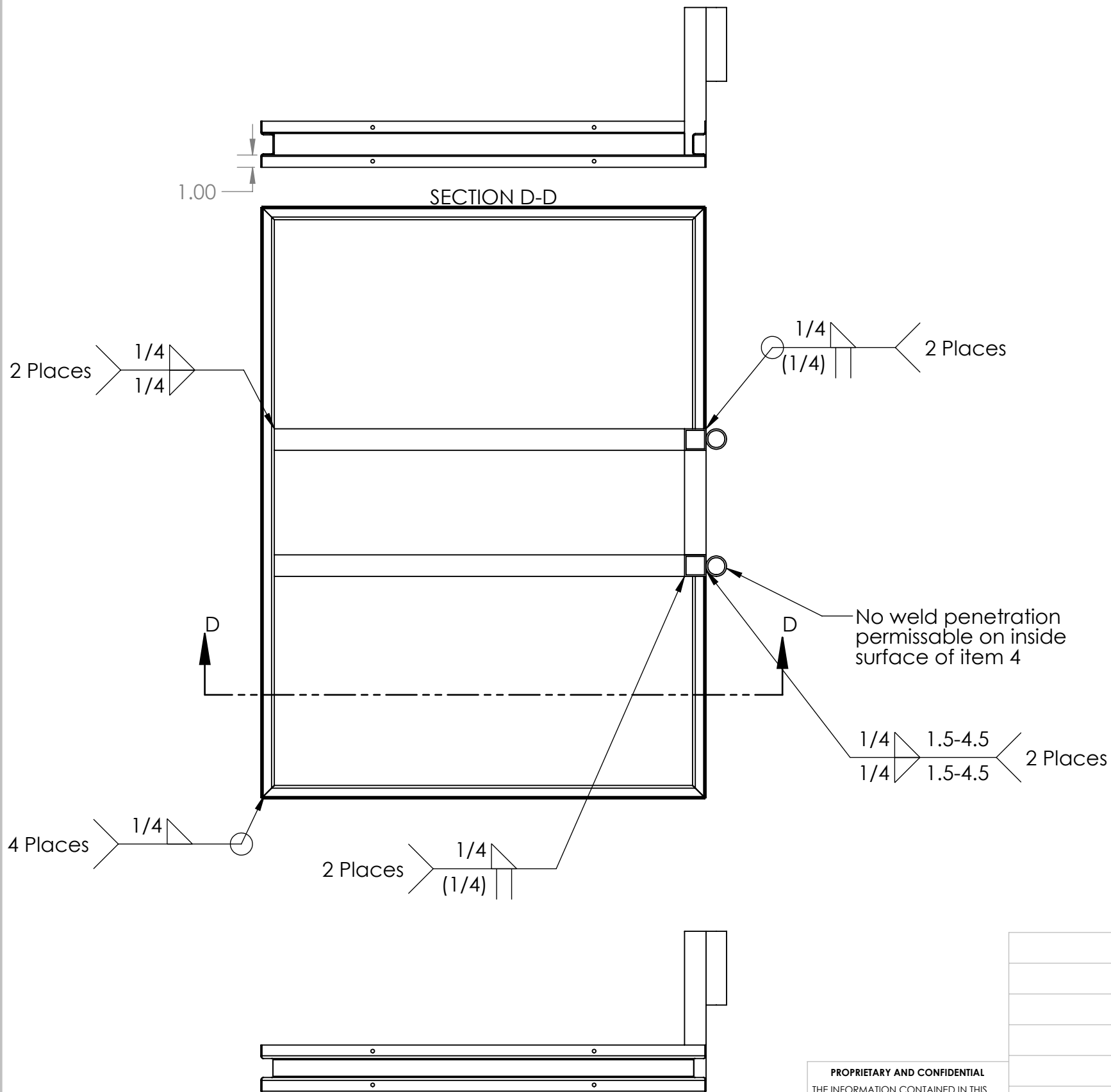
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2

1

B



B



A

A

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Scale Plate</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18007 A		
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		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:10 WEIGHT: SHEET 2 OF 7		

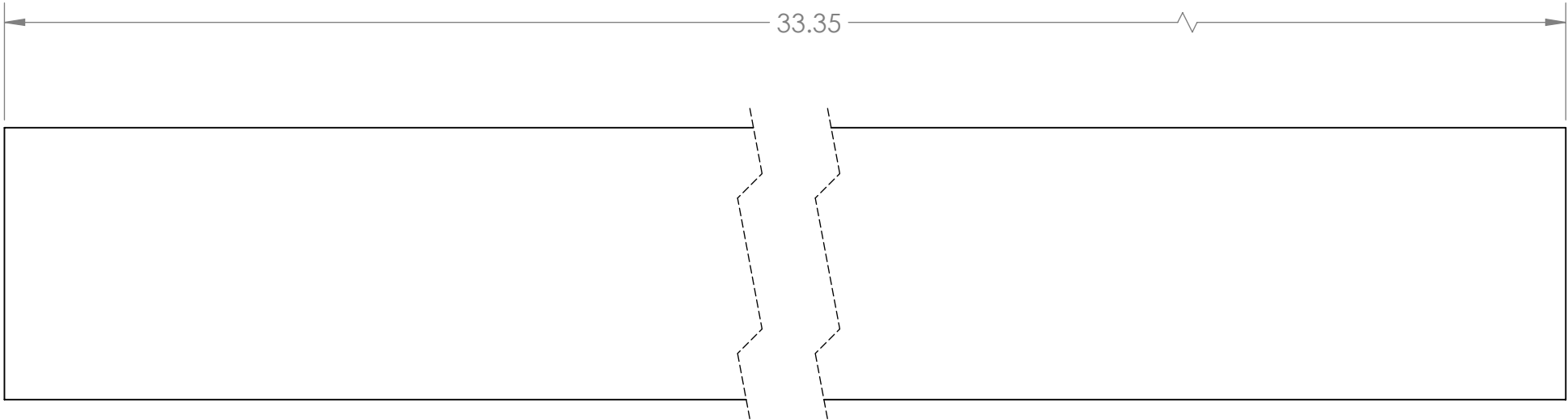
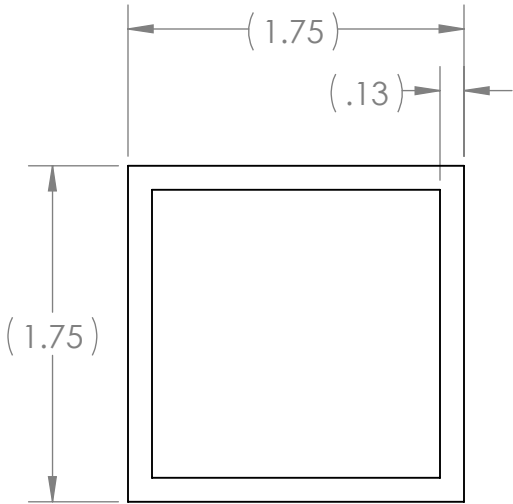
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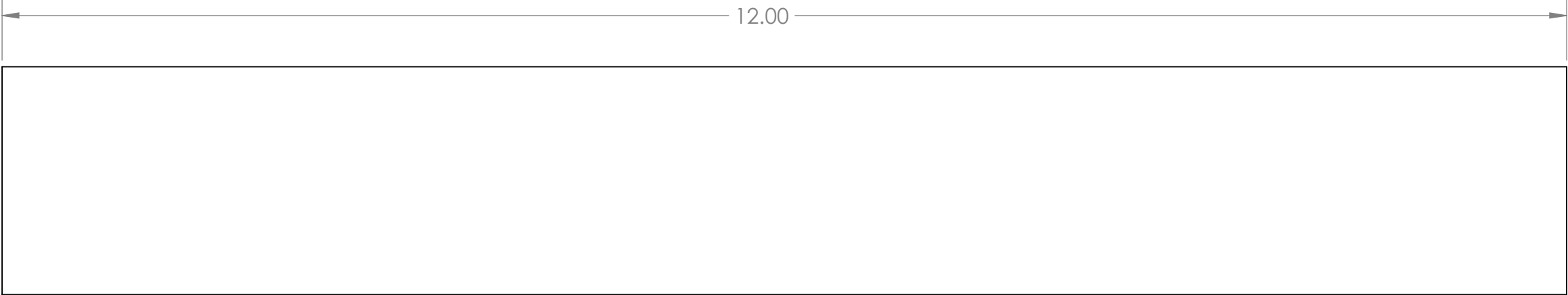
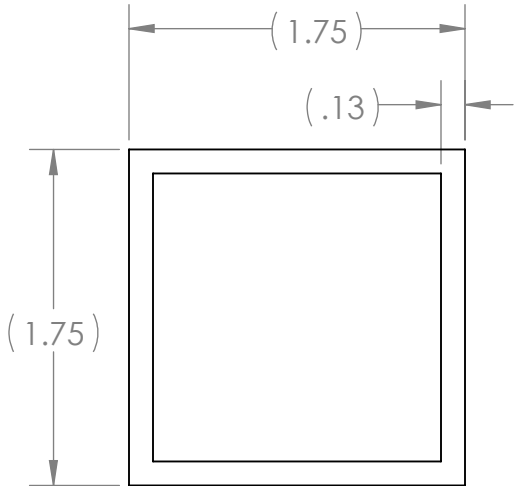
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B



B



Item: GE-18007-01
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale 1:1
QTY: 2



A

Item: GE-18007-02
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale 1:1
QTY: 2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div> <div>TITLE: <h1>Scale Plate</h1></div>	
		DIMENSIONS ARE IN INCHES	DRAWN				
		TOLERANCES:	CHECKED				
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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.				
		TWO PLACE DECIMAL $\pm .01$	Q.A.			SIZE DWG. NO. REV B GE-18007 A	
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:				
		INTERPRET GEOMETRIC TOLERANCING PER:					
		MATERIAL				SCALE: 1:1	WEIGHT:
NEXT ASSY	USED ON	FINISH					SHEET 3 OF 7
APPLICATION		DO NOT SCALE DRAWING					

4

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2

1

A

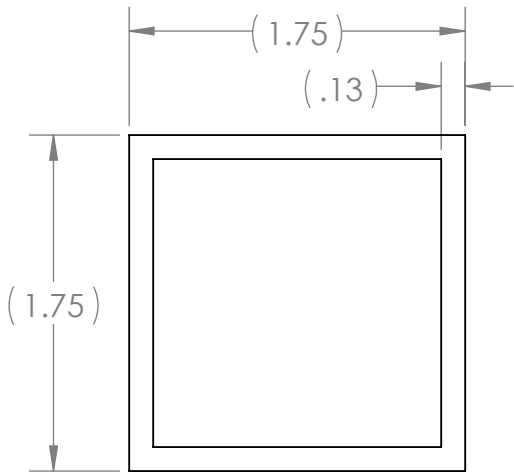
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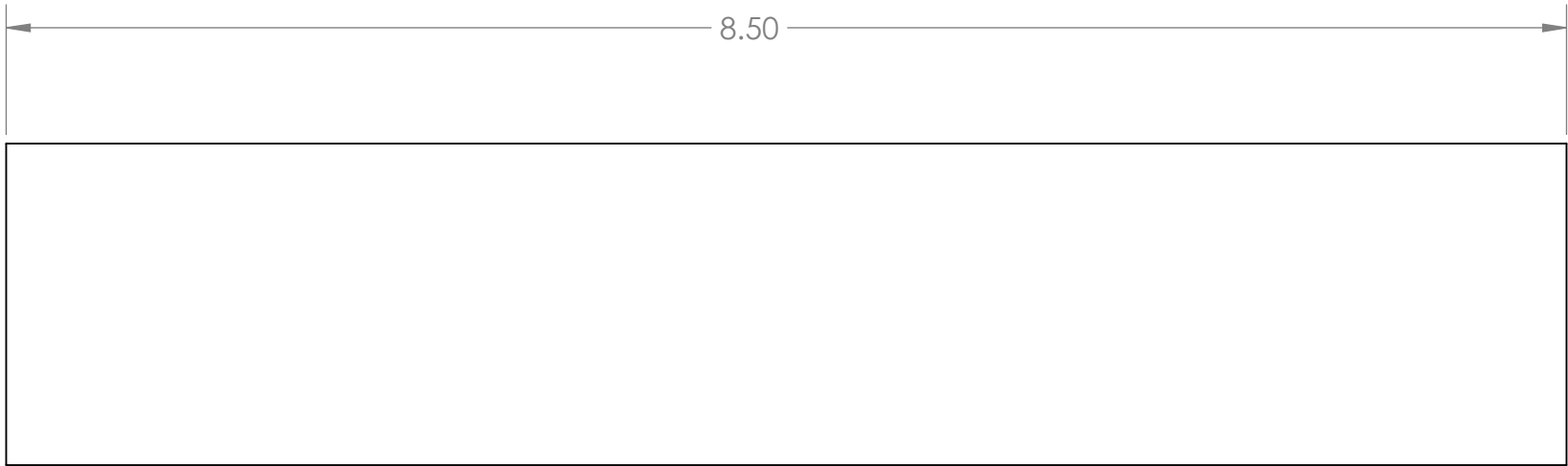
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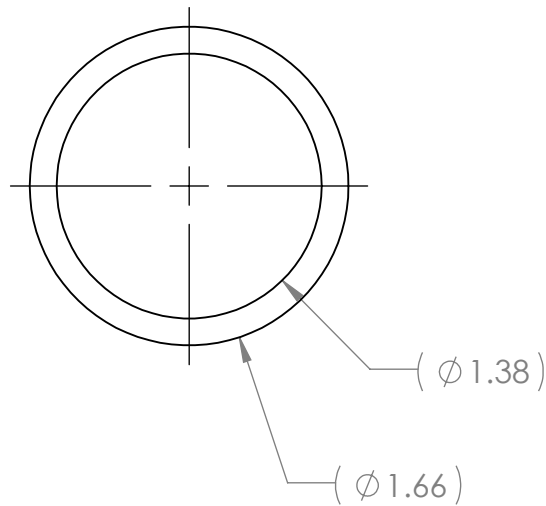


Item: GE-18007-03
Material 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale 1:1
QTY: 2

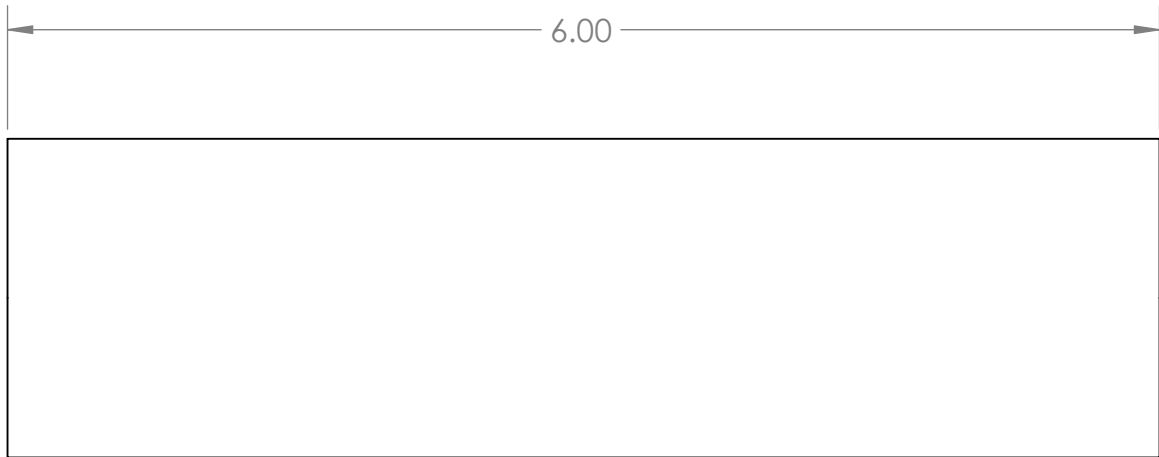


B

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Item: GE-18007-04
Material: 1.25" Schedule 40 Pipe, 6061 Aluminum
Scale 1:1
QTY: 2



A

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Scale Plate			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18007 A			
		MATERIAL	COMMENTS:						
NEXT ASSY	USED ON	FINISH							
APPLICATION		DO NOT SCALE DRAWING					SCALE: 1:1	WEIGHT:	SHEET 4 OF 7

4

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2

1

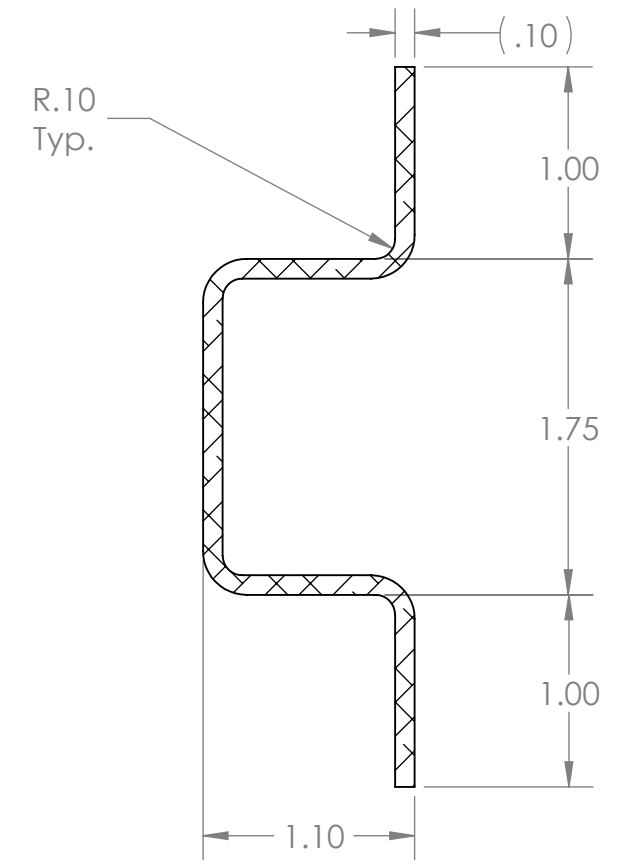
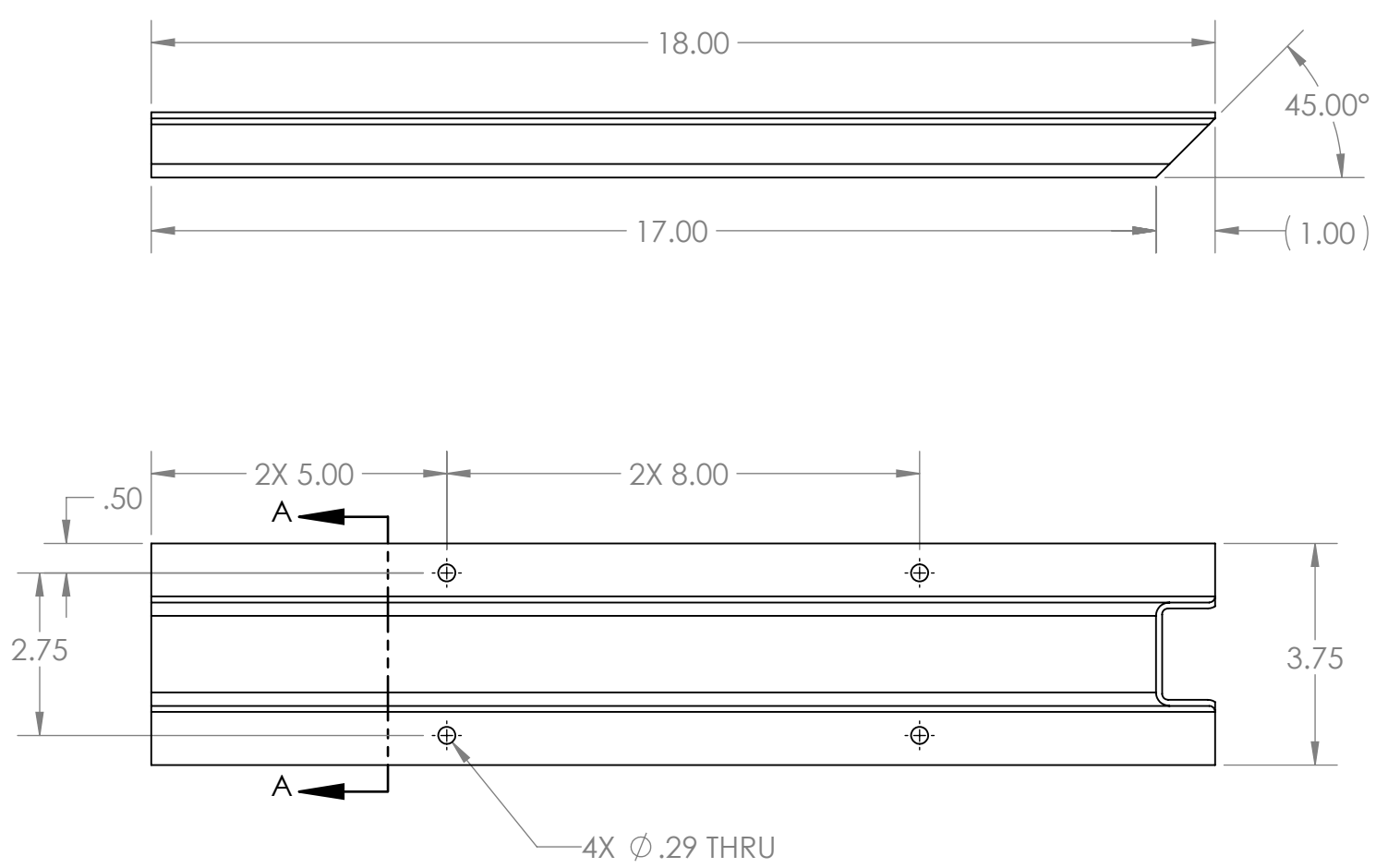
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3

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1



B



SECTION A-A
SCALE 1 : 1

Item: GE-18007-05
Material: 10 Gauge 5052 Aluminum Sheet
Scale 1:3
Qty: 2

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		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <h1>Scale Plate</h1>			
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		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18007 A			
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		TOLERANCING PER:							
		MATERIAL							
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APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:3 WEIGHT: SHEET 5 OF 7			

A

4

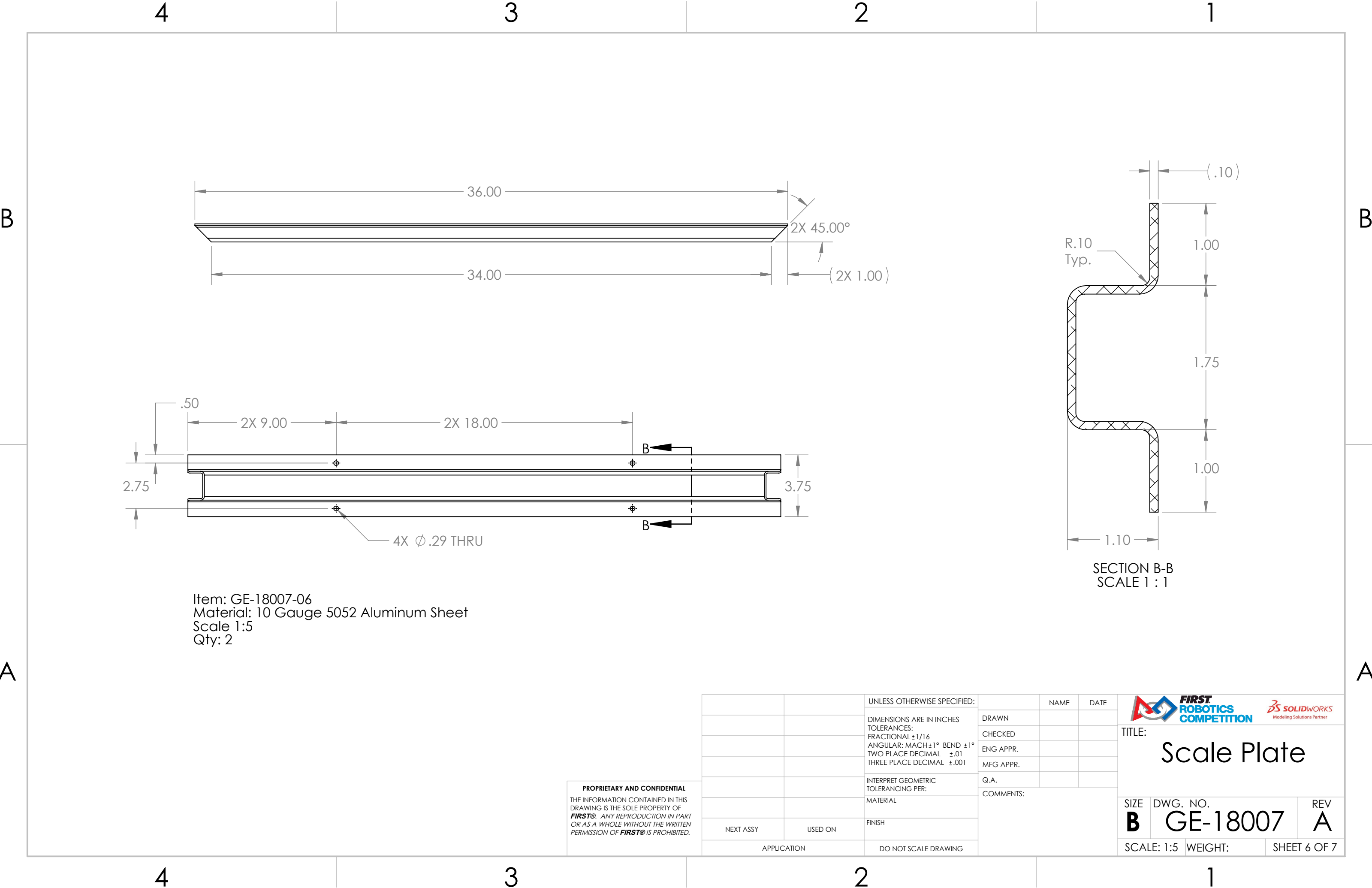
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B

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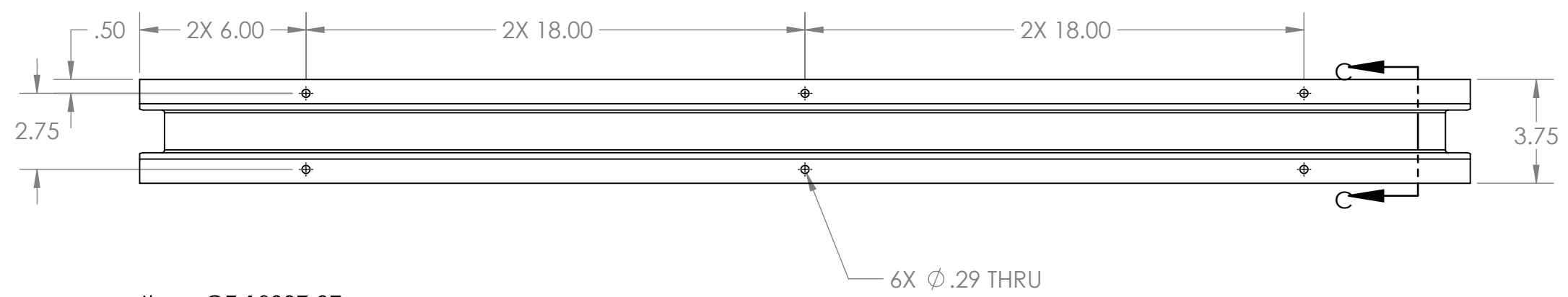
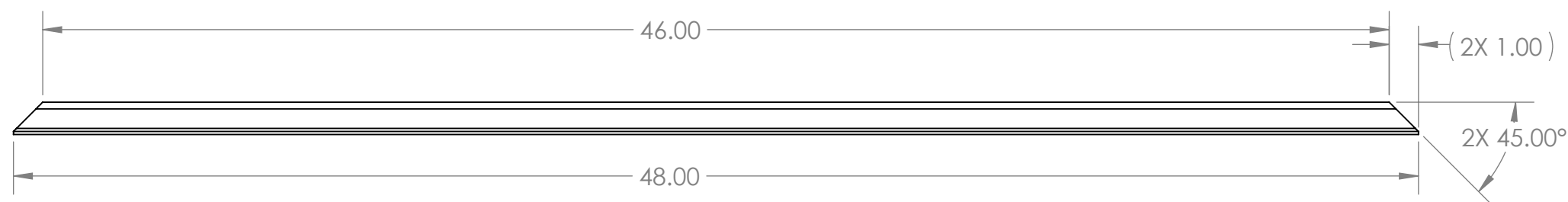


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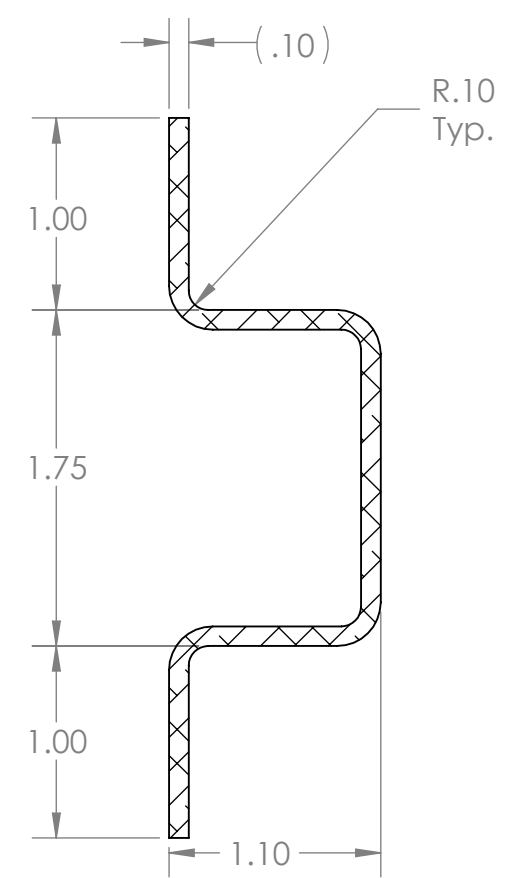
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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18007 A		
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:5 WEIGHT: SHEET 6 OF 7		

B

B



Item: GE-18007-07
Material: 10 Gauge 5052 Aluminum Sheet
Scale 1:5
Qty: 1





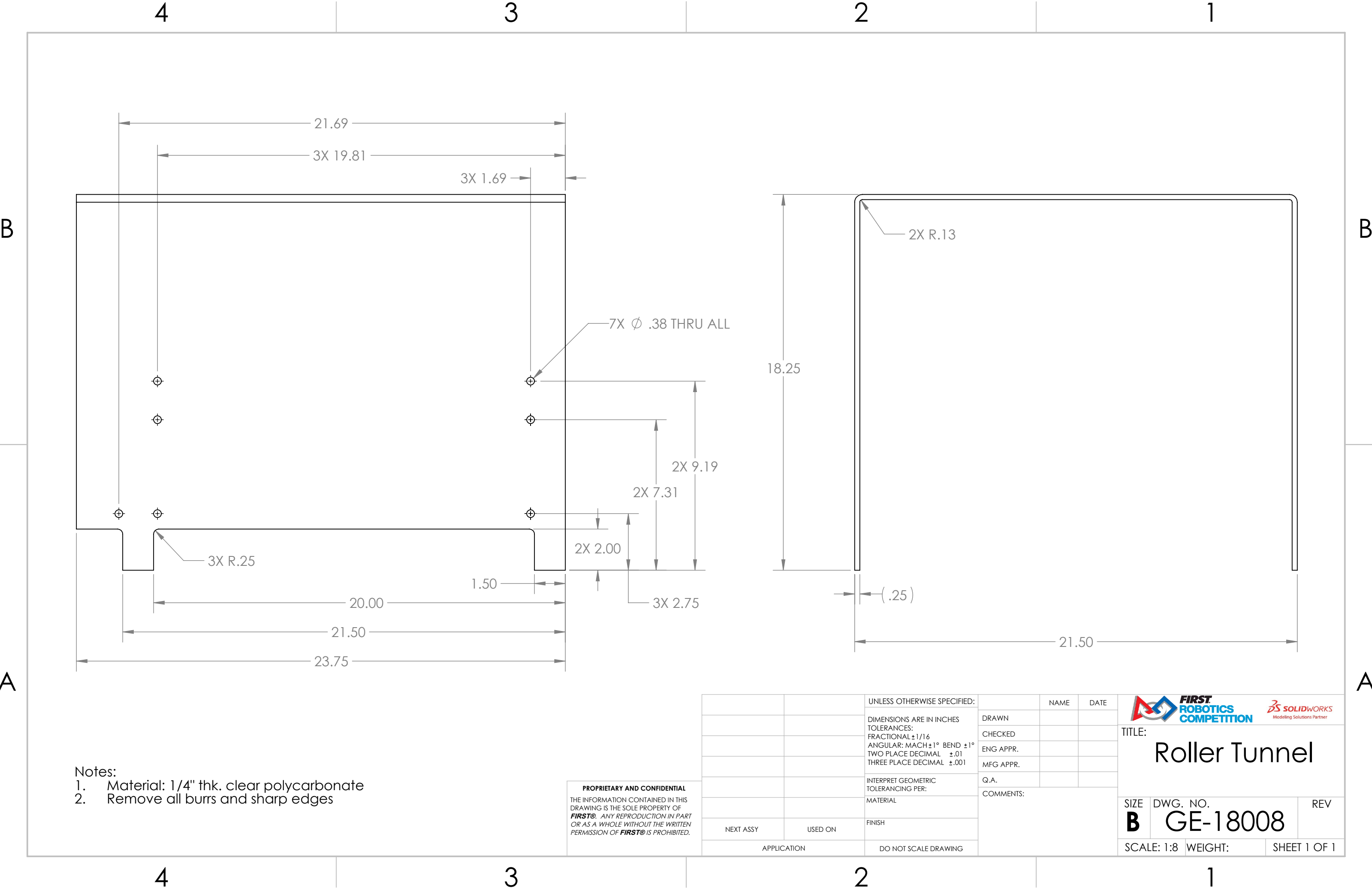
SECTION C-C
SCALE 1 : 1

A

A



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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div>FIRST ROBOTICS COMPETITION</div></div>			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Scale Plate			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18007 A			
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON					SCALE: 1:5 WEIGHT: SHEET 7 OF 7			
APPLICATION		DO NOT SCALE DRAWING							

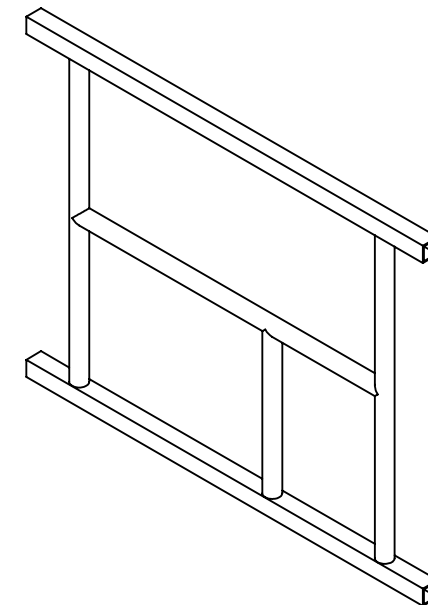
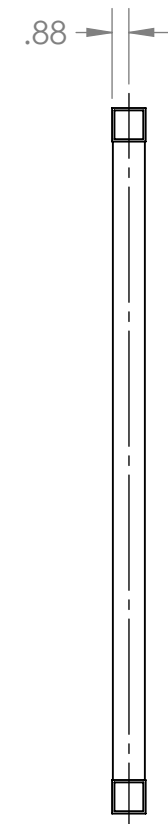


- Notes:
- 1. Material: 1/4" thk. clear polycarbonate
 - 2. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 			
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <h1>Roller Tunnel</h1>			
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		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18008			
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		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8		WEIGHT:	SHEET 1 OF 1

1





B

A

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: <h1>Exchange Frame</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18009		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:10 WEIGHT: SHEET 1 OF 3		

1

4

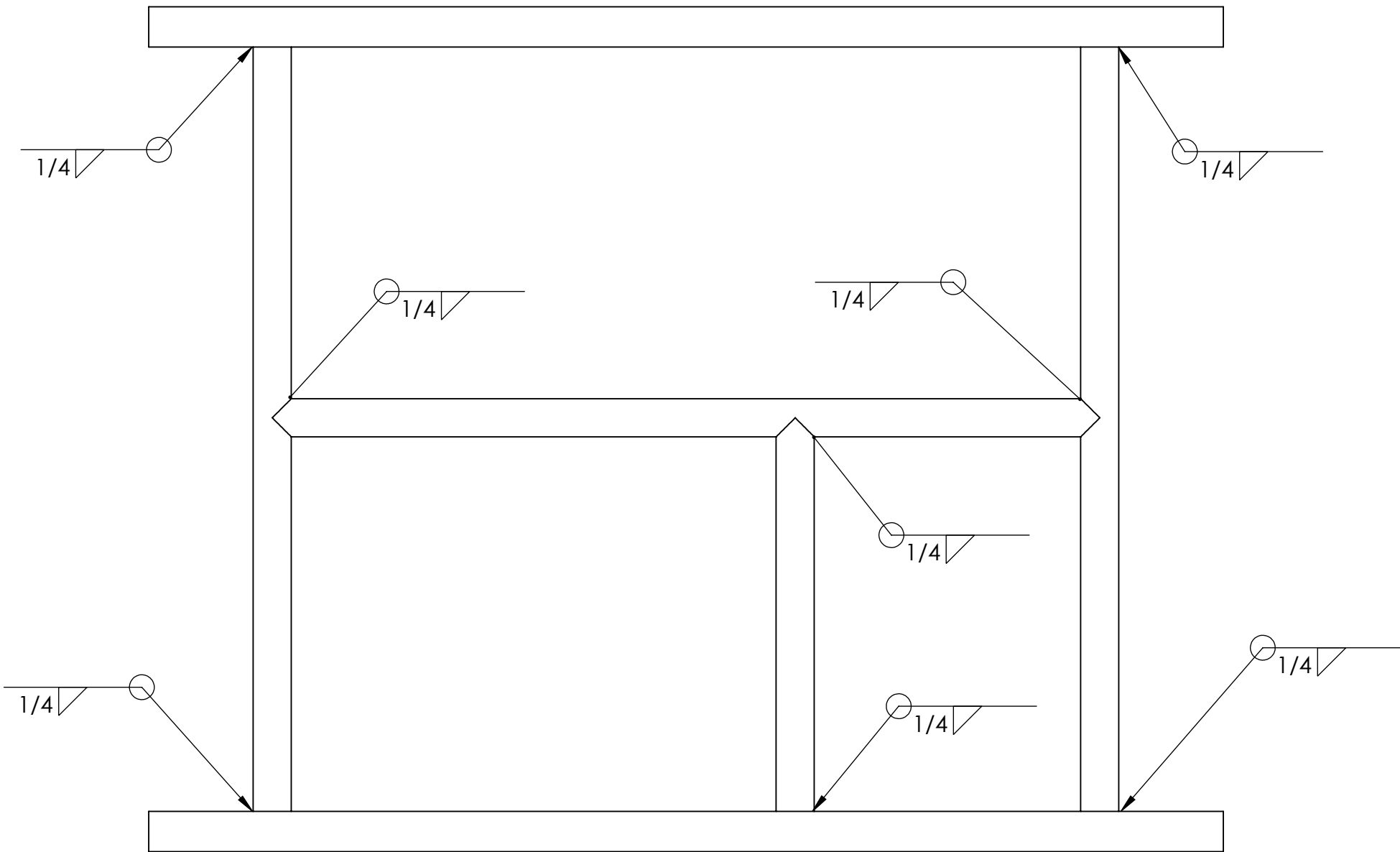
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B



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			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18009		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:10 WEIGHT: SHEET 2 OF 3		

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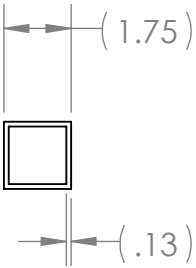
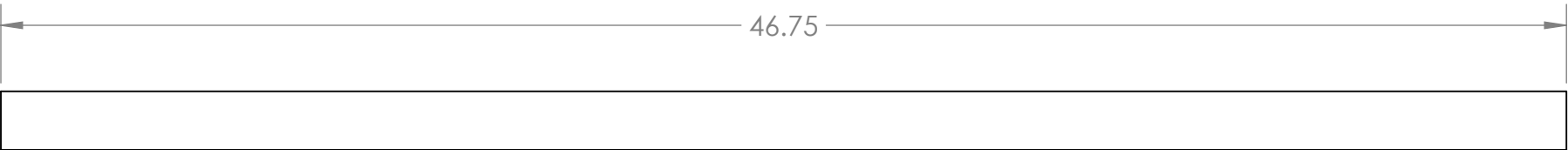
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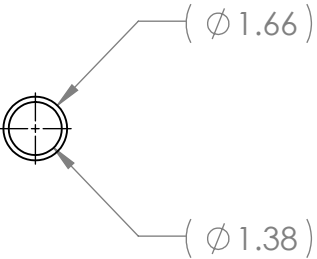
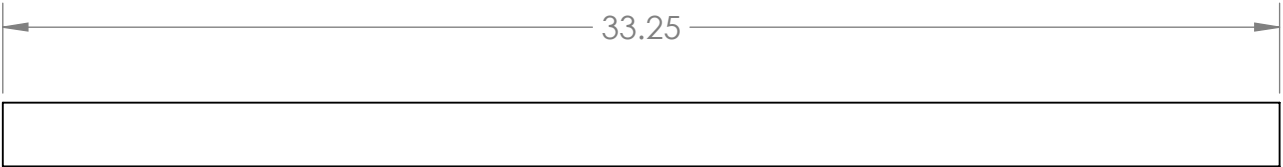
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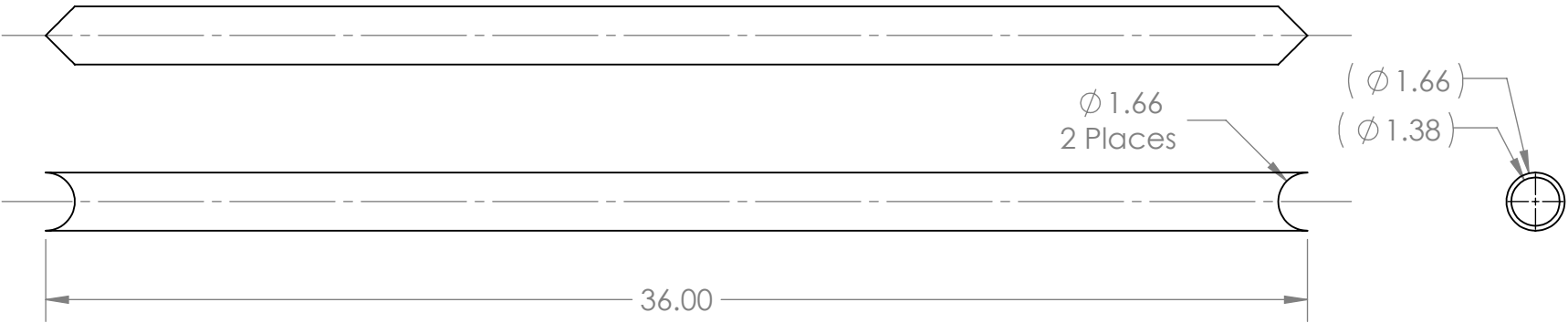
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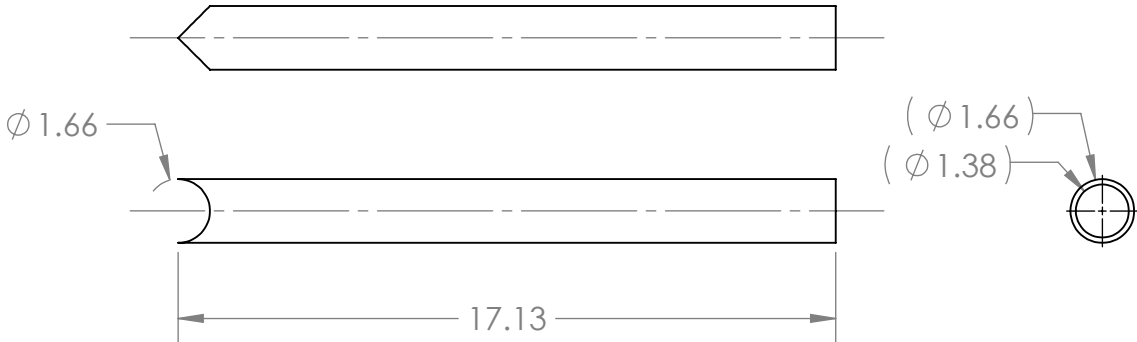
Item: GE-18009-01
Quantity: 2
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum



Item: GE-18009-02
Quantity: 2
Material: 1-1/4" Schedule 40 Pipe, 6061 Aluminum





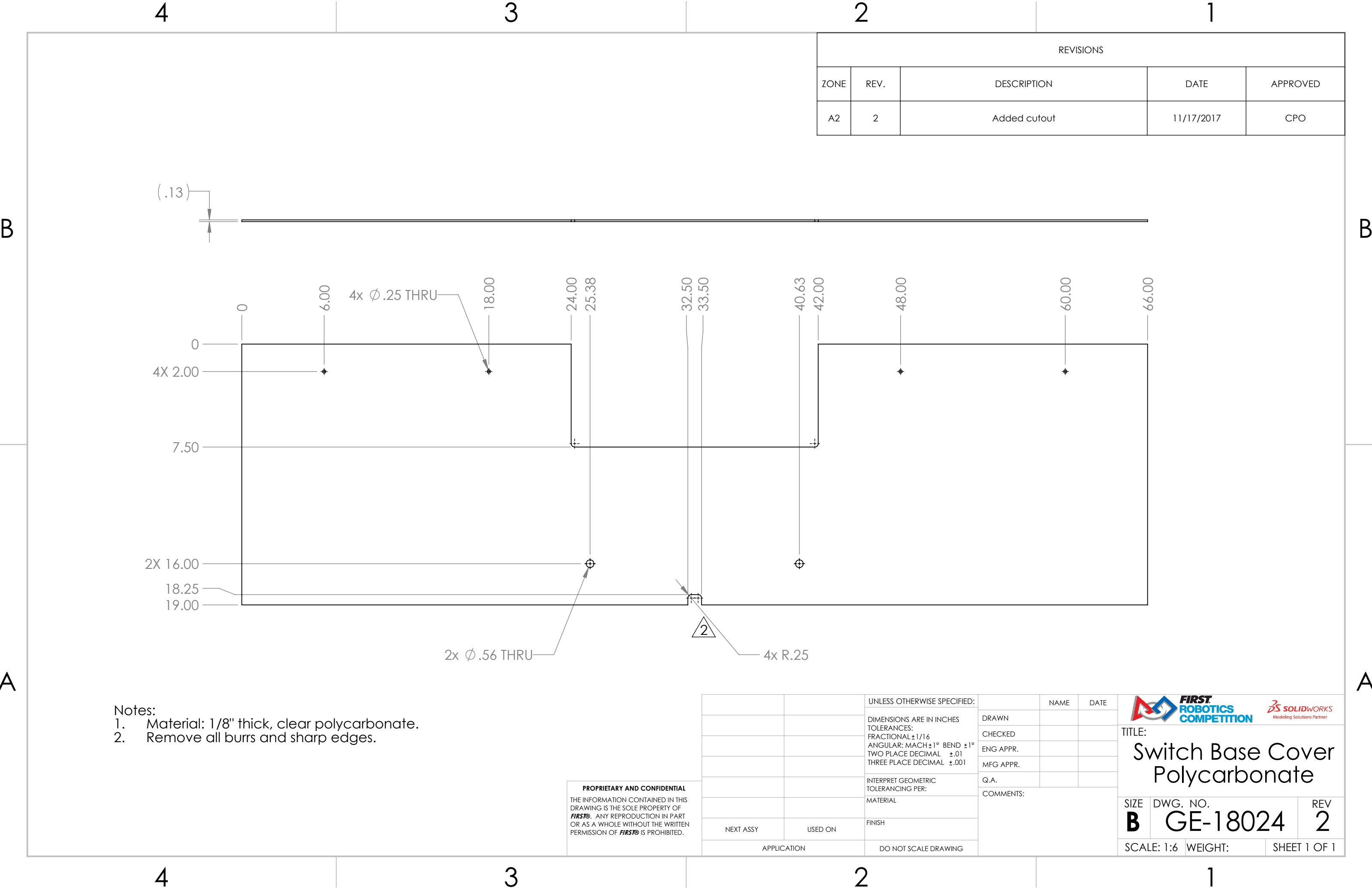
Item: GE-18009-03
Quantity: 1
Material: 1-1/4" Schedule 40 Pipe, 6061 Aluminum



Item: GE-18009-04
Quantity: 1
Material: 1-1/4" Schedule 40 Pipe, 6061 Aluminum

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			CHECKED			
			ENG APPR.			
			MFG APPR.			
			Q.A.			
			COMMENTS:			
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING				



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A2	2	Added cutout	11/17/2017	CPO

Notes:

- Material: 1/8" thick, clear polycarbonate.
- Remove all burrs and sharp edges.

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:
Switch Base Cover
Polycarbonate

SIZE
B

DWG. NO.
GE-18024

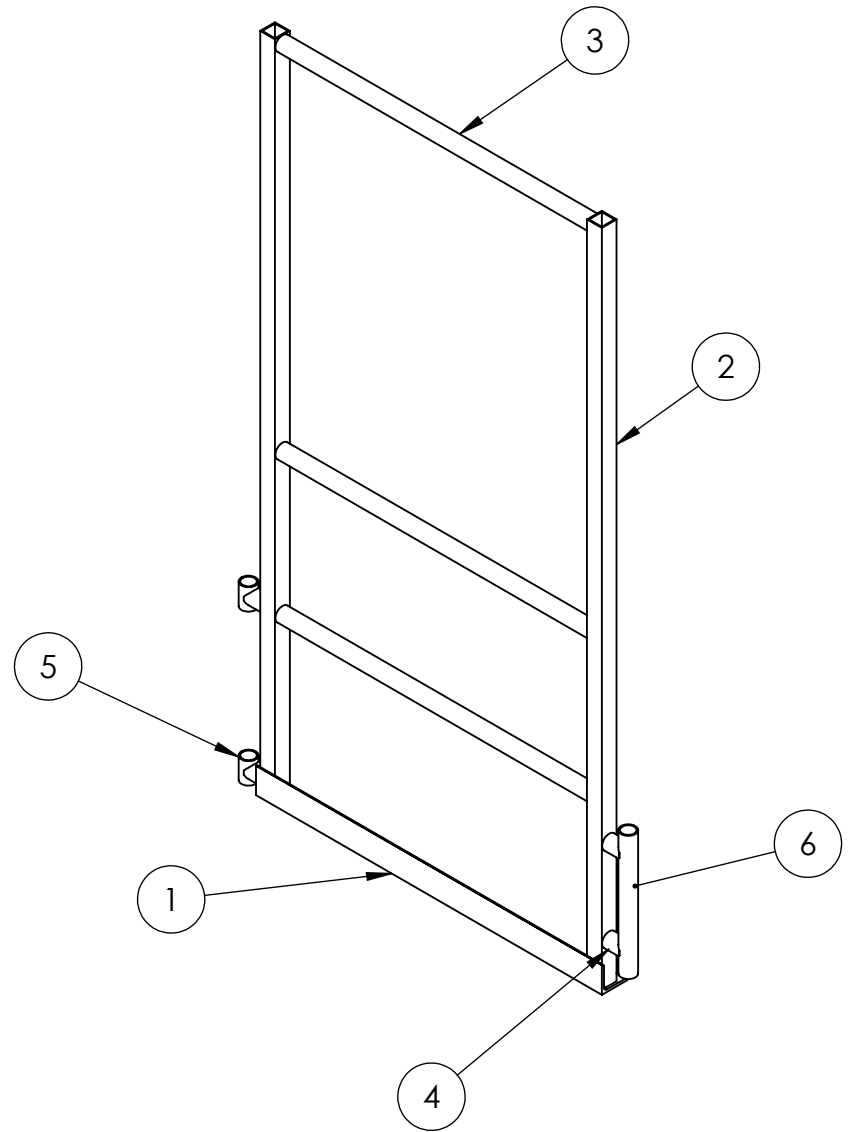
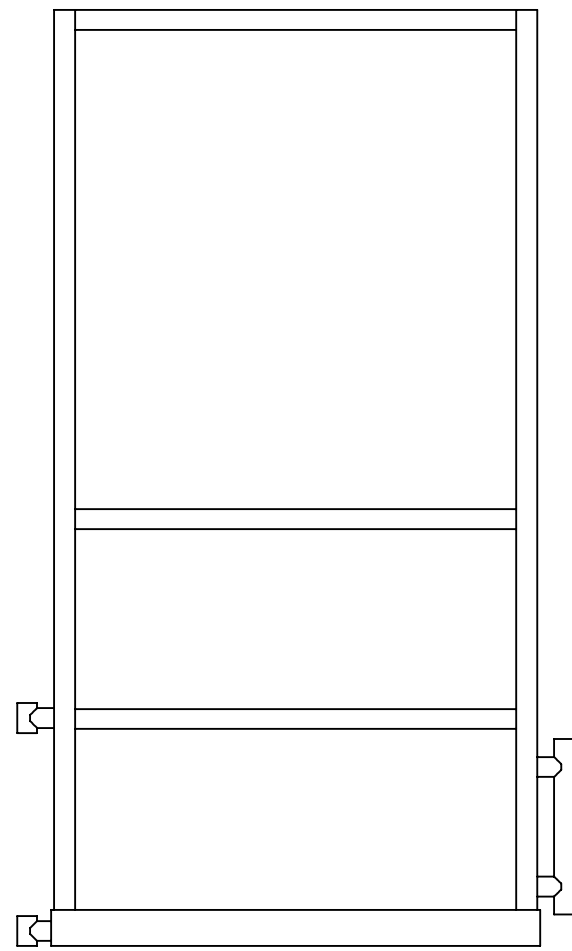
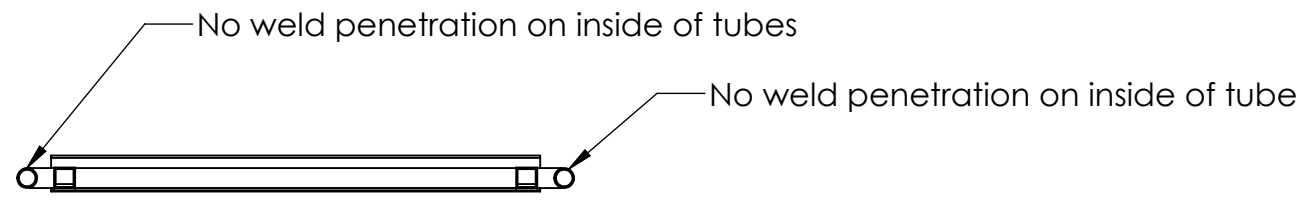
REV
2

SCALE: 1:6

WEIGHT:

SHEET 1 OF 1

B





A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18011-01	3" x .25" thk. Angle, 6061 Aluminum	1
2	GE-18011-02	1.75" x .125" thk. Square Tube, 6061 Aluminum	2
3	GE-18011-03	1-1/4" Schedule 40 Pipe, 6061 Aluminum	3
4	GE-18011-04	1-1/4" Schedule 40 Pipe, 6061 Aluminum	4
5	GE-18011-05	1-1/4" Schedule 40 Pipe, 6061 Aluminum	2
6	GE-18011-06	1-1/4" Schedule 40 Pipe, 6061 Aluminum	1

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL: $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



TITLE:
Portal Frame - Left

SIZE
B

DWG. NO.
GE-18011

REV

SCALE: 1:16 WEIGHT:

SHEET 1 OF 3

B

A

4

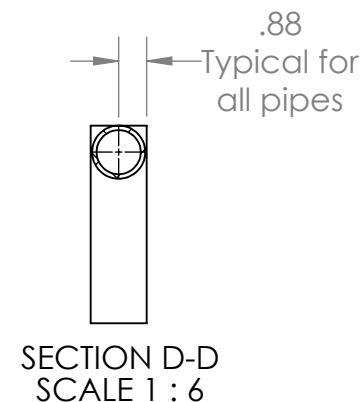
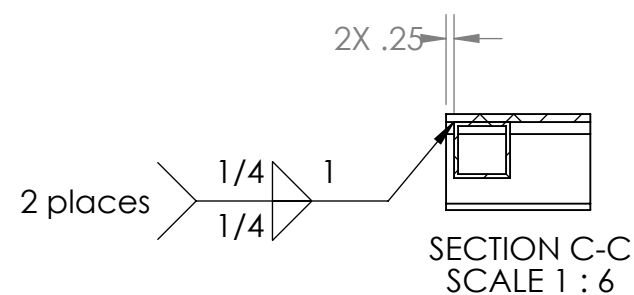
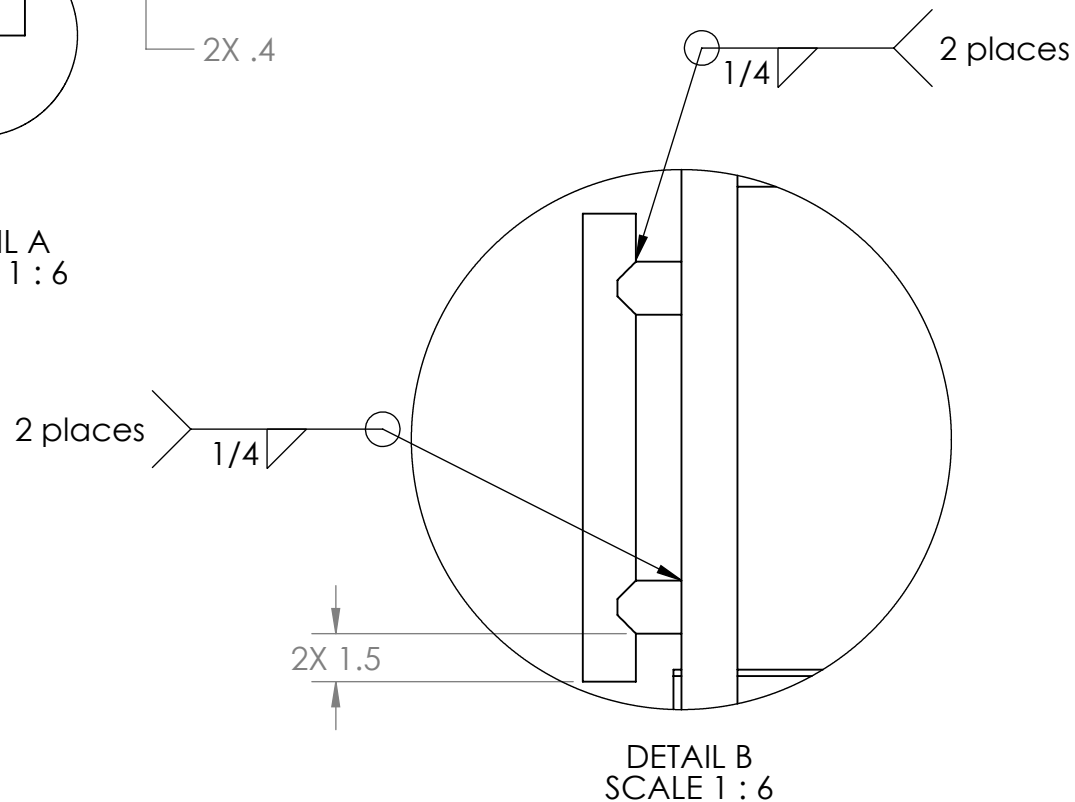
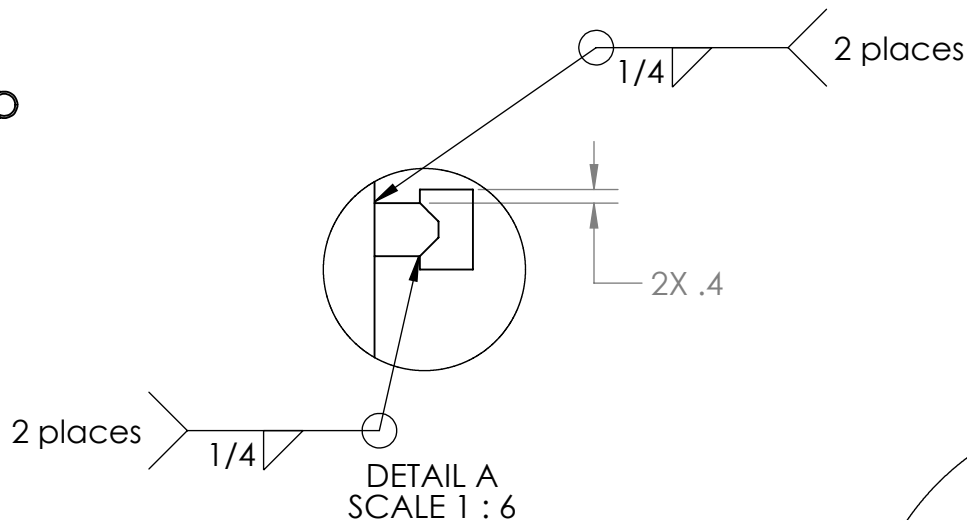
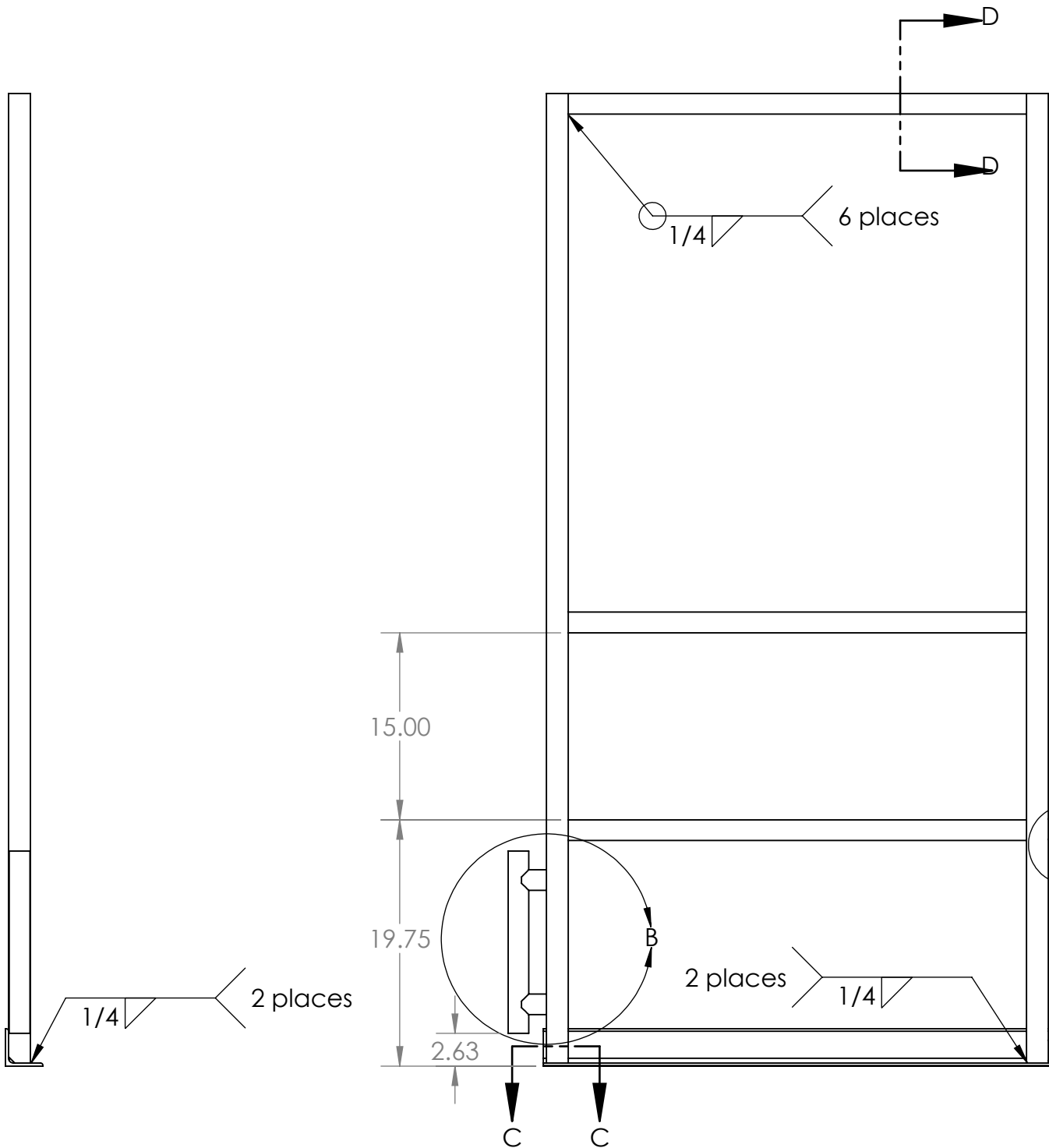
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2

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TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:
MATERIAL

FINISH

NEXT ASSY

USED ON

APPLICATION

DO NOT SCALE DRAWING

NAME

DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:

**FIRST
ROBOTICS
COMPETITION**

Modeling Solutions Partner

TITLE:

Portal Frame - Left

SIZE
BDWG. NO.
GE-18011

REV

SCALE: 1:12 WEIGHT:

SHEET 2 OF 3

4

3

2

1

4

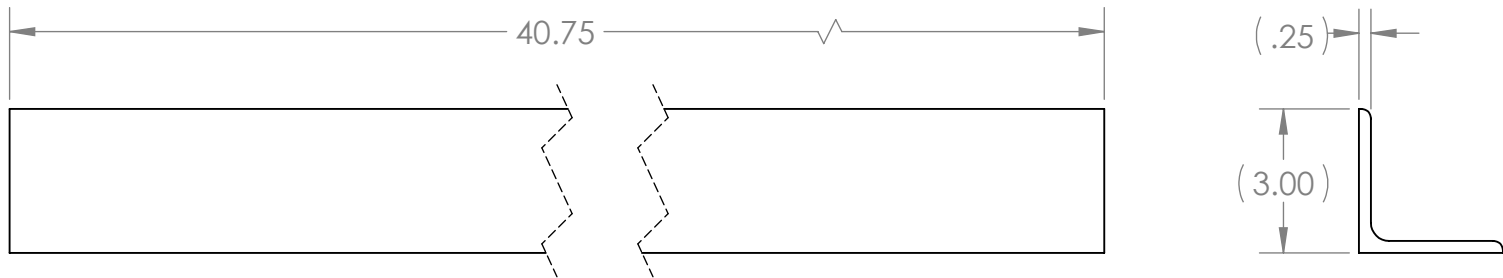
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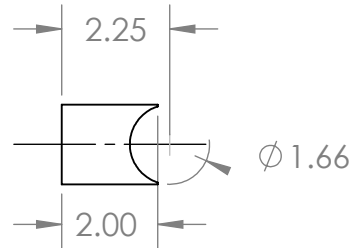
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B

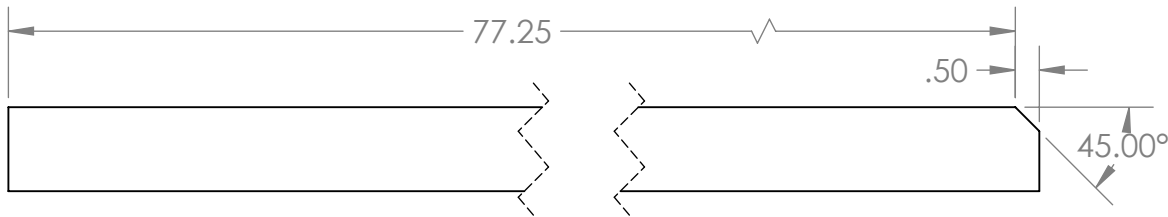
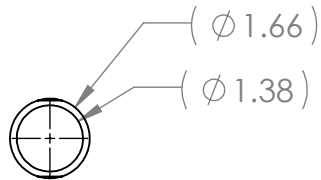
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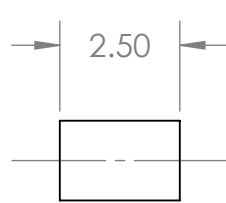
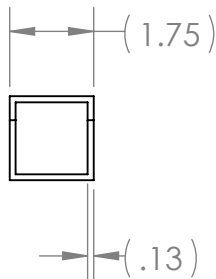
Item 1: GE-18011-01
Qty: 1
Material: 3" x .25" thk. Angle, 6061 Aluminum



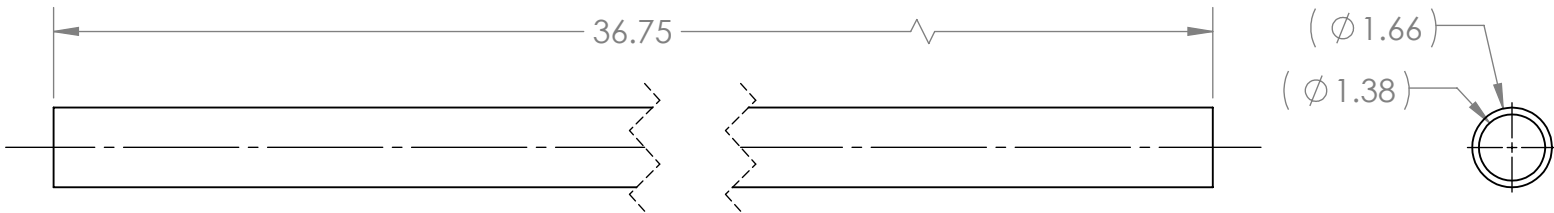
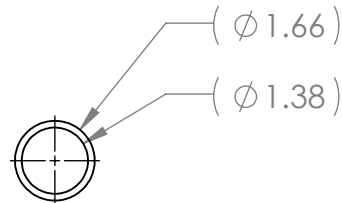
Item 1: GE-18011-04
Qty: 4
Material: 1-1/4" Schedule 40 Pipe, 6061 Aluminum



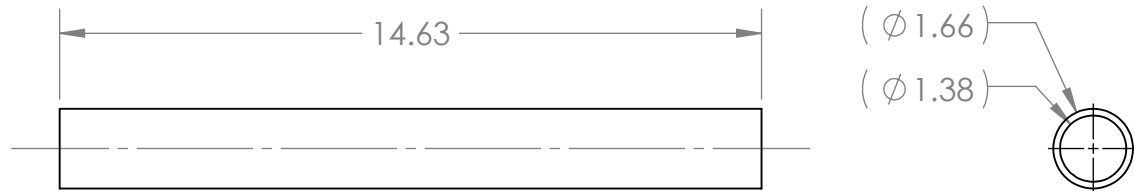
Item 1: GE-18011-02
Qty: 2
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum



Item 1: GE-18011-05
Qty: 2
Material: 1-1/4" Schedule 40 Pipe, 6061 Aluminum



Item 1: GE-18011-03
Qty: 3
Material: 1-1/4" Schedule 40 Pipe, 6061 Aluminum





Item 1: GE-18011-06
Qty: 1
Material: 1-1/4" Schedule 40 Pipe, 6061 Aluminum

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: <h1>Portal Frame - Left</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18011		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:4 WEIGHT: SHEET 3 OF 3		

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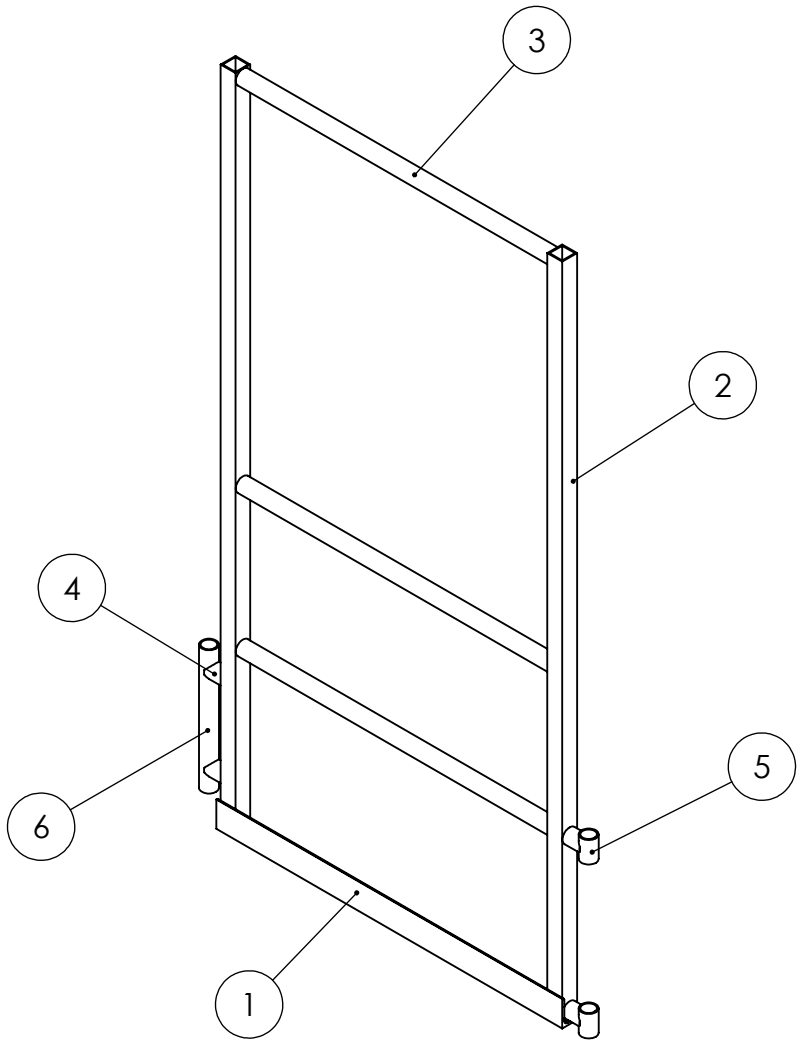
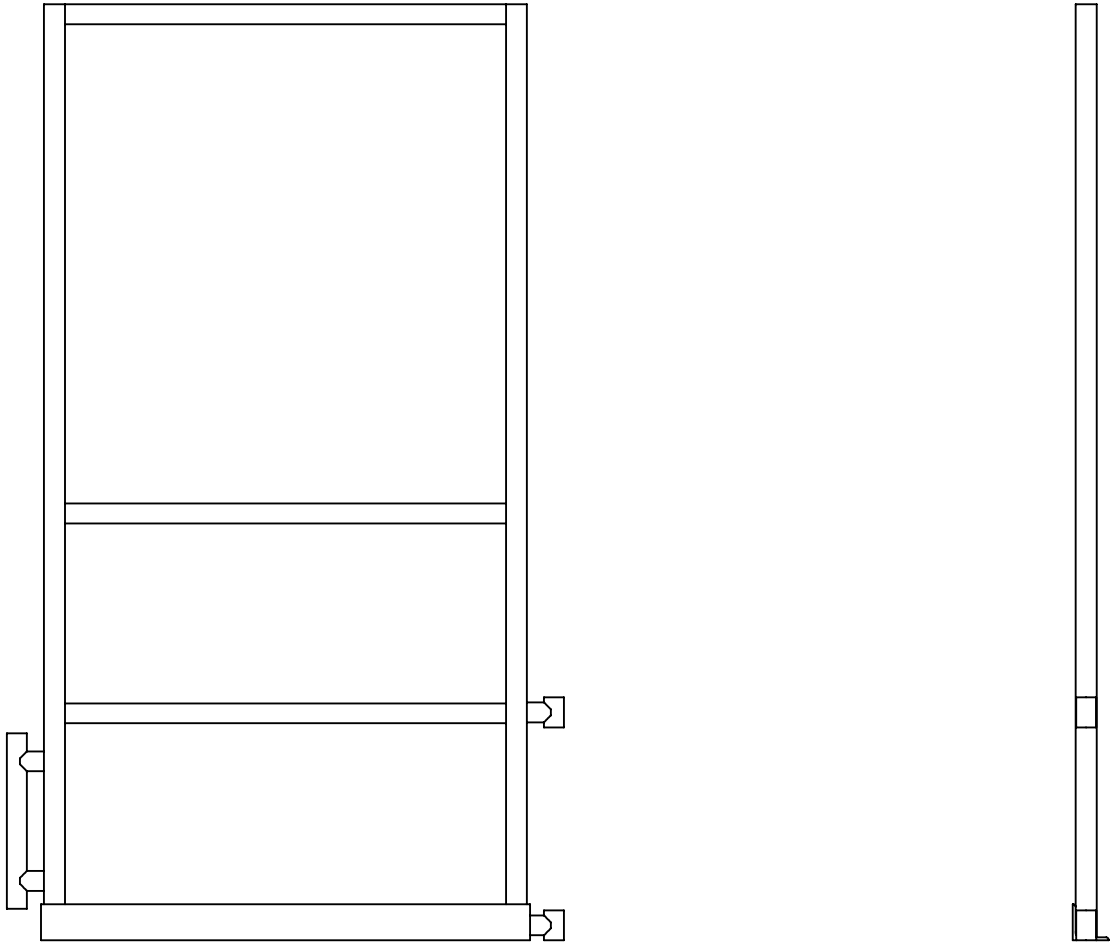
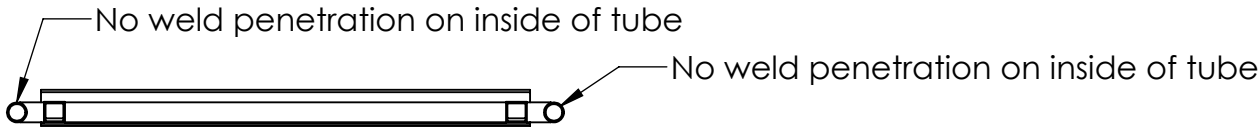
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2

1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18012-01	3" x .25" thk. Angle, 6061 Aluminum	1
2	GE-18012-02	1.75" x .125 thk. Square Tubing, 6061 Aluminum	2
3	GE-18012-03	1-1/4" Schedule 40 Pipe, 6061 Aluminum	3
4	GE-18012-04	1-1/4" Schedule 40 Pipe, 6061 Aluminum	4
5	GE-18012-05	1-1/4" Schedule 40 Pipe, 6061 Aluminum	2
6	GE-18012-06	1-1/4" Schedule 40 Pipe, 6061 Aluminum	1

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: <h1>Portal Frame - Right</h1>			
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			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18012			
		MATERIAL							
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NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING							

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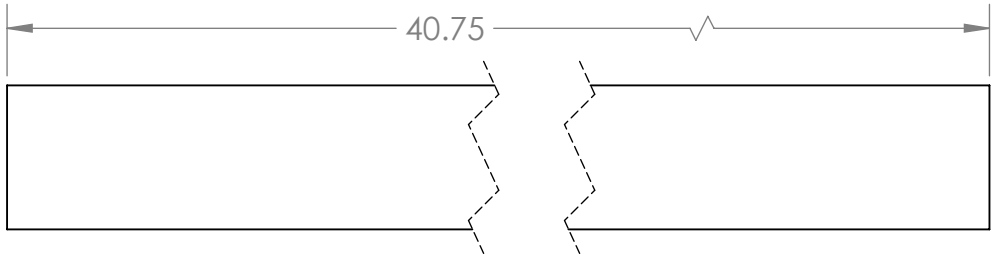
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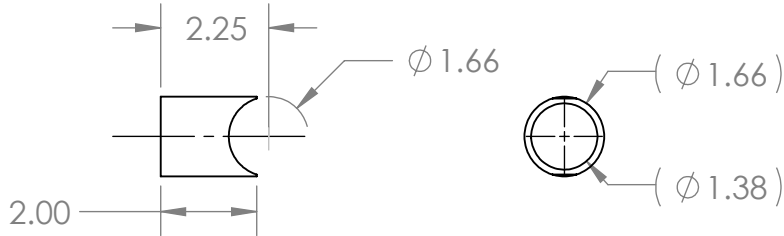
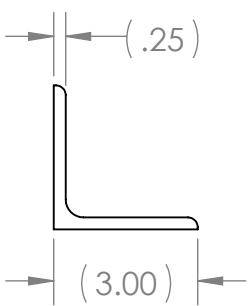
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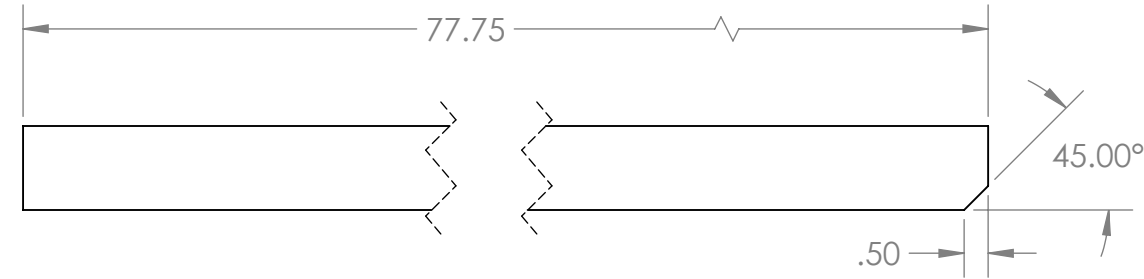
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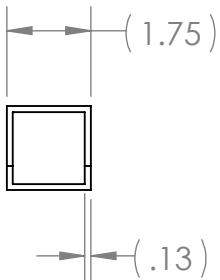
Item: GE18012-01
Qty: 1
Material 3" x .25" thick Angle, 6061 Aluminum



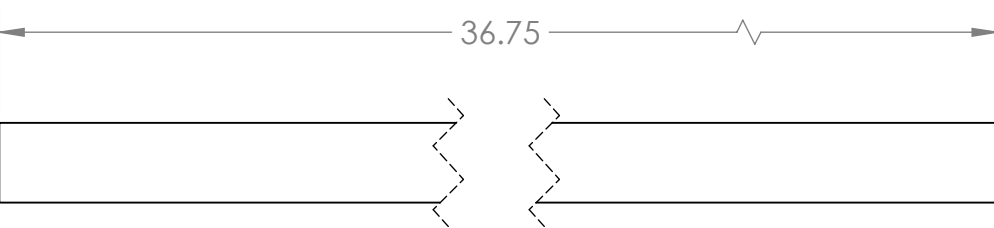
Item: GE18012-04
Qty: 4
Material 1-1/4" Schedule 40 Pipe, 6061 Aluminum



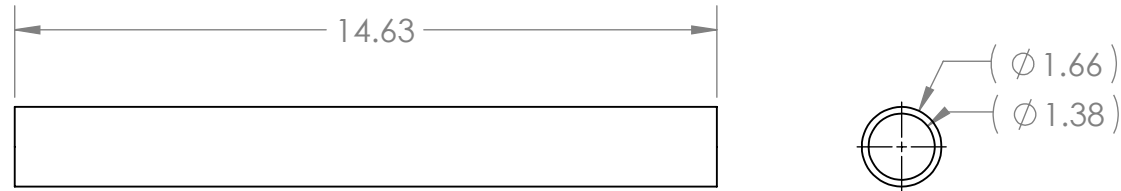
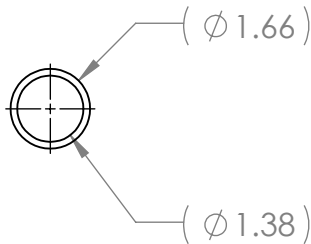
Item: GE18012-02
Qty: 2
Material 1.75" x .125" thick Square Tubing, 6061 Aluminum



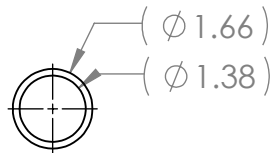
Item: GE18012-05
Qty: 2
Material 1-1/4" Schedule 40 Pipe, 6061 Aluminum



Item: GE18012-03
Qty: 3
Material 1-1/4" Schedule 40 Pipe, 6061 Aluminum



Item: GE18012-06
Qty: 1
Material 1-1/4" Schedule 40 Pipe, 6061 Aluminum



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		CHECKED	
		ENG APPR.	
		MFG APPR.	
INTERPRET GEOMETRIC TOLERANCING PER:		Q.A.	
MATERIAL		COMMENTS:	
FINISH			
NEXT ASSY	USED ON		
APPLICATION		DO NOT SCALE DRAWING	



TITLE: Portal Frame - Right			
SIZE B	DWG. NO. GE-18012	REV	
SCALE: 1:4	WEIGHT:	SHEET 3 OF 3	

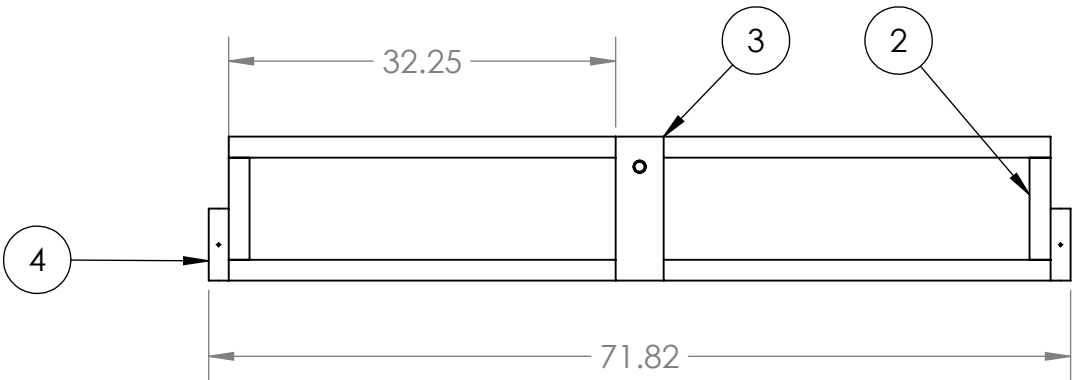
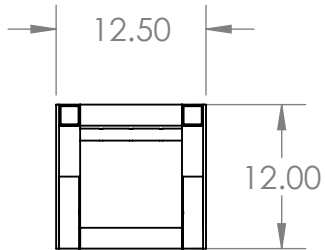
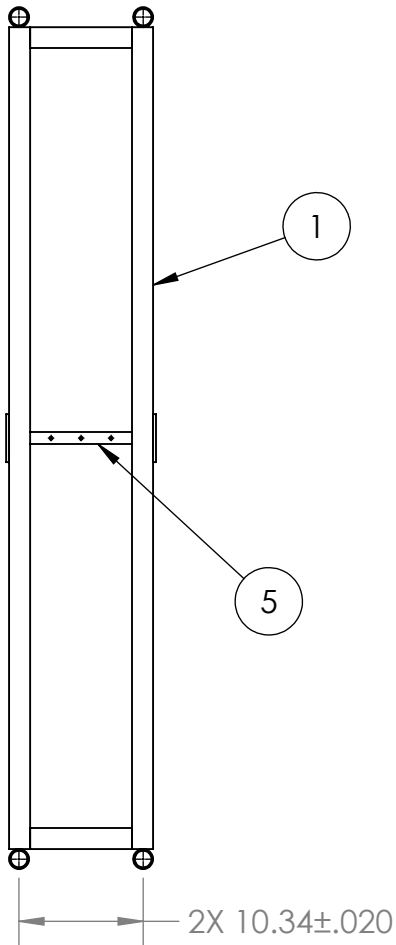
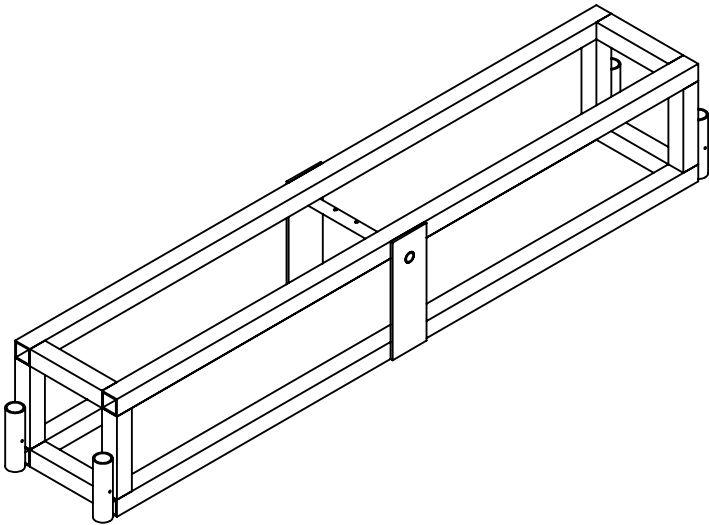
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REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
2-B3	2	Added weld note	11/17/17	CPO



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18013-1	1.75" x .125" thk. Square Tube, 6063 Aluminum	4
2	GE-18013-2	1.75" x .125" thk. Square Tube, 6063 Aluminum	8
3	GE-18013-3	.25" thk. Plate, 6061 Aluminum	2
4	GE-18013-4	1.25" Schedule 40 Pipe, 6061 Aluminum	4
5	GE-18013-5	1" OD x 0.095" thk. Tube, 6061 Aluminum	1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 TITLE: Switch Arm
		DIMENSIONS ARE IN INCHES	DRAWN			
		TOLERANCES:	CHECKED			
		FRACTIONAL: $\pm 1/16$	ENG APPR.			
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.			
		TWO PLACE DECIMAL $\pm .01$	Q.A.			SIZE B DWG. NO. GE-18013 REV 2
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL				SCALE: 1:16 WEIGHT:
		FINISH				SHEET 1 OF 5
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING				

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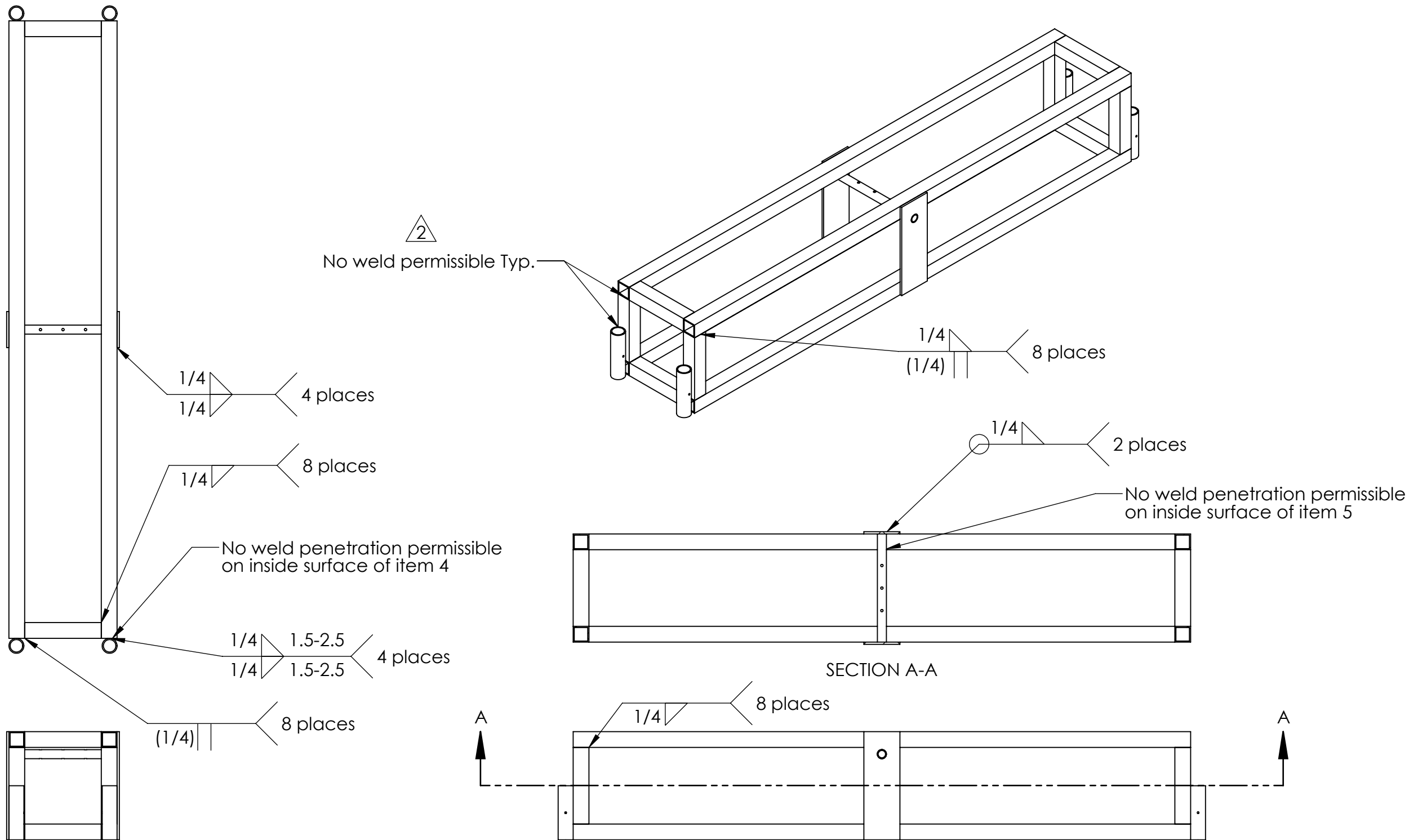
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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:
MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:

**FIRST**
ROBOTICS
COMPETITIONSOLIDWORKS
Modeling Solutions Partner

TITLE:

Switch Arm

SIZE

B

DWG. NO.

GE-18013

REV

2

SCALE: 1:12 WEIGHT:

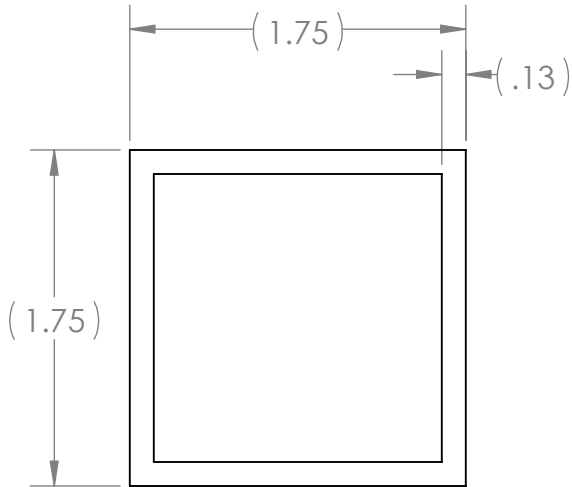
SHEET 2 OF 5

4

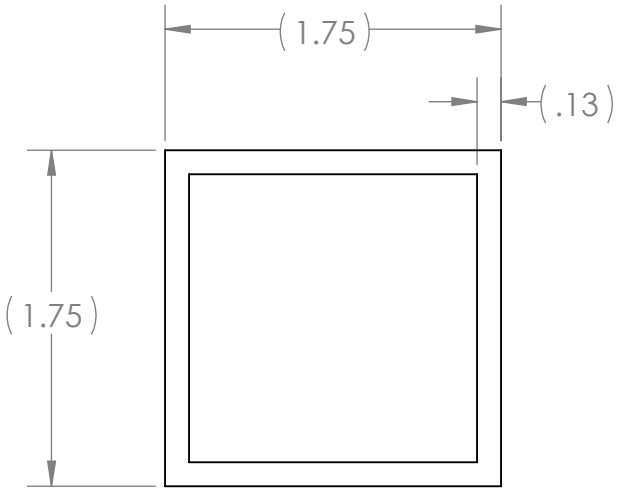
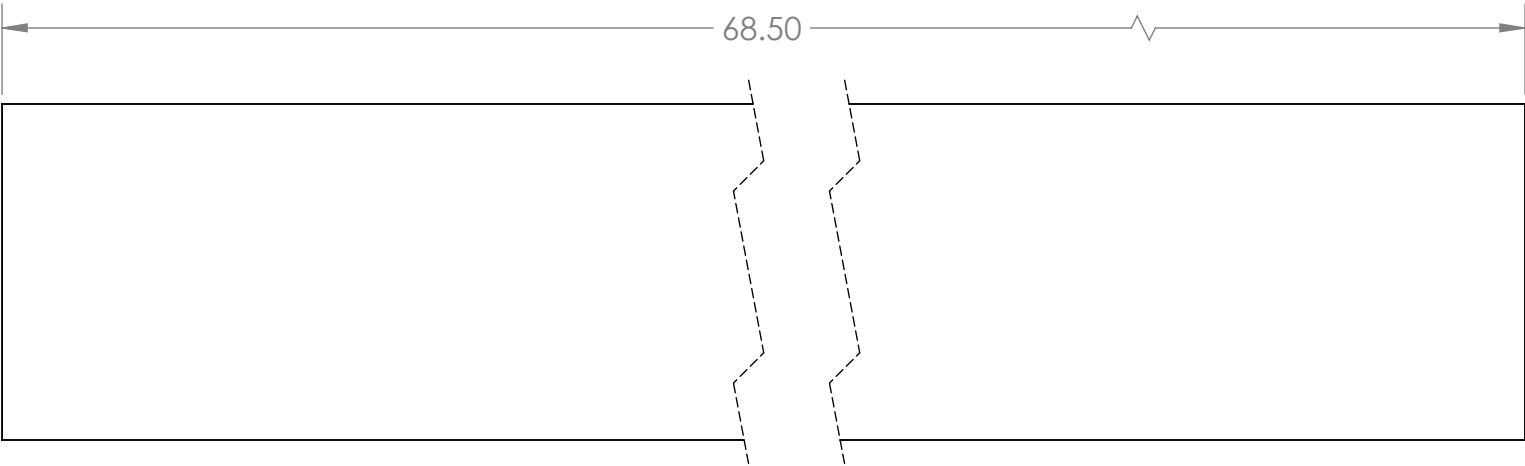
3

2

1





Item: GE-18013-1
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
QTY: 4



Item: GE-18013-2
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
QTY: 8



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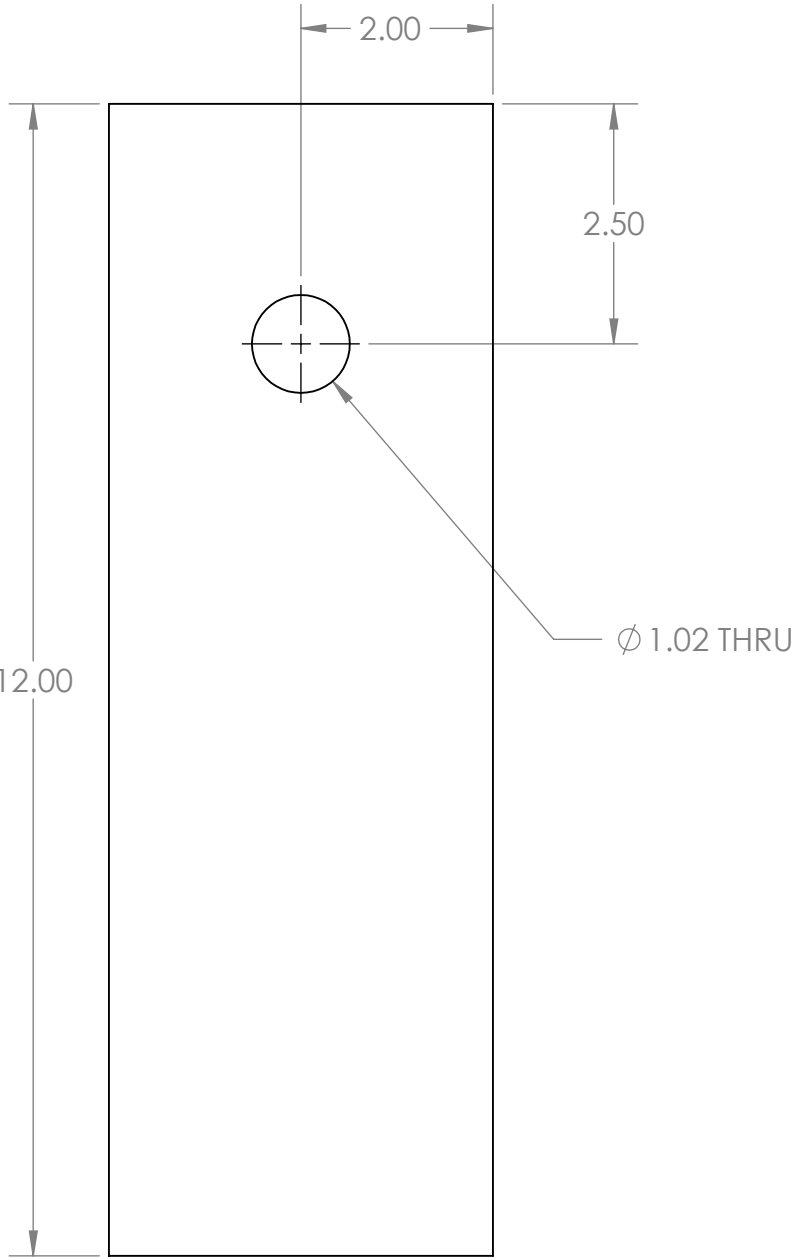
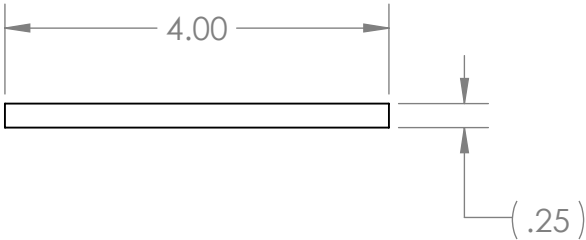
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div>FIRST ROBOTICS COMPETITION</div><div>SOLIDWORKS Modeling Solutions Partner</div></div>			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Switch Arm			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18013 2			
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING							SCALE: 1:1

4

3

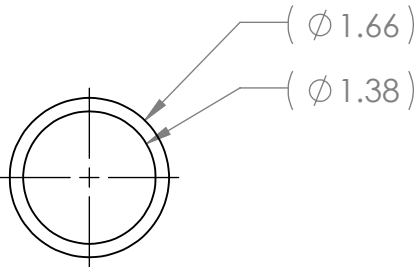
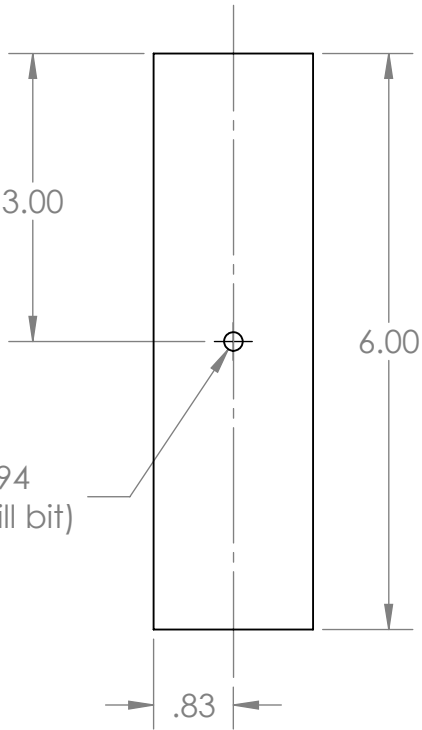
2

1





Item: GE-18013-3
Material: 0.25" thk. Plate, 6061 Aluminum
QTY: 2

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Item: GE-18013-4
Material: 1.25" Schedule 40 Pipe, 6061 Aluminum
QTY: 4

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



TITLE:

Switch Arm

SIZE
B

DWG. NO.
GE-18013

REV
2

SCALE: 1:2

WEIGHT:

SHEET 4 OF 5

4

3

2

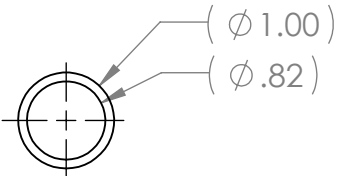
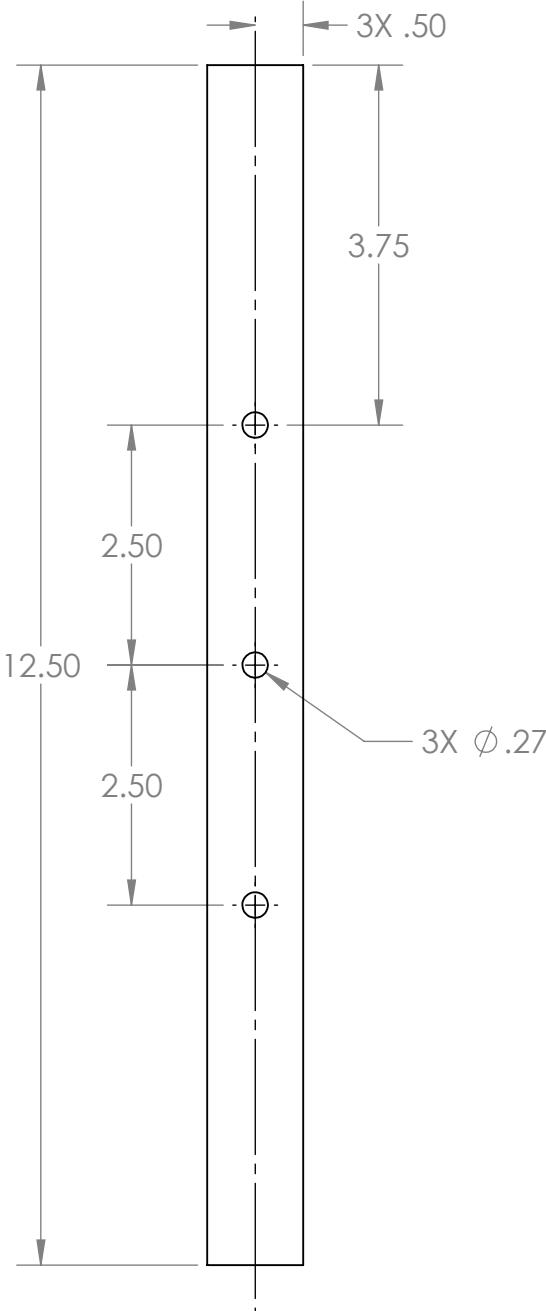
1

B

B



A

A



Item: GE-18013-5
Material: 1" OD x 0.095" thk. tube, 6061 Aluminum
QTY: 1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div> <div>TITLE: <h1>Switch Arm</h1></div>		
		DIMENSIONS ARE IN INCHES	DRAWN					
		TOLERANCES:	CHECKED					
		FRACTIONAL $\pm 1/16$	ENG APPR.					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.			SIZE DWG. NO. REV B GE-18013 2		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:					
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL				SCALE: 1:2	WEIGHT:	SHEET 5 OF 5
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING						

B

A

B

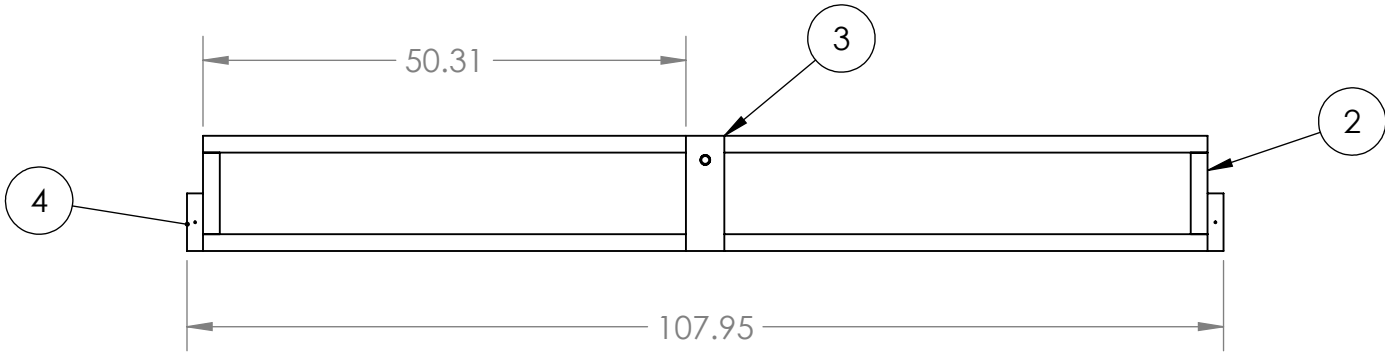
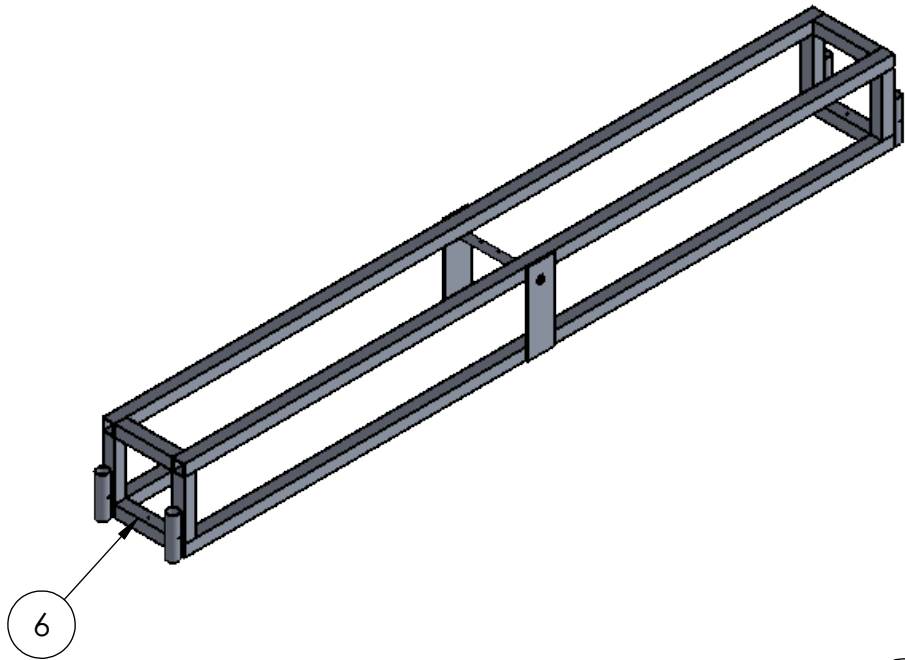
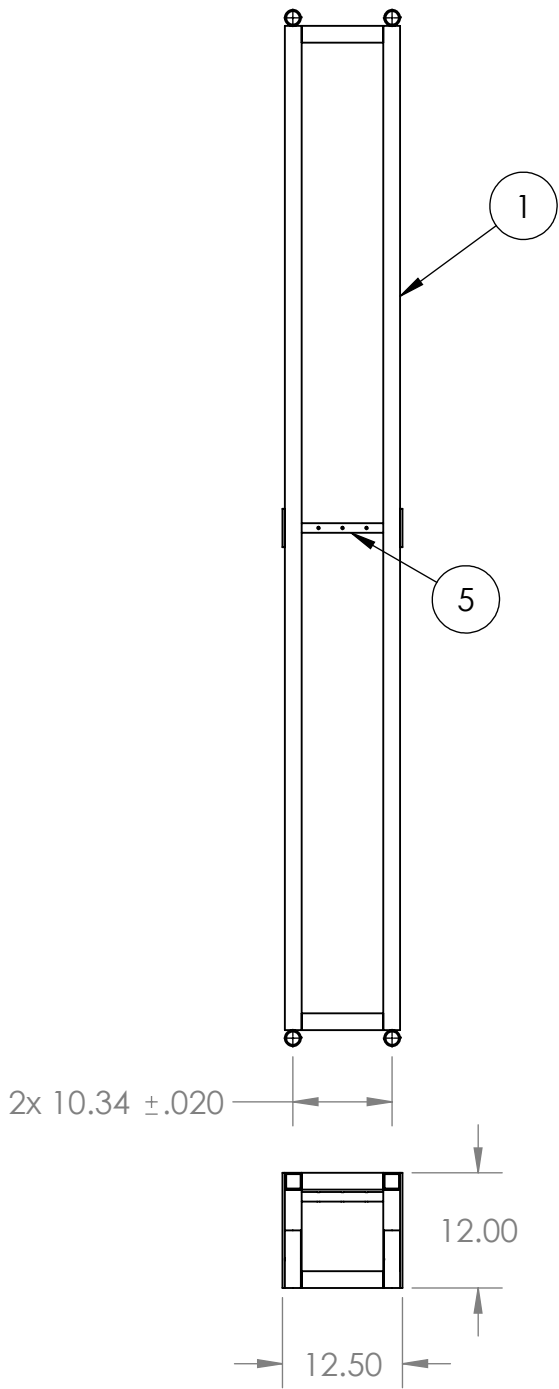
A

4

3

2



1



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
5-B3, 5-B4	2	Added locating dimensions for holes on GE-18014-5	11/9/2017	CPO
2-B3	3	Added weld note	11/17/2017	CPO

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18014-1	1.75" x .125" thk. Square Tube, 6063 Aluminum	4
2	GE-18014-2	1.75" x .125" thk. Square Tube, 6063 Aluminum	6
3	GE-18014-3	0.25" thk. plate, 6061 Aluminum	2
4	GE-18014-4	1.25" Schedule 40 Pipe, 6061 Aluminum	4
5	GE-18014-5	1" OD x 0.095" thk. Tube, 6061 Aluminum	1
6	GE-18014-6	1.75" x .125" thk. Square Tube, 6063 Aluminum	2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: <h1>Scale Arm</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18014 3		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:20 WEIGHT: SHEET 1 OF 5		

4

3

2

1

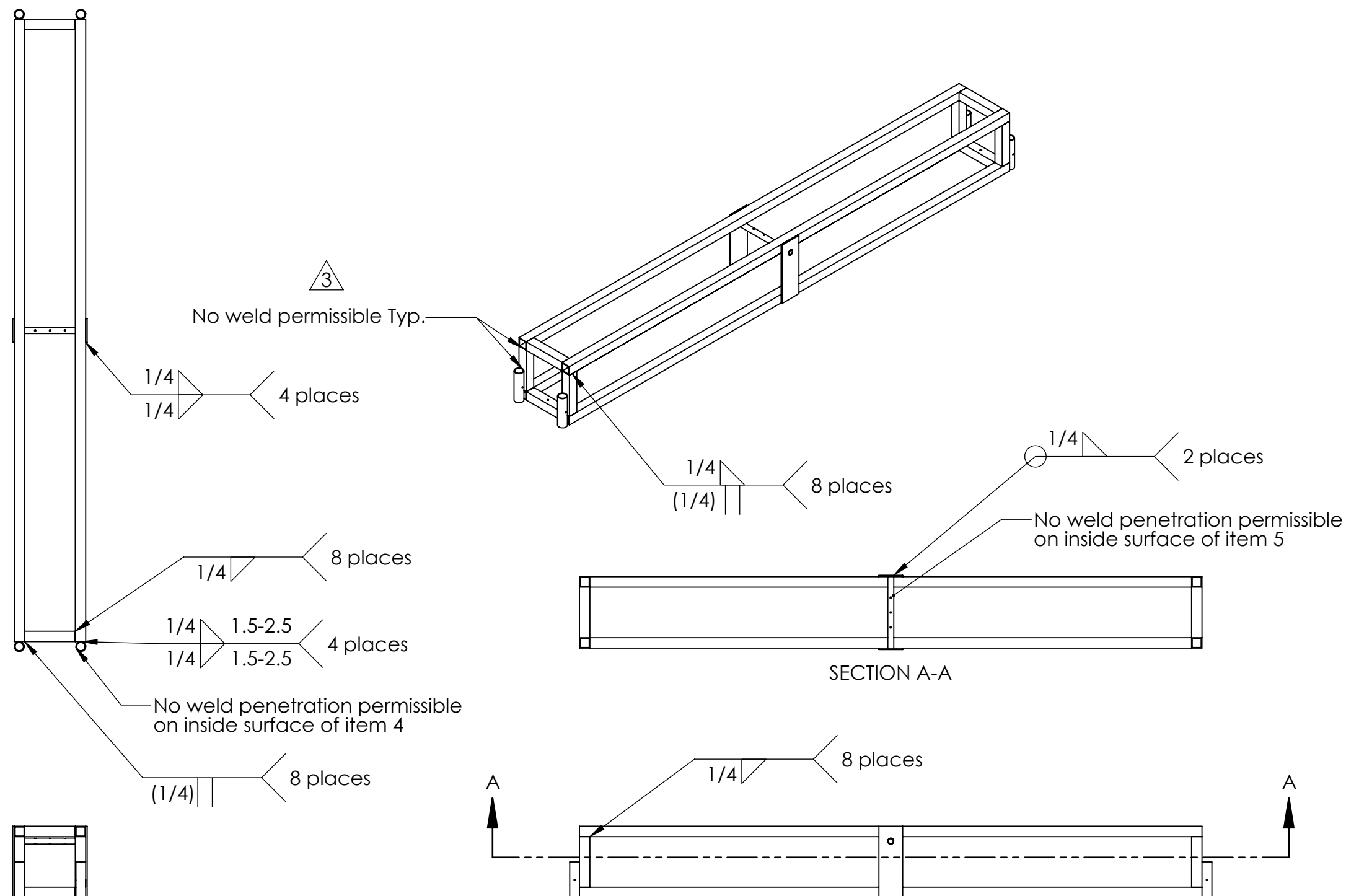
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3

2

1

B



A

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UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:
MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



TITLE:

Scale Arm

SIZE
BDWG. NO.
GE-18014REV
3

SCALE: 1:20 WEIGHT:

SHEET 2 OF 5

4

3

2

1

4

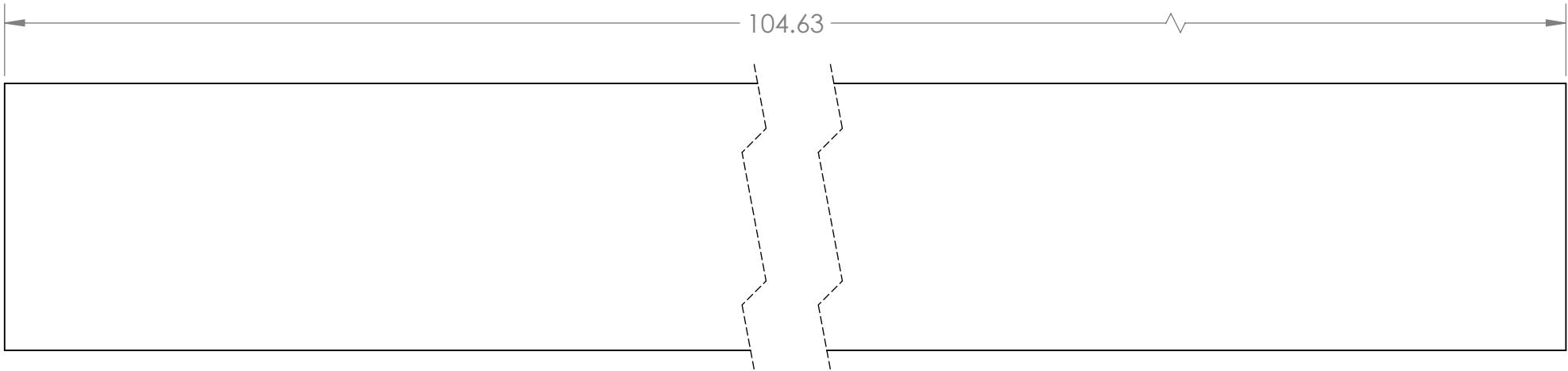
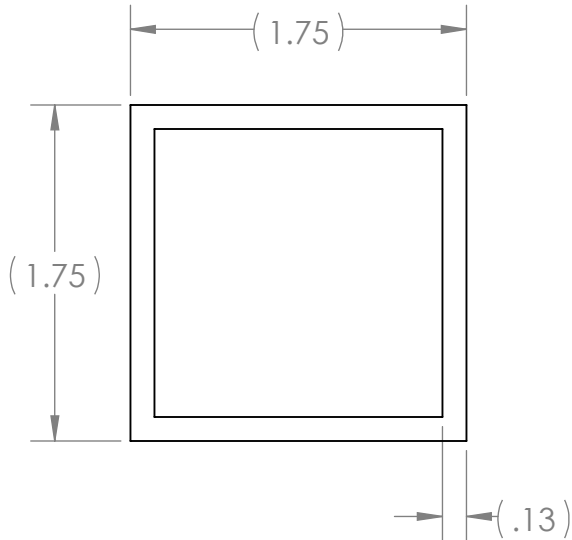
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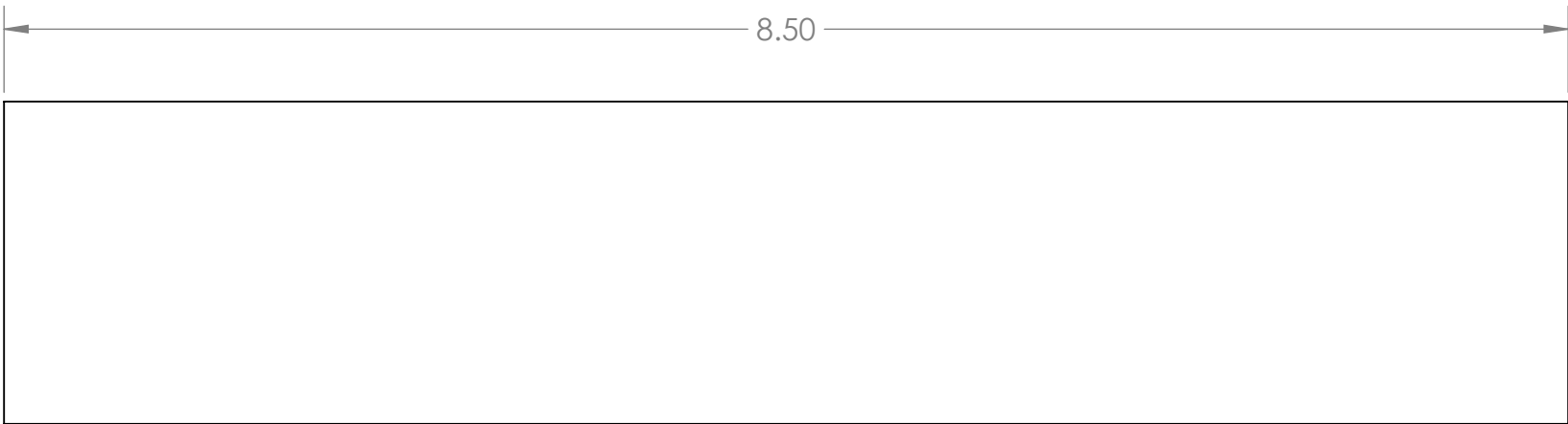
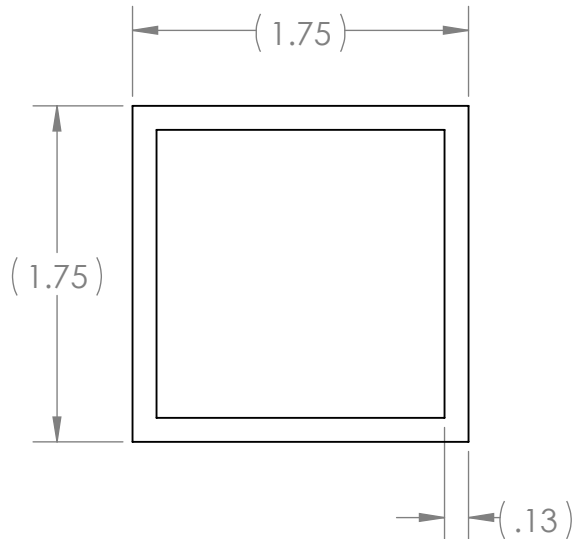
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B

B



Item: GE-18014-1
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale: 1:1
QTY: 4





A

A

Item: GE-18014-2
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale: 1:1
QTY: 6

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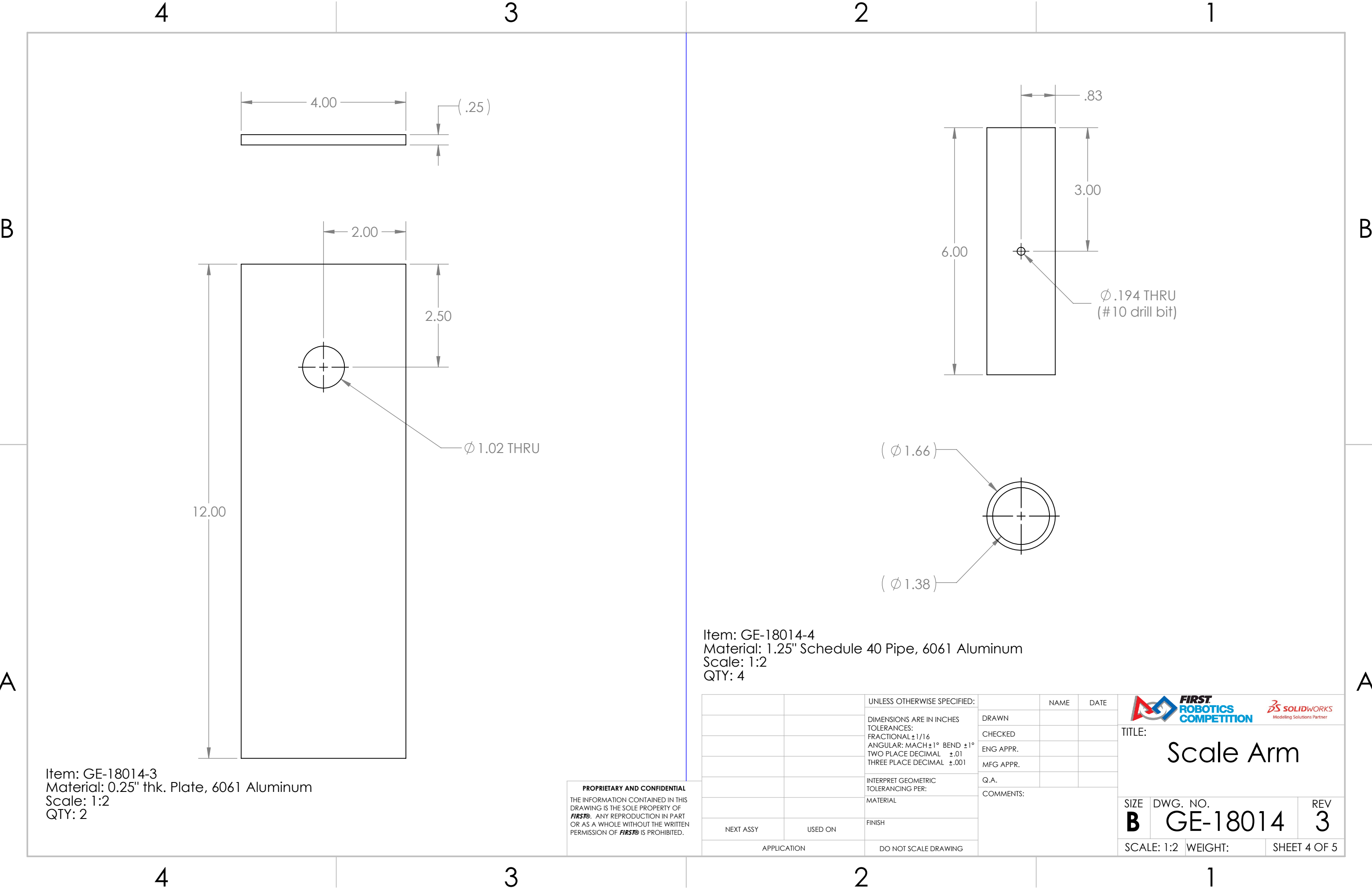
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		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: Scale Arm	
		TOLERANCES:	CHECKED				
		FRACTIONAL $\pm 1/16$	ENG APPR.				
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.				
		TWO PLACE DECIMAL $\pm .01$	Q.A.				
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18014 3	
		INTERPRET GEOMETRIC TOLERANCING PER:					
		MATERIAL					
		FINISH					
NEXT ASSY	USED ON						
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:1 WEIGHT: SHEET 3 OF 5	

4

3

2



1



Item: GE-18014-3
Material: 0.25" thk. Plate, 6061 Aluminum
Scale: 1:2
QTY: 2

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Item: GE-18014-4
Material: 1.25" Schedule 40 Pipe, 6061 Aluminum
Scale: 1:2
QTY: 4

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Scale Arm</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18014 3		
		MATERIAL						
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:2 WEIGHT: SHEET 4 OF 5		

4

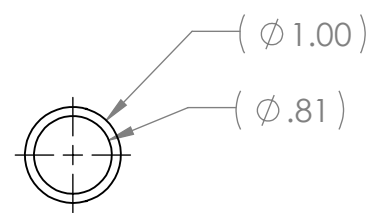
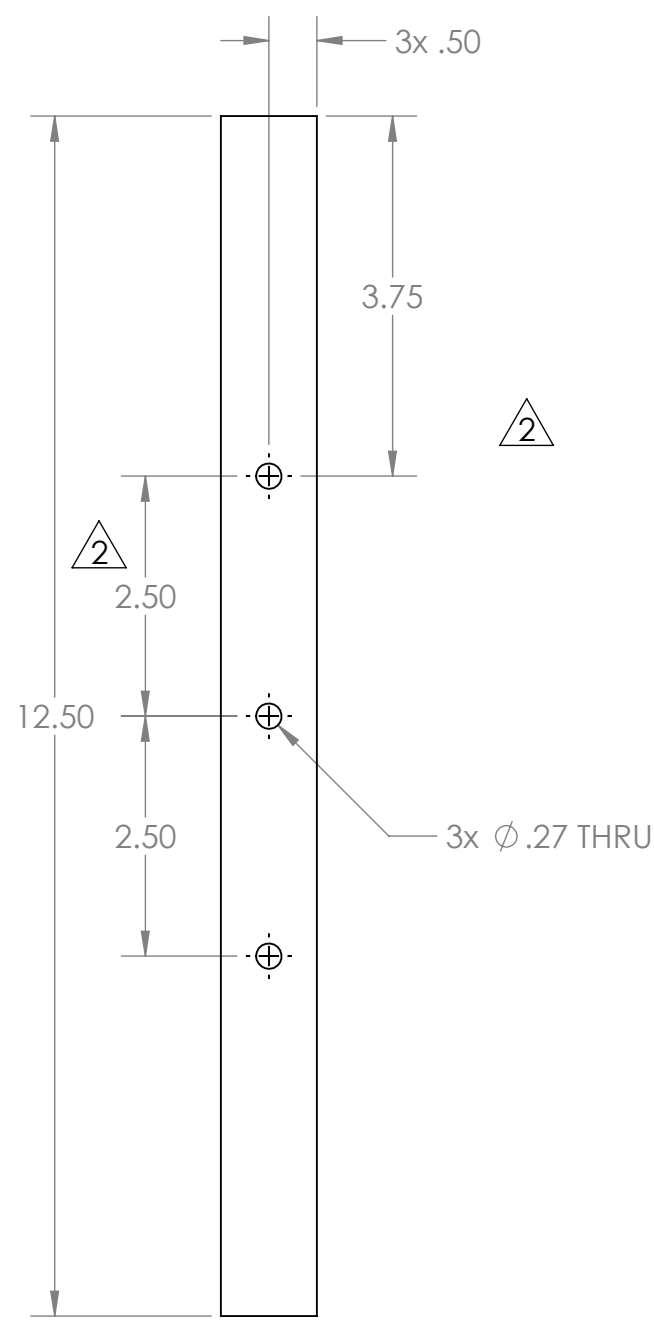
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2

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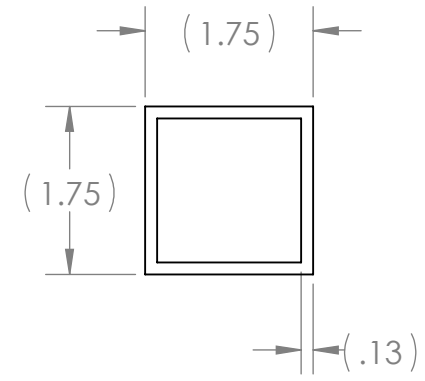
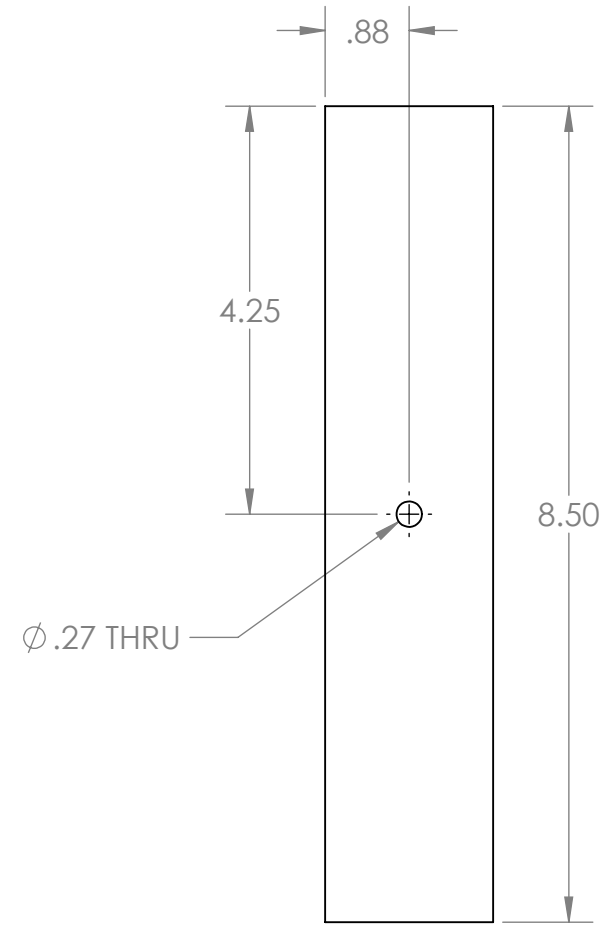
B

B





Item: GE-18014-5
Material: 1" OD x 0.095" thk. Tube, 6061 Aluminum
Scale: 1:2
QTY: 4

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Item: GE-18014-6
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale: 1:2
QTY: 2

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <h1>Scale Arm</h1>		
		TOLERANCES:	CHECKED					
		FRACTIONAL $\pm 1/16$	ENG APPR.					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18014 3		
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH				SCALE: 1:2 WEIGHT: SHEET 5 OF 5		
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						

A

A

4

3

2

1

4

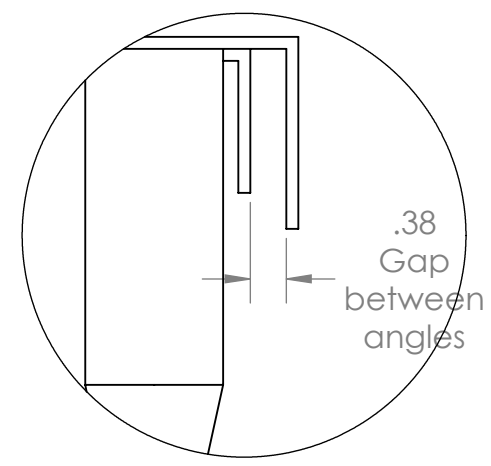
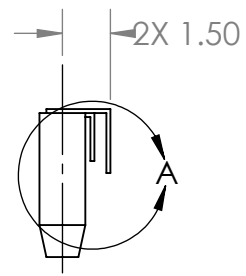
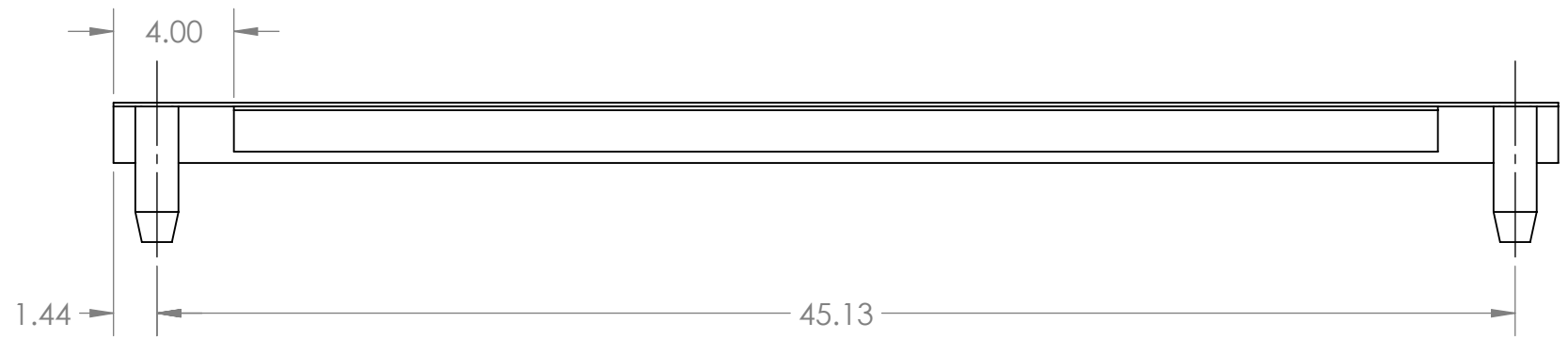
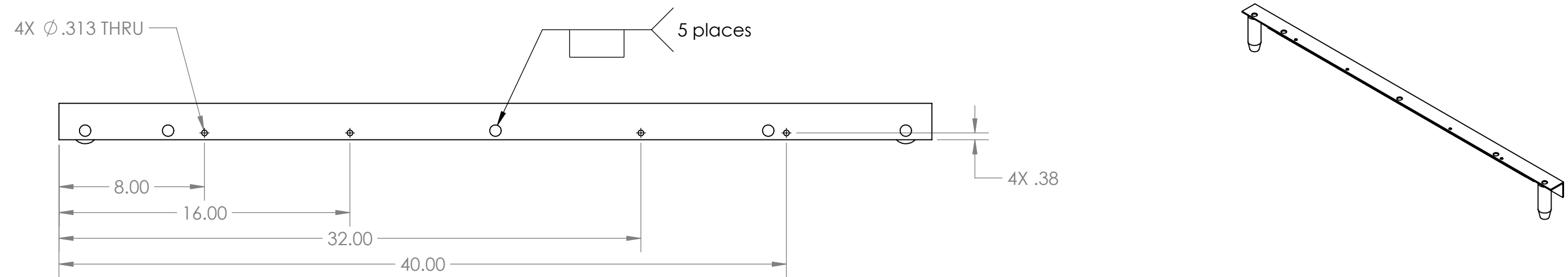
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2

1

B

B





DETAIL A
SCALE 1 : 2

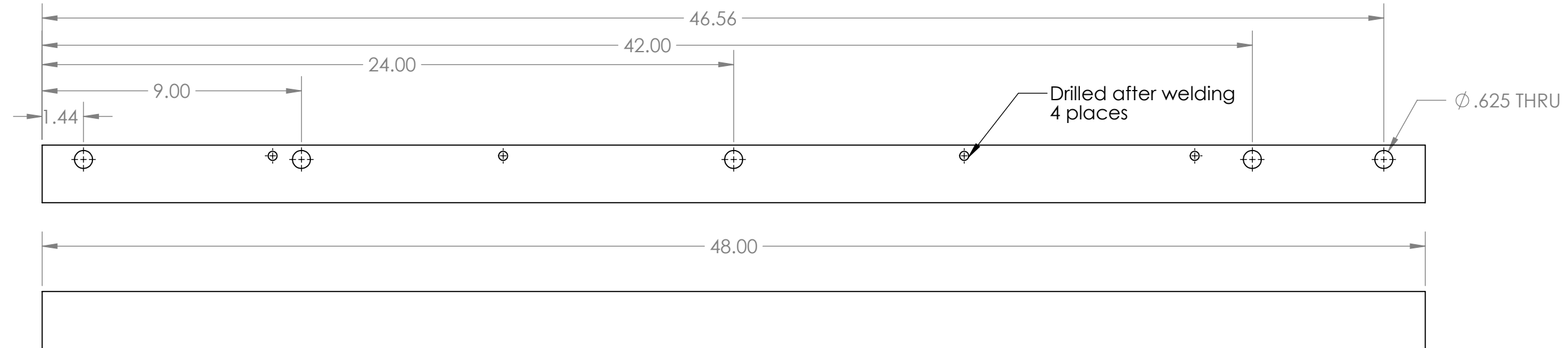
A

A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18015-01	2" x .125" thk. Angle, 6063 Aluminum	1
2	GE-18015-02	1-7/16" Round Bar, 6061 Aluminum	2
3	GE-18015-03	1-1/2" x .125" thk. Angle, 6063 Aluminum	1

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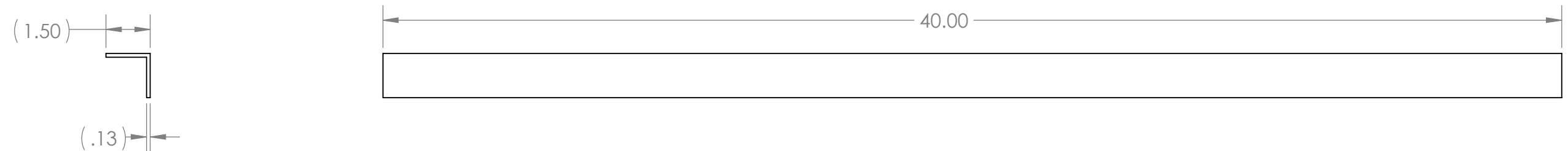
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div></div><div>TITLE: <div>Top Rail, Exchange</div></div><div>SIZE B DWG. NO. GE-18015 REV</div><div>SCALE: 1:6 WEIGHT: SHEET 1 OF 2</div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN					
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:					
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						



Item: GE-18015-01
Qty: 1
Material: 2" x .125" thk. Angle, 6063 Aluminum





Item: GE-18015-02
Qty: 2
Material: 1-7/16" Round Bar, 6061 Aluminum



Item: GE-18015-03
Qty: 1
Material: 1-1/2" x .125" thk. Angle, 6063 Aluminum

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>	
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN				TITLE: <div>Top Rail, Exchange</div>
			CHECKED				
			ENG APPR.				
			MFG APPR.				
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.				
		MATERIAL	COMMENTS:				
		FINISH					
NEXT ASSY	USED ON						
APPLICATION		DO NOT SCALE DRAWING					
			SCALE: 1:4		WEIGHT:	SHEET 2 OF 2	
			SIZE		DWG. NO.	REV	
			B		GE-18015		

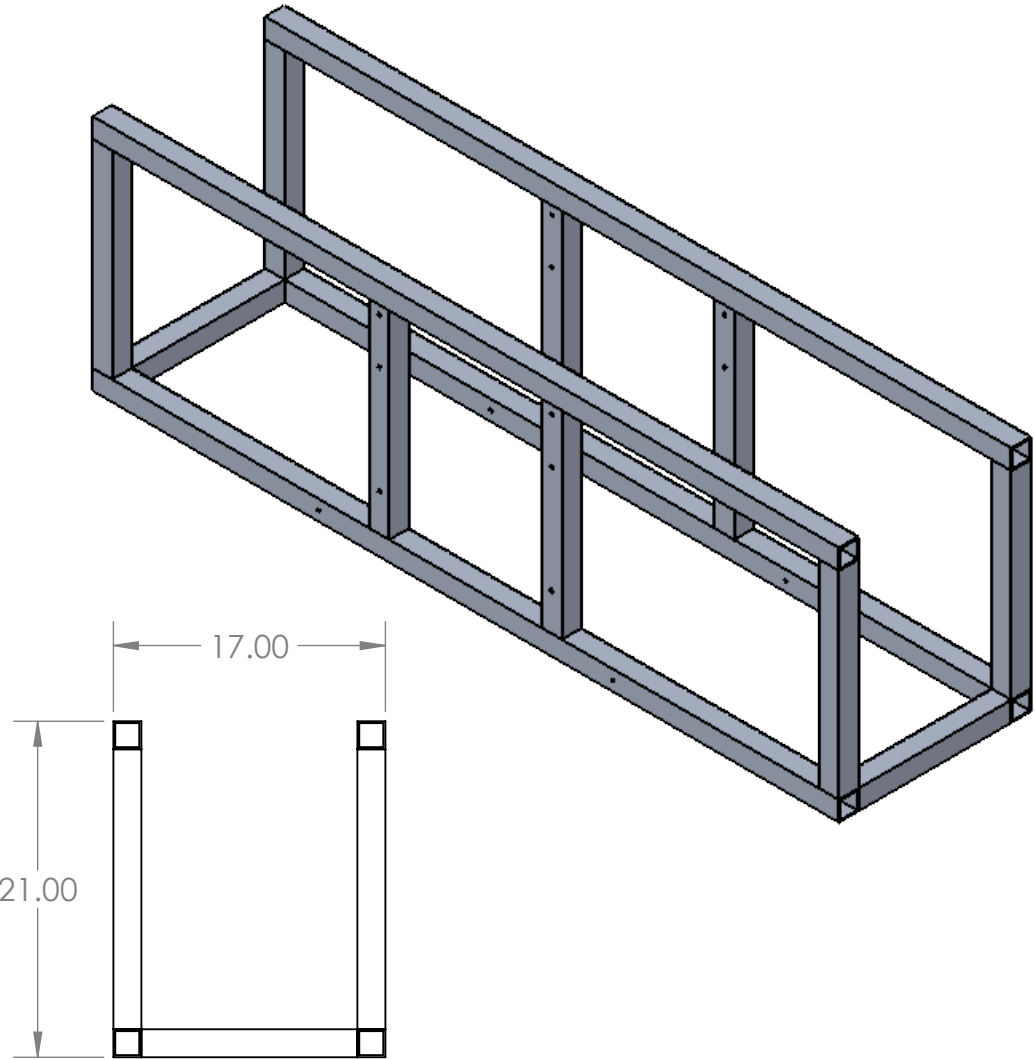
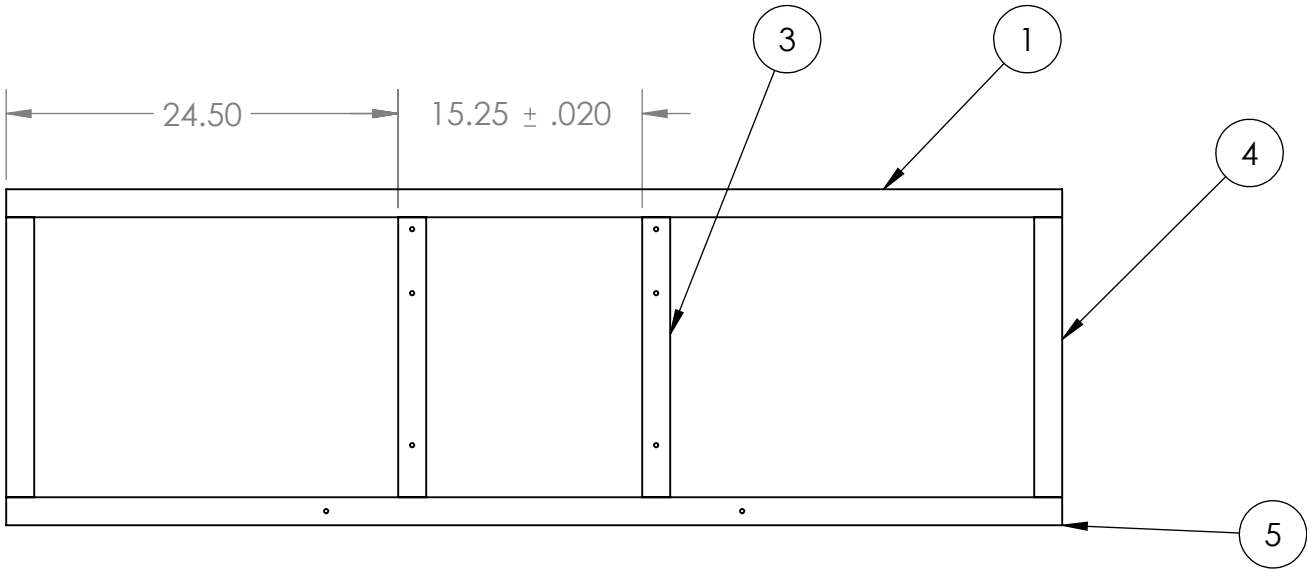
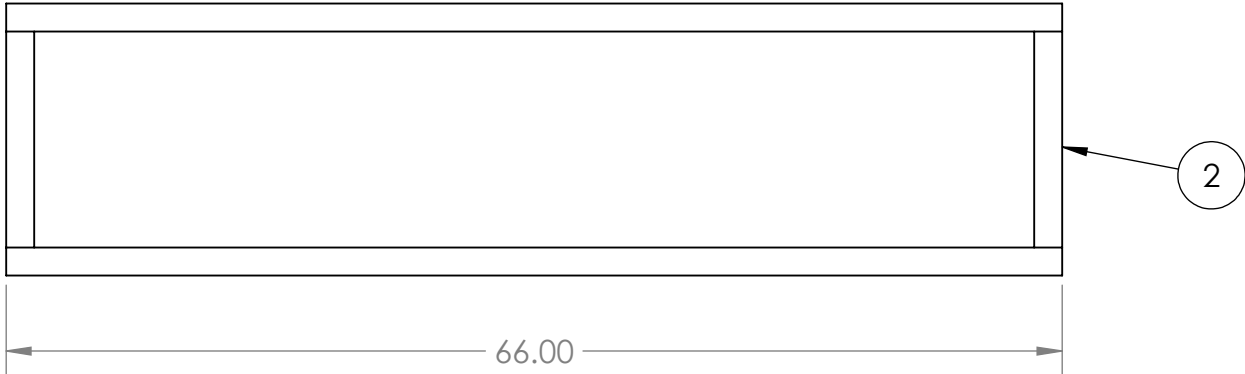
4

3


2

1



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
4-B3	2	Added hole to GE-18016-3	11/6/2017	CPO
A4, 3-B4, 5-B3	3	Added two of part GE-18016-5 to replace two GE-18016-1	11/21/2017	CPO



A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18016-1	1.75" x .125" thk. Square Tube, 6063 Aluminum	2
2	GE-18016-2	1.75" x .125" thk. Square Tube, 6063 Aluminum	2
3	GE-18016-3	1.75" x .125" thk. Square Tube, 6063 Aluminum	4
4	GE-18016-4	1.75" x .125" thk. Square Tube, 6063 Aluminum	4
 5	GE-18016-5	1.75" x .125" thk. Square Tube, 6063 Aluminum	2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div> FIRST ROBOTICS COMPETITION</div> <div> SOLIDWORKS Modeling Solutions Partner</div>															
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Switch Frame</h1>															
			CHECKED																		
			ENG APPR.																		
			MFG APPR.																		
			Q.A.																		
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			<table><tr><td>SIZE</td><td>DWG. NO.</td><td>REV</td></tr><tr><td>B</td><td>GE-18016</td><td>3</td></tr><tr><td colspan="2">SCALE: 1:12</td><td>WEIGHT:</td></tr><tr><td colspan="2"></td><td>SHEET 1 OF 5</td></tr></table>				SIZE	DWG. NO.	REV	B	GE-18016	3	SCALE: 1:12		WEIGHT:			SHEET 1 OF 5
SIZE	DWG. NO.	REV																			
B	GE-18016	3																			
SCALE: 1:12		WEIGHT:																			
		SHEET 1 OF 5																			
		MATERIAL																			
		FINISH																			
NEXT ASSY	USED ON																				
APPLICATION		DO NOT SCALE DRAWING																			

4

3

2

1

B

A

4

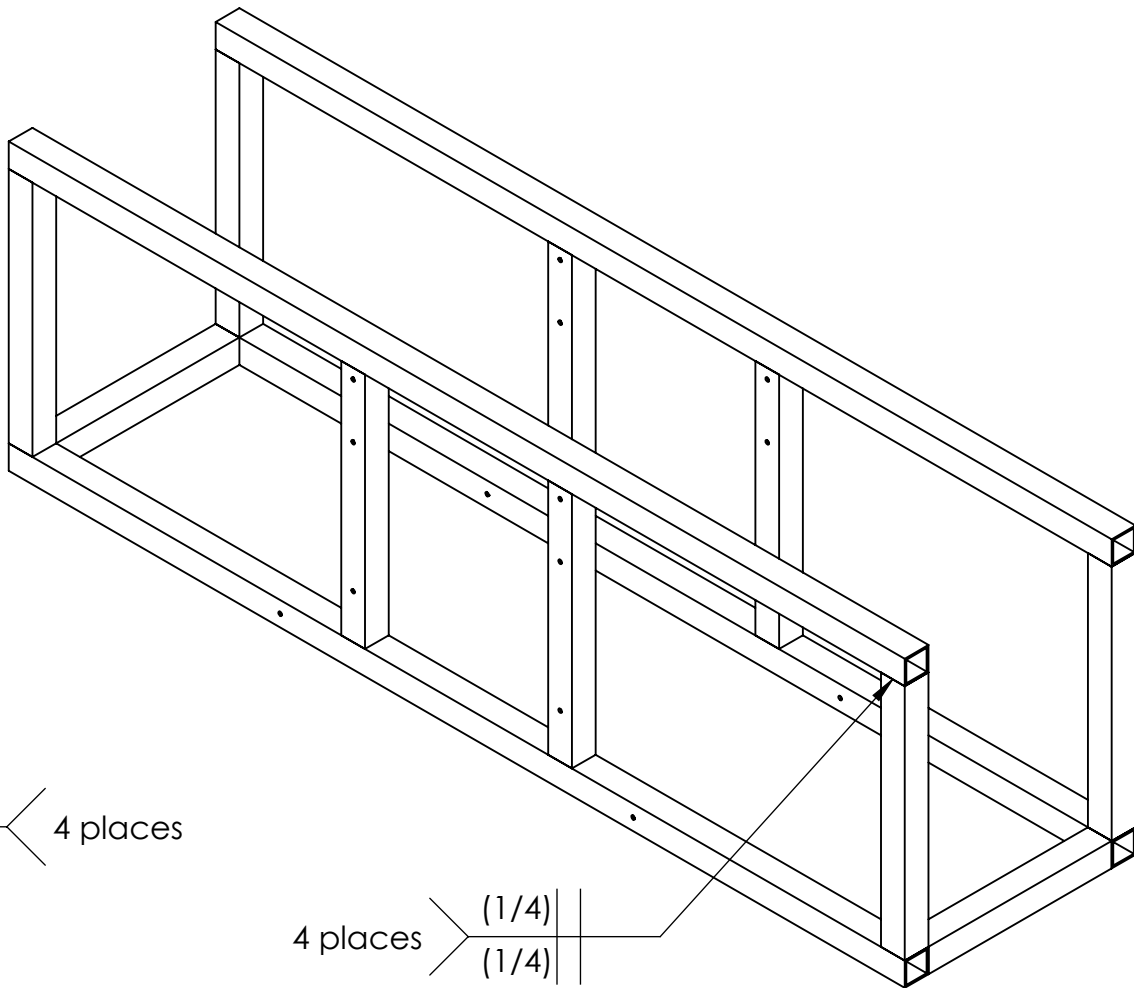
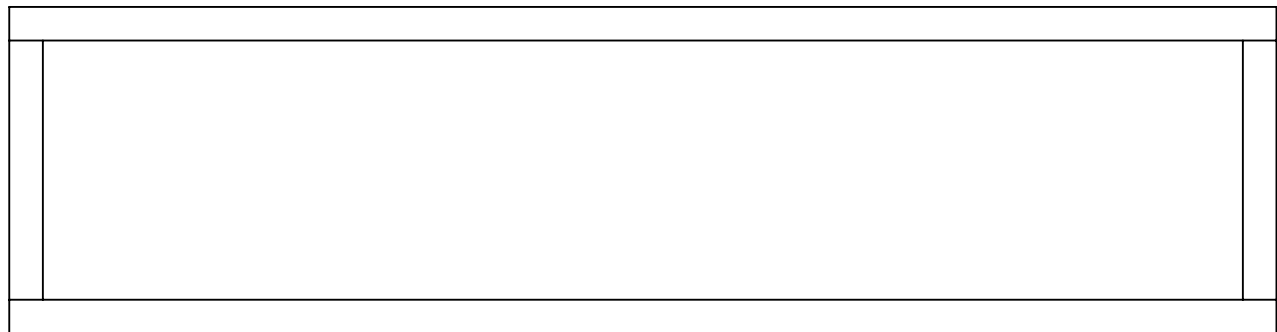
3

2

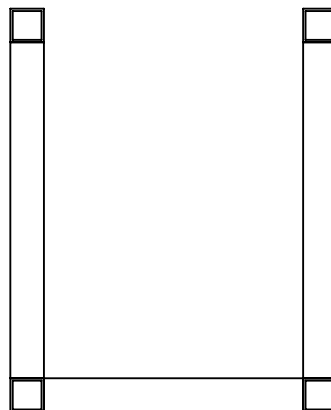
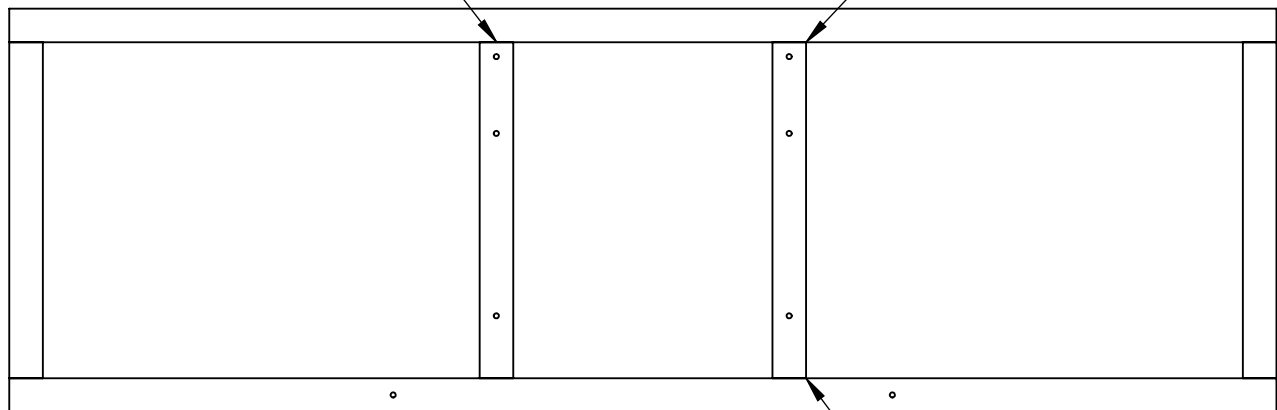
1

B

B



No weld permissible
on face of item 3 (4x)



1/4
(1/4) 4 places

1/4
1/4 4 places

4 places (1/4)
(1/4)

1/4
4 places

1/4
(1/4) 4 places

1/4
(1/4) 4 places

1/4
1/4 4 places

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES		DRAWN	
		TOLERANCES:		CHECKED	
		FRACTIONAL $\pm 1/16$		ENG APPR.	
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$		MFG APPR.	
		TWO PLACE DECIMAL $\pm .01$		Q.A.	
		THREE PLACE DECIMAL $\pm .001$		COMMENTS:	
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			
				TITLE:	
				Switch Frame	
SIZE	DWG. NO.	REV			
B	GE-18016	3			
SCALE: 1:10		WEIGHT:		SHEET 2 OF 5	

4

3

2

1

A

A

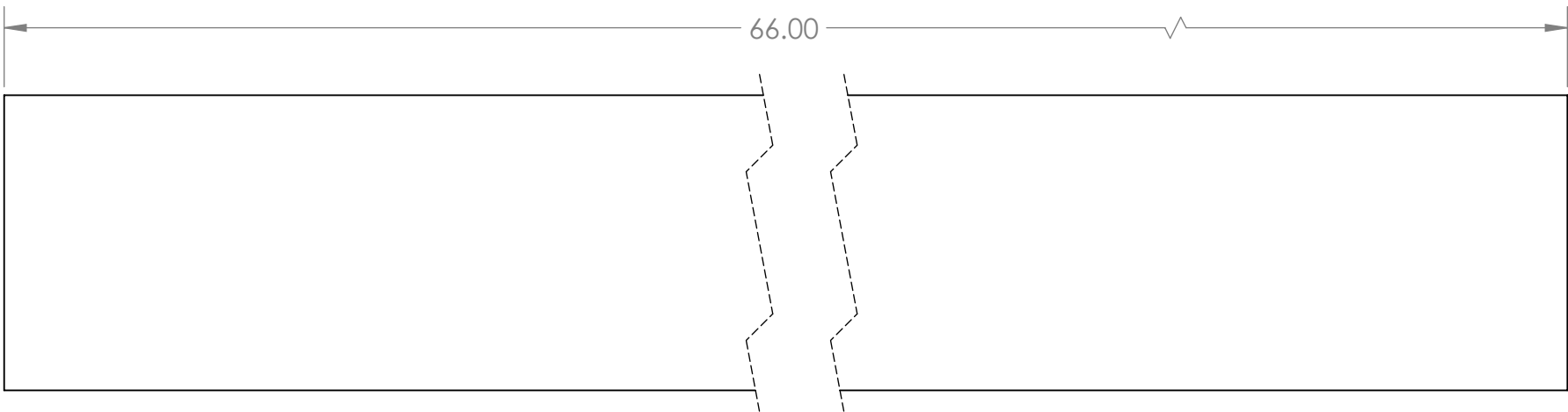
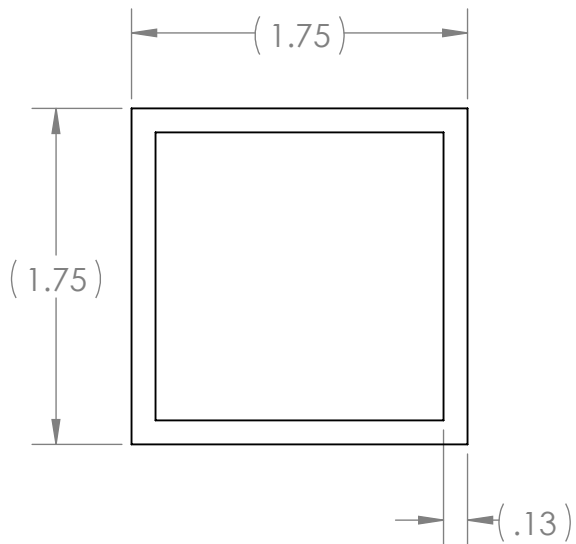
4

3

2

1

B

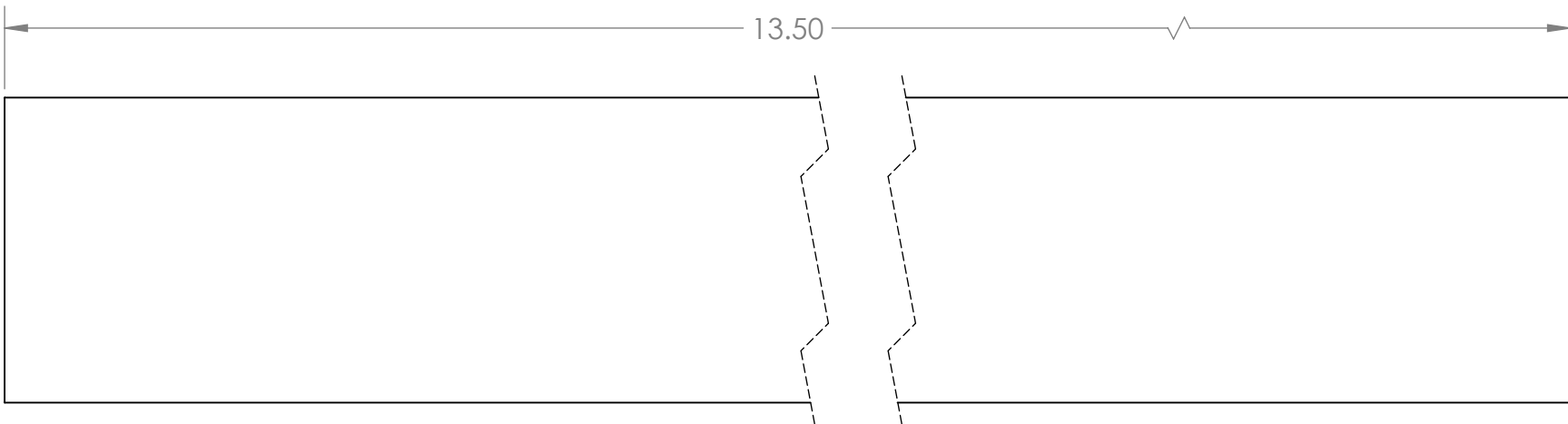
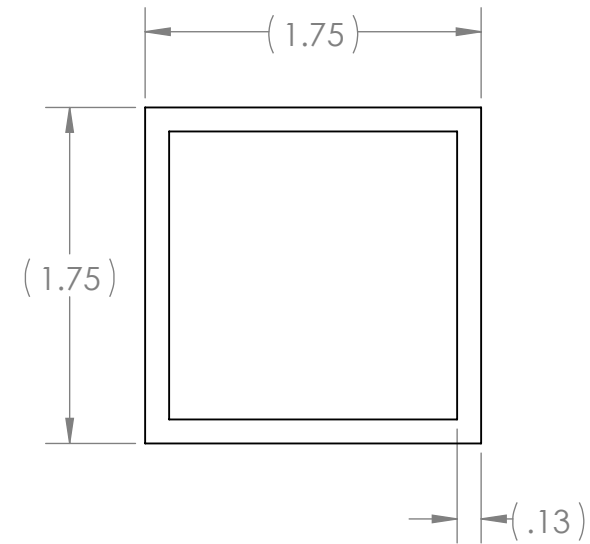


Item: GE-18016-1
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale: 1:1
QTY: 2





B

A



Item: GE-18016-2
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale: 1:1
QTY: 2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Switch Frame</h1>			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18016 3			
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING							
						SCALE: 1:1		WEIGHT:	SHEET 3 OF 5

4

3

2

1

A

4

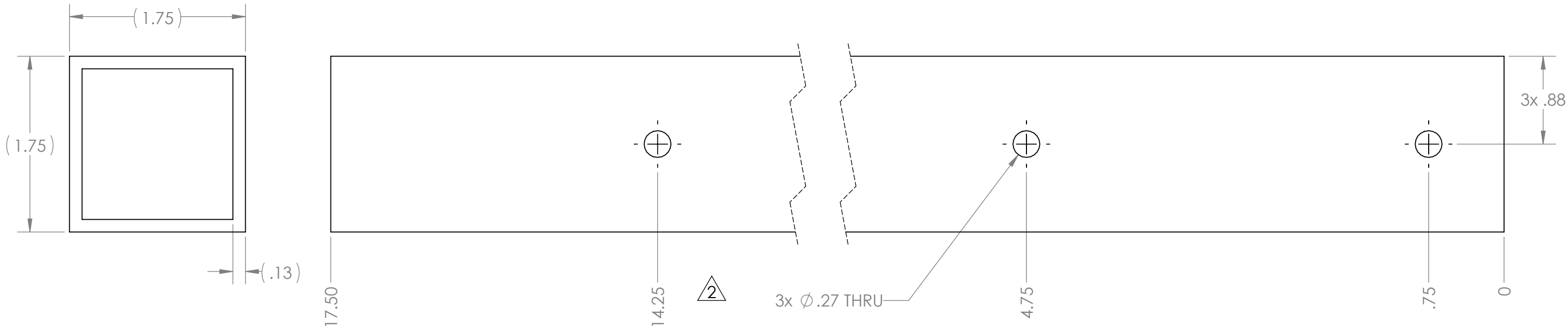
3

2

1

B

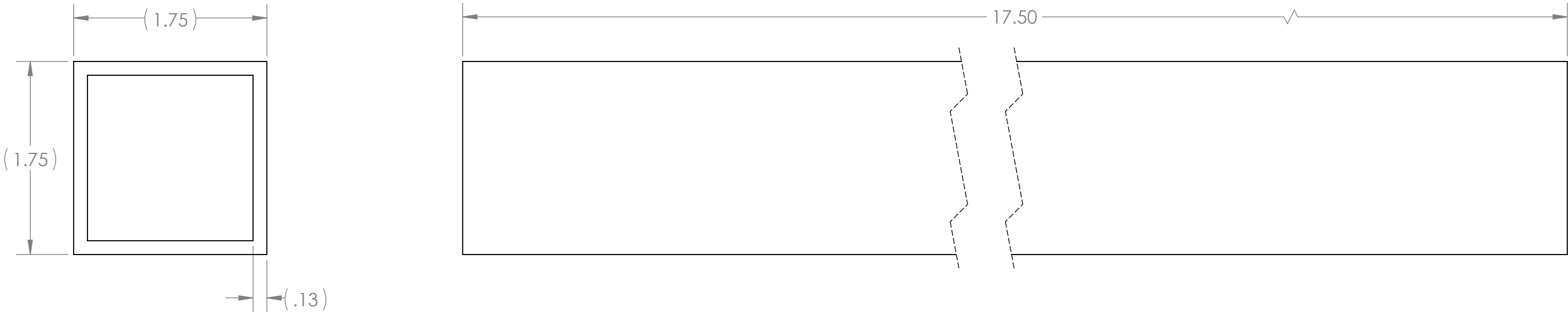
B



Item: GE-18016-3
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale: 1:1
QTY: 4



A

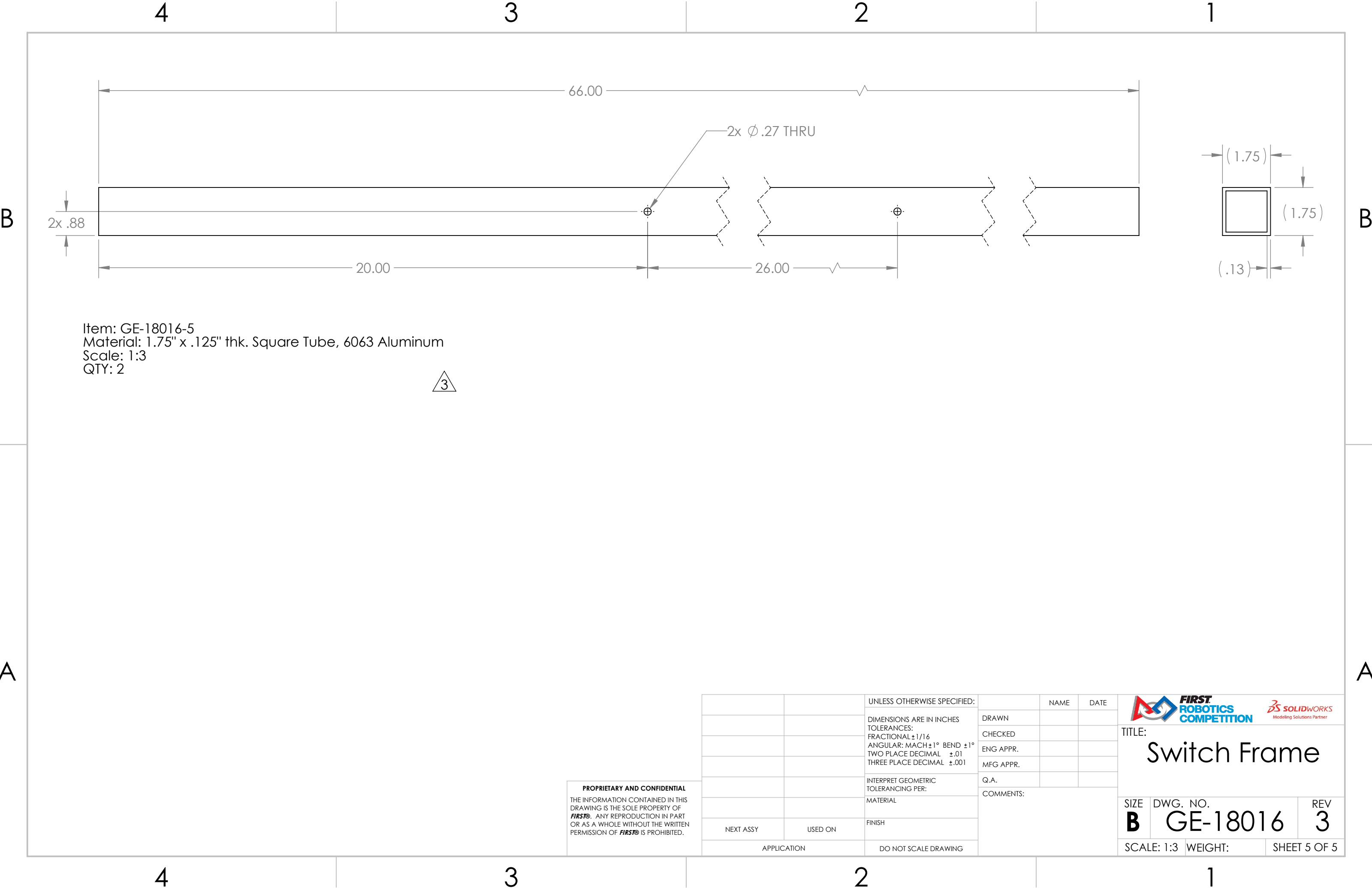
A



Item: GE-18016-4
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale: 1:1
QTY: 4

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Switch Frame</h1>			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18016 3			
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING							
						SCALE: 1:1		WEIGHT:	SHEET 4 OF 5

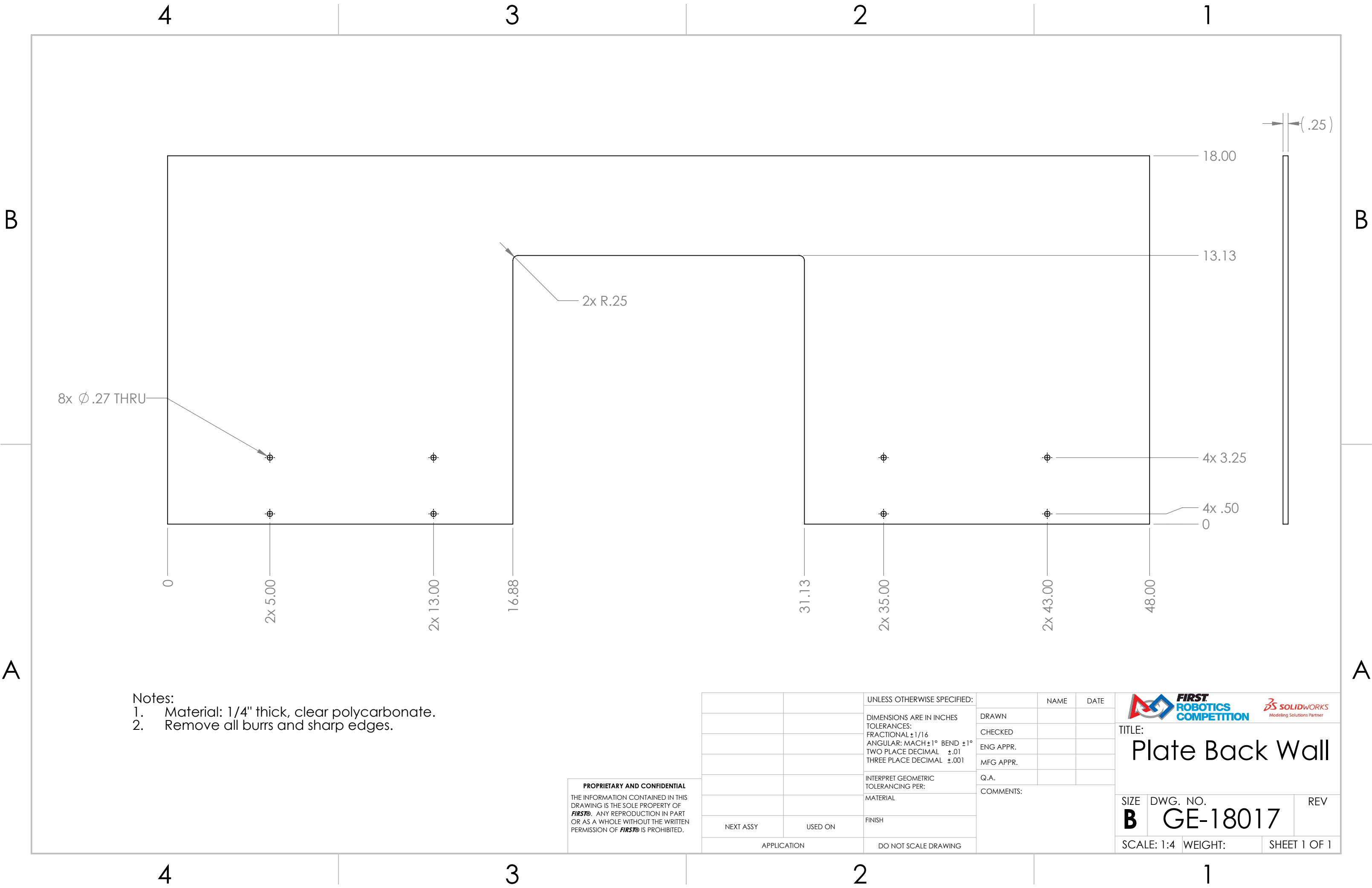


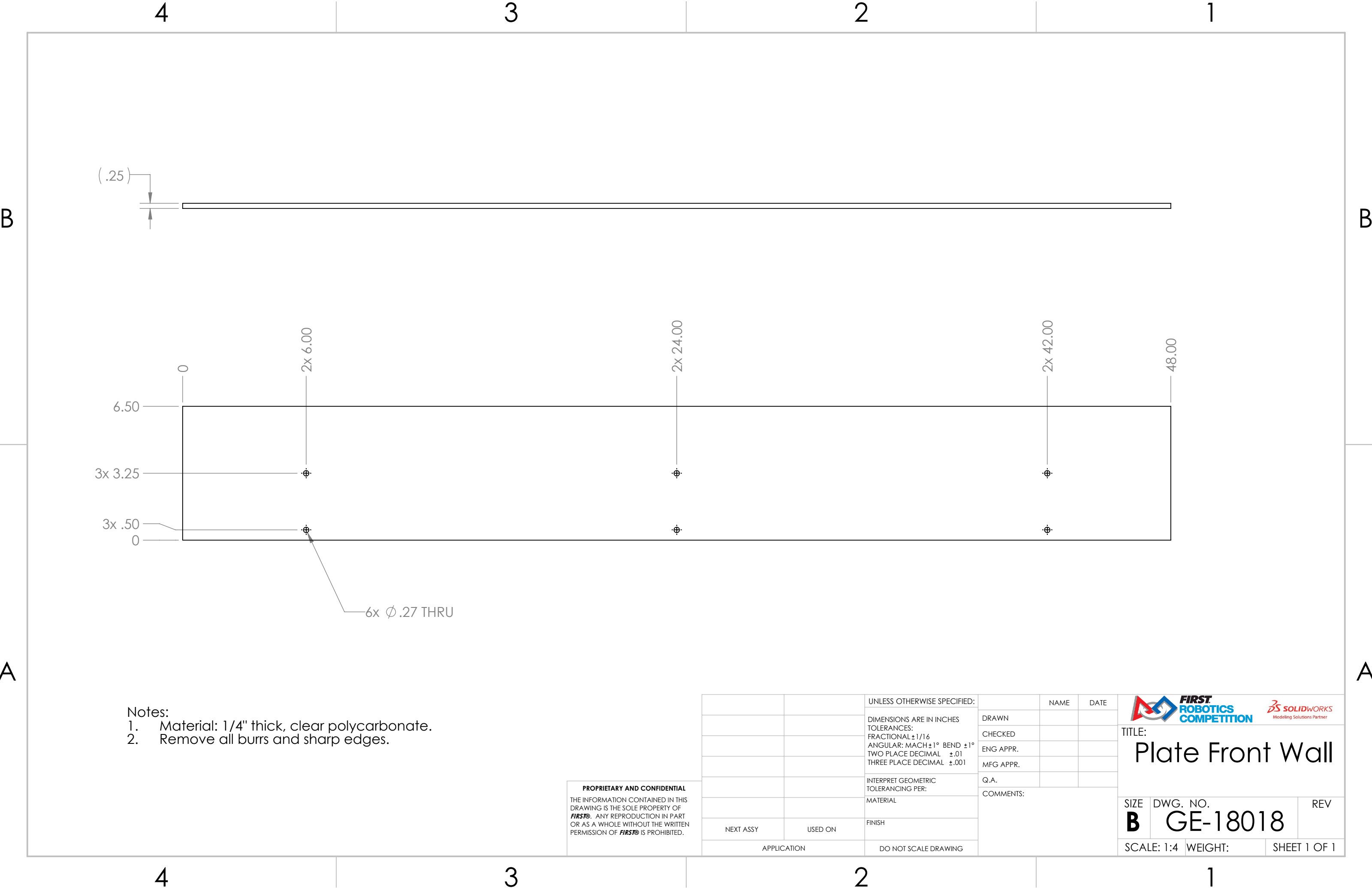
Item: GE-18016-5
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
Scale: 1:3
QTY: 2

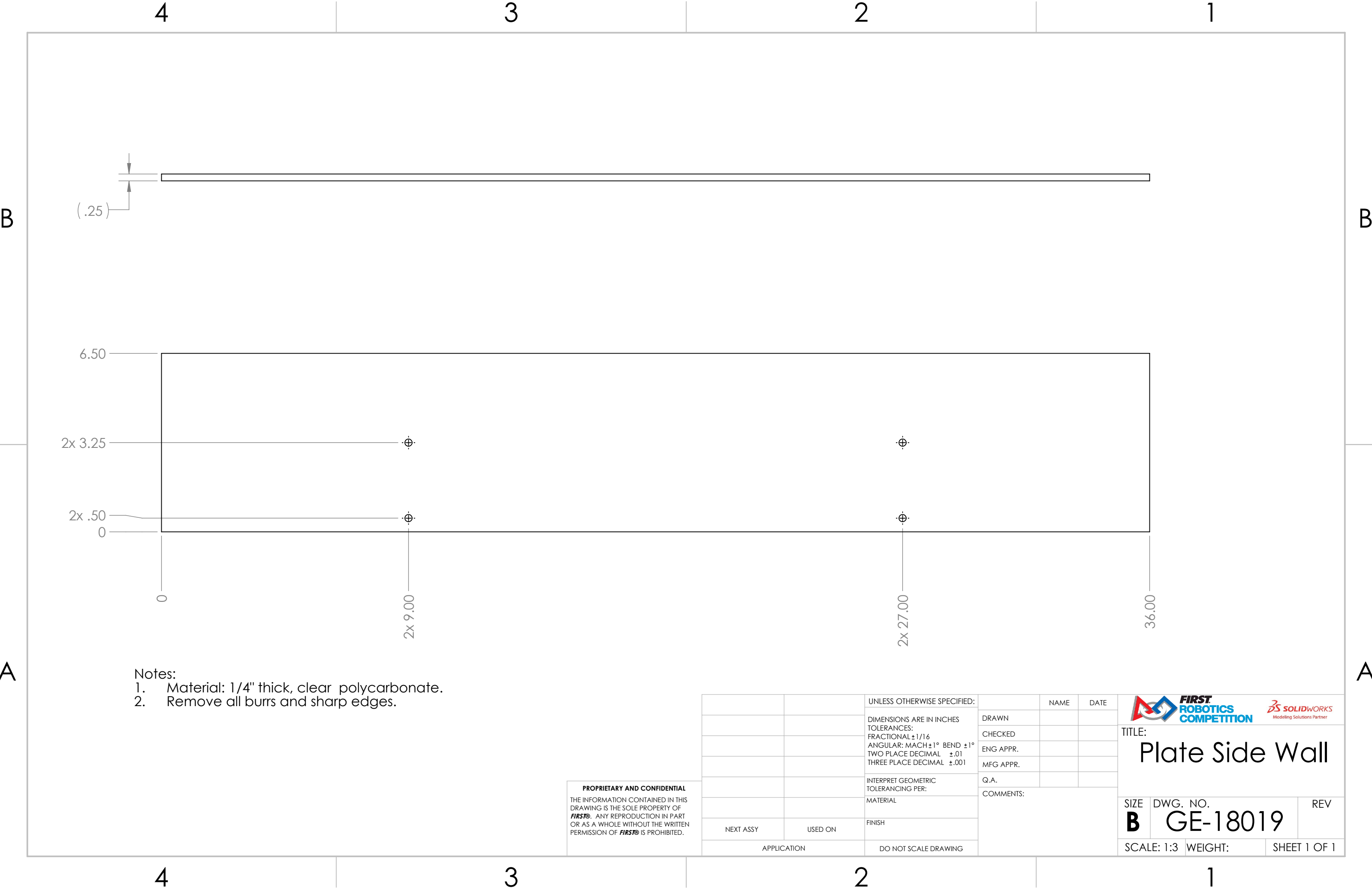


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		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <h1>Switch Frame</h1>		
		TOLERANCES:	CHECKED					
		FRACTIONAL $\pm 1/16$	ENG APPR.					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18016 3		
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH				SCALE: 1:3 WEIGHT: SHEET 5 OF 5		
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						









- Notes:
- 1. Material: 1/4" thick, clear polycarbonate.
 - 2. Remove all burrs and sharp edges.

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		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN	NAME	DATE	<div></div> <div>TITLE: Plate Side Wall</div>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			<div>SIZE DWG. NO. REV</div> <div>B GE-18019</div>		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:3 WEIGHT: SHEET 1 OF 1		

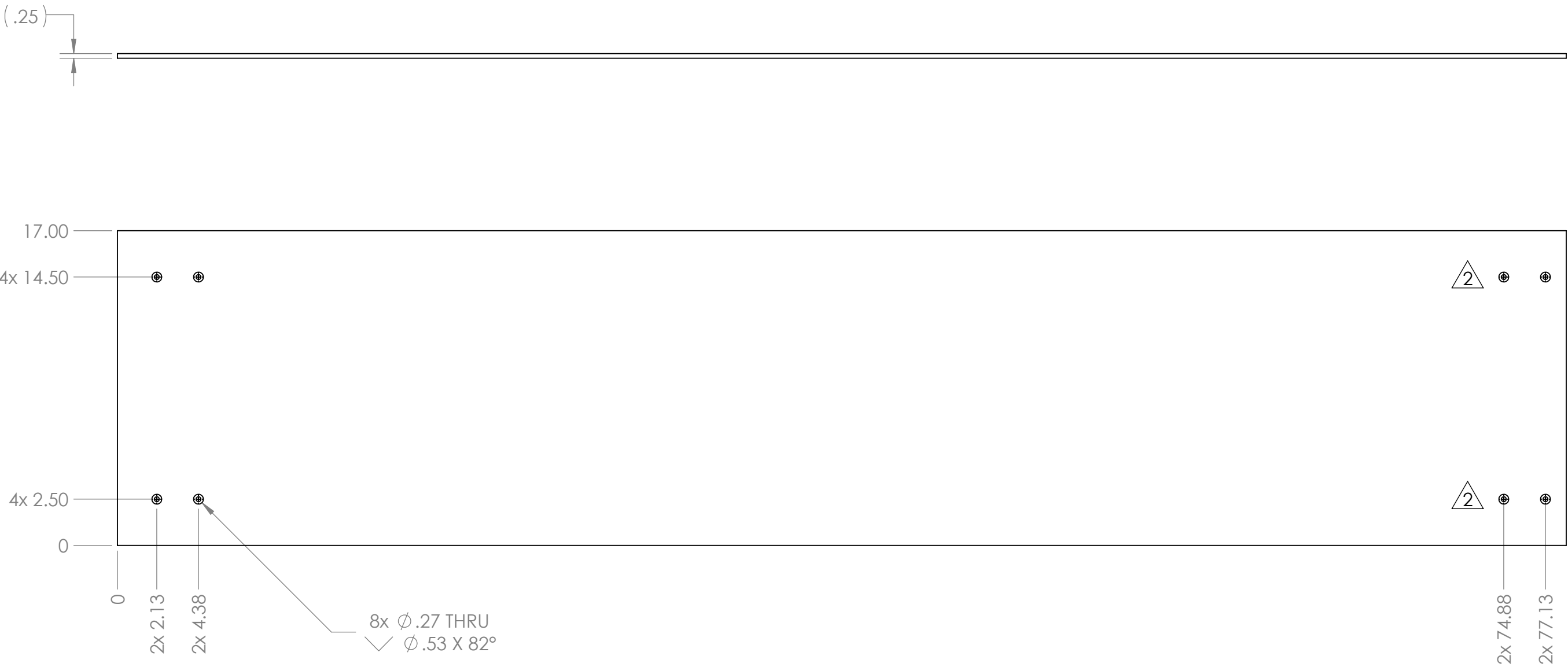
4

3

2



1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A1, B1	2	Moved location of 4 countersunk holes. Removed 8 holes.	11/17/2017	CPO



- Notes:
1. Material: 1/4" thick, clear polycarbonate.
 2. Remove all burrs and sharp edges.

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		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: Scale Side Cover Polycarbonate			
		TOLERANCES:	CHECKED						
		FRACTIONAL $\pm 1/16$	ENG APPR.						
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.						
		TWO PLACE DECIMAL $\pm .01$							
		THREE PLACE DECIMAL $\pm .001$							
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.						
		MATERIAL	COMMENTS:						
		FINISH							
NEXT ASSY	USED ON					SIZE B	DWG. NO. GE-18020		REV 2
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:6		WEIGHT:	SHEET 1 OF 1

4

3

2

1

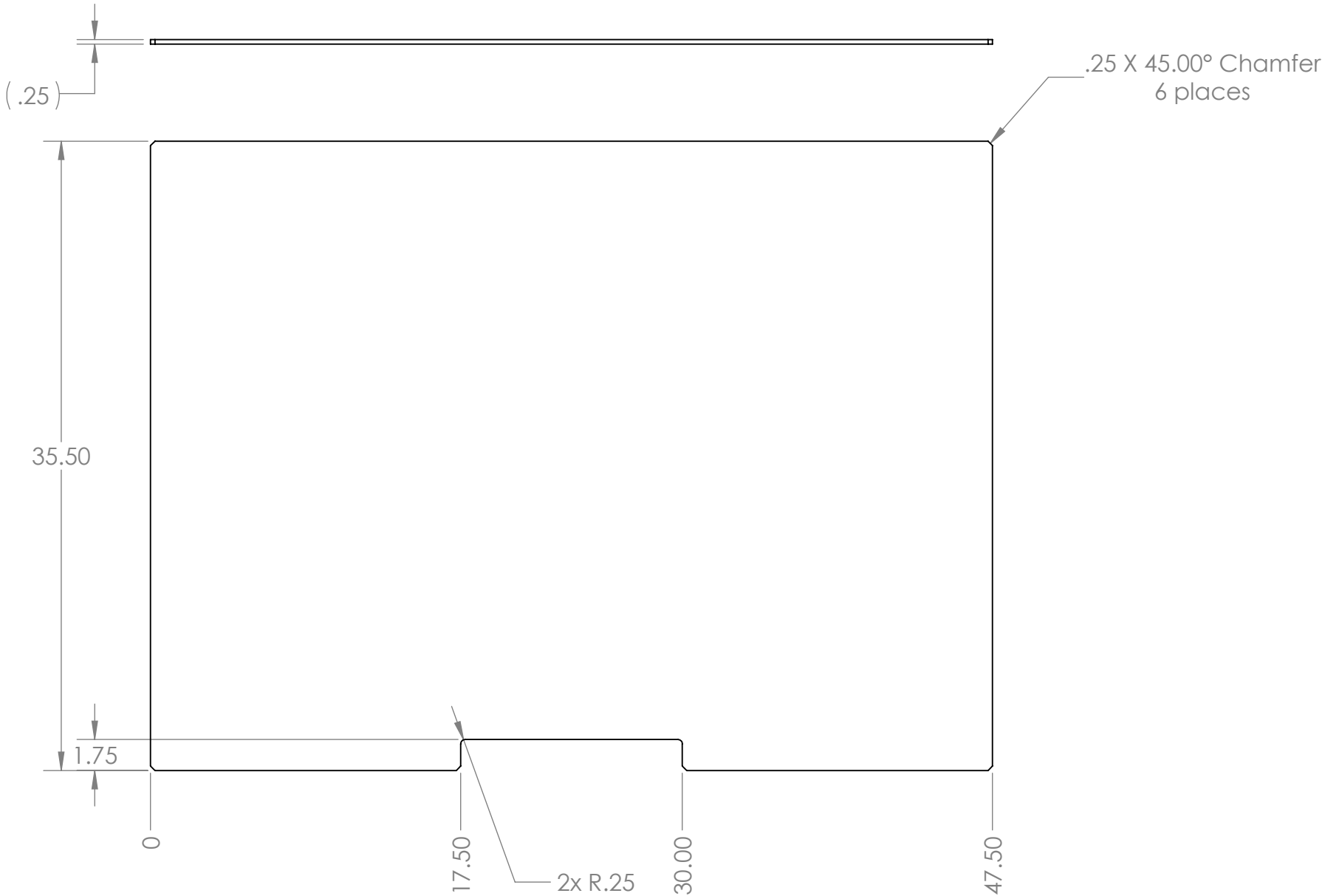
4

3

2

1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A4	2	Changed material thickness in note to match part dimension	12/7/2017	CPO



- Notes:
1. Material: 1/4" thick, black HDPE
 2. Surface: Textured, Orange Peel
 3. Remove all burrs and sharp edges

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



TITLE:
Scale and Switch
Basket, Plate

SIZE	DWG. NO.	REV
B	GE-18021	2

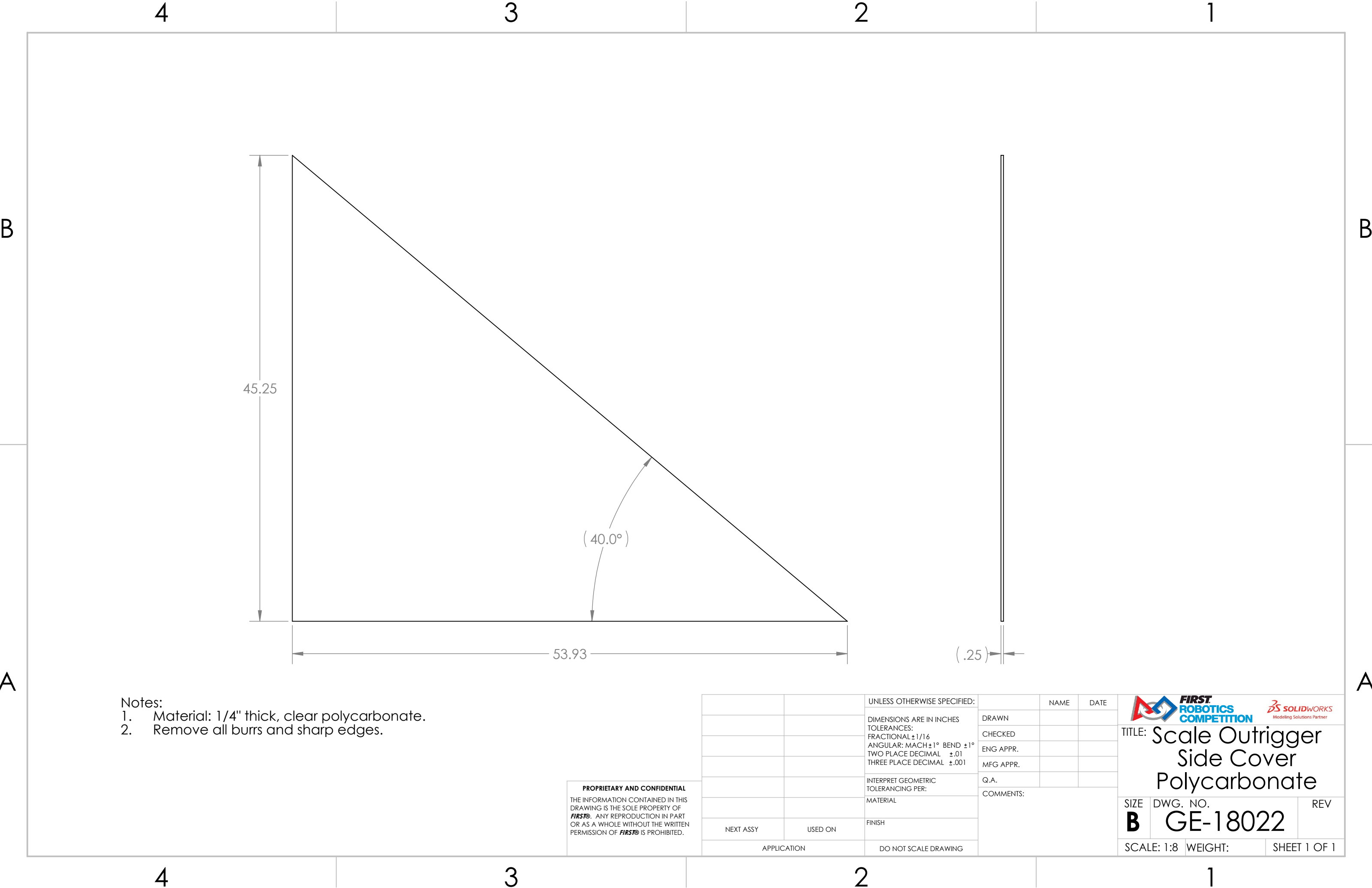
SCALE: 1:8	WEIGHT:	SHEET 1 OF 1
------------	---------	--------------

4

3



2

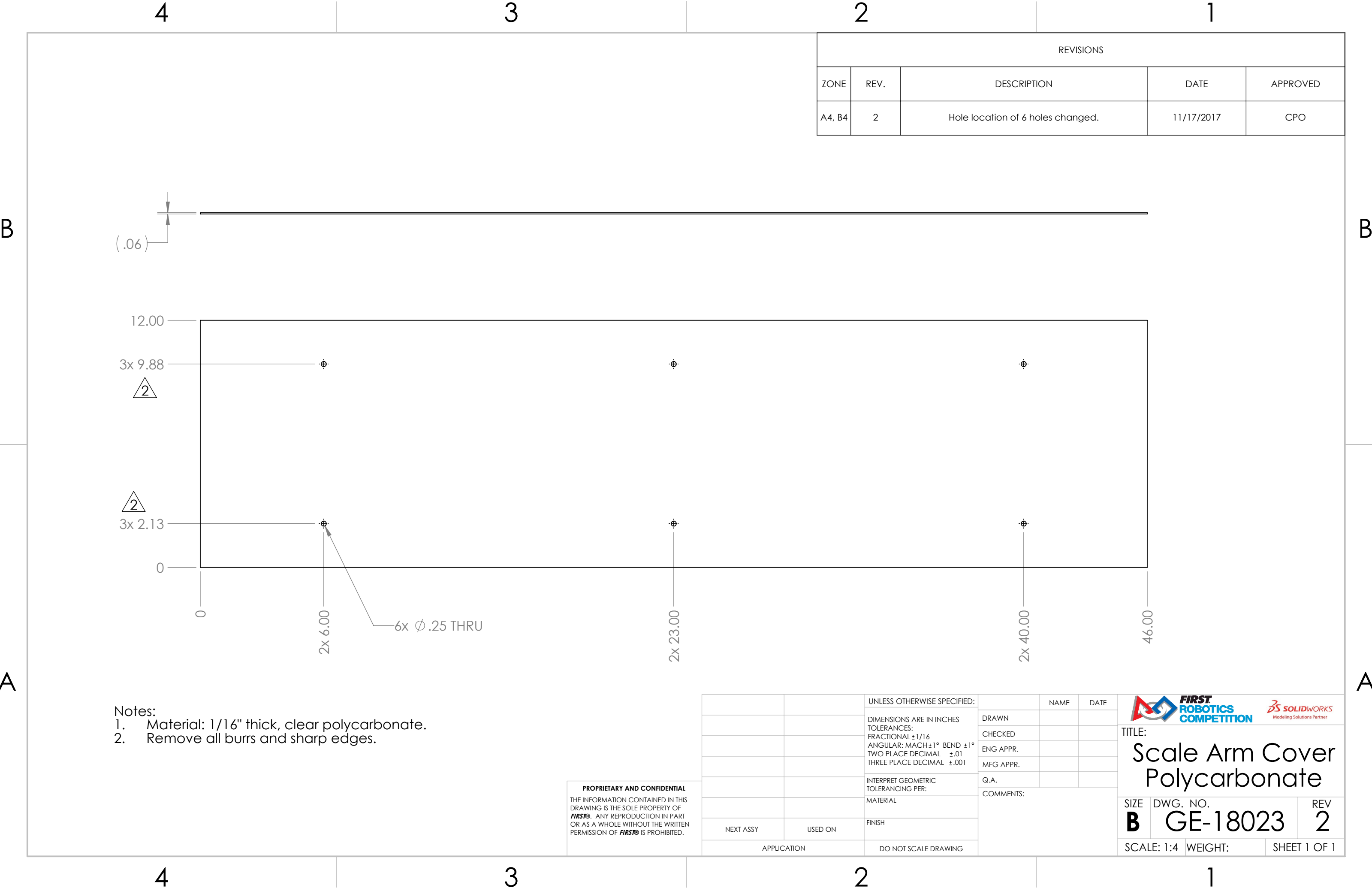
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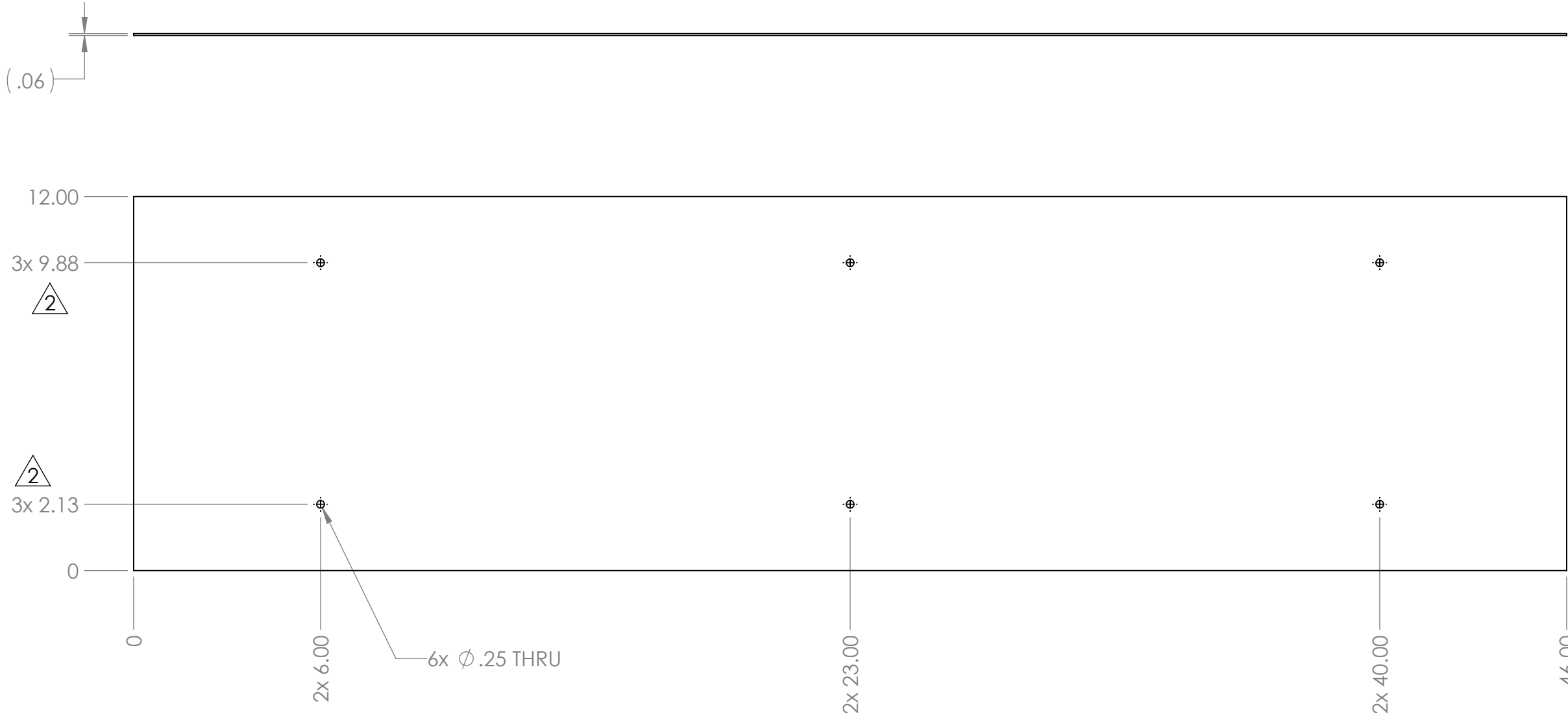
- Notes:
- 1. Material: 1/4" thick, clear polycarbonate.
 - 2. Remove all burrs and sharp edges.



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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Scale Outrigger Side Cover Polycarbonate			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18022			
		MATERIAL	COMMENTS:						
		FINISH							
NEXT ASSY	USED ON					SCALE: 1:8 WEIGHT: SHEET 1 OF 1			
APPLICATION		DO NOT SCALE DRAWING							



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A4, B4	2	Hole location of 6 holes changed.	11/17/2017	CPO





TITLE:

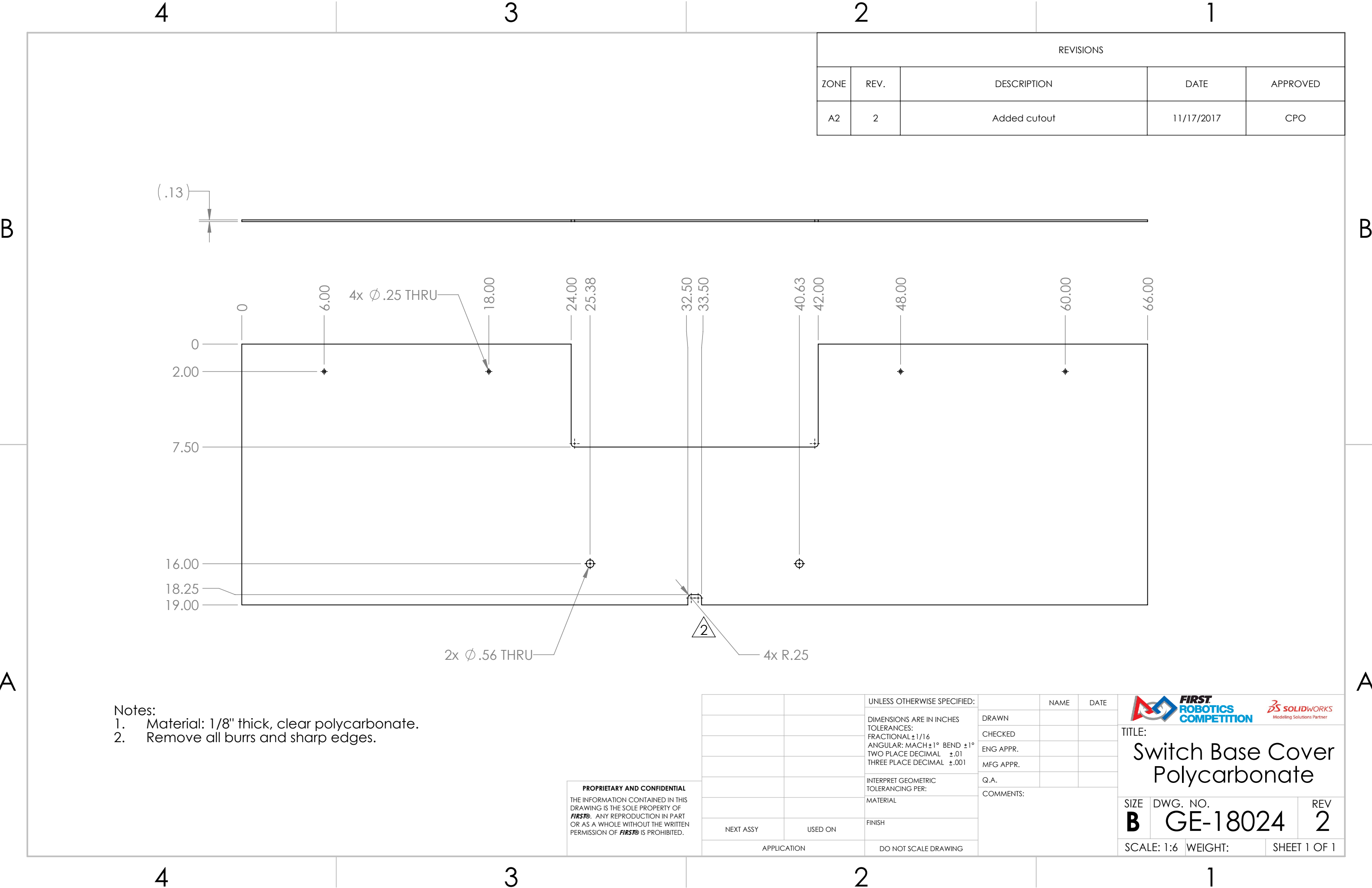
Scale Arm Cover Polycarbonete

SIZE	DWG. NO.	REV
B	GE-18023	2

SCALE: 1:4	WEIGHT:	SHEET 1 OF 1
------------	---------	--------------

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A2	2	Added cutout	11/17/2017	CPO

Notes:

- Material: 1/8" thick, clear polycarbonate.
- Remove all burrs and sharp edges.

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:
Switch Base Cover
Polycarbonate

SIZE
B

DWG. NO.
GE-18024

REV
2

SCALE: 1:6

WEIGHT:

SHEET 1 OF 1

4

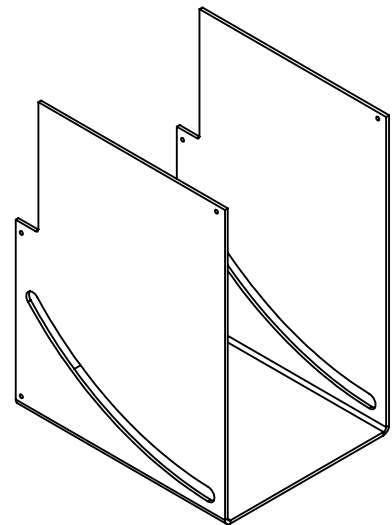
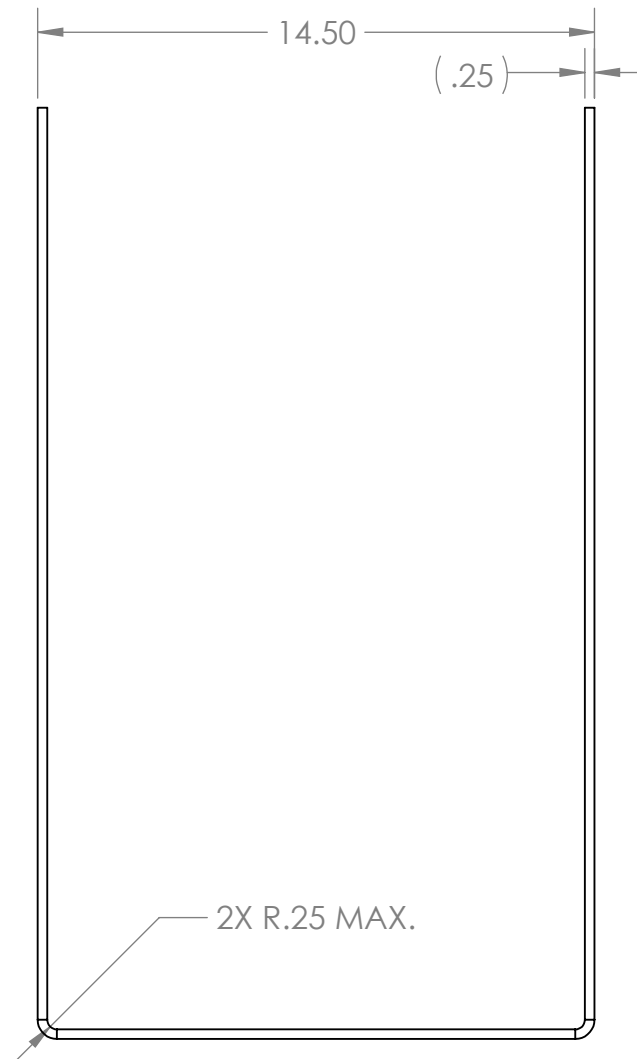
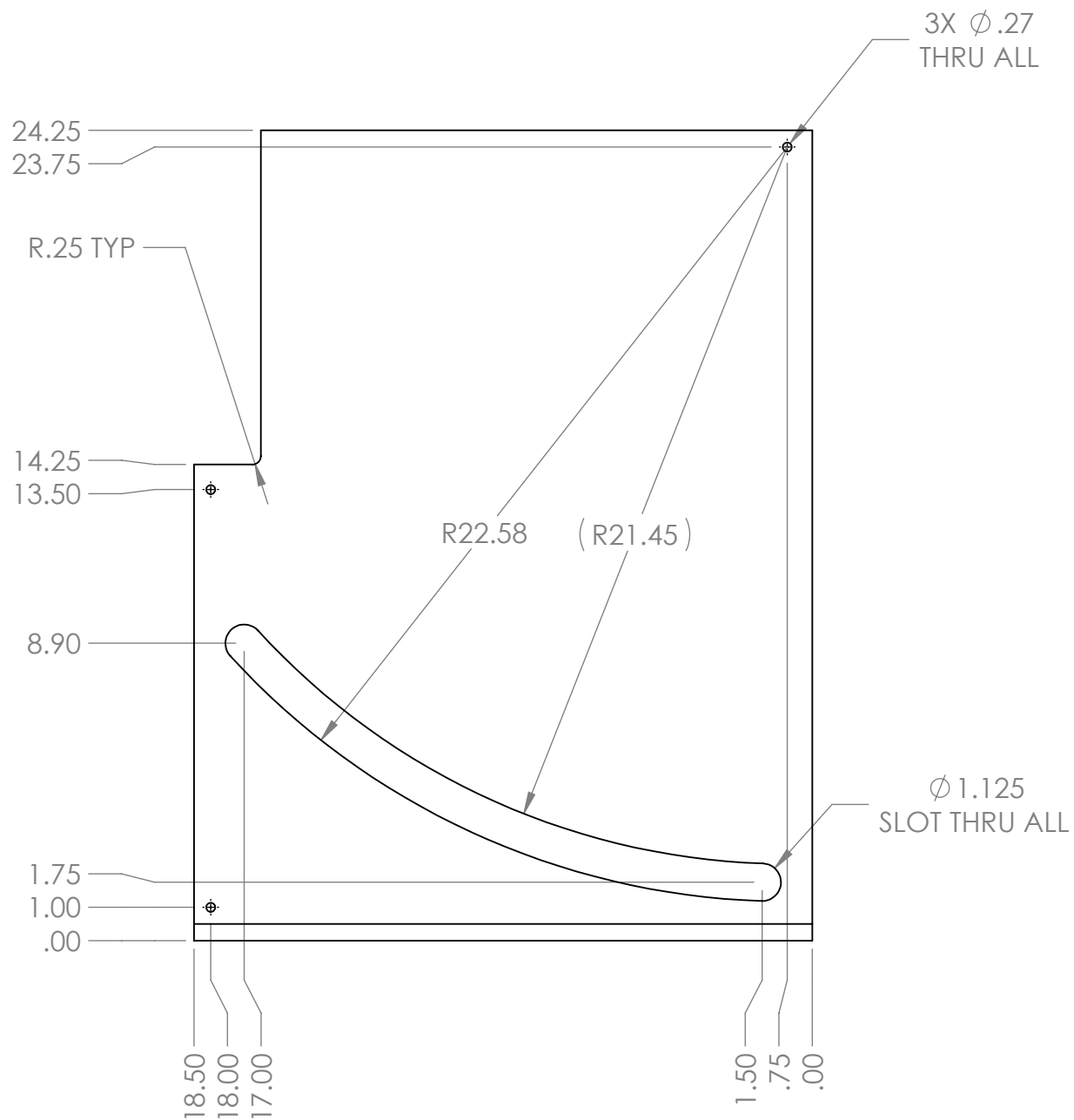
3

2

1

B

A





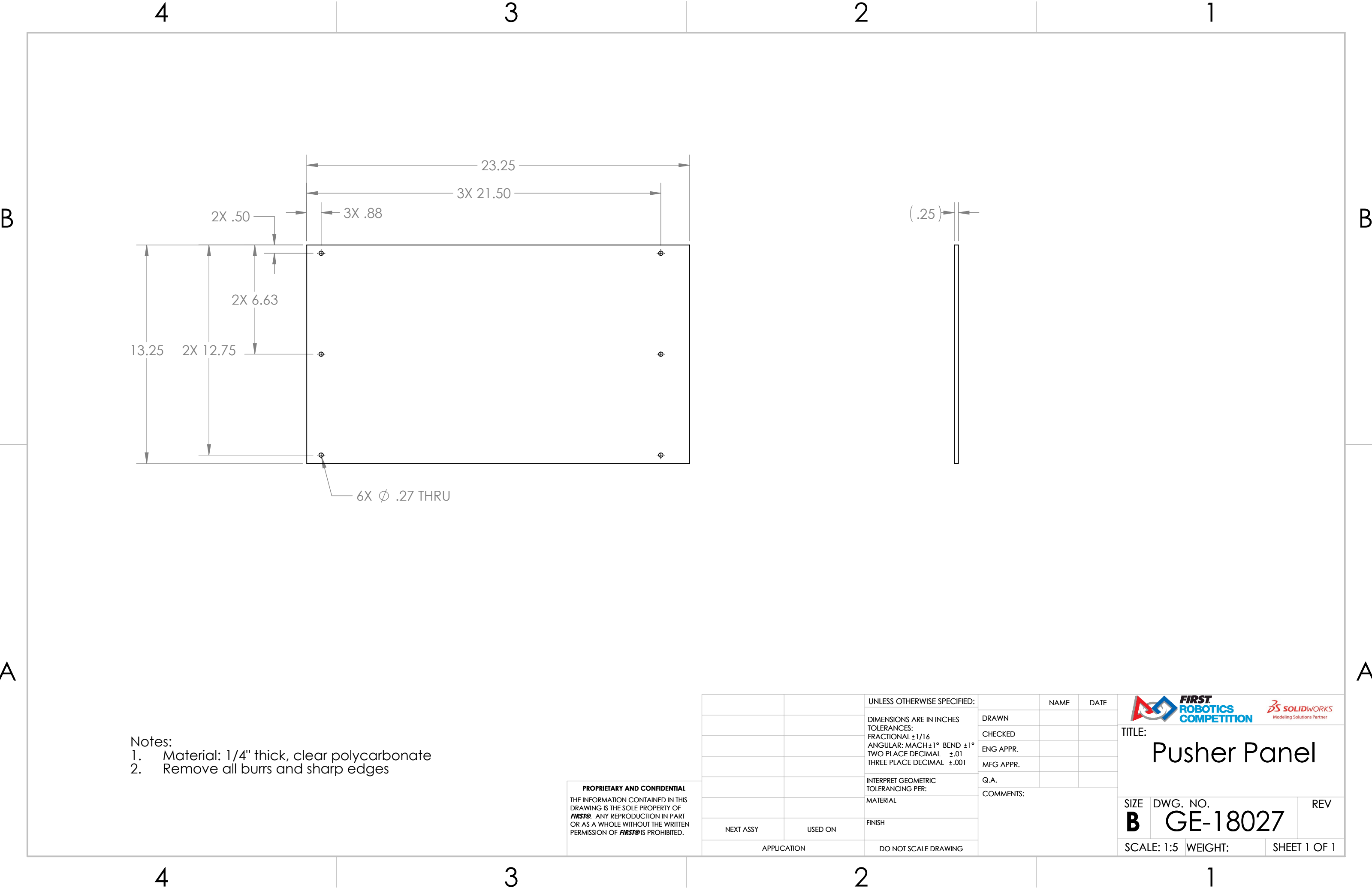
B

A

- Notes:
1. Material: 1/4" thick, clear polycarbonate
 2. Remove all burrs and sharp edges

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Chute Body</h1>			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18025 SCALE: 1:5 WEIGHT: SHEET 1 OF 1			
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING							



4

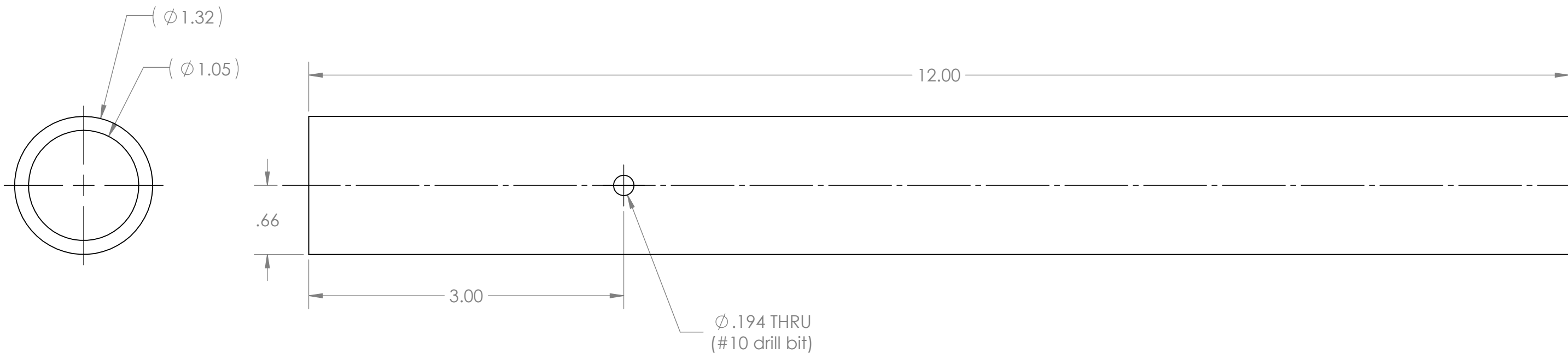
3

2

1

B

B





A

A

- Notes:
- 1. Material: 1" Schedule 40 Pipe, 6061 Aluminum
 - 2. Remove all burrs and sharp edges

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Plate Mount Pin		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:			SIZE DWG. NO. REV B GE-18028		
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:1 WEIGHT: SHEET 1 OF 1		

4

3

2

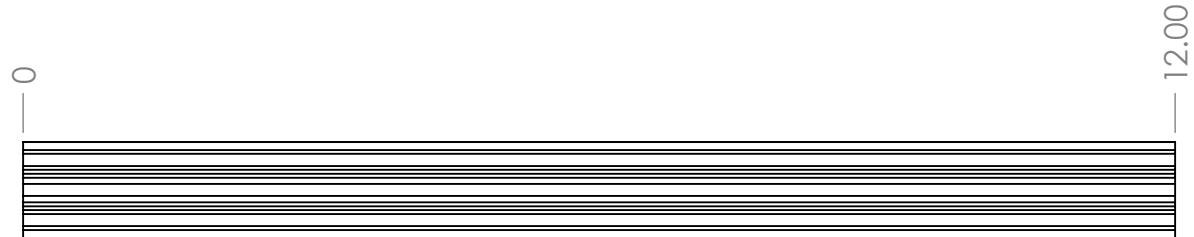
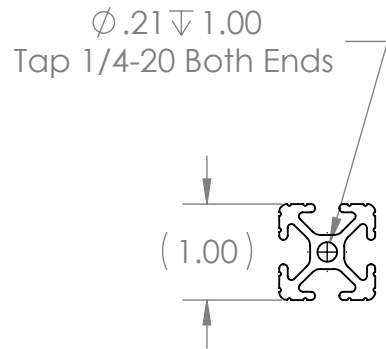
1

2

1

B

B



Note:

1. 80-20 aluminum extrusion
2. Remove all burrs and sharp edges

A

A

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		DIMENSIONS ARE IN INCHES
		TOLERANCES:
		FRACTIONAL $\pm 1/16$
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



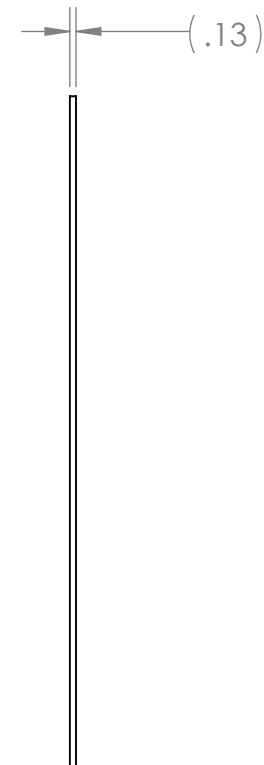
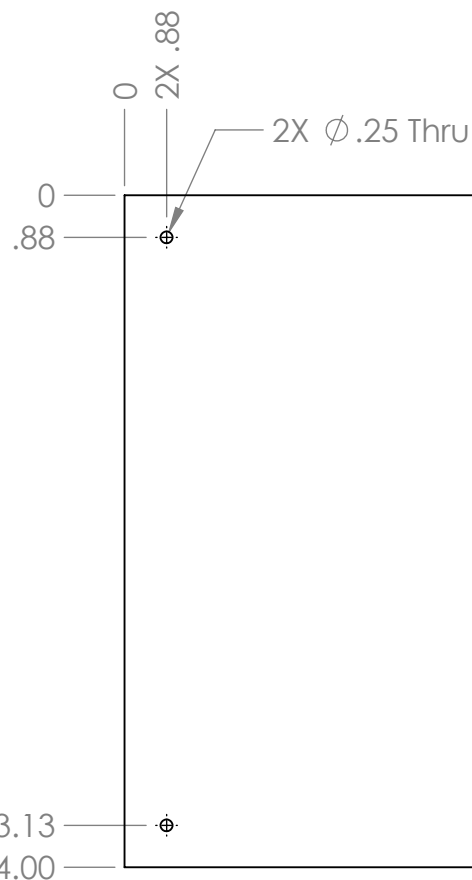
TITLE:
80-20 Extrusion

SIZE	DWG. NO.	REV
A	GE-18030	
SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

2

1



1



Notes:

1. 1/8" smooth HDPE, red or blue
2. Remove burrs and sharp edges

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN				TITLE:
			CHECKED				Vault HDPE Bottom Side
			ENG APPR.				
			MFG APPR.				
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE	
		MATERIAL	COMMENTS:			DWG. NO.	
						A	
		FINISH				GE-18031	
						REV	
NEXT ASSY	USED ON					SCALE: 1:4	
APPLICATION		DO NOT SCALE DRAWING				WEIGHT:	
						SHEET 1 OF 1	



FIRST
ROBOTICS
COMPETITION



SOLIDWORKS
Modeling Solutions Partner

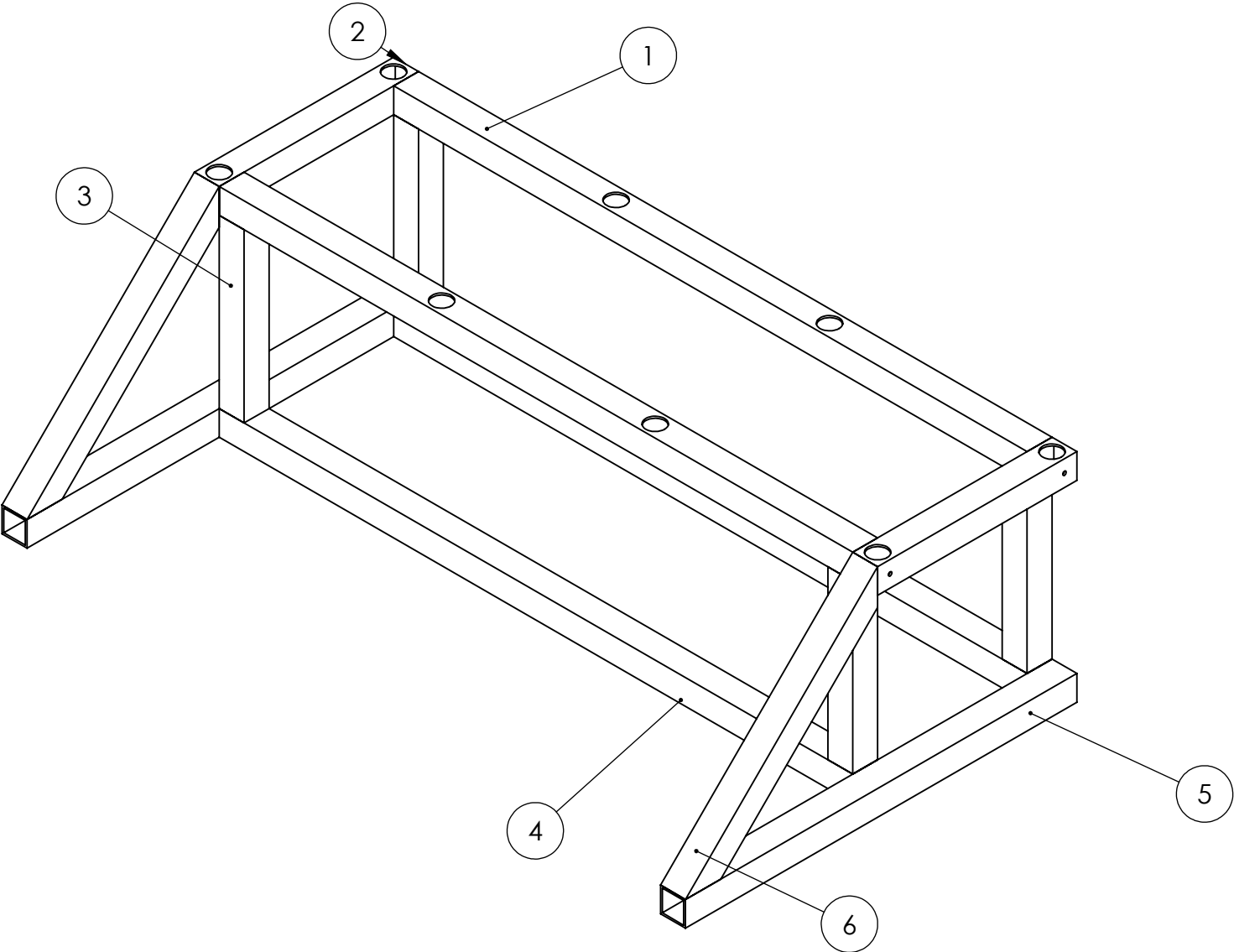
TITLE:

Vault HDPE Bottom Side

SIZE A	DWG. NO. GE-18031	REV
SCALE: 1:4	WEIGHT:	SHEET 1 OF

2

1



Bill of Material

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18032-01	1 3/4", 1/8" Thick Square Tube 6063 Aluminum	2
2	GE-18032-02	1 3/4", 1/8" Thick Square Tube 6063 Aluminum	2
3	GE-18032-03	1 3/4", 1/8" Thick Square Tube 6063 Aluminum	4
4	GE-18032-05	1 3/4", 1/8" Thick Square Tube 6063 Aluminum	2
5	GE-18032-04	1 3/4", 1/8" Thick Square Tube 6063 Aluminum	2
6	GE-18032-06	1 3/4", 1/8" Thick Square Tube 6063 Aluminum	2

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN		
			CHECKED		
			ENG APPR.		
			MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		
		MATERIAL	COMMENTS:		
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			
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			SIZE B	DWG. NO. GE-18032	REV
			SCALE: 1:8 WEIGHT:		SHEET 1 OF 7

4

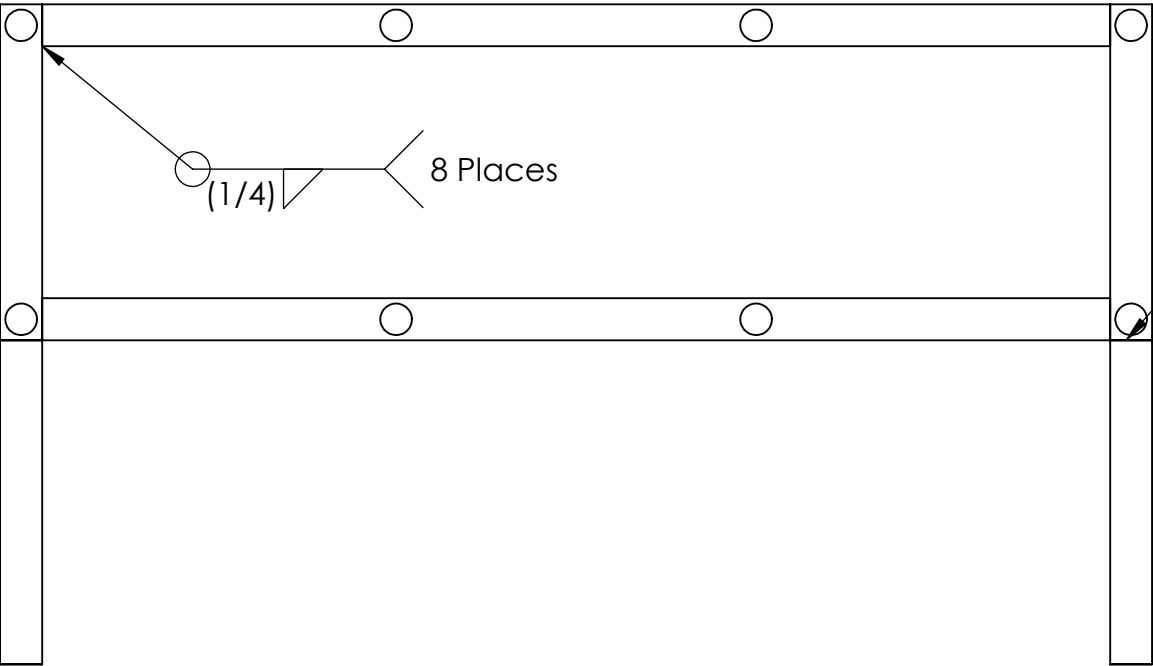
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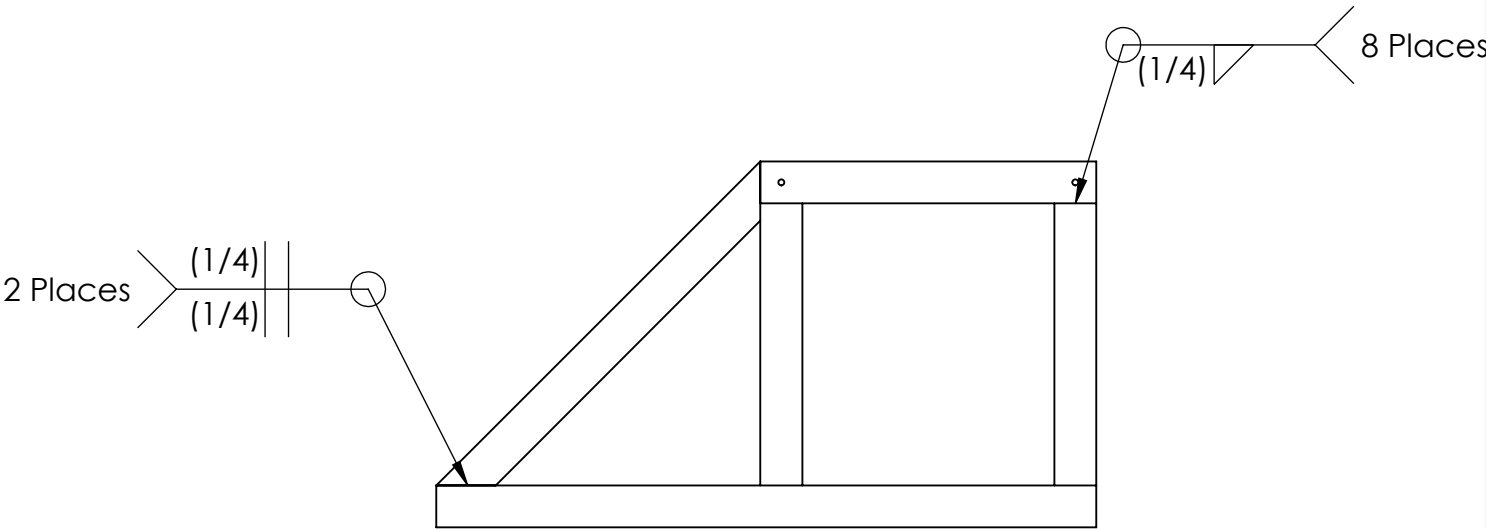
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B

B





Top View



A

A

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		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV <div>BGE-18032</div>		
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NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8 WEIGHT: SHEET 2 OF 7		

4

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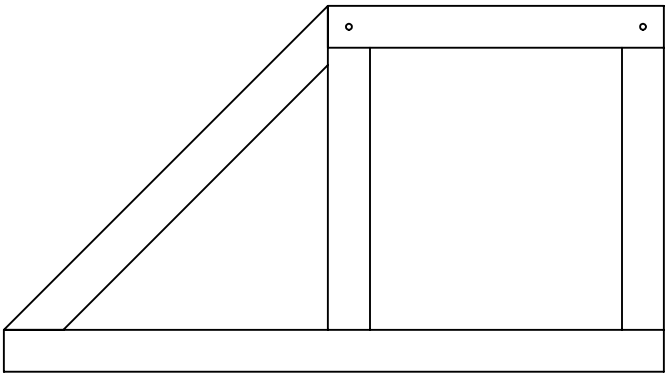
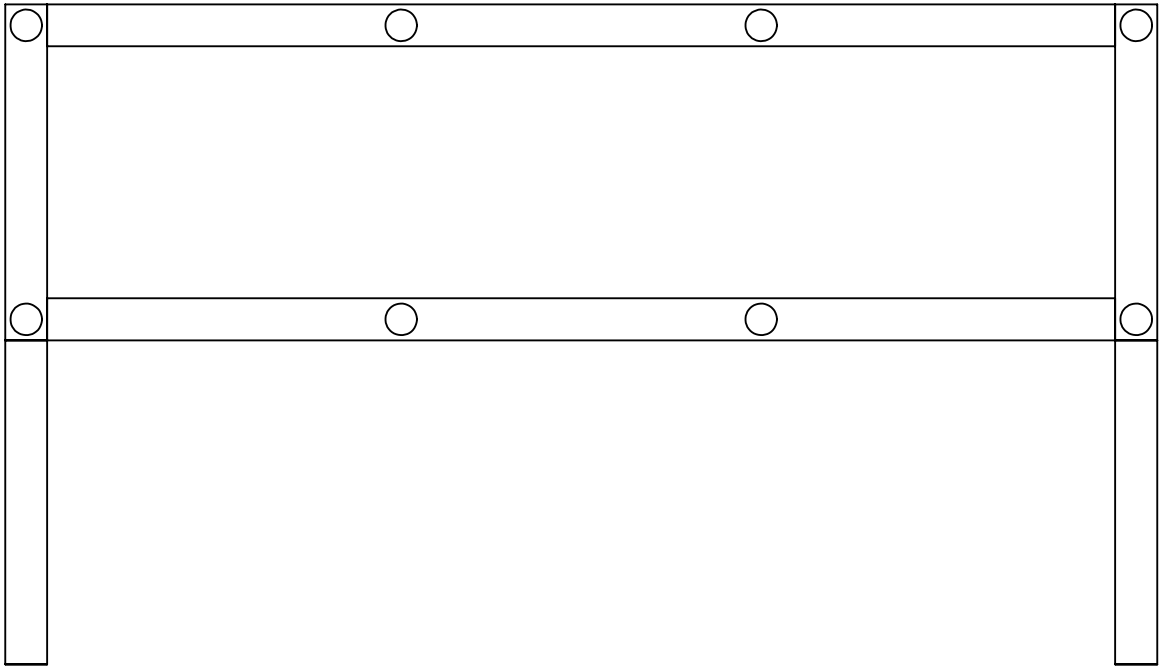
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1



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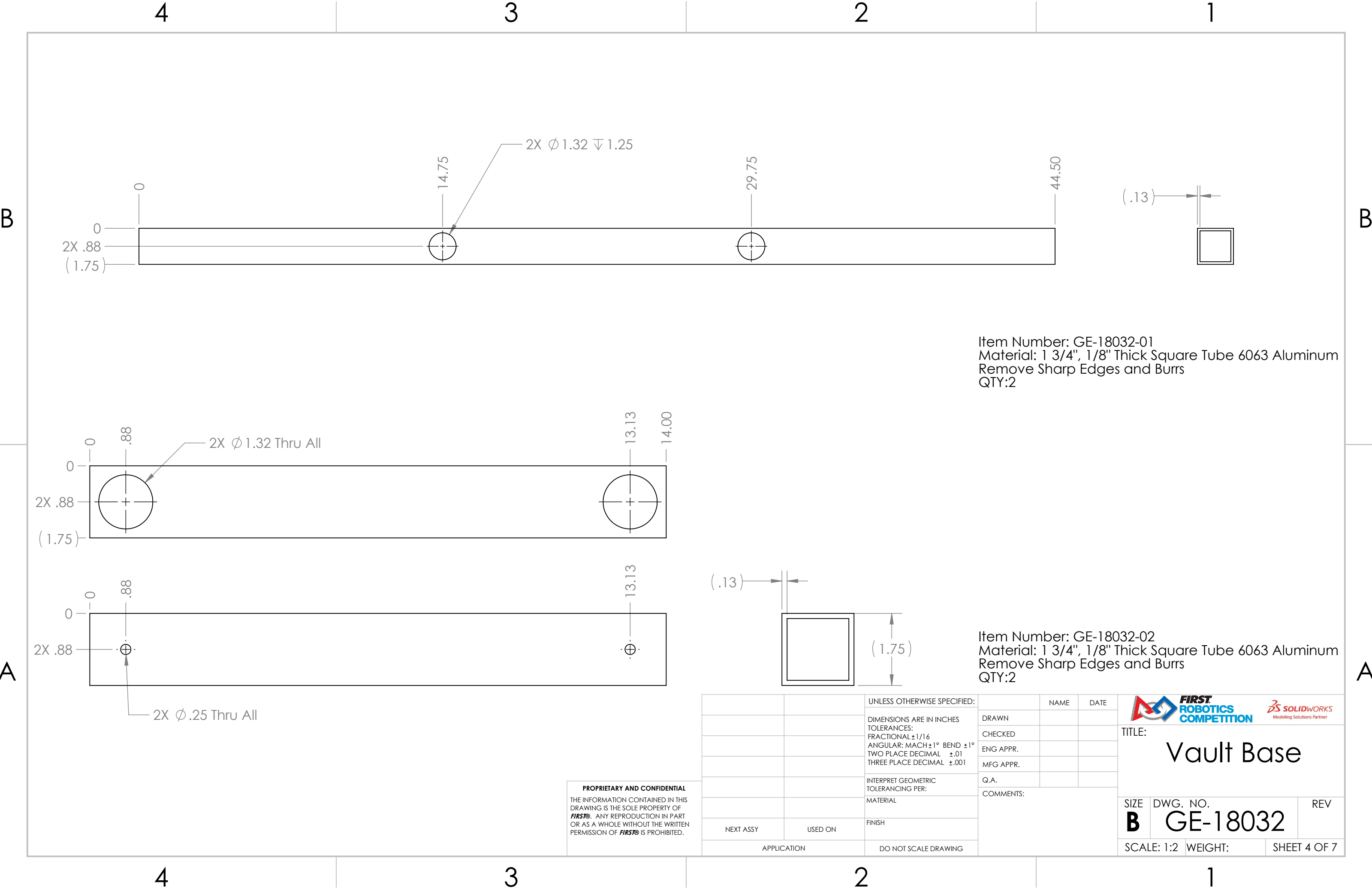
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			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18032		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						
			SCALE: 1:8			WEIGHT:		SHEET 3 OF 7

4

3

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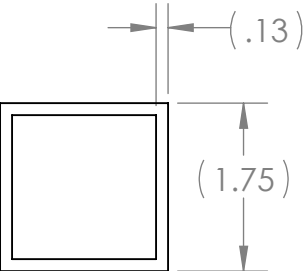
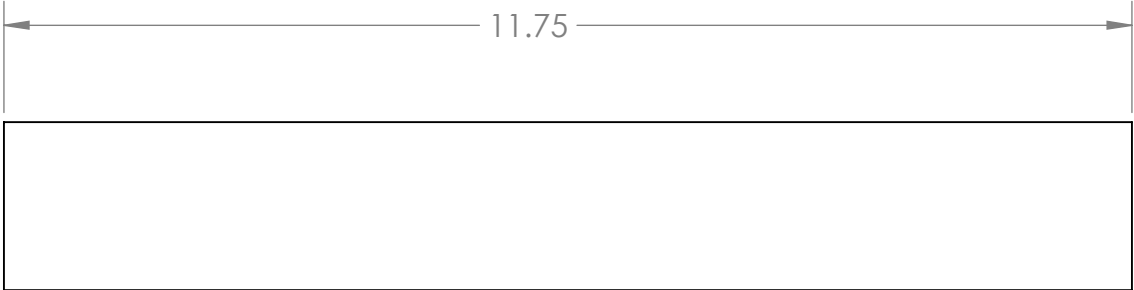
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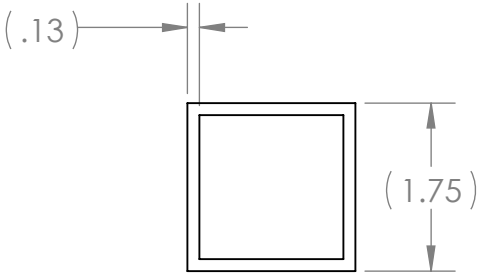
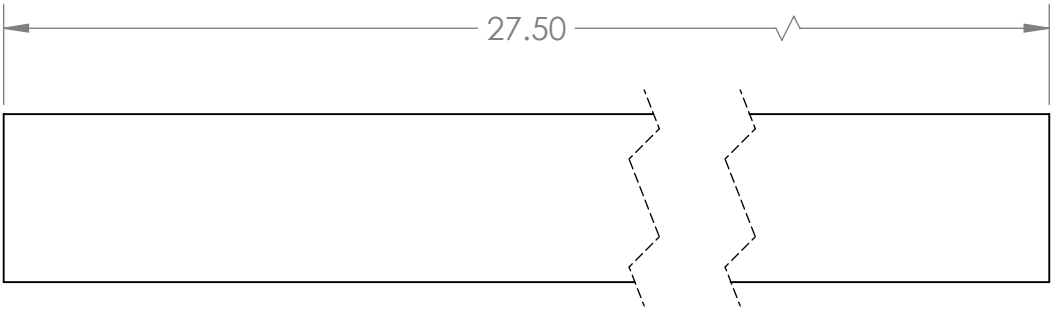
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B

B



Item Number: GE-18032-03
Material: 1 3/4" 6063 Alumium Square Tube
Remove Sharp Edges and Burrs
QTY:4






Item Number: GE-18032-04
Material: 1 3/4" 6063 Alumium Square Tube
Remove Sharp Edges and Burrs
QTY: 2

A

A

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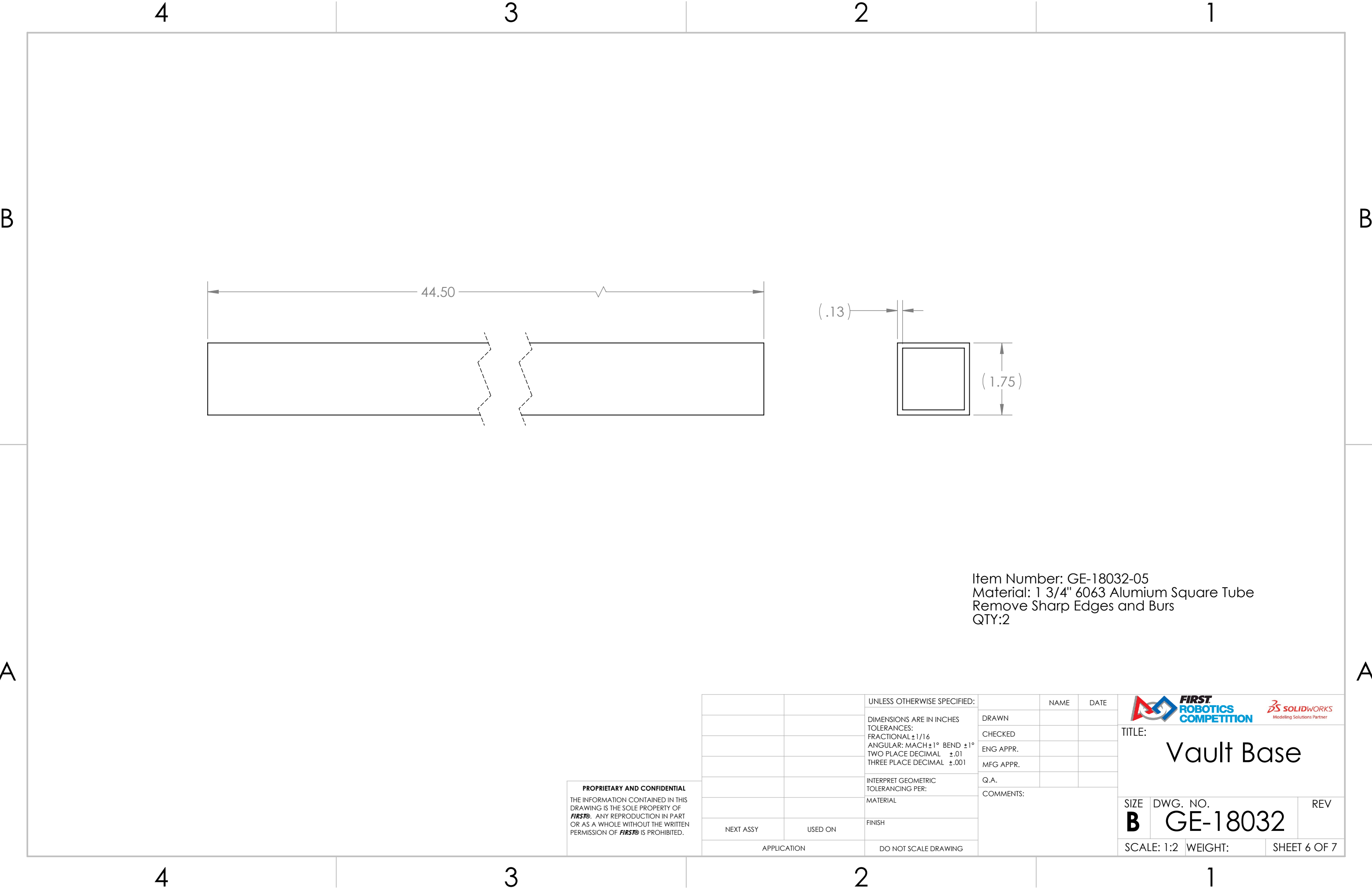
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			CHECKED						
			ENG APPR.						
			MFG APPR.						
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18032			
		MATERIAL	COMMENTS:						
		FINISH							
NEXT ASSY	USED ON					SCALE: 1:2		WEIGHT:	SHEET 5 OF 7
APPLICATION		DO NOT SCALE DRAWING							

4

3



2

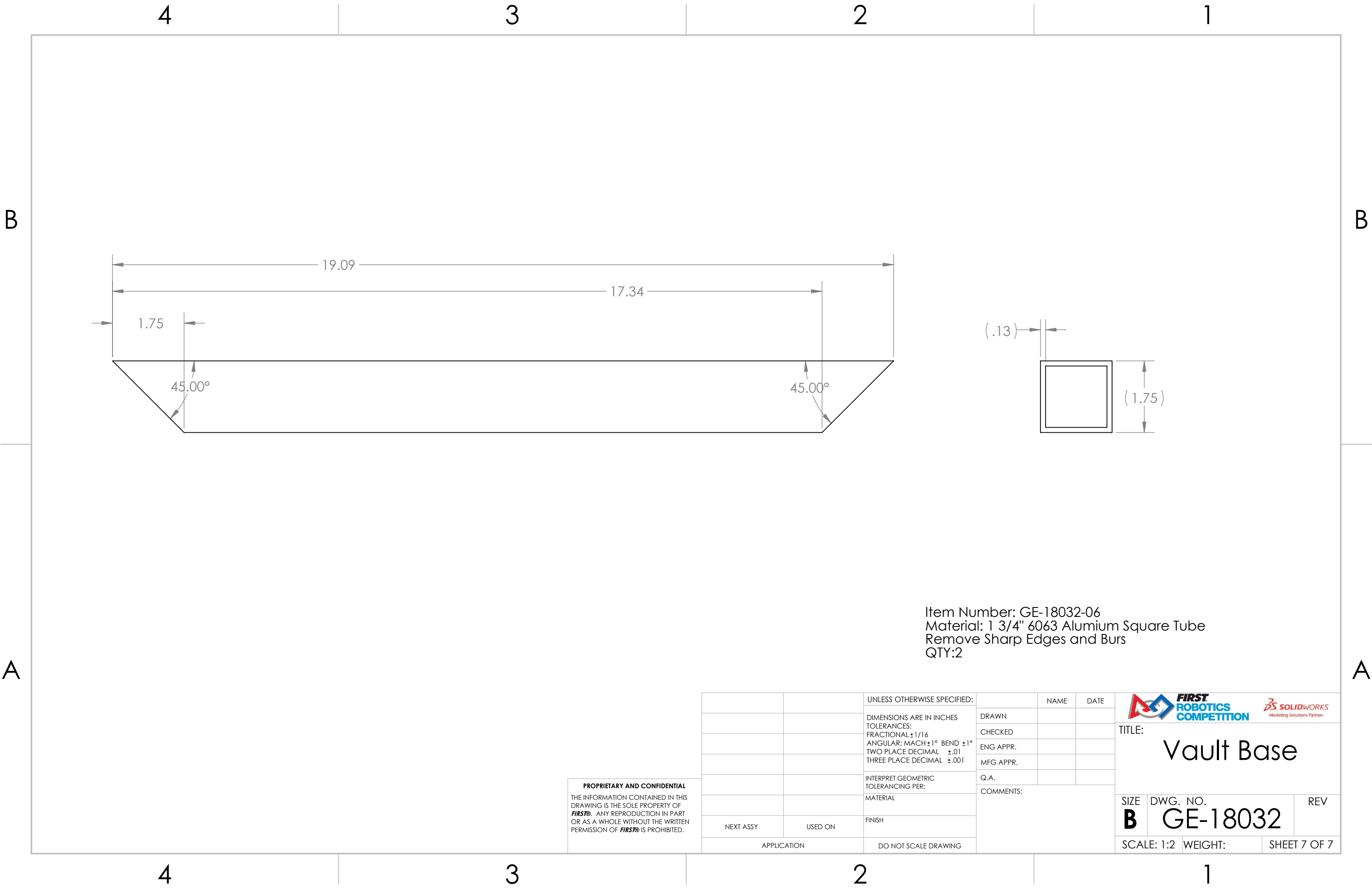
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Item Number: GE-18032-05
Material: 1 3/4" 6063 Alumium Square Tube
Remove Sharp Edges and Burs
QTY:2



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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Vault Base			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18032			
		MATERIAL	COMMENTS:						
NEXT ASSY	USED ON	FINISH							
APPLICATION		DO NOT SCALE DRAWING							
						SCALE: 1:2		WEIGHT:	SHEET 6 OF 7



Item Number: GE-18032-06
Material: 1 3/4" 6063 Alumium Square Tube
Remove Sharp Edges and Burs
QTY:2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Vault Base		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:			SIZE DWG. NO. REV B GE-18032		
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING						
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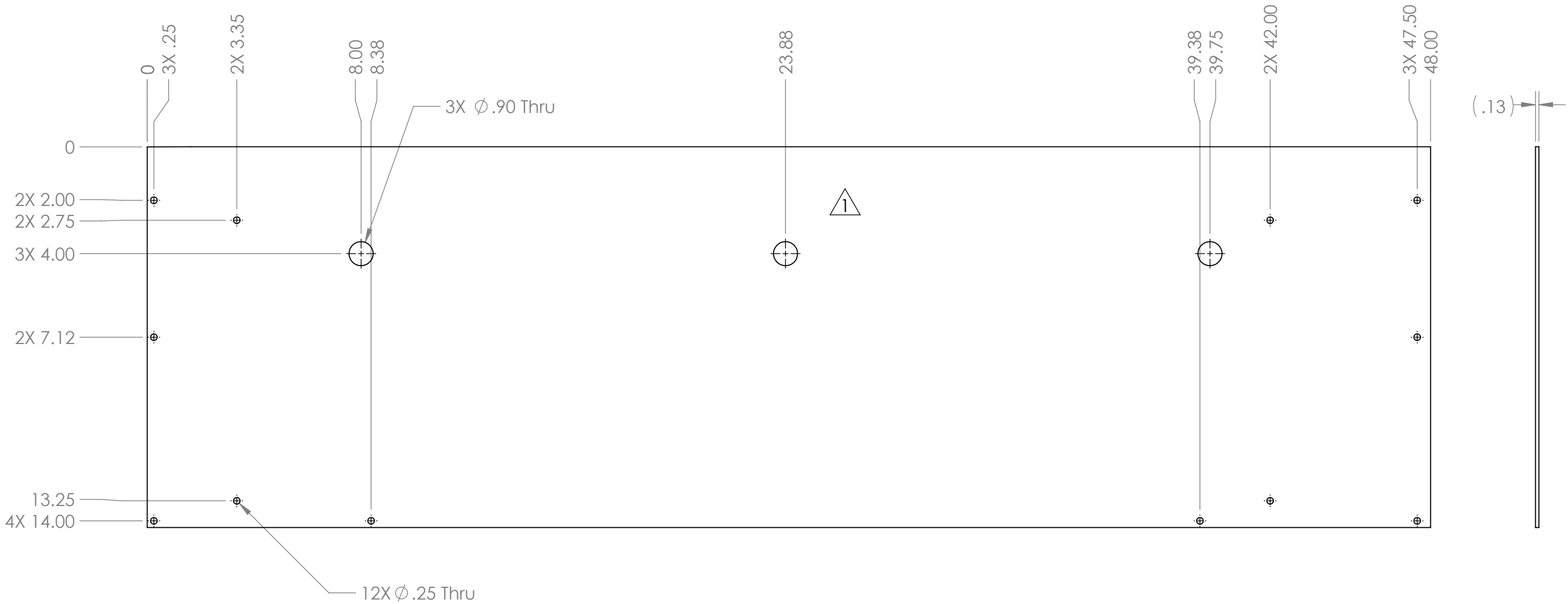
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3

2

1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B2	1	Removed holes and added holes at 3.35 and 42.00	11/20/2017	MXS

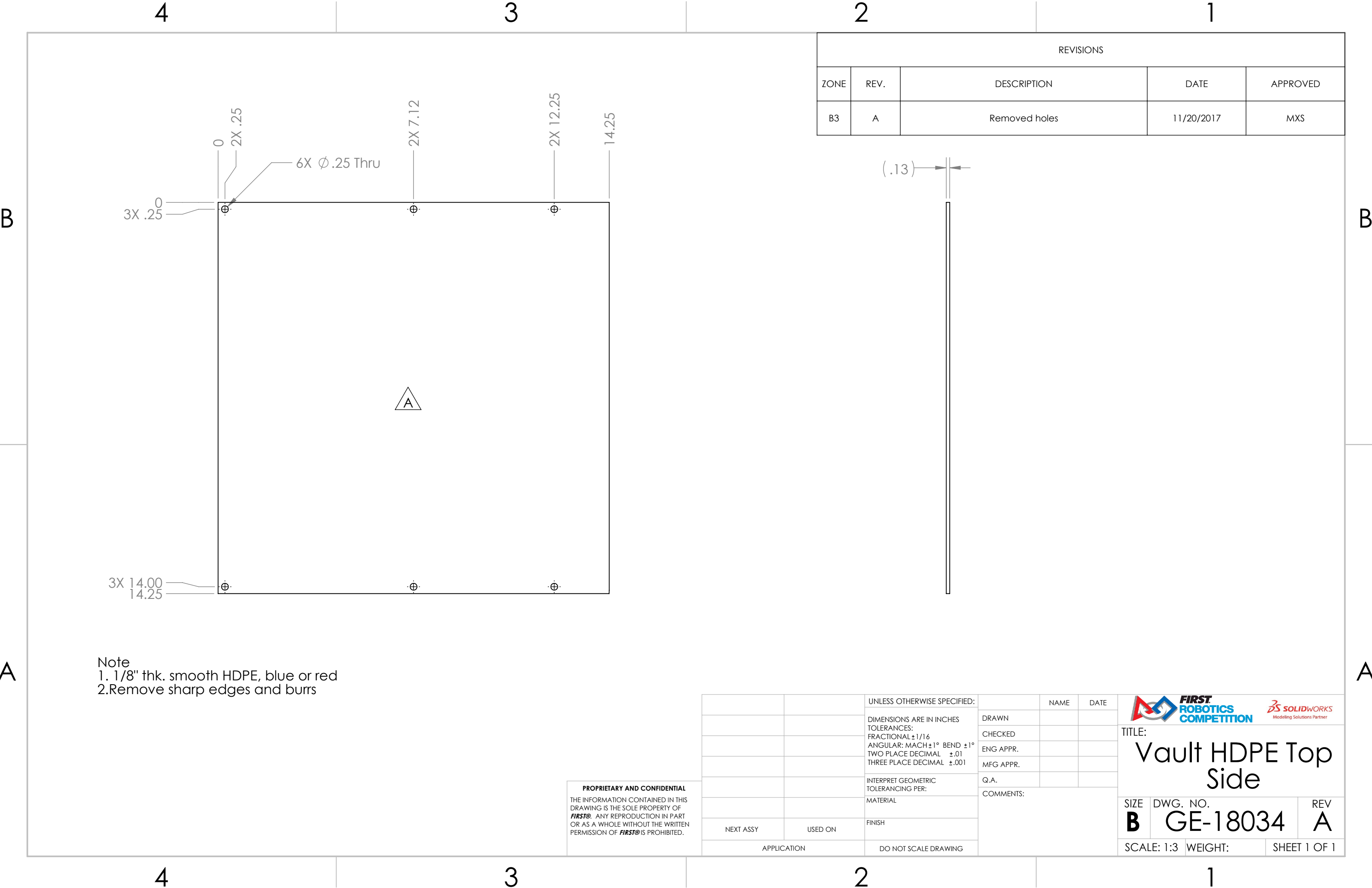


Note

- 1/8" thk. clear Polycarbonate
- Remove sharp edges and burrs

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN		
			CHECKED		
			ENG APPR.		
			MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		
		MATERIAL	COMMENTS:		
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			
			TITLE: Vault polycarbonete Top Front Face		
SIZE	DWG. NO.	REV			
B	GE-18033	1			
SCALE: 1:8		WEIGHT:	SHEET 1 OF 1		



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B3	A	Removed holes	11/20/2017	MXS

Note
1. 1/8" thk. smooth HDPE, blue or red
2.Remove sharp edges and burrs



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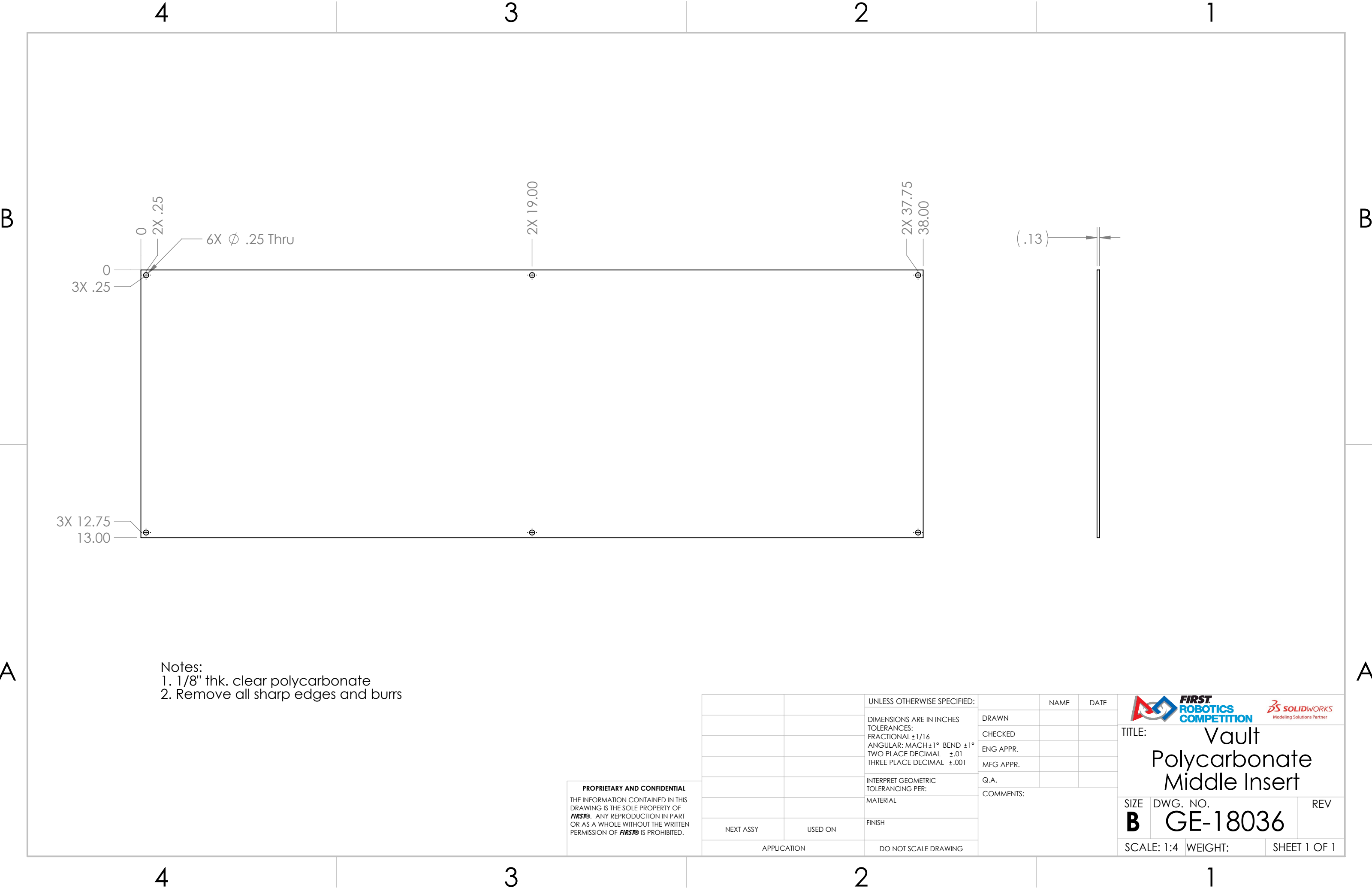
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			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18034 A		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING	SCALE: 1:3					



- Notes:
- 1. 1/8" thk. smooth HDPE, red or blue
 - 2. Remove sharp edges and burrs



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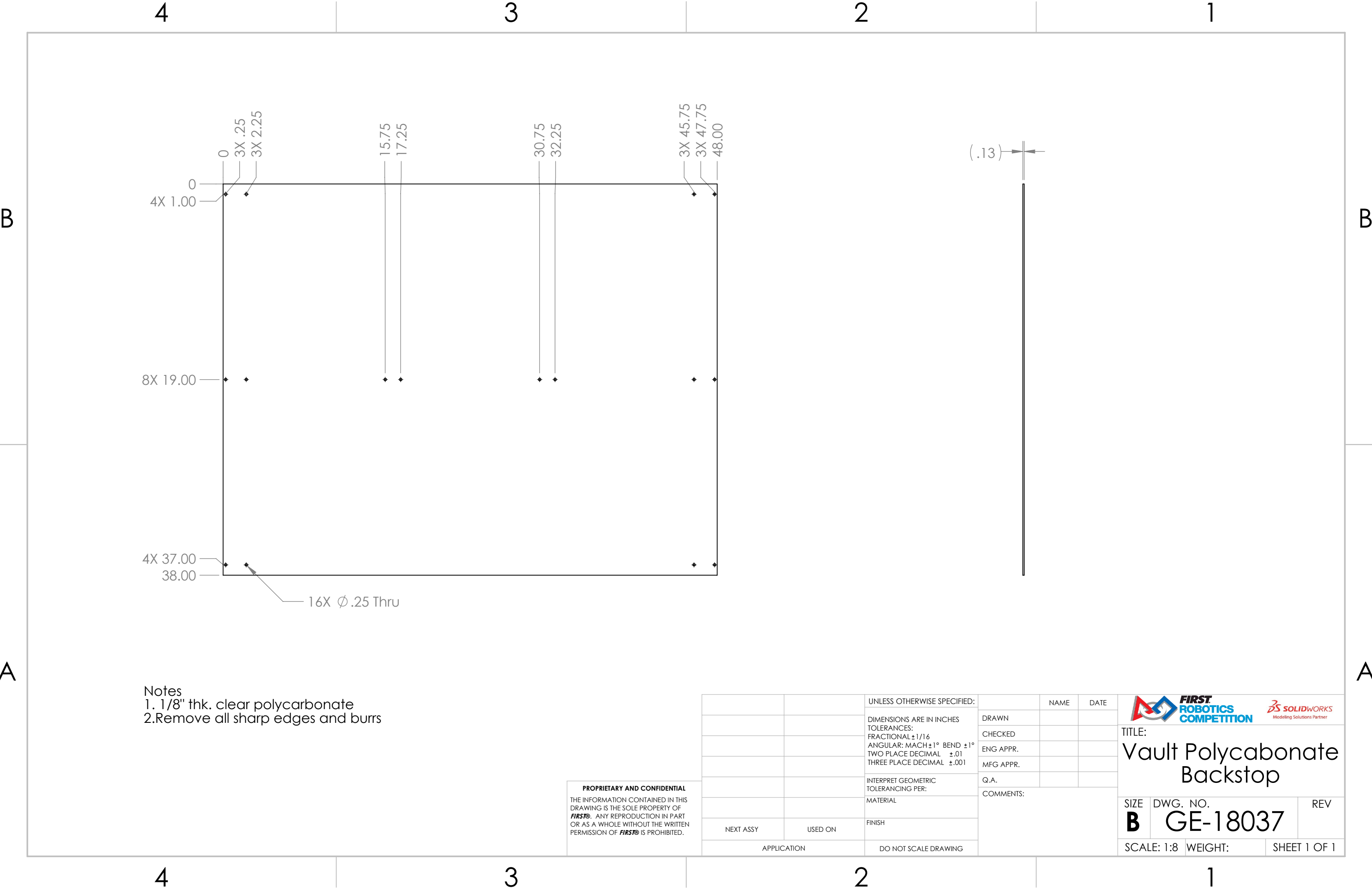
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			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			COMMENTS:		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON					SIZE B	DWG. NO. GE-18035	REV
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:4	WEIGHT:	SHEET 1 OF 1



Notes:
1. 1/8" thk. clear polycarbonate
2. Remove all sharp edges and burrs



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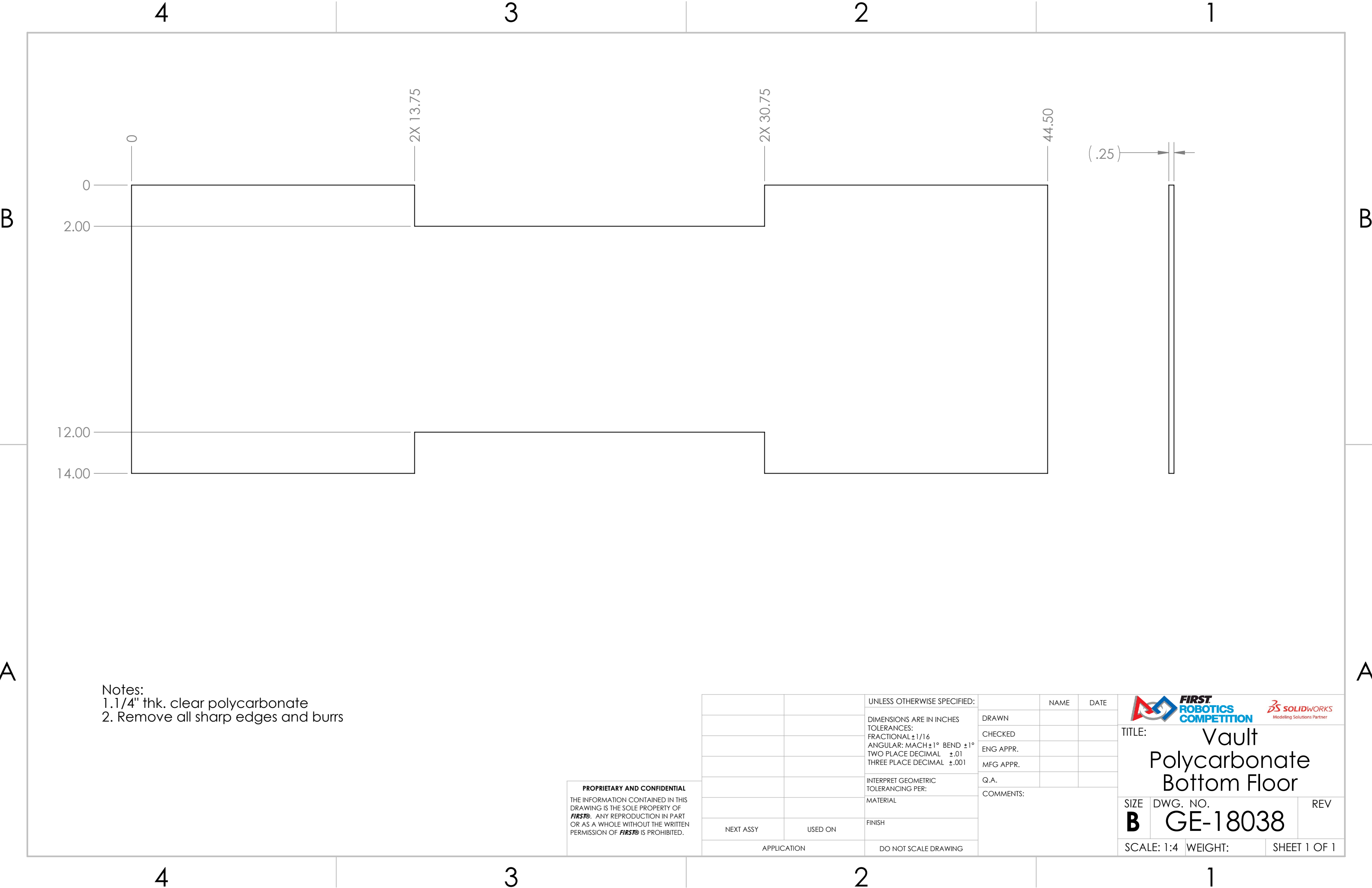
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			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18036		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:4 WEIGHT: SHEET 1 OF 1		



Notes
1. 1/8" thk. clear polycarbonate
2.Remove all sharp edges and burrs



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			CHECKED					
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			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18037		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8 WEIGHT: SHEET 1 OF 1		



Notes:
1. 1/4" thk. clear polycarbonate
2. Remove all sharp edges and burrs

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			MFG APPR.							
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		MATERIAL	COMMENTS:							
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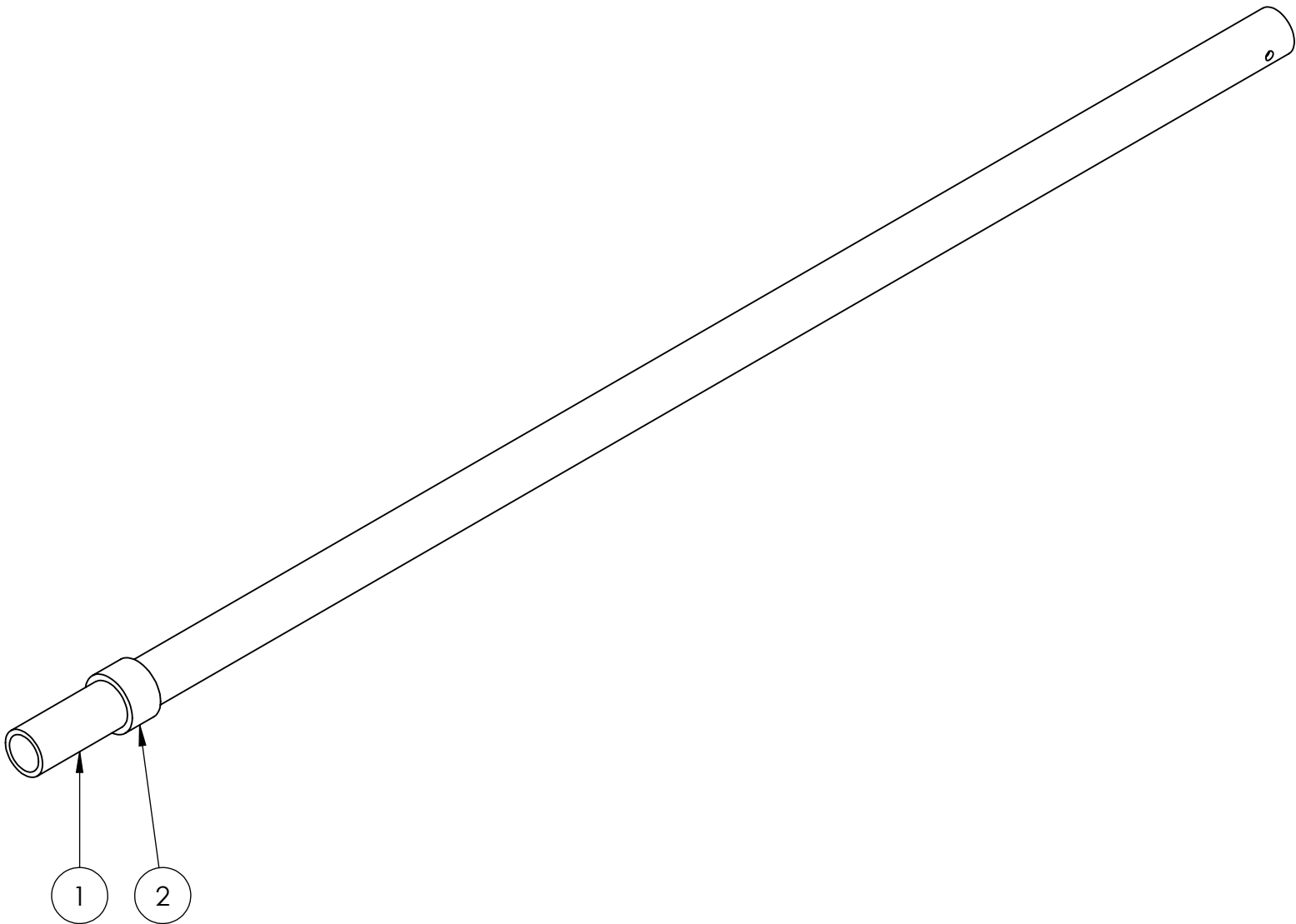
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B

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A

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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18039-01	1" Schedule 40 Aluminum Pipe	1
2	GE-18039-02	1 1/4" Schedule 40 Aluminum Pipe	1

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			CHECKED					
			ENG APPR.					
			MFG APPR.					
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		MATERIAL	COMMENTS:			SIZE	DWG. NO.	REV
NEXT ASSY	USED ON	FINISH				B	GE-18039	
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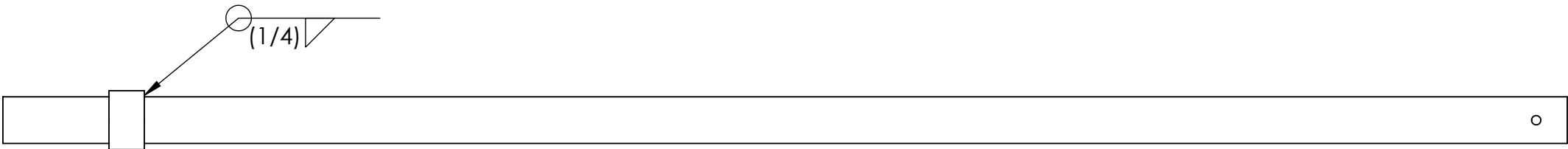
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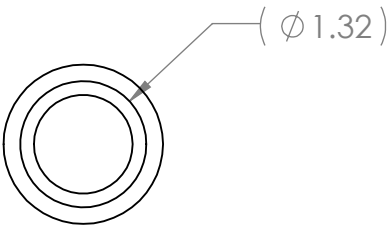
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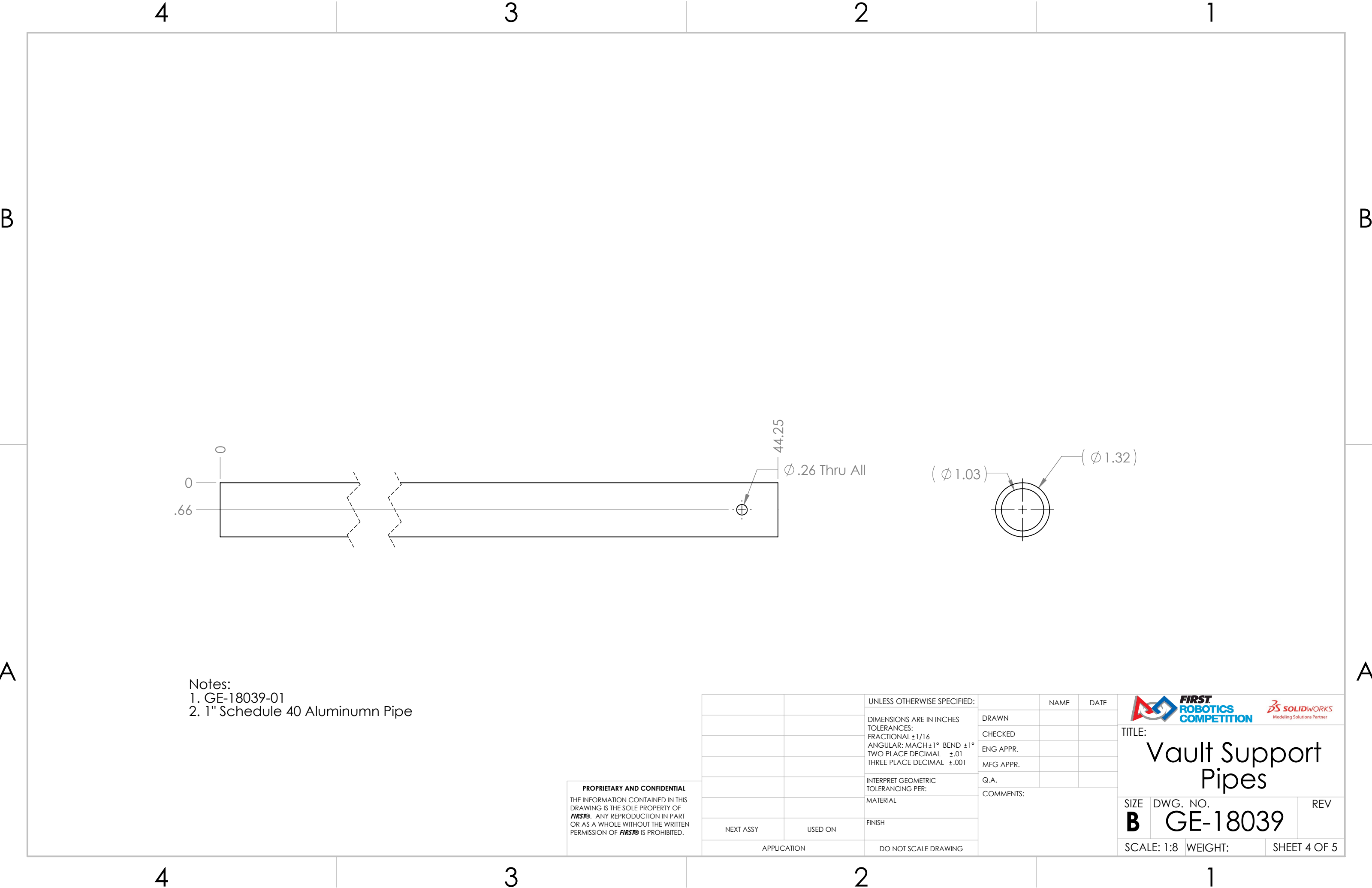
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			CHECKED					
			ENG APPR.					
			MFG APPR.					
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		MATERIAL	COMMENTS:			SIZE	DWG. NO.	REV
NEXT ASSY	USED ON	FINISH				B	GE-18039	
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8 WEIGHT: SHEET 3 OF 5		

4

3



2

1



- Notes:
- 1. GE-18039-01
 - 2. 1" Schedule 40 Aluminumn Pipe

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			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18039		
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NEXT ASSY	USED ON					SCALE: 1:8	WEIGHT:	SHEET 4 OF 5
APPLICATION		DO NOT SCALE DRAWING						

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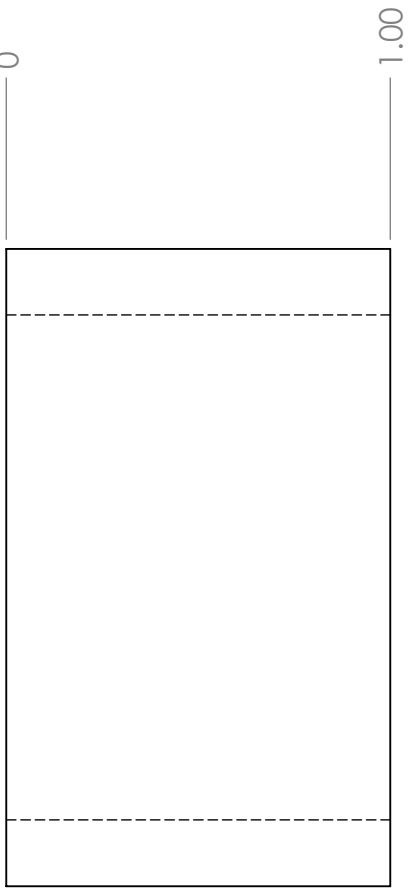
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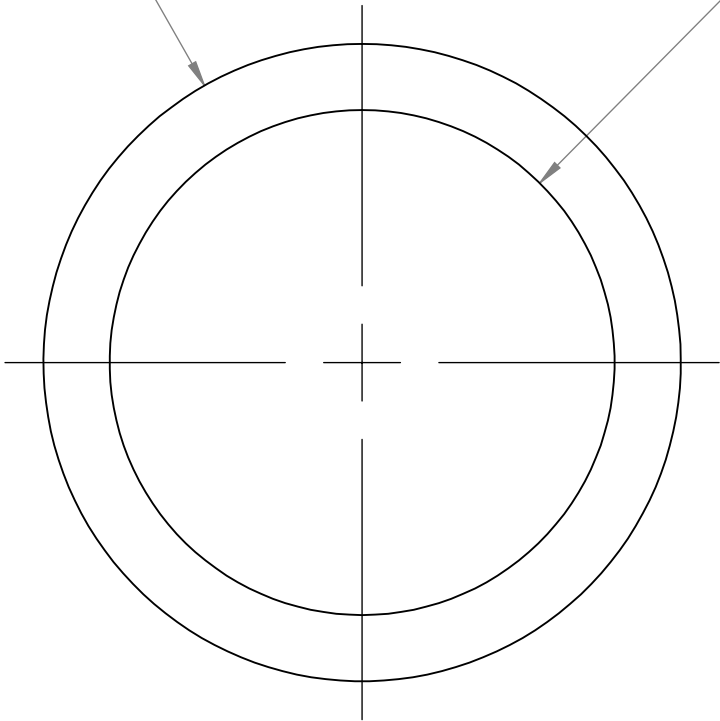
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B



(Ø 1.66)

(Ø 1.32)





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A

- Notes:
- 1. GE-18039-01
 - 2. 1 1/4" Schedule 40 Aluminumn Pipe

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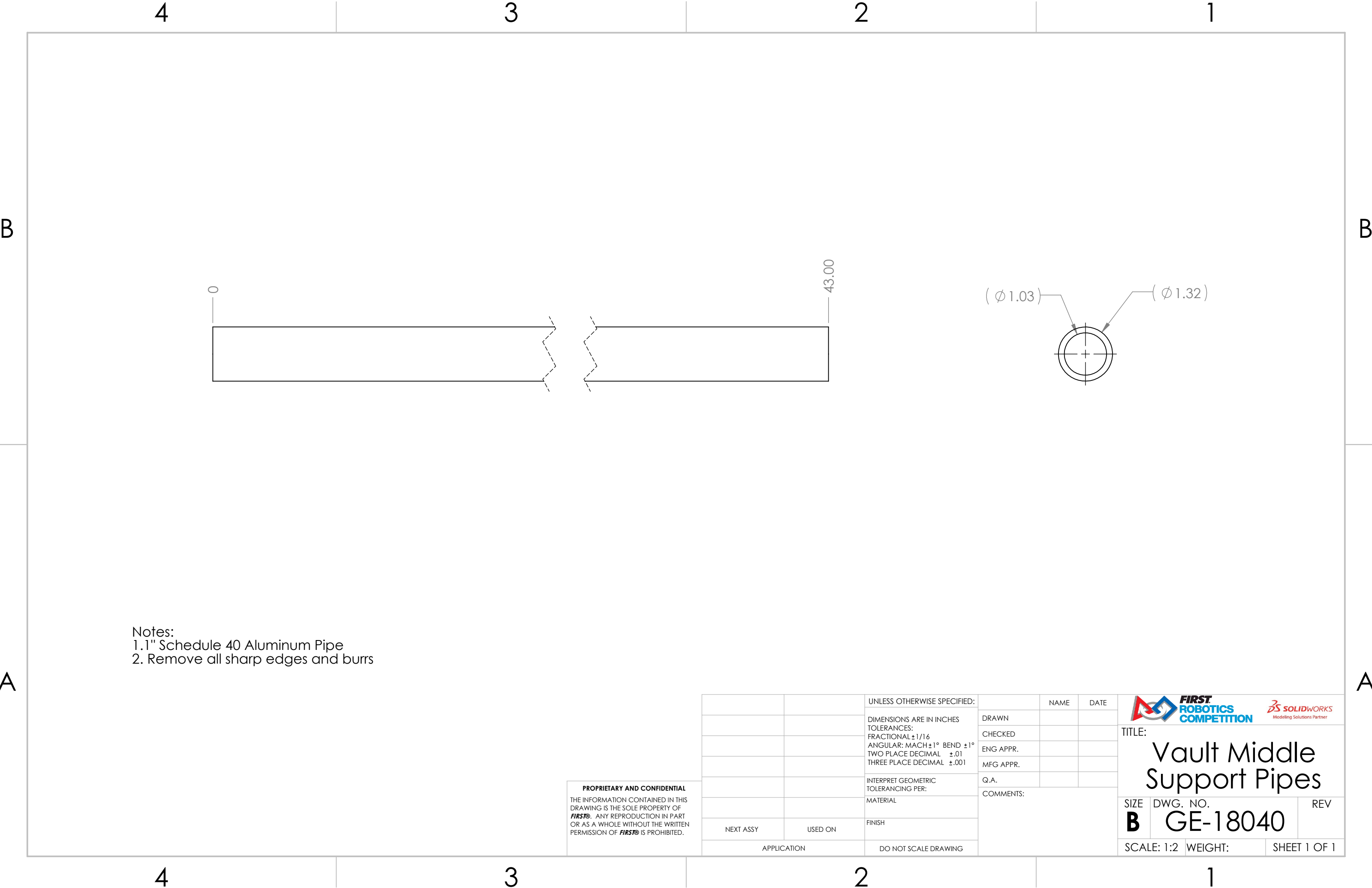
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			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:			SIZE	DWG. NO.	REV
NEXT ASSY	USED ON	FINISH				B	GE-18039	
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8	WEIGHT:	SHEET 5 OF 5

4

3



2

1



Notes:
1. 1" Schedule 40 Aluminum Pipe
2. Remove all sharp edges and burrs

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Vault Middle Support Pipes		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			COMMENTS:		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON					SIZE B	DWG. NO. GE-18040	REV
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

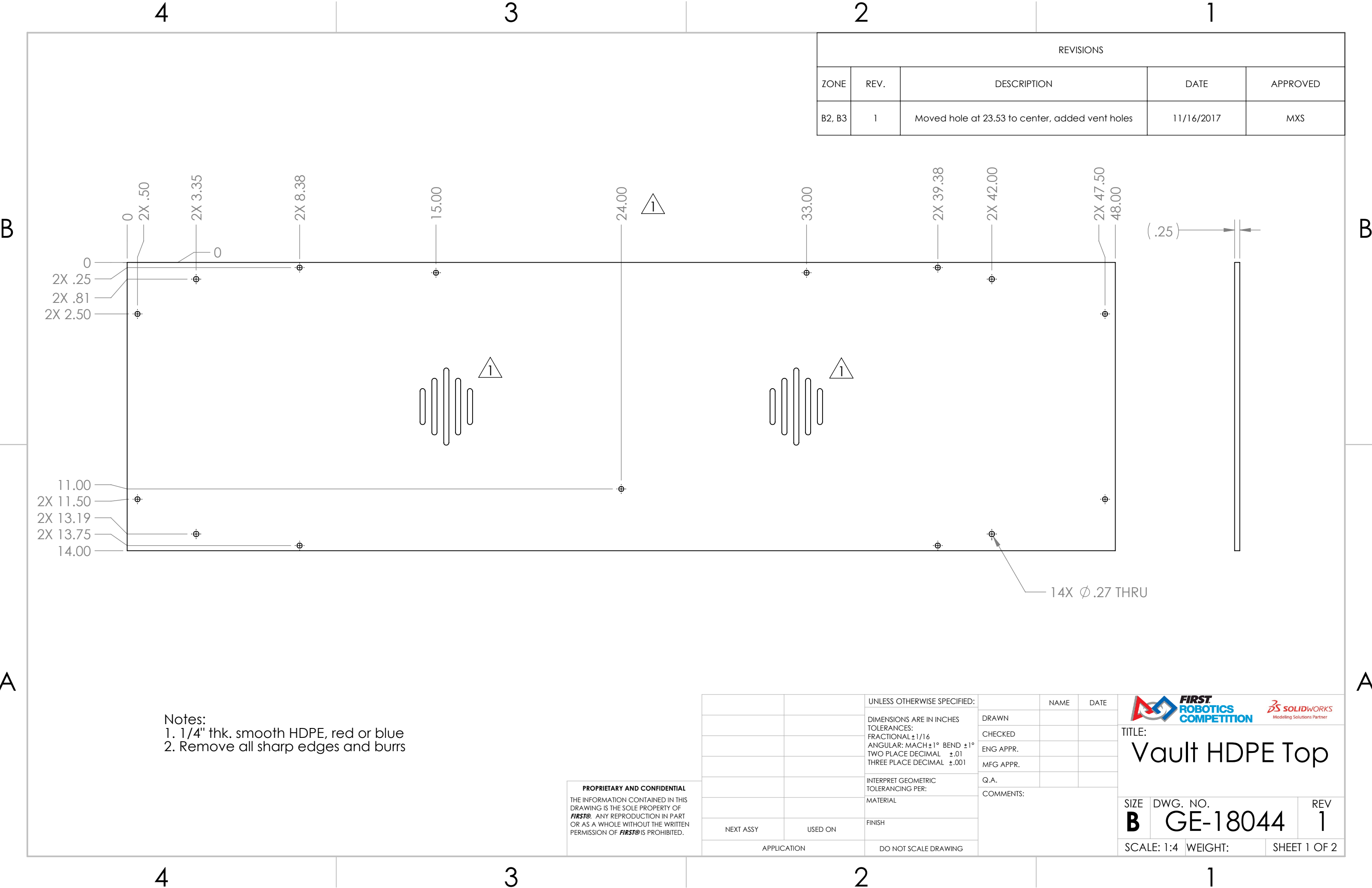
REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B2, B4	1	Added holes are 3.35 and 42	11/20/2017	MXS

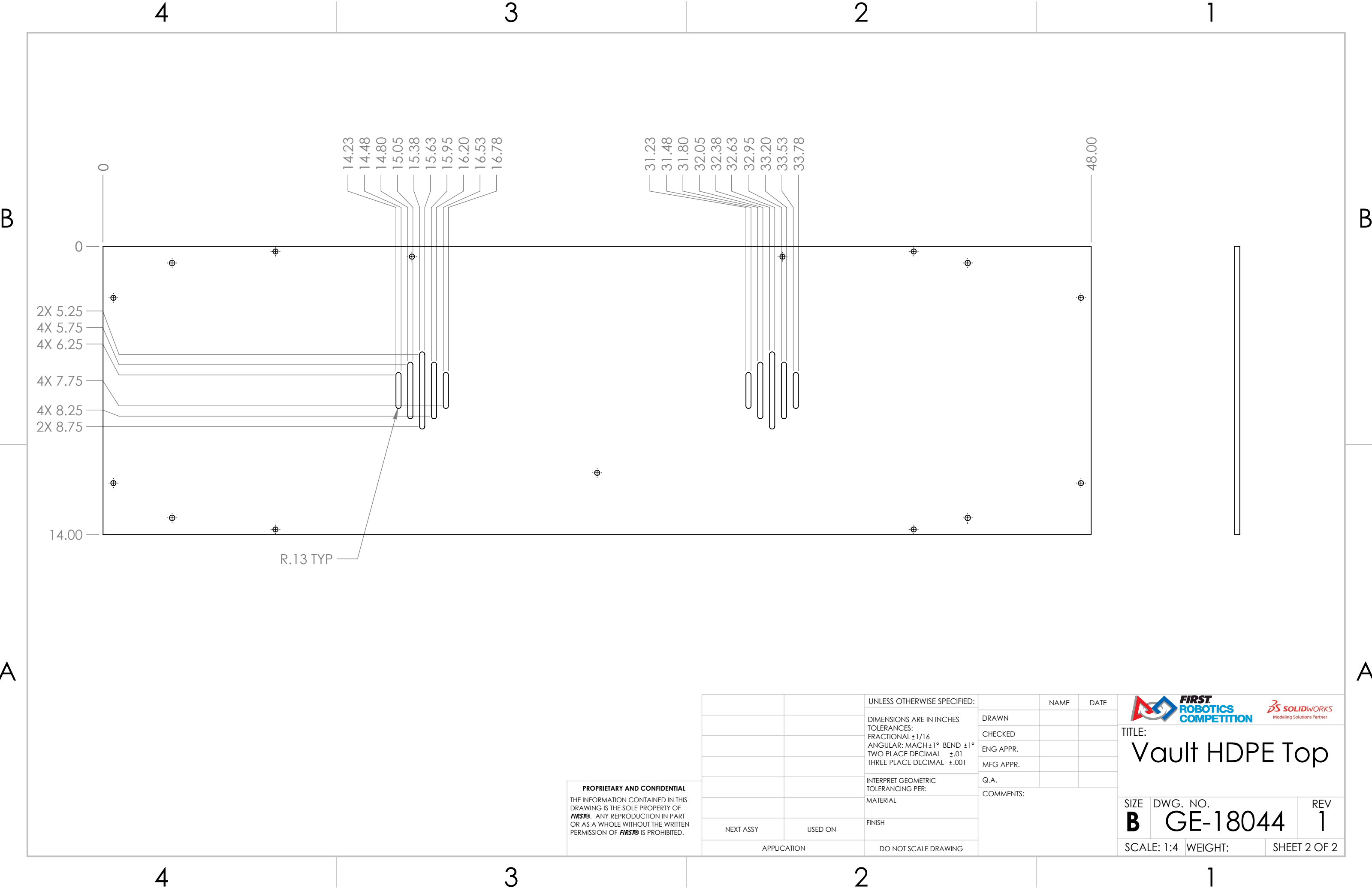


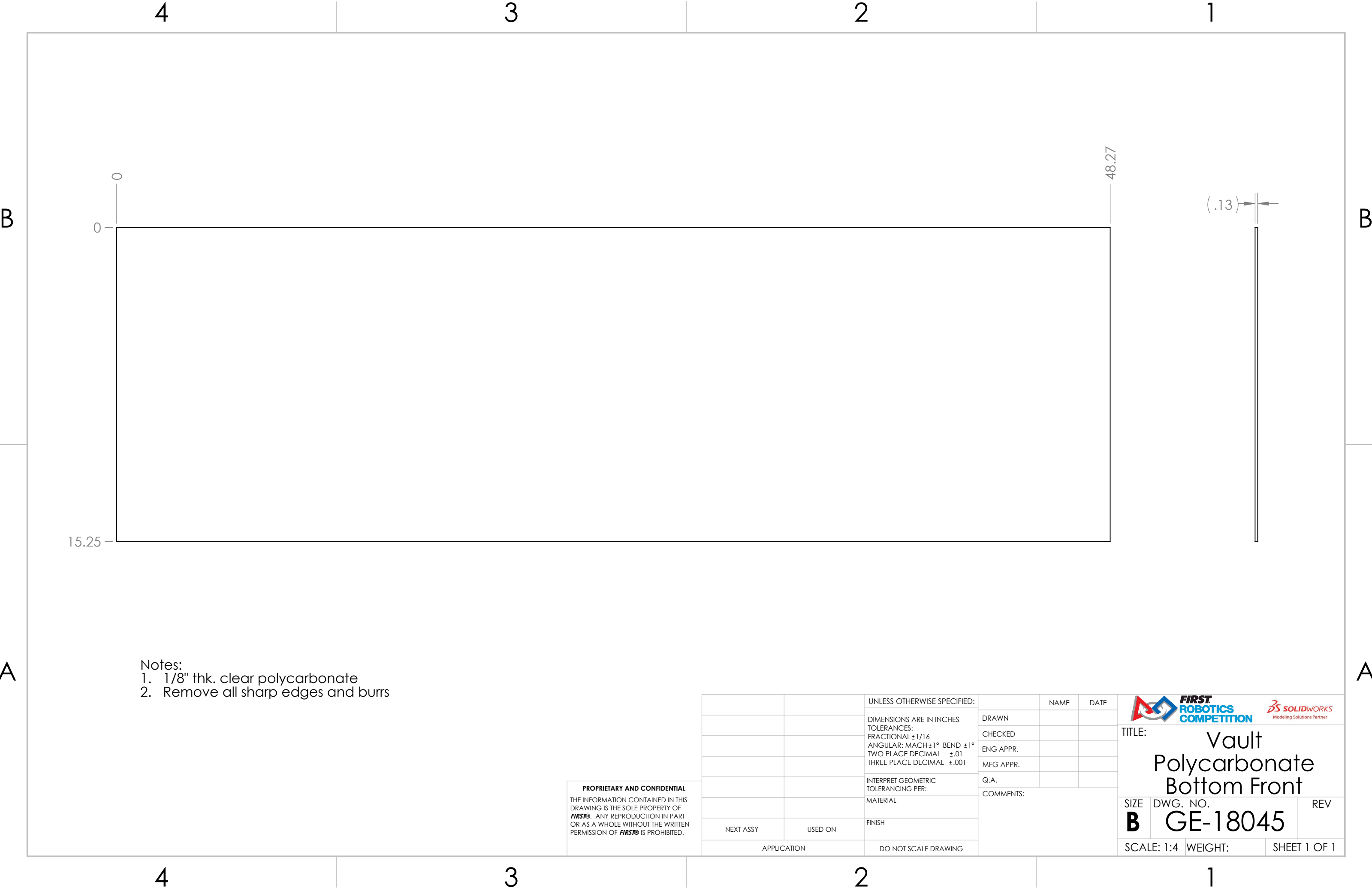
- Notes:
- 1/8" thk. clear polycarbonate
 - Remove all sharp edges and burrs

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		DIMENSIONS ARE IN INCHES	DRAWN			
		TOLERANCES:	CHECKED			
		FRACTIONAL $\pm 1/16$	ENG APPR.			
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.			
		TWO PLACE DECIMAL $\pm .01$				TITLE: Vault Polycarbonate Top Backside
		THREE PLACE DECIMAL $\pm .001$				
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			
		MATERIAL	COMMENTS:			
		FINISH				
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING				







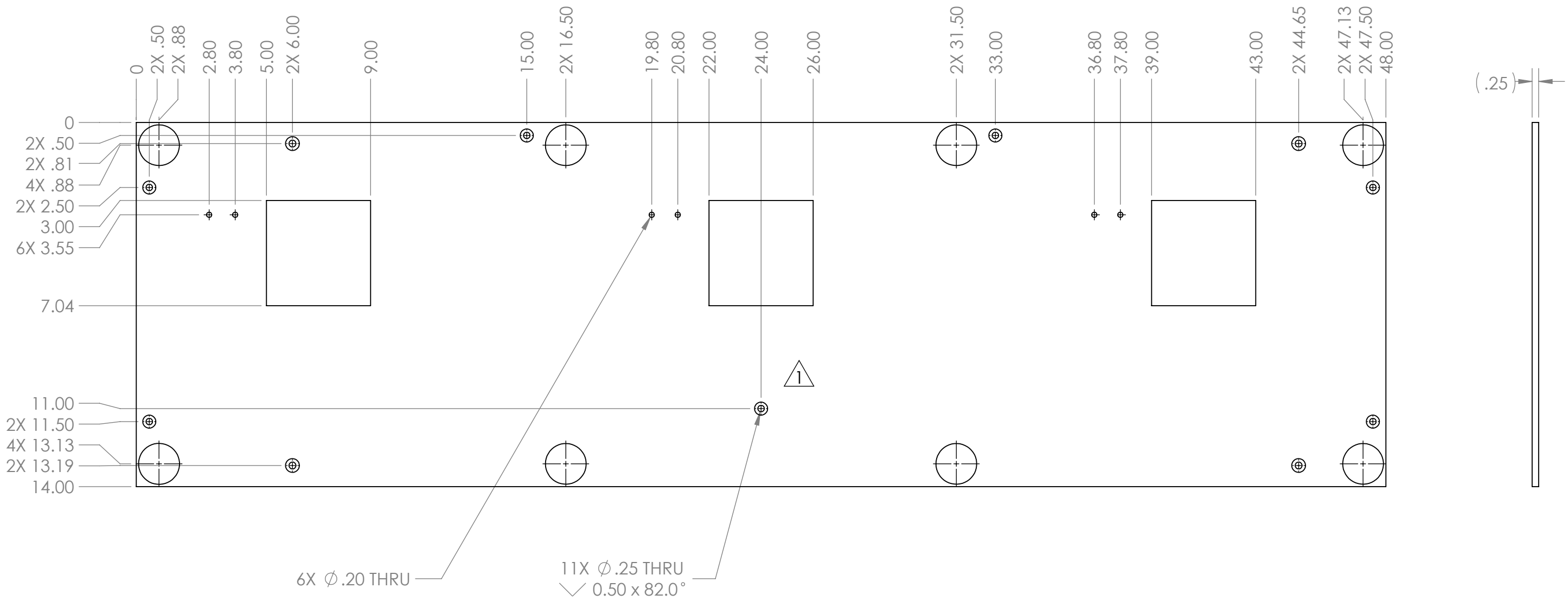


Notes:
1. 1/8" thk. clear polycarbonate
2. Remove all sharp edges and burrs

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: Vault Polycarbonate Bottom Front		
		TOLERANCES:	CHECKED					
		FRACTIONAL $\pm 1/16$	ENG APPR.					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18045		
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:4 WEIGHT: SHEET 1 OF 1		

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A3	1	Hole moved to 24" (centered); countersunk all .25" holes	11/16/2017	MXS



Notes:
1. 1/4" thk. clear polycarbonate
2. Remove all sharp edges and burrs

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 		
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: Vault Polycarbonate Top Base		
		TOLERANCES:	CHECKED					
		FRACTIONAL $\pm 1/16$	ENG APPR.					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18046 1		
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:4 WEIGHT: SHEET 1 OF 2		

4

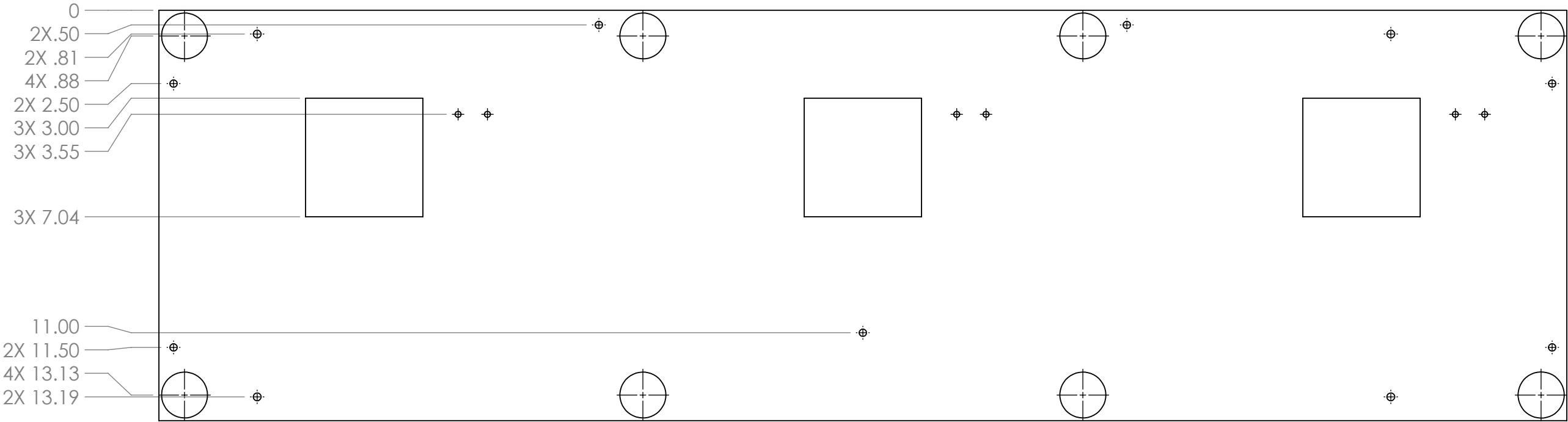
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2

1

B



B

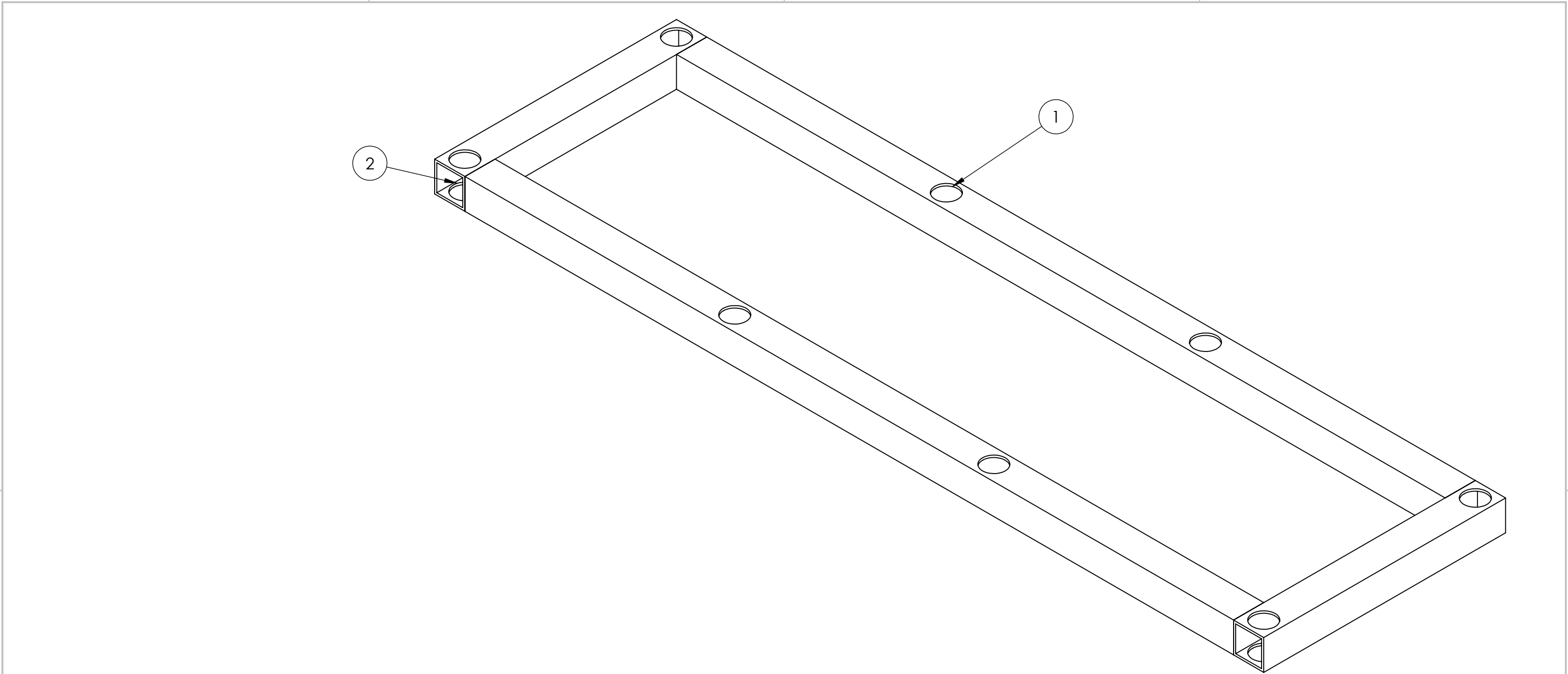


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PROHIBITED.

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div></div><div>TITLE: Vault Polycarbonate Top Base</div><div><div>SIZE B</div><div>DWG. NO. GE-18046</div><div>REV 1</div></div><div><div>SCALE: 1:4</div><div>WEIGHT:</div><div>SHEET 2 OF 2</div></div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN					
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:					
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18047-01	1 3/4", 1/8" Thick Square Tube, 6063 Aluminum	2
2	GE-18047-02	1 3/4", 1/8" Thick Square Tube, 6063 Aluminum	2

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL ±1/16	ENG APPR.		
		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.		
		TWO PLACE DECIMAL ±.01	Q.A.		
		THREE PLACE DECIMAL ±.001	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:

Vault Top Frame

SIZE

B

DWG. NO.

GE-18047

REV

SCALE: 1:4

WEIGHT:

SHEET 1 OF 3

4

3

2

1

B

B

A

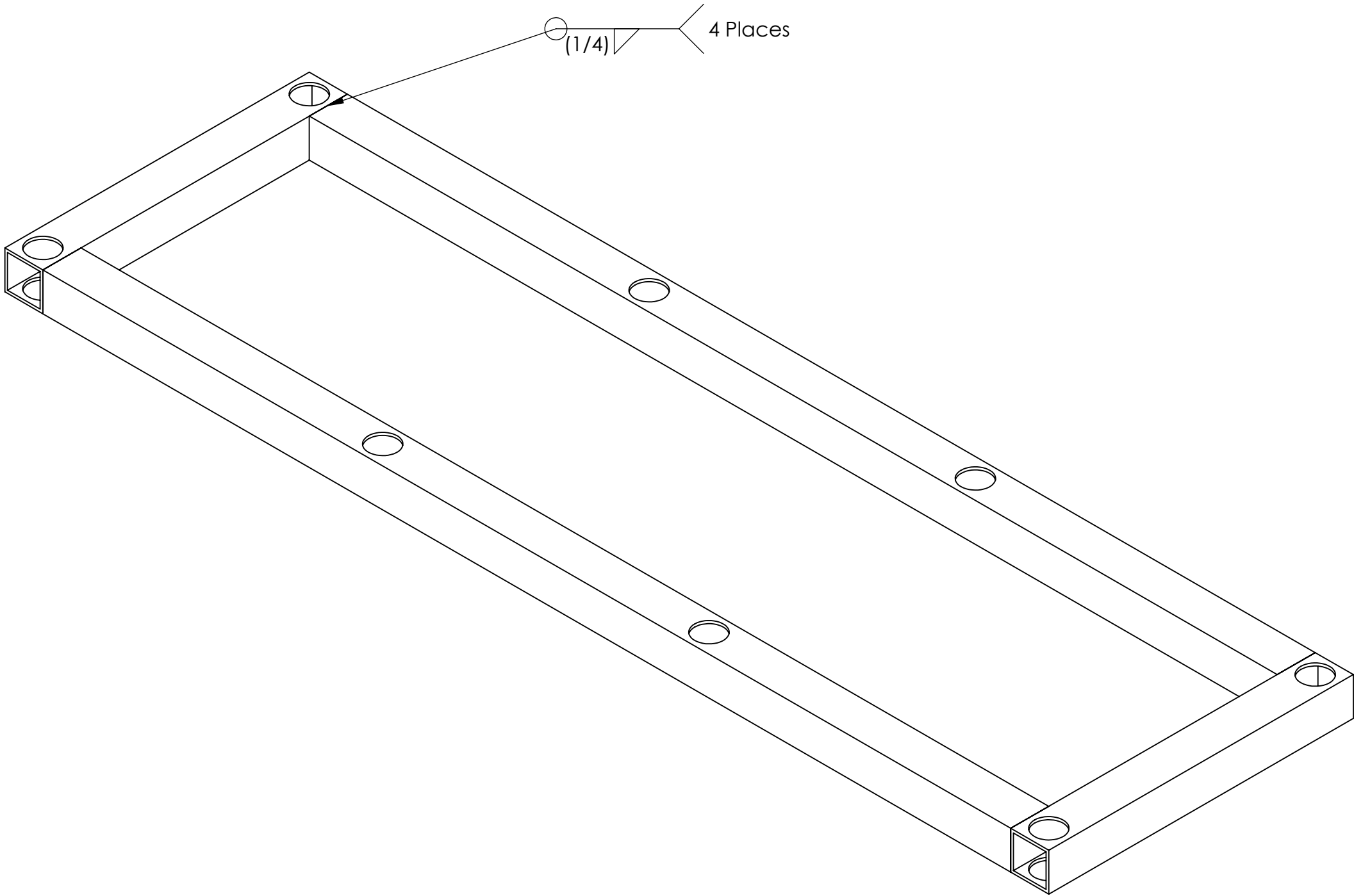
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4

3



2

1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18047-01	1 3/4", 1/8" Thick Square Tube, 6063 Aluminum	2
2	GE-18047-02	1 3/4", 1/8" Thick Square Tube, 6063 Aluminum	2

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		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: Vault Top Frame			
		TOLERANCES:	CHECKED						
		FRACTIONAL $\pm 1/16$	ENG APPR.						
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.						
		TWO PLACE DECIMAL $\pm .01$	Q.A.						
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18047			
		INTERPRET GEOMETRIC TOLERANCING PER:							
		MATERIAL				SCALE: 1:8 WEIGHT: SHEET 2 OF 3			
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING							

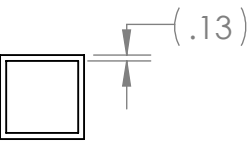
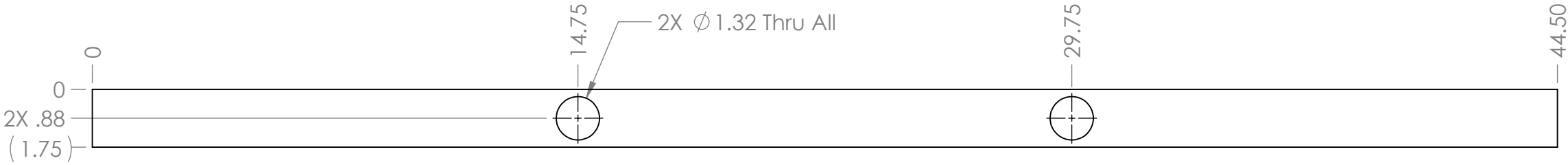
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3

2

1

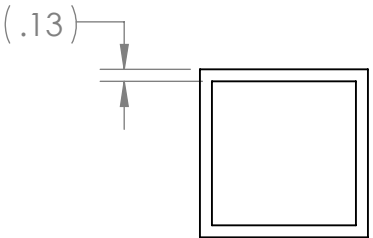
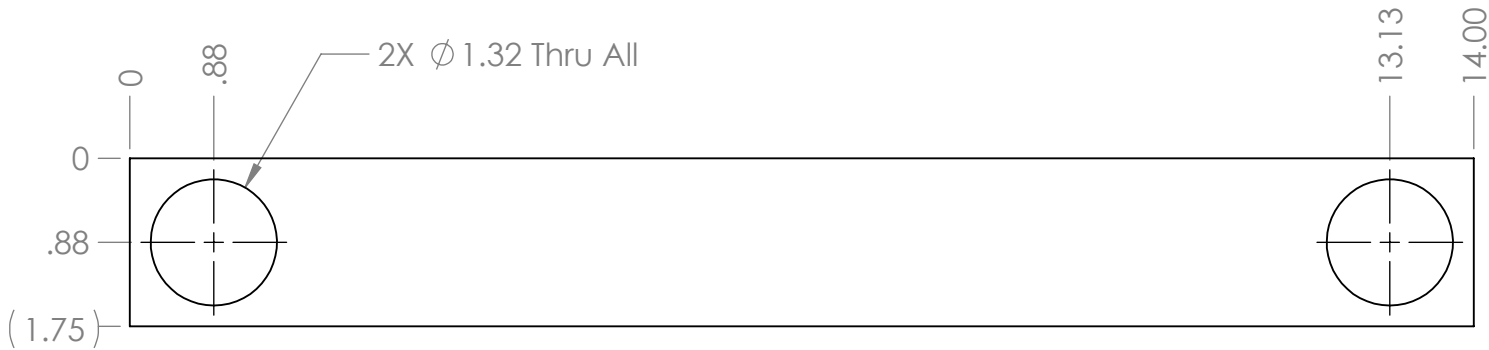
B



B

Item Number: GE-18047-01
Material: 1 3/4", 1/8" Thick Square Tube, 6063 Aluminum
Qty: 2

A



A

Item Number: GE-18047-02
Material: 1 3/4", 1/8" Thick Square Tube, 6063 Aluminum
Qty: 2

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		TOLERANCES:	CHECKED		
		FRACTIONAL ±1/16	ENG APPR.		
		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.		
		TWO PLACE DECIMAL ±.01	Q.A.		
		THREE PLACE DECIMAL ±.001	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



TITLE:		
Vault Top Frame		
SIZE	DWG. NO.	REV
B	GE-18047	
SCALE: 1:8	WEIGHT:	SHEET 3 OF 3

4

3

2

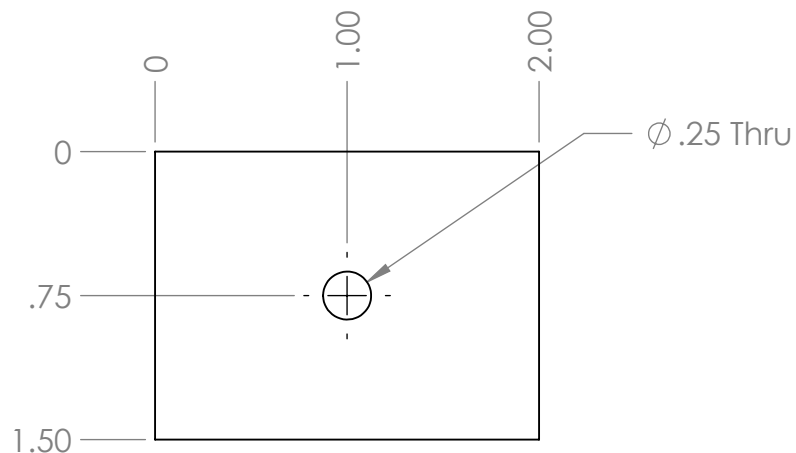
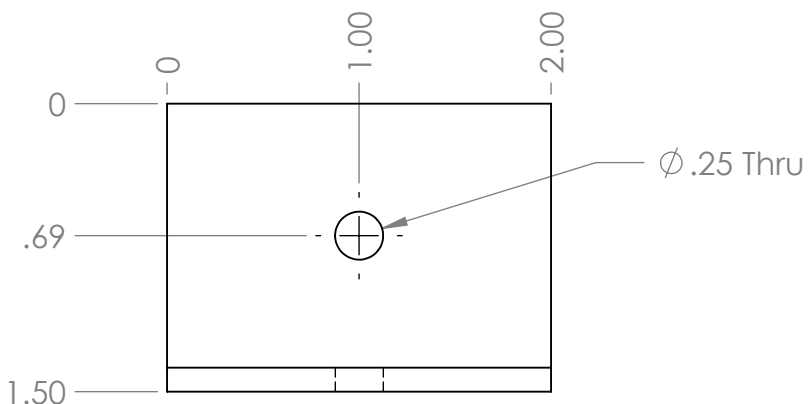
1

2

1

B

B



Side view of the Vault Bracket. The vertical plate has a thickness of 0.13 inches.

- Notes:
1. Material: 1-1/2" 1/8" Thick Aluminum Angle
 2. Remove all burrs and sharp edges

A

A

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			



FIRST
ROBOTICS
COMPETITION

SOLIDWORKS
Modeling Solutions Partner

TITLE:

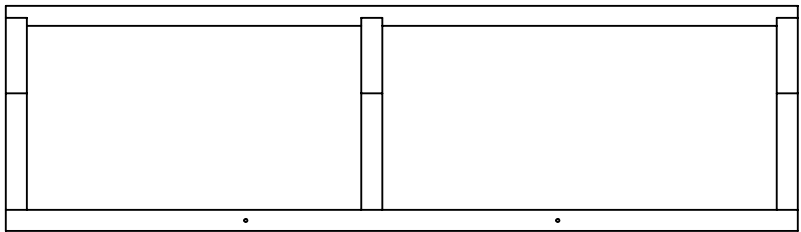
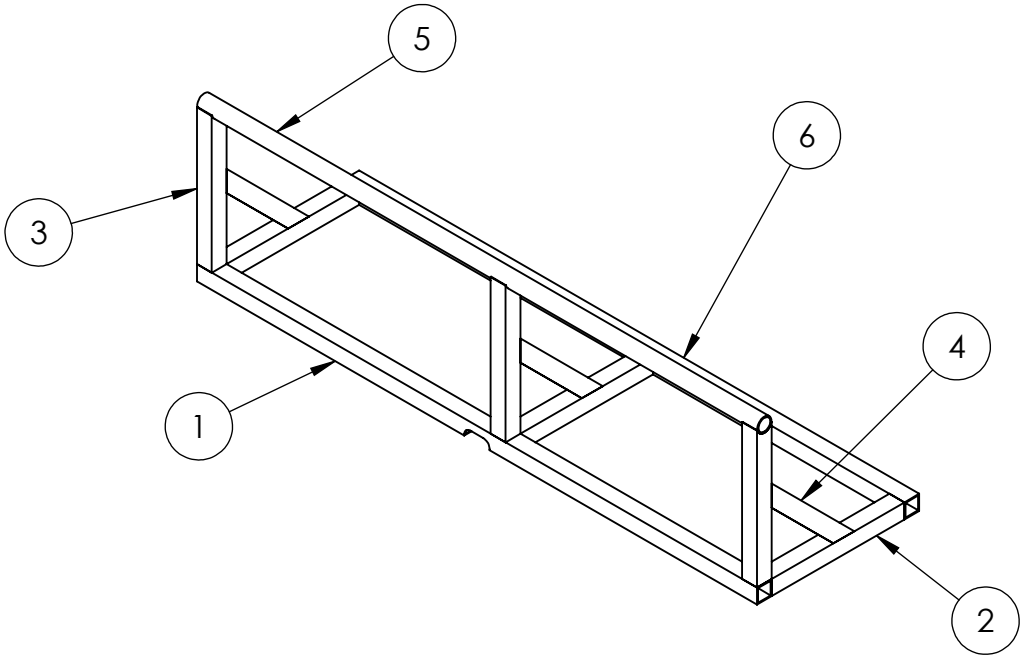
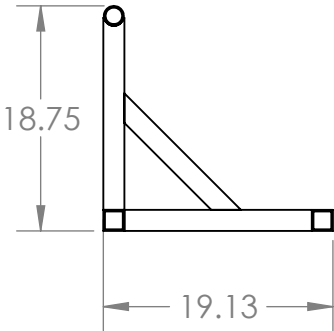
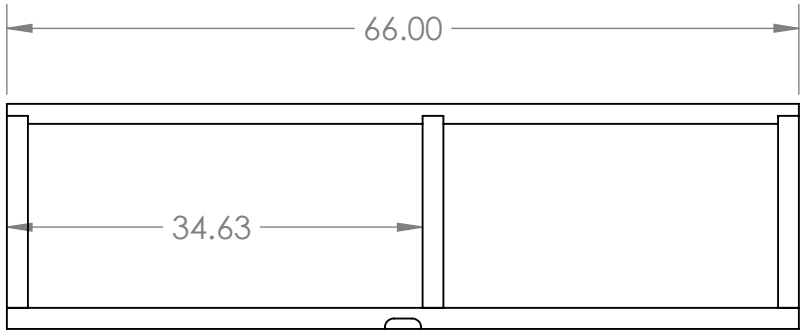
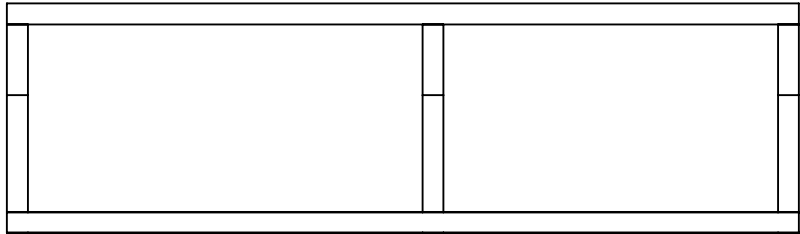
Vault Bracket

SIZE	DWG. NO.	REV
A	GE-18048	
SCALE: 1:1	WEIGHT:	SHEET 1 OF 1

2



1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A1, 3-A2	1	Added two holes to GE-18051-06	11/21/17	CPO



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18051-01	1.75" x .125" thk. Square Tube, 6061 Aluminum	1
2	GE-18051-02	1.75" x .125" thk. Square Tube, 6061 Aluminum	3
3	GE-18051-03	1.75" x .125" thk. Square Tube, 6061 Aluminum	3
4	GE-18051-04	1.75" x .125" thk. Square Tube, 6061 Aluminum	3
5	GE-18051-05	1-1/4" Schedule 40 Pipe, 6061 Aluminum	1
6	GE-18051-06	1.75" x .125" thk. Square Tube, 6061 Aluminum	1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 					
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: Side Frame, Fence					
		TOLERANCES:	CHECKED								
		FRACTIONAL $\pm 1/16$	ENG APPR.								
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.								
		TWO PLACE DECIMAL $\pm .01$	Q.A.								
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE B					
		INTERPRET GEOMETRIC TOLERANCING PER:									
		MATERIAL									
		FINISH									
NEXT ASSY	USED ON									DWG. NO.	
						GE-18051		1			
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:16		WEIGHT:	SHEET 1 OF 3		

4

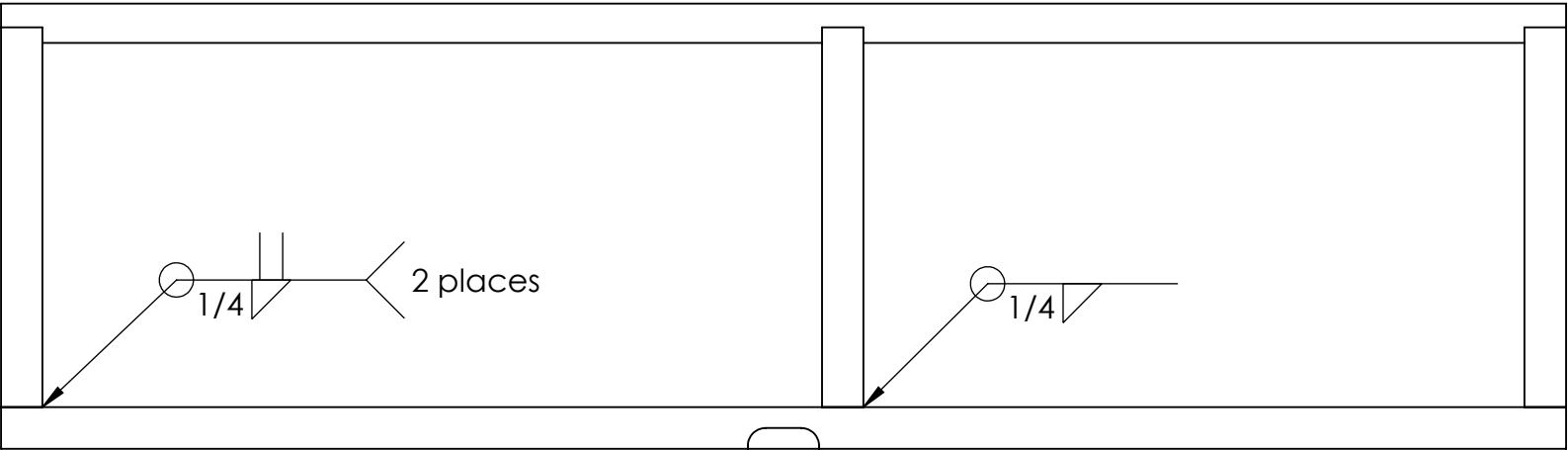
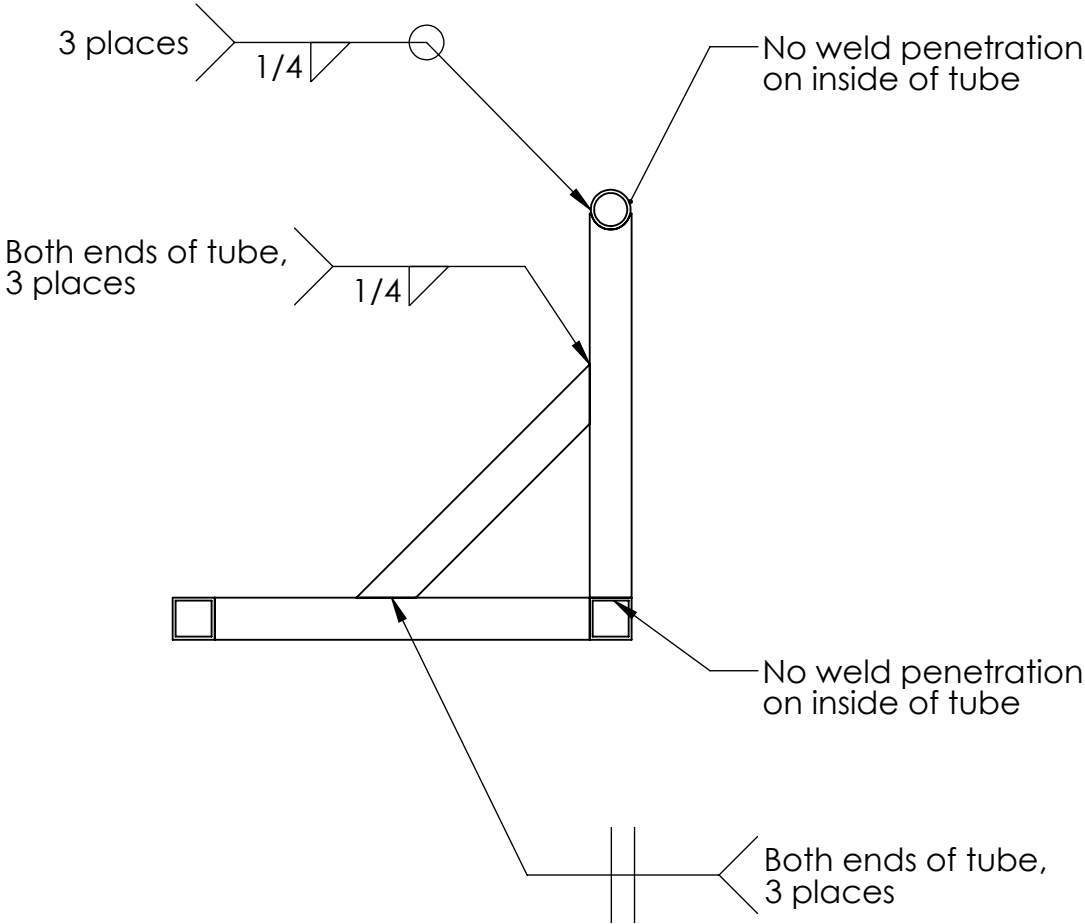
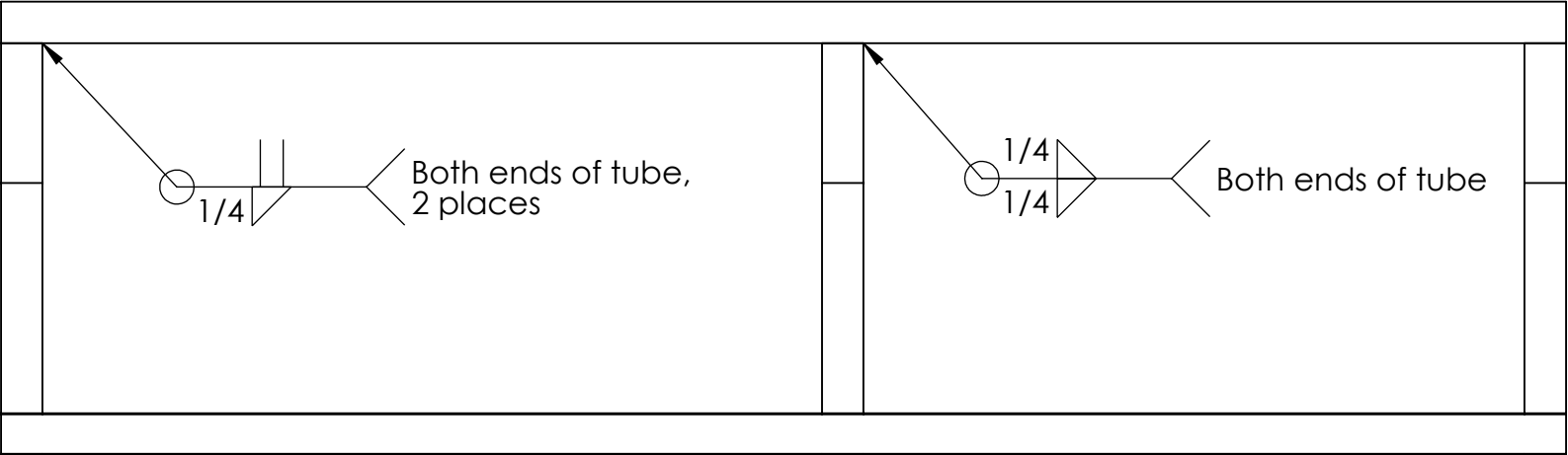
3

2

1



B

B



A

A

UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 
		DRAWN		
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$		CHECKED		TITLE: Side Frame, Fence
		ENG APPR.		
		MFG APPR.		
INTERPRET GEOMETRIC TOLERANCING PER:		Q.A.		SIZE DWG. NO. REV B GE-18051 1
MATERIAL		COMMENTS:		
FINISH				
NEXT ASSY	USED ON	APPLICATION		SCALE: 1:8 WEIGHT: SHEET 2 OF 3
DO NOT SCALE DRAWING				

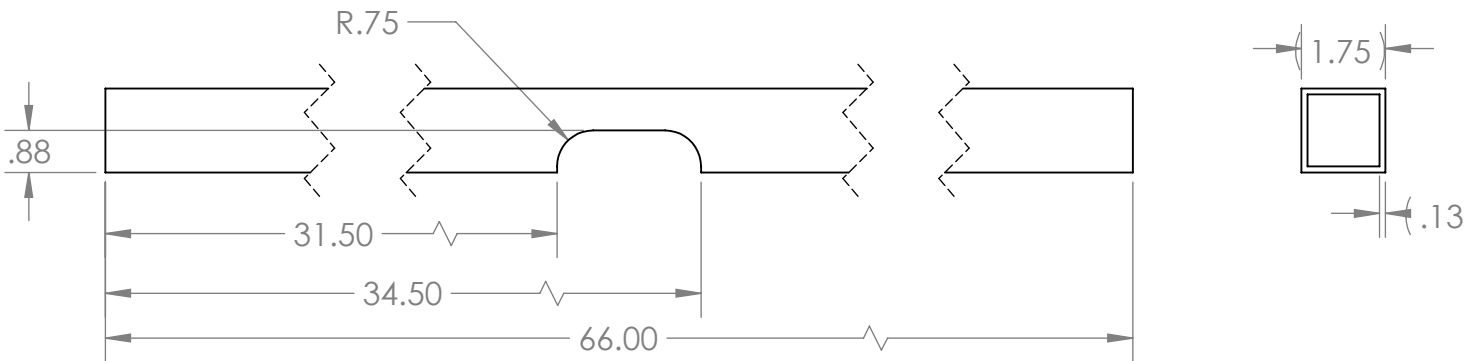
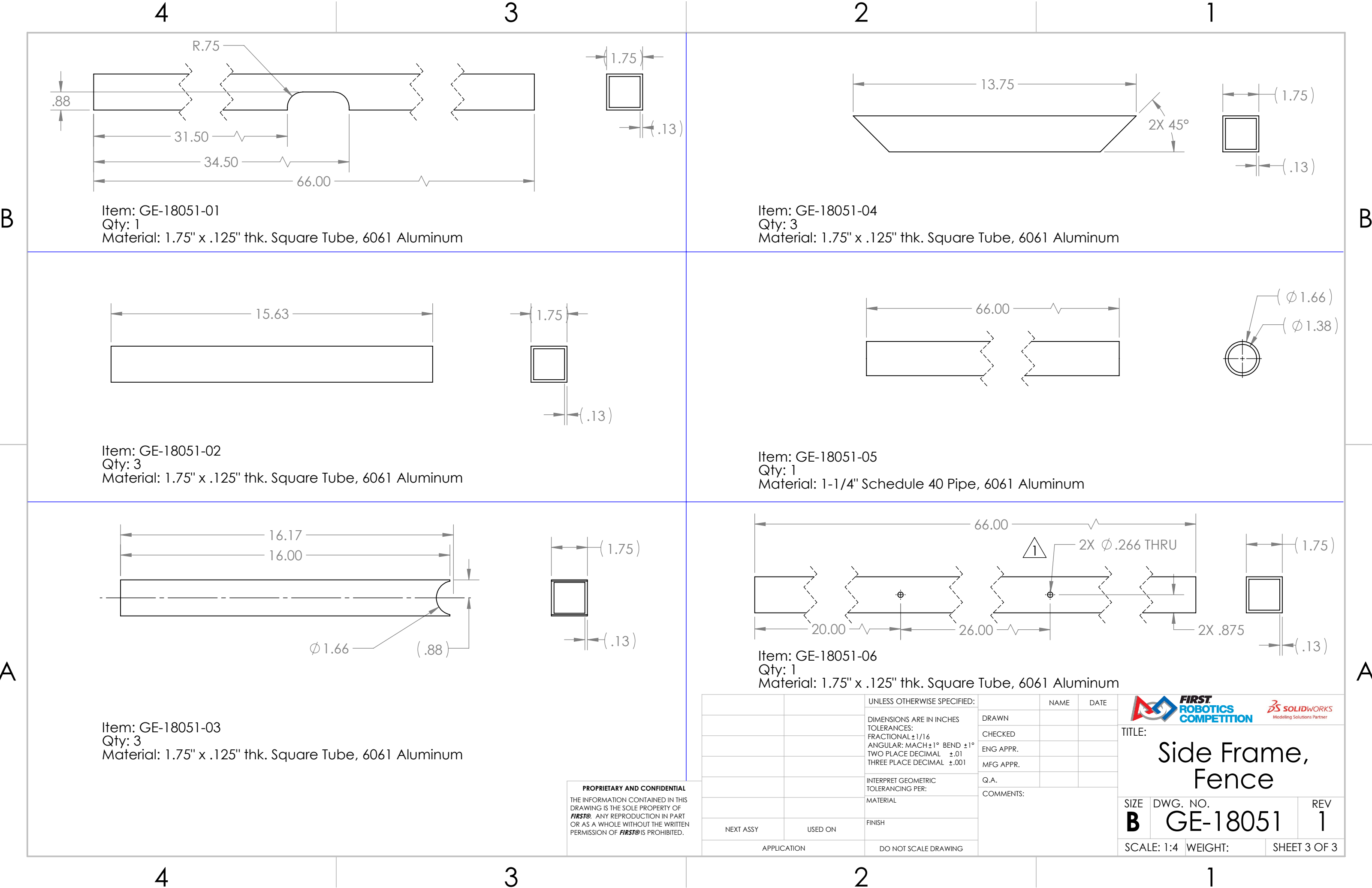
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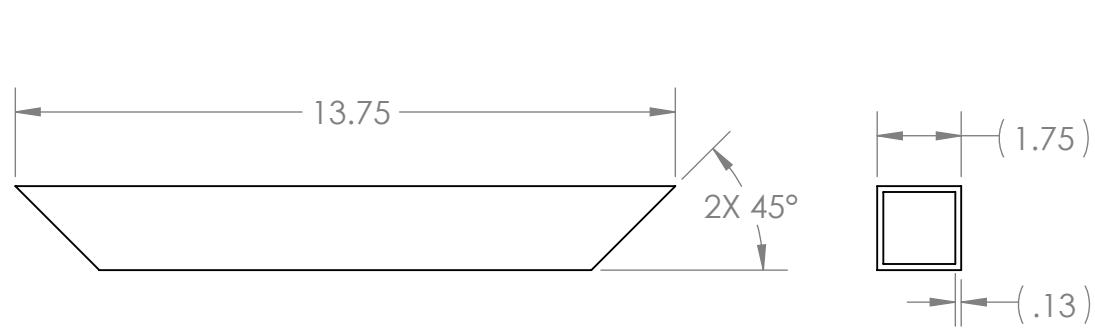
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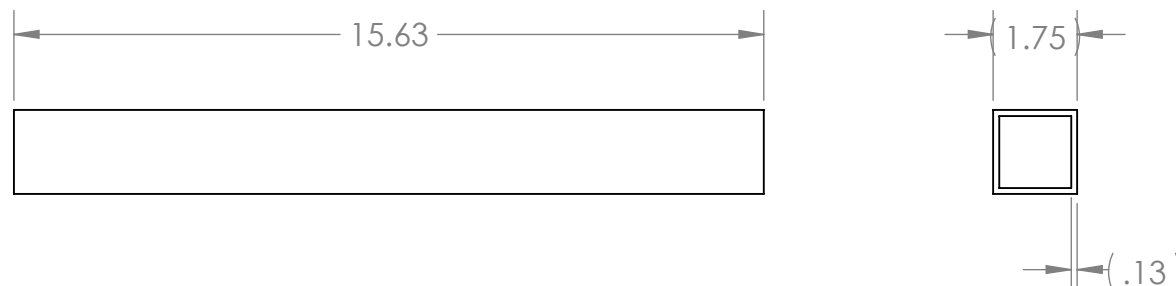
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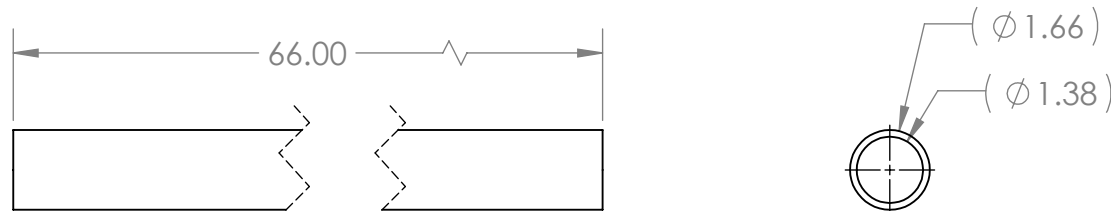
Item: GE-18051-01
Qty: 1
Material: 1.75" x .125" thk. Square Tube, 6061 Aluminum



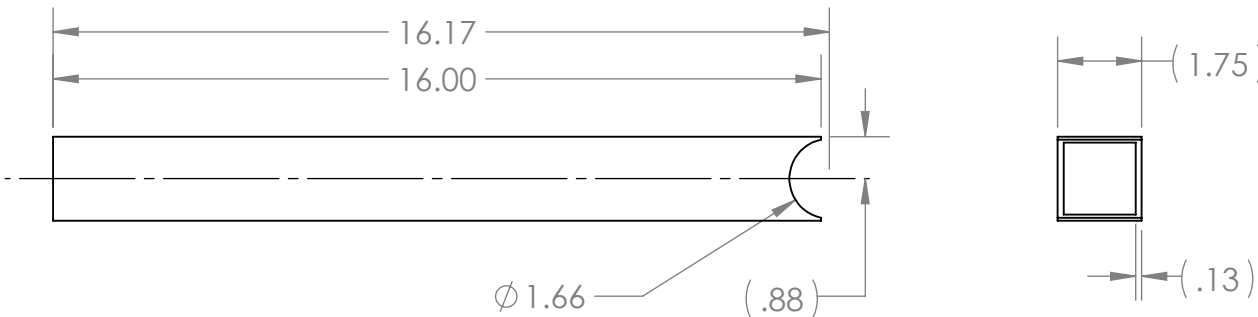
Item: GE-18051-04
Qty: 3
Material: 1.75" x .125" thk. Square Tube, 6061 Aluminum



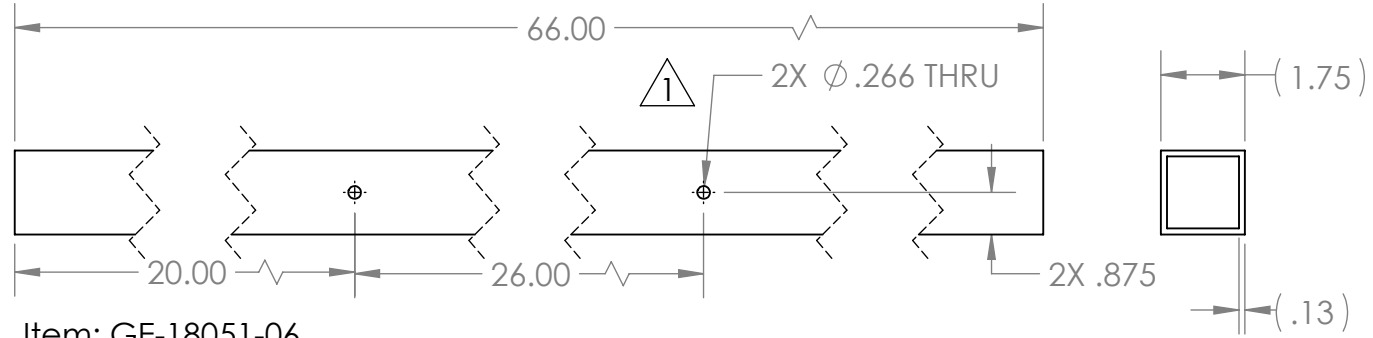
Item: GE-18051-02
Qty: 3
Material: 1.75" x .125" thk. Square Tube, 6061 Aluminum



Item: GE-18051-05
Qty: 1
Material: 1-1/4" Schedule 40 Pipe, 6061 Aluminum





Item: GE-18051-03
Qty: 3
Material: 1.75" x .125" thk. Square Tube, 6061 Aluminum



Item: GE-18051-06
Qty: 1
Material: 1.75" x .125" thk. Square Tube, 6061 Aluminum

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		TOLERANCES:	CHECKED			
		FRACTIONAL ±1/16	ENG APPR.			
		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.			
		TWO PLACE DECIMAL ±.01	Q.A.			TITLE: Side Frame, Fence
		THREE PLACE DECIMAL ±.001	COMMENTS:			
		INTERPRET GEOMETRIC TOLERANCING PER:				SIZE DWG. NO. REV
		MATERIAL				B GE-18051 1
		FINISH				SCALE: 1:4 WEIGHT: SHEET 3 OF 3
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING				

4

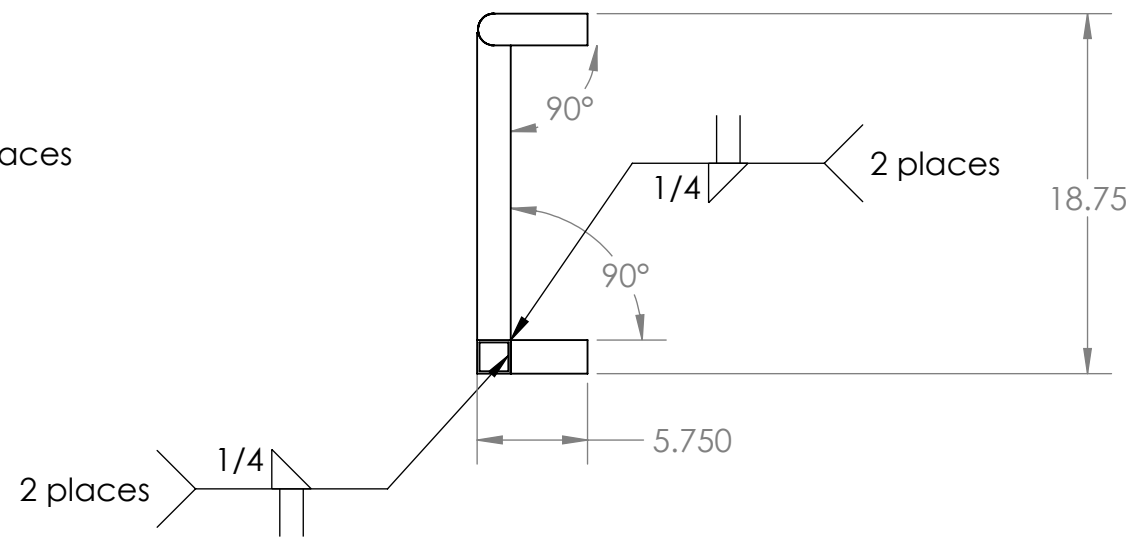
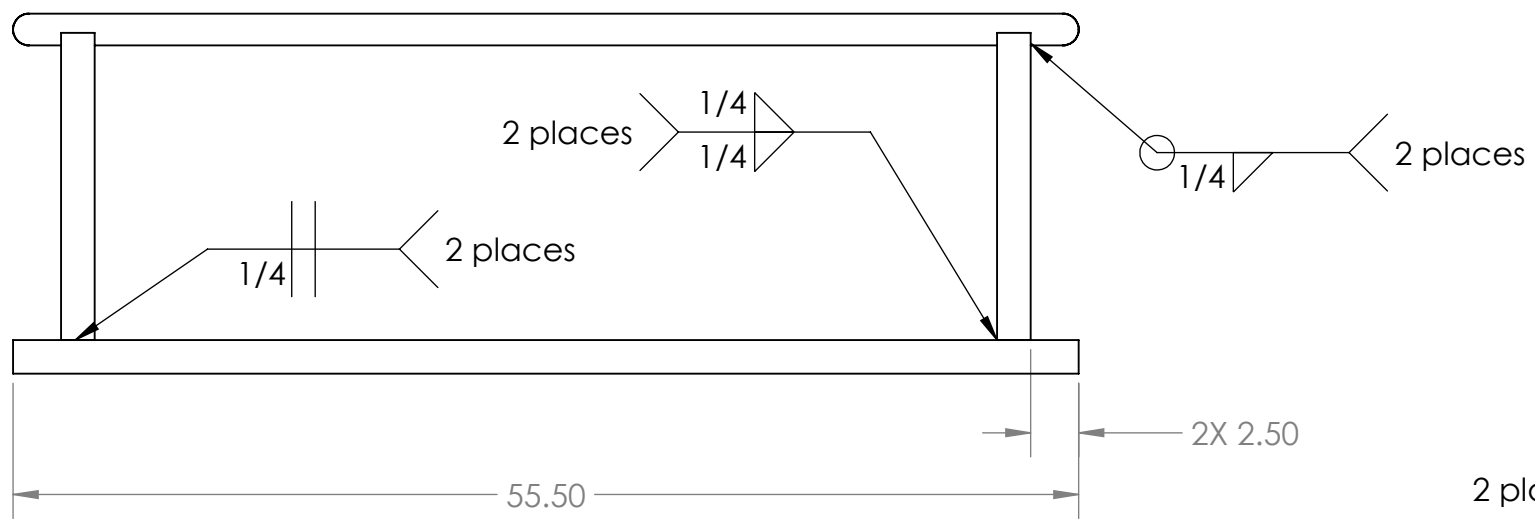
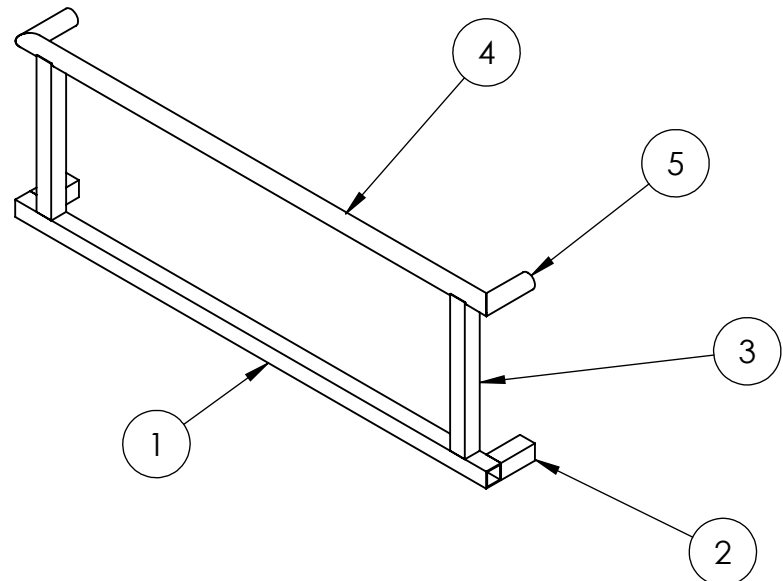
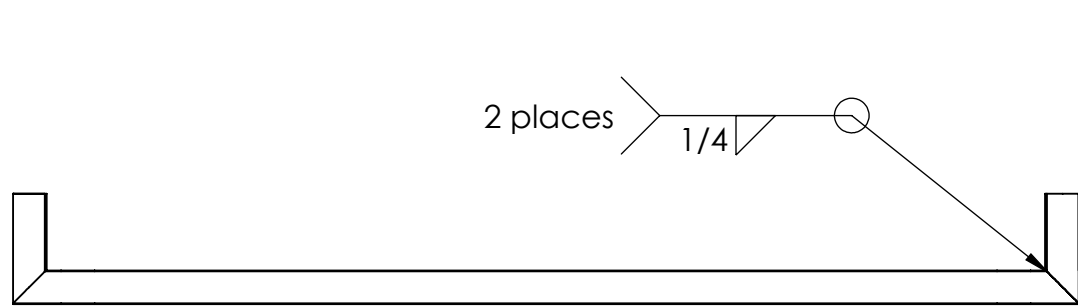
3

2

1

B

B





A

A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18052-01	1.75" x .125" thk. Square Tube, 6061 Aluminum	1
2	GE-18052-02	1.75" x .125" thk. Square Tube, 6061 Aluminum	2
3	GE-18052-03	1.75" x .125" thk. Square Tube, 6061 Aluminum	2
4	GE-18052-04	1-1/4" Schedule 40 Pipe, 6061 Aluminum	1
5	GE-18052-05	1-1/4" Schedule 40 Pipe, 6061 Aluminum	2

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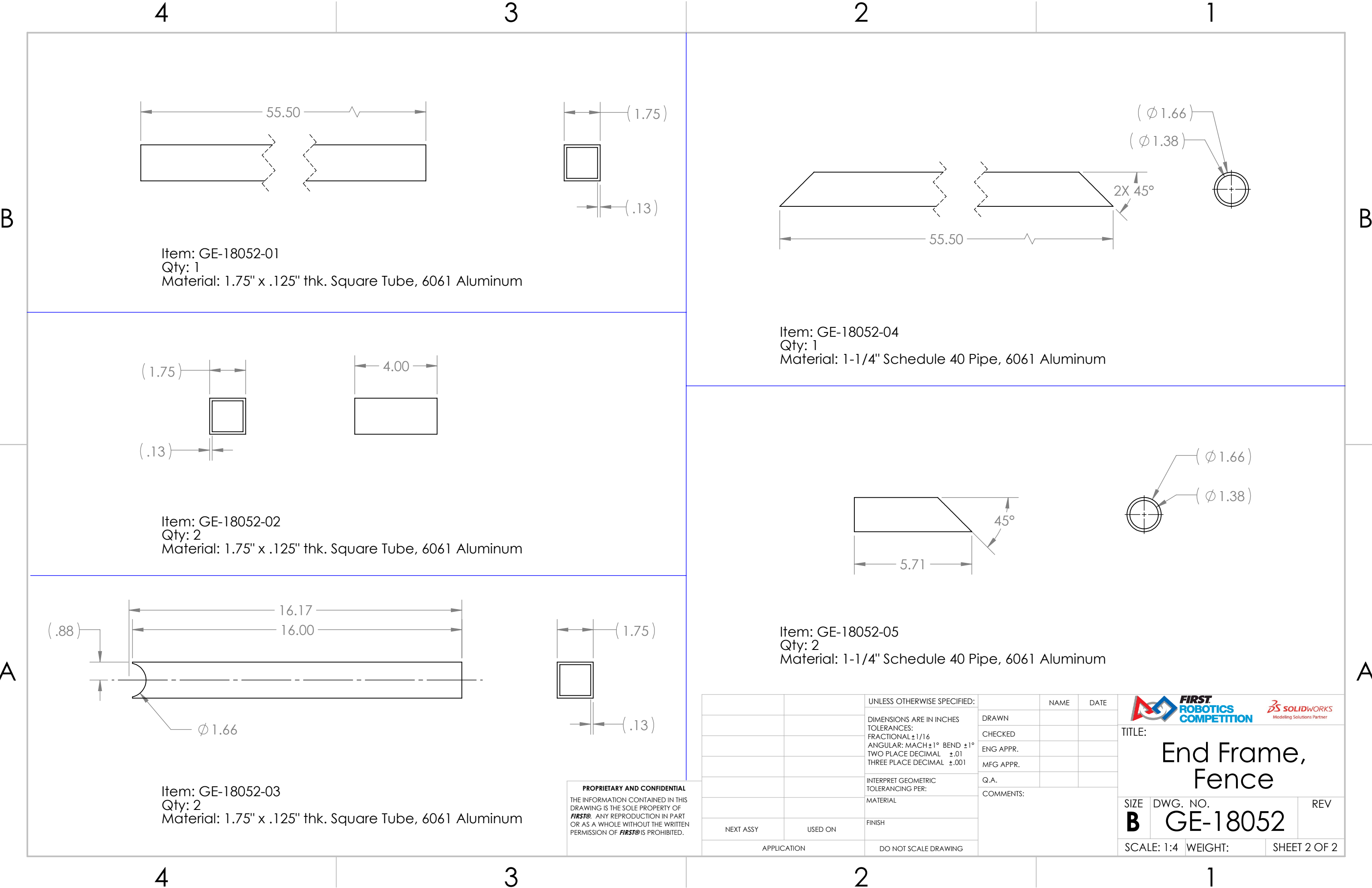
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div><div>FIRST ROBOTICS COMPETITION</div></div><div><div>SOLIDWORKS Modeling Solutions Partner</div></div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: End Frame, Fence		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18052		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						

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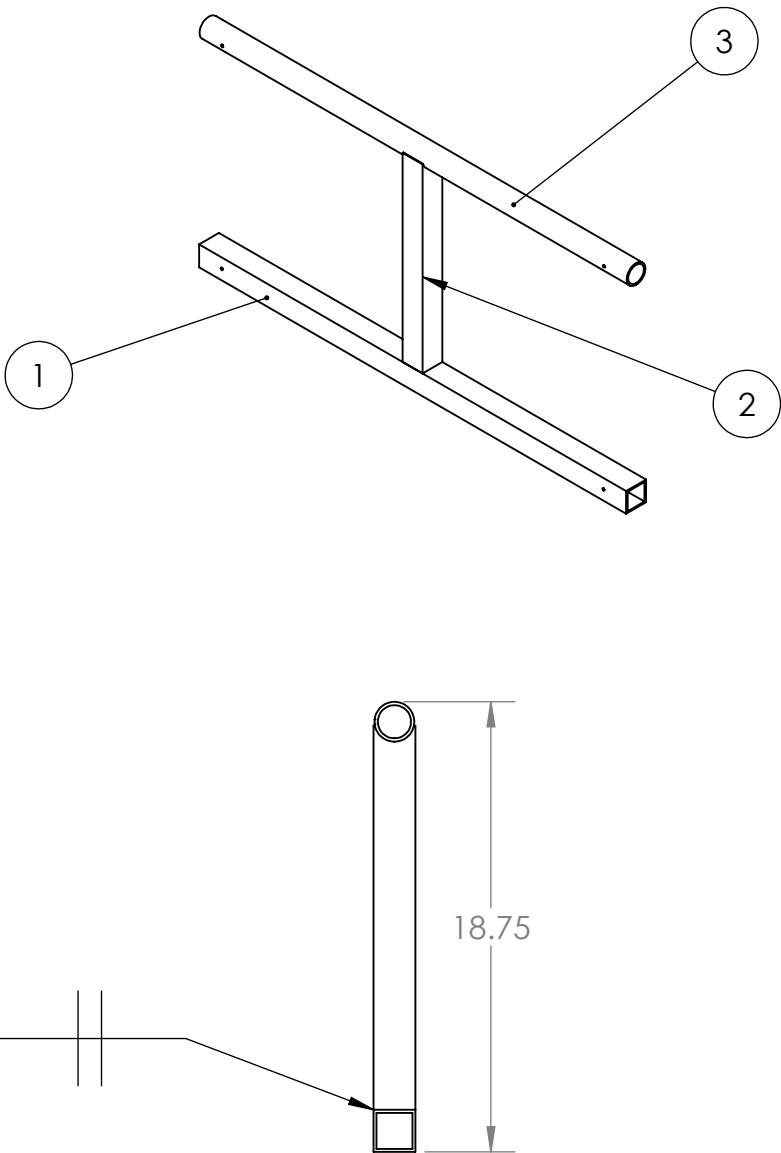
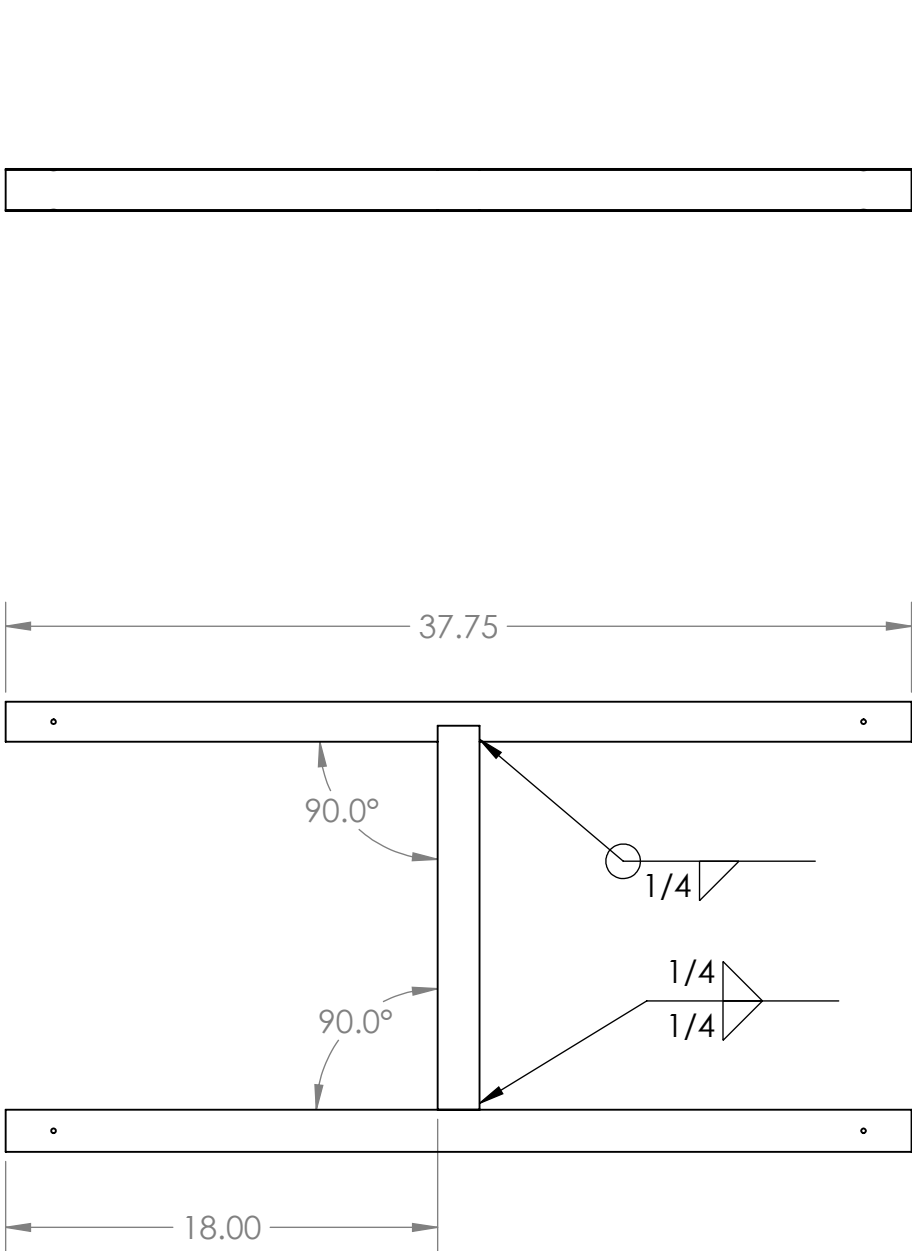
1

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B



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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18053-01	1.75" x .125" thk. Square Tube, 6061 Aluminum	1
2	GE-18053-02	1.75" x .125" thk. Square Tube, 6061 Aluminum	1
3	GE-18053-03	1-1/4" Schedule 40 Pipe, 6061 Aluminum	1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/16 ANGULAR: MACH ± 1° BEND ± 1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN				TITLE:	
			CHECKED				Connecting Frame, Fence	
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:					
		FINISH						
NEXT ASSY	USED ON					SIZE B	DWG. NO. GE-18053	REV
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8	WEIGHT:	SHEET 1 OF 2



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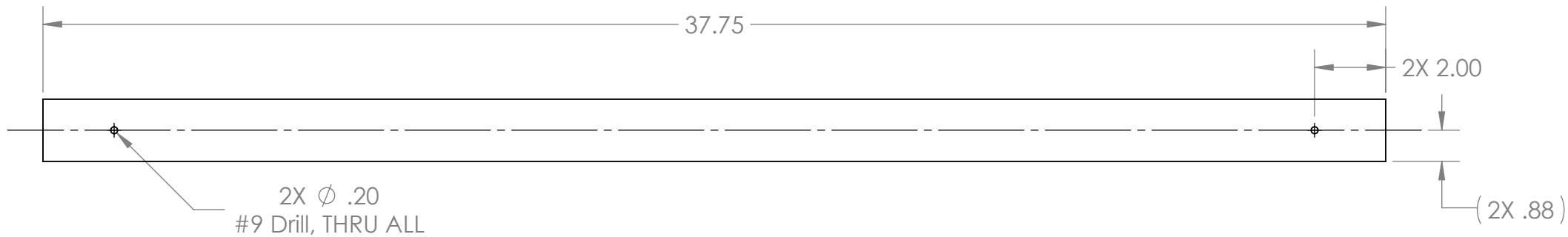
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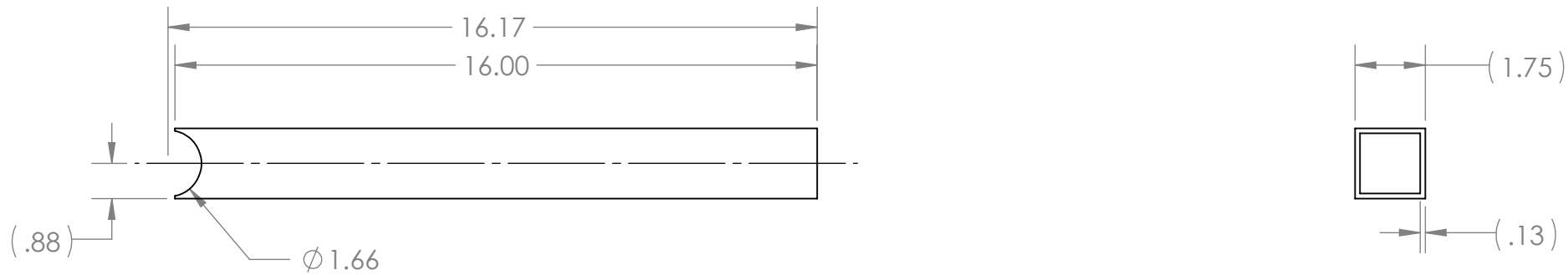
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B



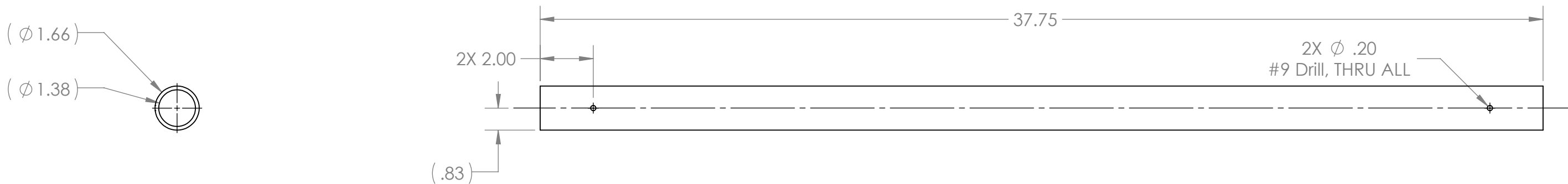
Item: GE-18053-01
Qty: 1
Material: 1.75" x .125" thk. Square Tube, 6061 Aluminum

B





Item: GE-18053-02
Qty: 1
Material: 1.75" x .125" thk. Square Tube, 6061 Aluminum

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Item: GE-18053-03
Qty: 1
Material: 1-1/4" Schedule 40 Pipe, 6061 Aluminum

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:	<div><div></div><div>TITLE: Connecting Frame, Fence</div><div><div>SIZE B</div><div>DWG. NO. GE-18053</div><div>REV</div></div><div>SCALE: 1:4</div><div>WEIGHT:</div><div>SHEET 2 OF 2</div></div>	
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

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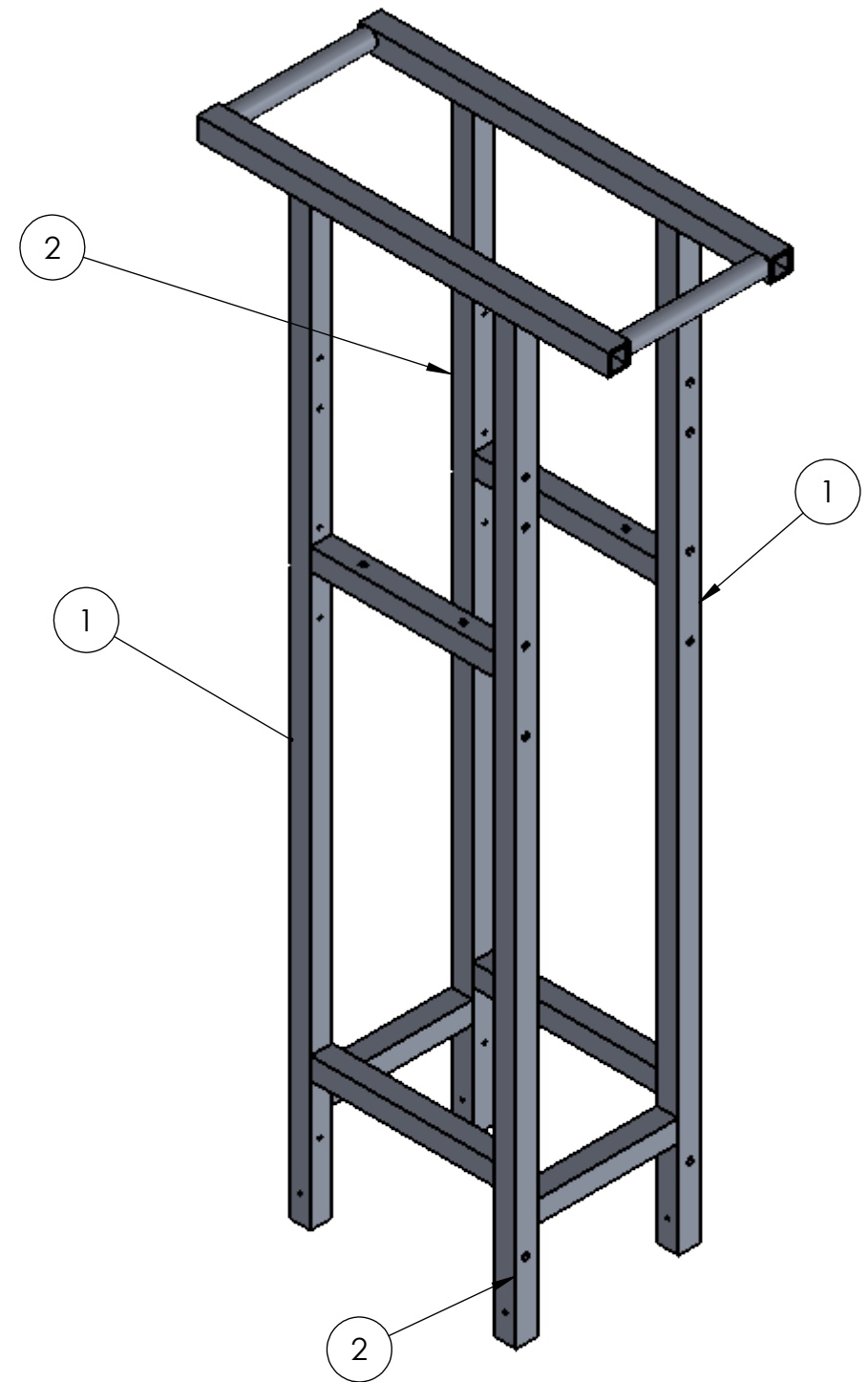
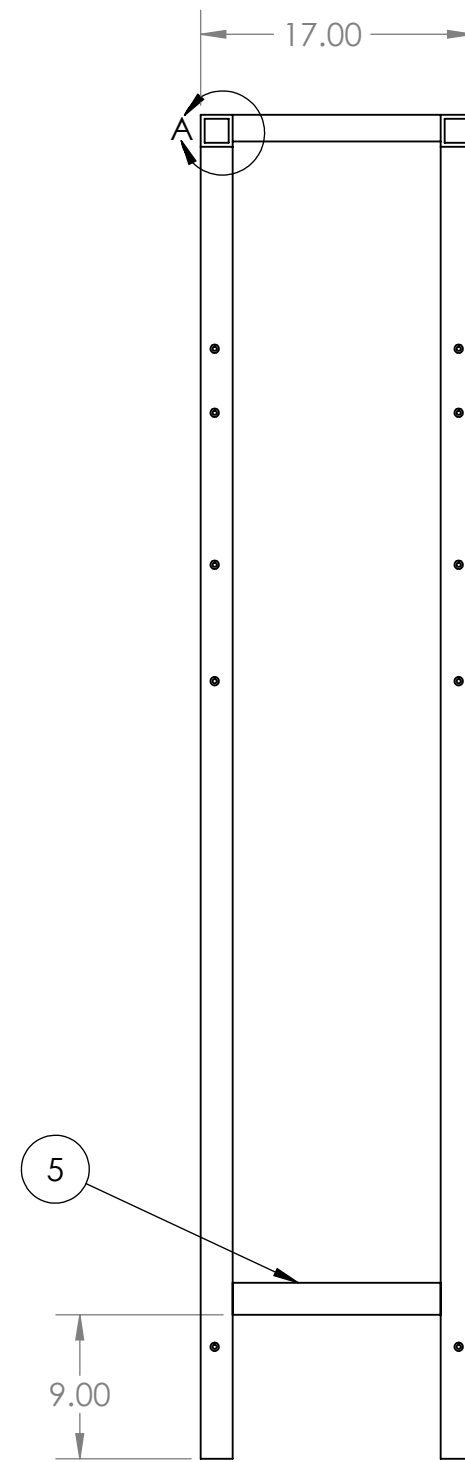
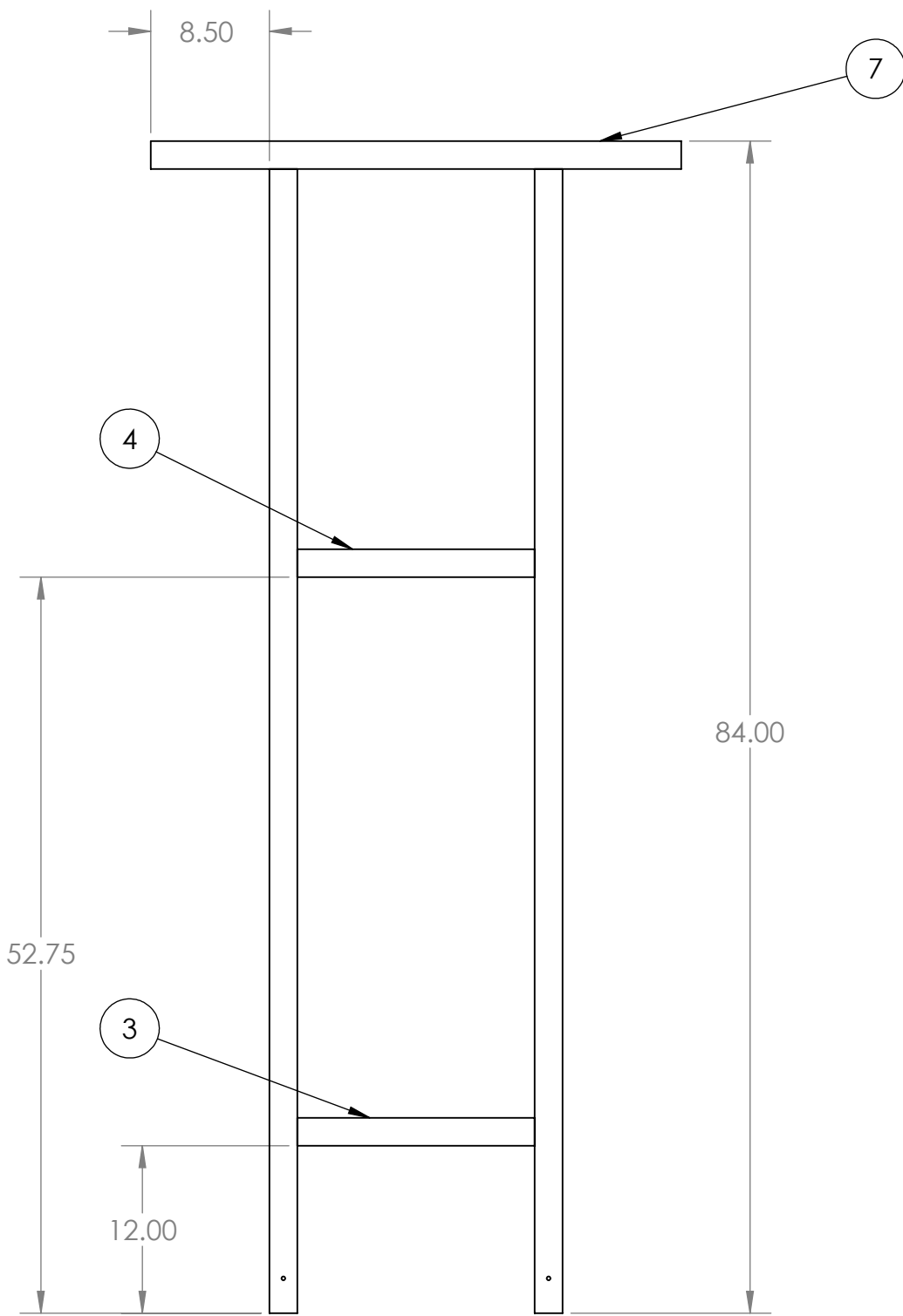
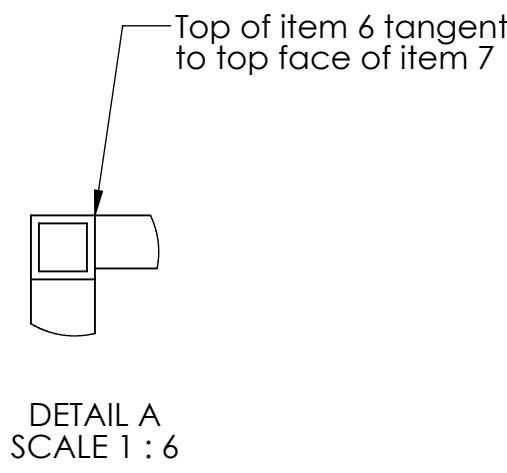
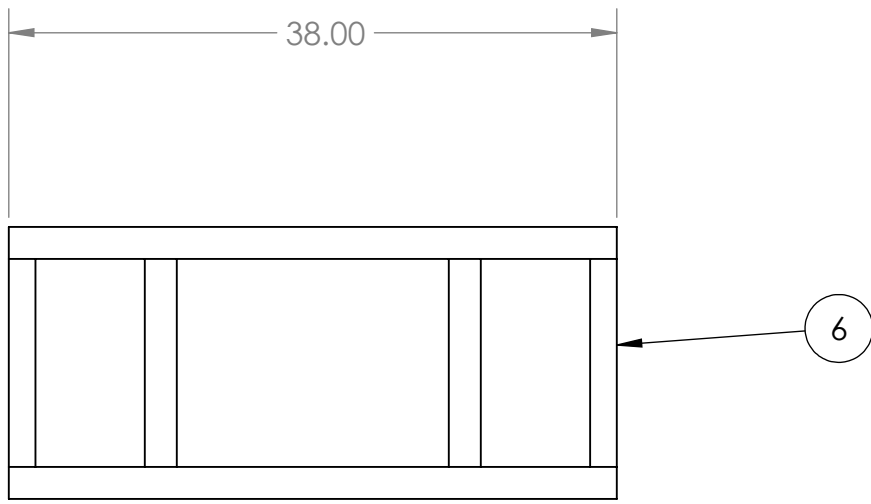
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18054-1	2" x .25" thk. Square Tube, 6061 Aluminum	2
2	GE-18054-2	2" x .25" thk. Square Tube, 6061 Aluminum	2
3	GE-18054-3	2" x .25" thk. Square Tube, 6061 Aluminum	2
4	GE-18054-4	2" x .25" thk. Square Tube, 6061 Aluminum	2
5	GE-18054-5	2" x .25" thk. Square Tube, 6061 Aluminum	2
6	GE-18054-6	1-1/4" Schedule 40 Pipe, 6061 Aluminum	2
7	GE-18054-7	2" x .25" thk. Square Tube, 6061 Aluminum	2

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		DIMENSIONS ARE IN INCHES			DRAWN	
		TOLERANCES:			CHECKED	
		FRACTIONAL ± 1/16			ENG APPR.	
		ANGULAR: MACH ± 1° BEND ± 1°			MFG APPR.	
		TWO PLACE DECIMAL ± .01			Q.A.	
		THREE PLACE DECIMAL ± .001			COMMENTS:	
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL				
		FINISH				
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING				



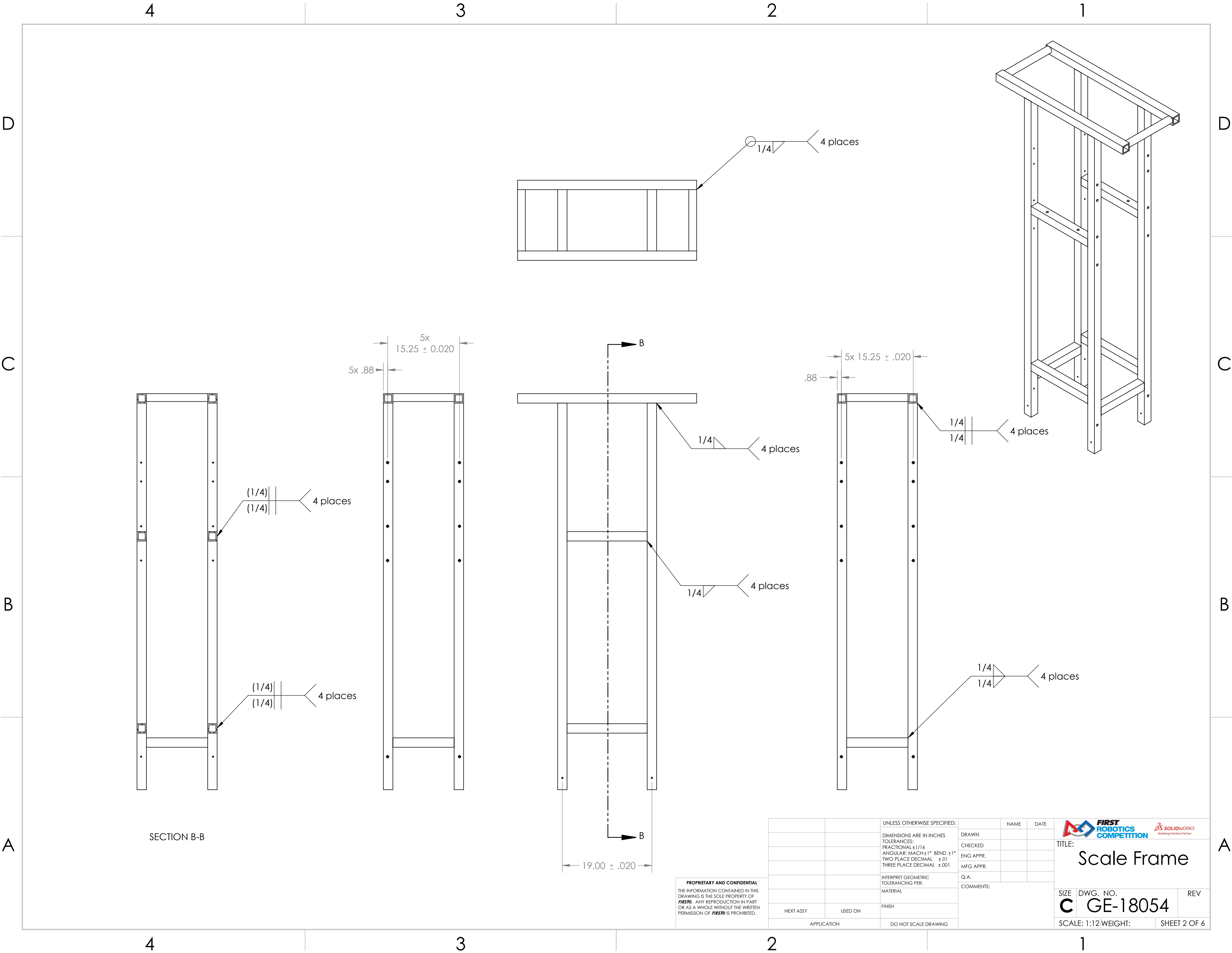
TITLE:

Scale Frame



SIZE DWG. NO.
C GE-18054

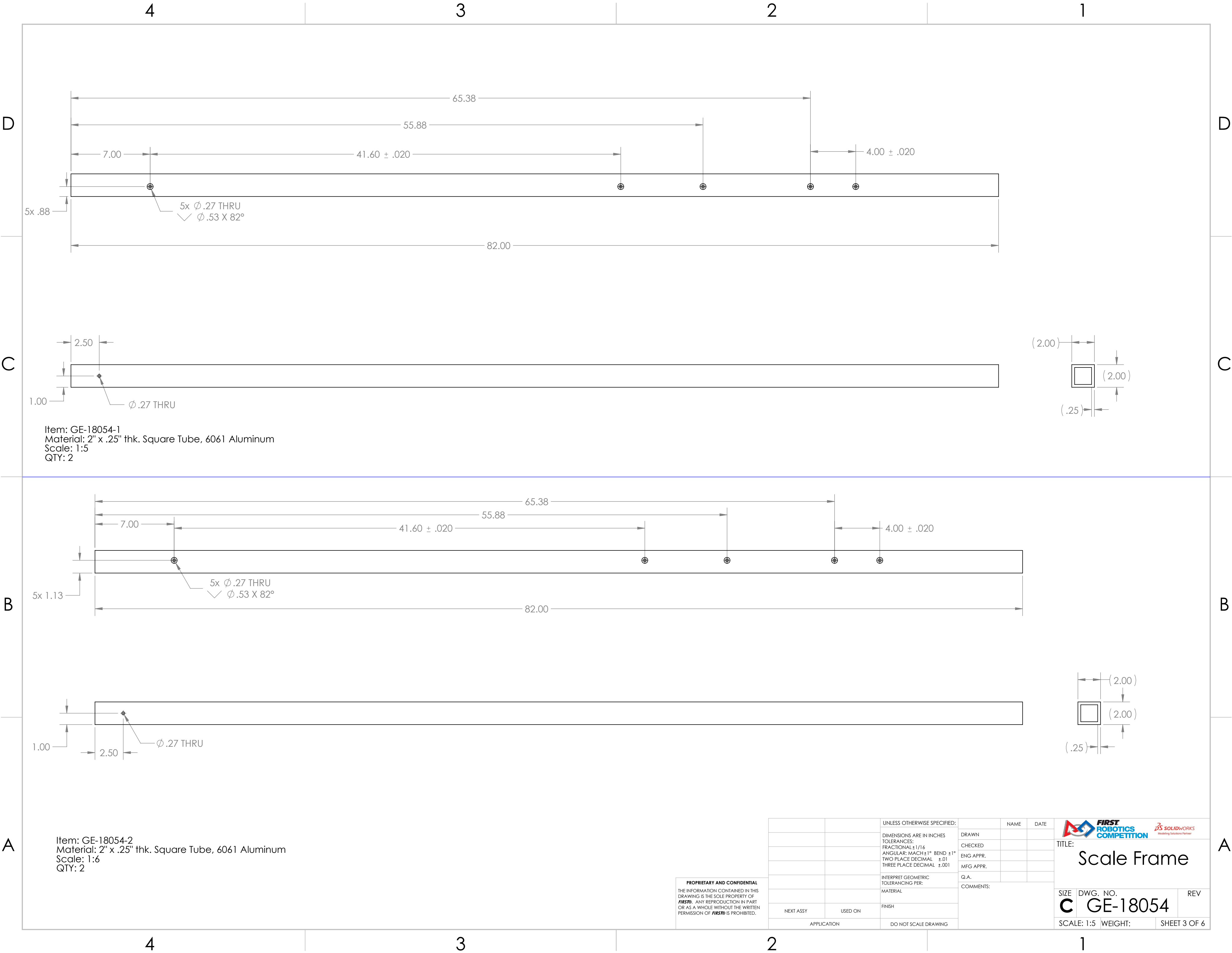
REV

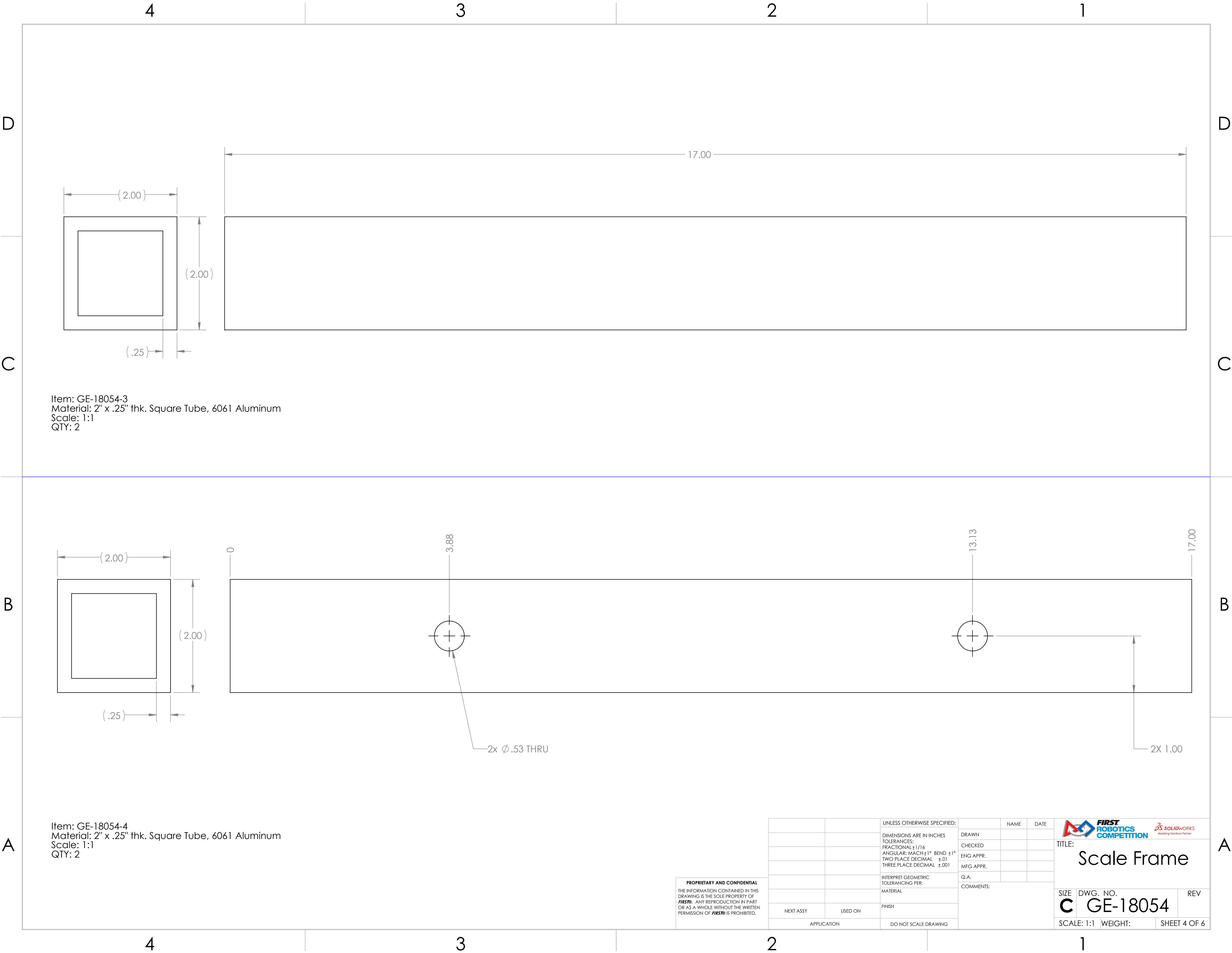
SCALE: 1:12 WEIGHT: SHEET 1 OF 6



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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 
		DIMENSIONS ARE IN INCHES	DRAWN			
		TOLERANCES:	CHECKED			
		FRACTIONAL: ±1/16	ENG APPR.			
		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.			
		TWO PLACE DECIMAL ±.01	Q.A.			
		THREE PLACE DECIMAL ±.001	COMMENTS:	<div>TITLE: <h1>Scale Frame</h1><div><div>SIZE</div><div>DWG. NO. C GE-18054</div><div>REV</div></div><div>SCALE: 1:12 WEIGHT:</div><div>SHEET 2 OF 6</div></div>		
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL				
		FINISH				
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING				







Item: GE-18054-3
Material: 2" x .25" thk. Square Tube, 6061 Aluminum
Scale: 1:1
QTY: 2

Item: GE-18054-4
Material: 2" x .25" thk. Square Tube, 6061 Aluminum
Scale: 1:1
QTY: 2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 FIRST ROBOTICS COMPETITION		 SOLIDWORKS Modeling Solutions Partner	
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN CHECKED ENG APPR. MFG APPR.			TITLE: <h1>Scale Frame</h1>			
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.						
		MATERIAL	COMMENTS:						
		FINISH				SIZE	DWG. NO.		REV
NEXT ASSY	USED ON					C	GE-18054		
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:1		WEIGHT:	SHEET 4 OF 6

4

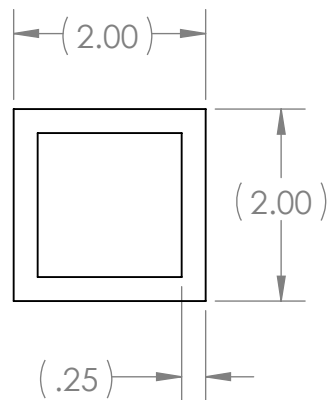
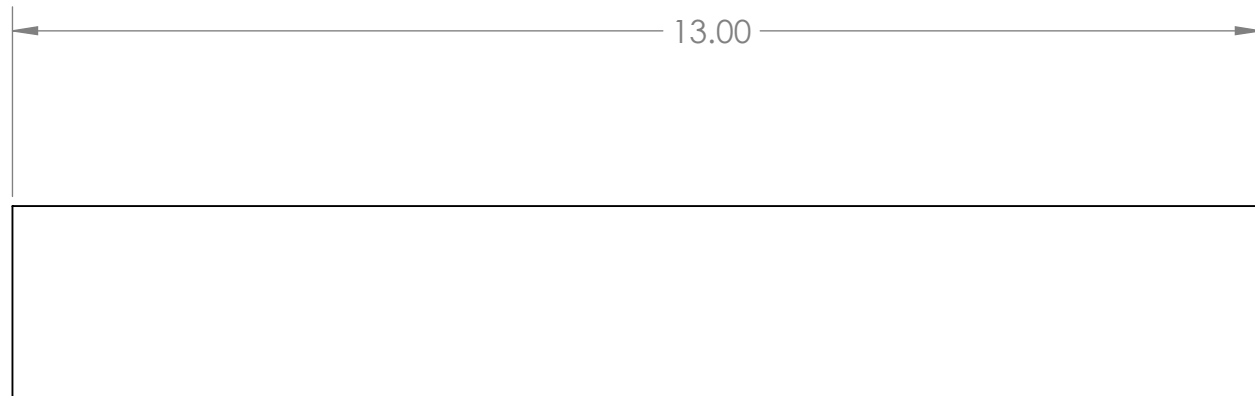
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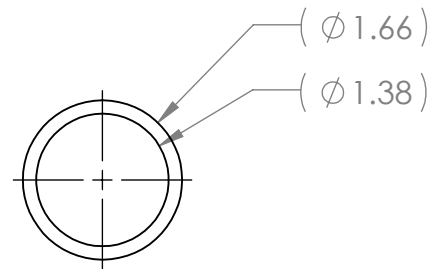
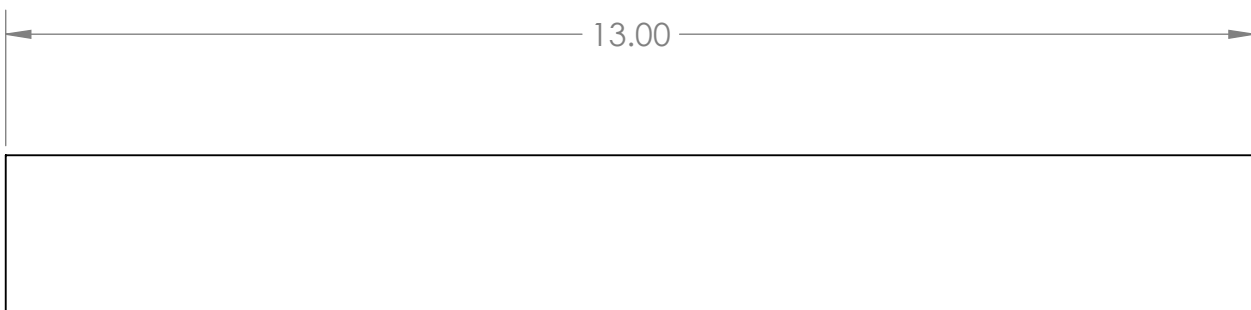
D



Item: GE-18054-5
Material: 2" x .25" thk. Square Tube, 6061 Aluminum
Scale: 1:1
QTY: 2

C



C

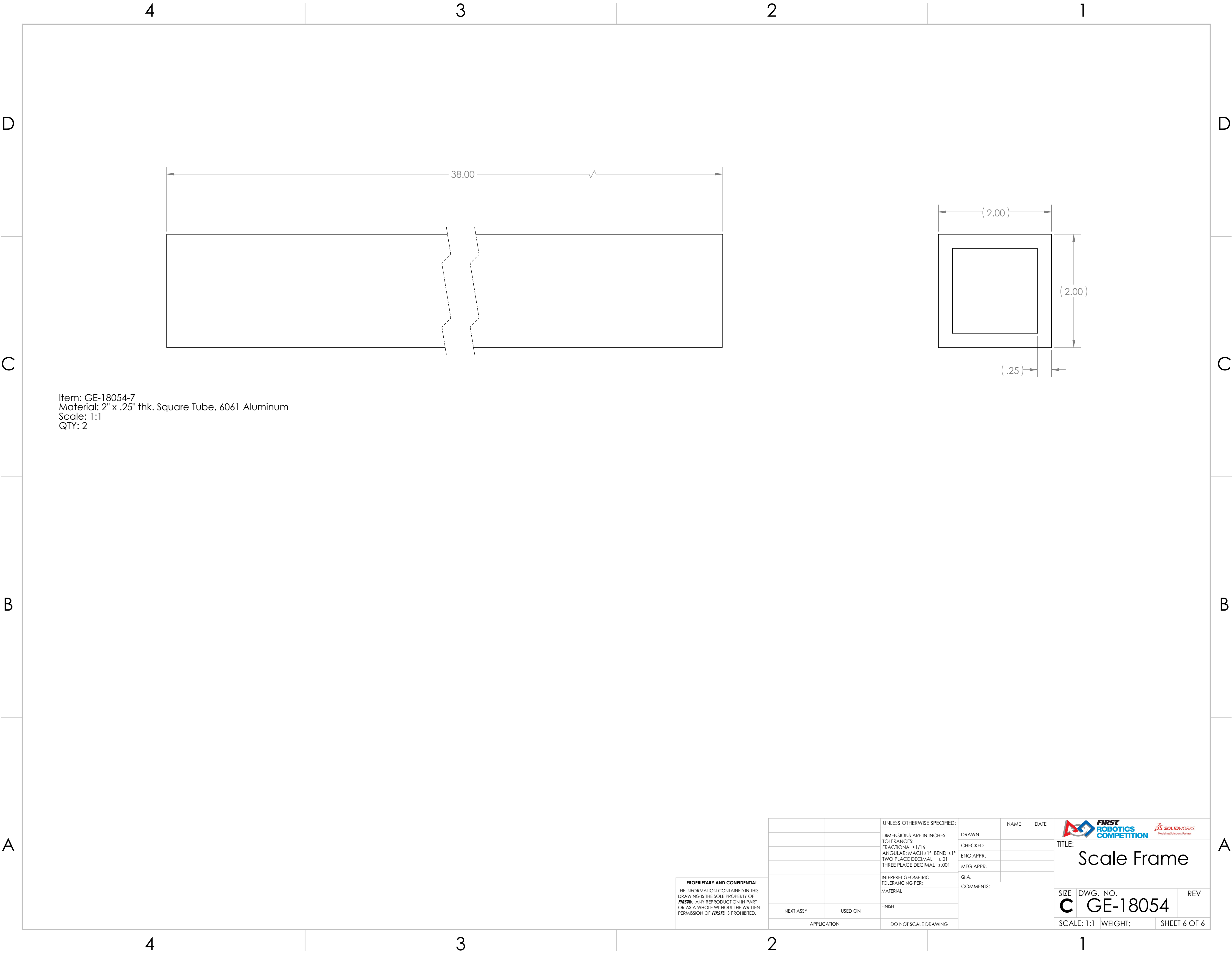


Item: GE-18054-6
Material: 1-1/4" Schedule 40 Pipe, 6061 Aluminum
Scale: 1:1
QTY: 2

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<div>PROPRIETARY AND CONFIDENTIAL</div> <div>THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRSTB. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRSTB IS PROHIBITED.</div>			UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div> <div>TITLE:</div> <div>Scale Frame</div> <div><div>SIZE</div><div>DWG. NO.</div><div>REV</div><div>C</div><div>GE-18054</div><div>SCALE: 1:2</div><div>WEIGHT:</div><div>SHEET 5 OF 6</div></div>
			DIMENSIONS ARE IN INCHES	DRAWN			
			TOLERANCES:	CHECKED			
			FRACTIONAL ± 1/16	ENG APPR.			
			ANGULAR: MACH ± 1° BEND ± 1°	MFG APPR.			
			TWO PLACE DECIMAL ±.01				
			THREE PLACE DECIMAL ±.001				
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.				
		MATERIAL	COMMENTS:				
	NEXT ASSY	USED ON	FINISH				
	APPLICATION		DO NOT SCALE DRAWING				



4

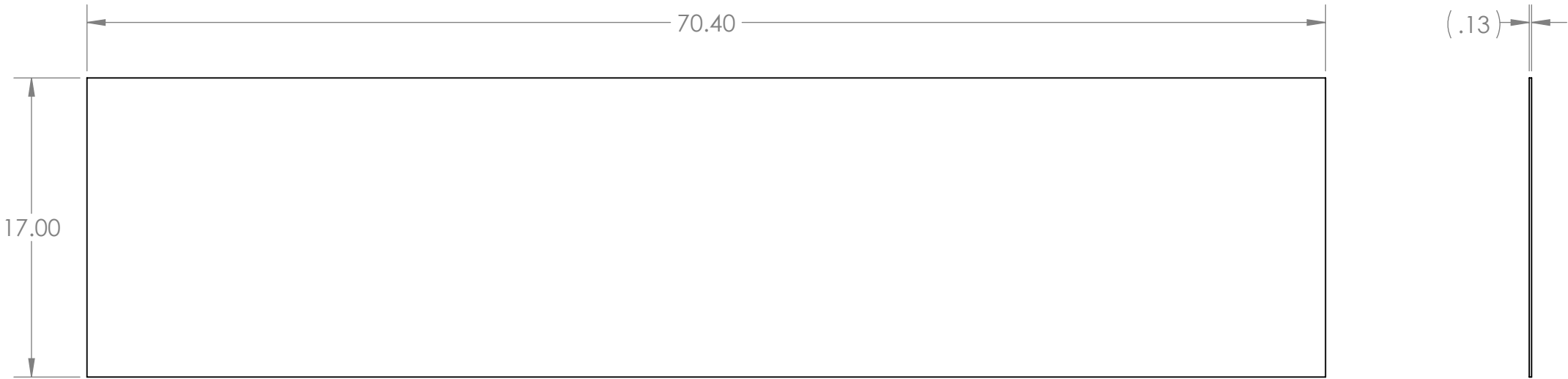
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- Notes:
- 1. Material: 1/8" thick, clear polycarbonate.
 - 2. Remove all burrs and sharp edges.

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <div>Outrigger Top Polycarbonate</div>		
		TOLERANCES:	CHECKED					
		FRACTIONAL $\pm 1/16$	ENG APPR.					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV <div>BGE-18055</div>		
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH				SCALE: 1:8 WEIGHT: SHEET 1 OF 1		
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						

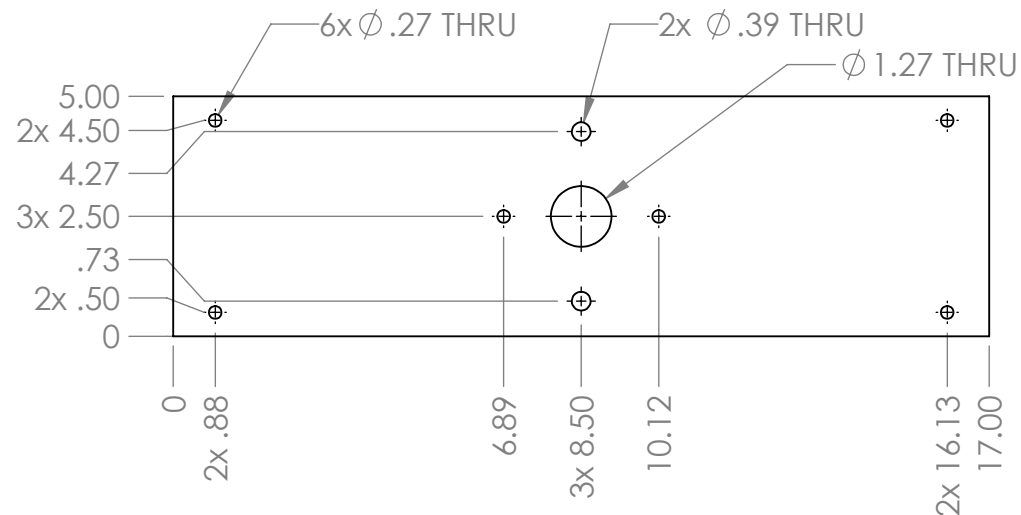
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Notes:

1. Material: 1/4" thick, clear polycarbonate.
2. Remove all burrs and sharp edges.

A

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		UNLESS OTHERWISE SPECIFIED:
		DIMENSIONS ARE IN INCHES
		TOLERANCES:
		FRACTIONAL $\pm 1/16$
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
		TWO PLACE DECIMAL $\pm .01$
		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

	NAME	DATE
DRAWN		
CHECKED		
ENG APPR.		
MFG APPR.		
Q.A.		
COMMENTS:		



FIRST
ROBOTICS
COMPETITION

SOLIDWORKS
Modeling Solutions Partner

TITLE:

Bearing Damper
Polycarbonate

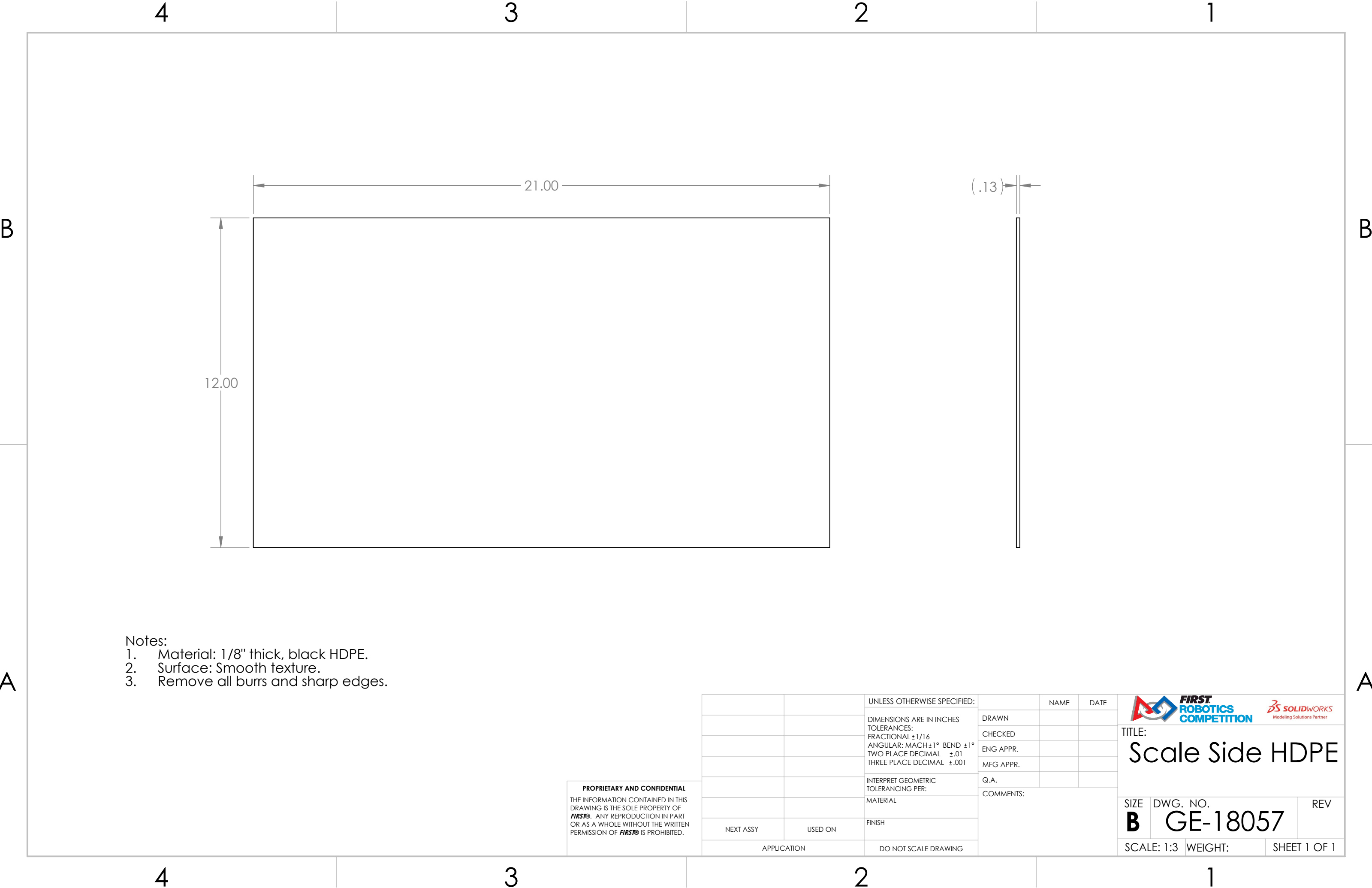
SIZE	DWG. NO.	REV
A	GE-18056	
SCALE: 1:4		WEIGHT:
		SHEET 1 OF 1

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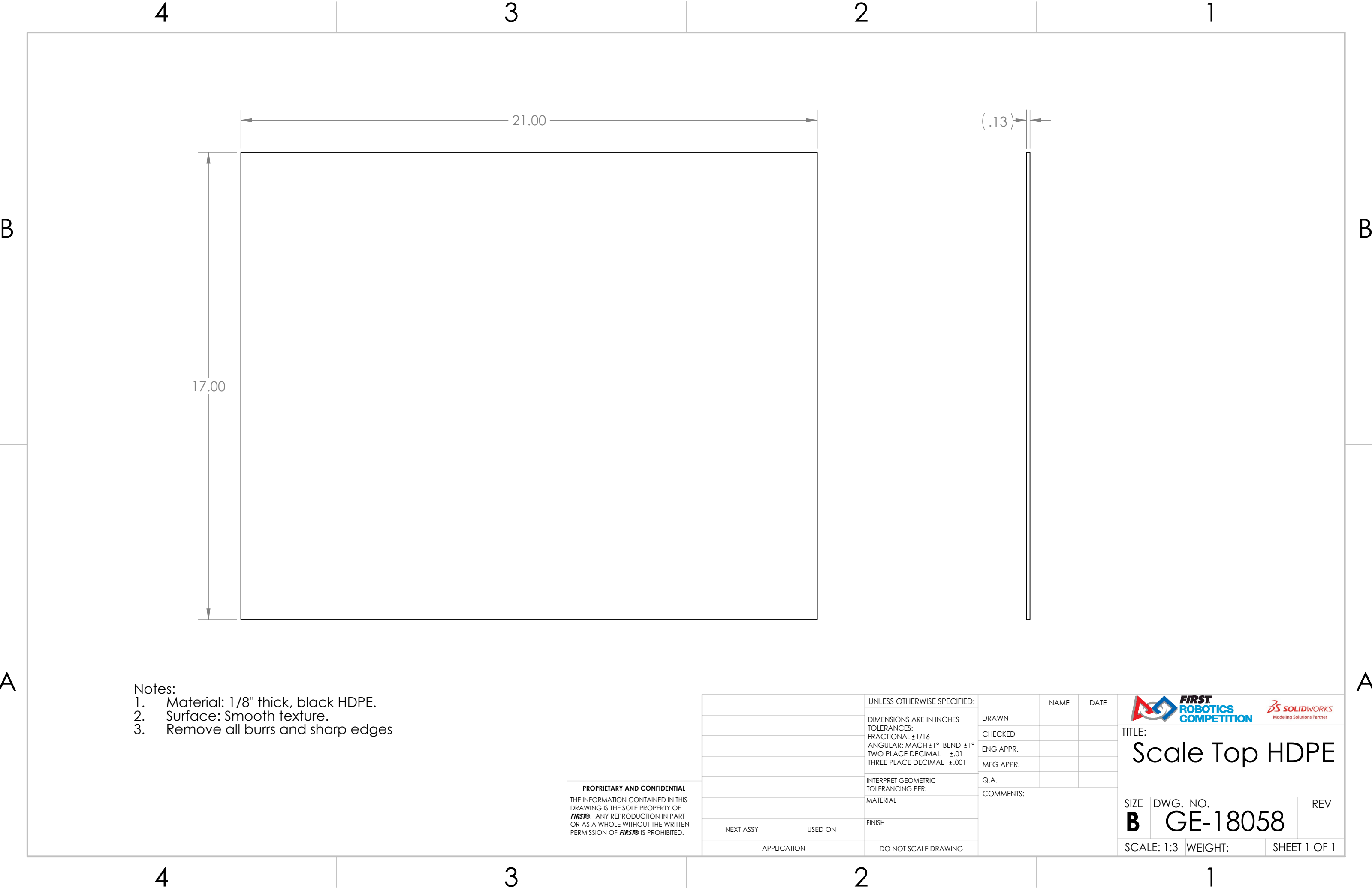


Notes:

- 1. Material: 1/8" thick, black HDPE.
- 2. Surface: Smooth texture.
- 3. Remove all burrs and sharp edges.

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Scale Side HDPE		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:			SIZE DWG. NO. REV B GE-18057		
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:3 WEIGHT: SHEET 1 OF 1		

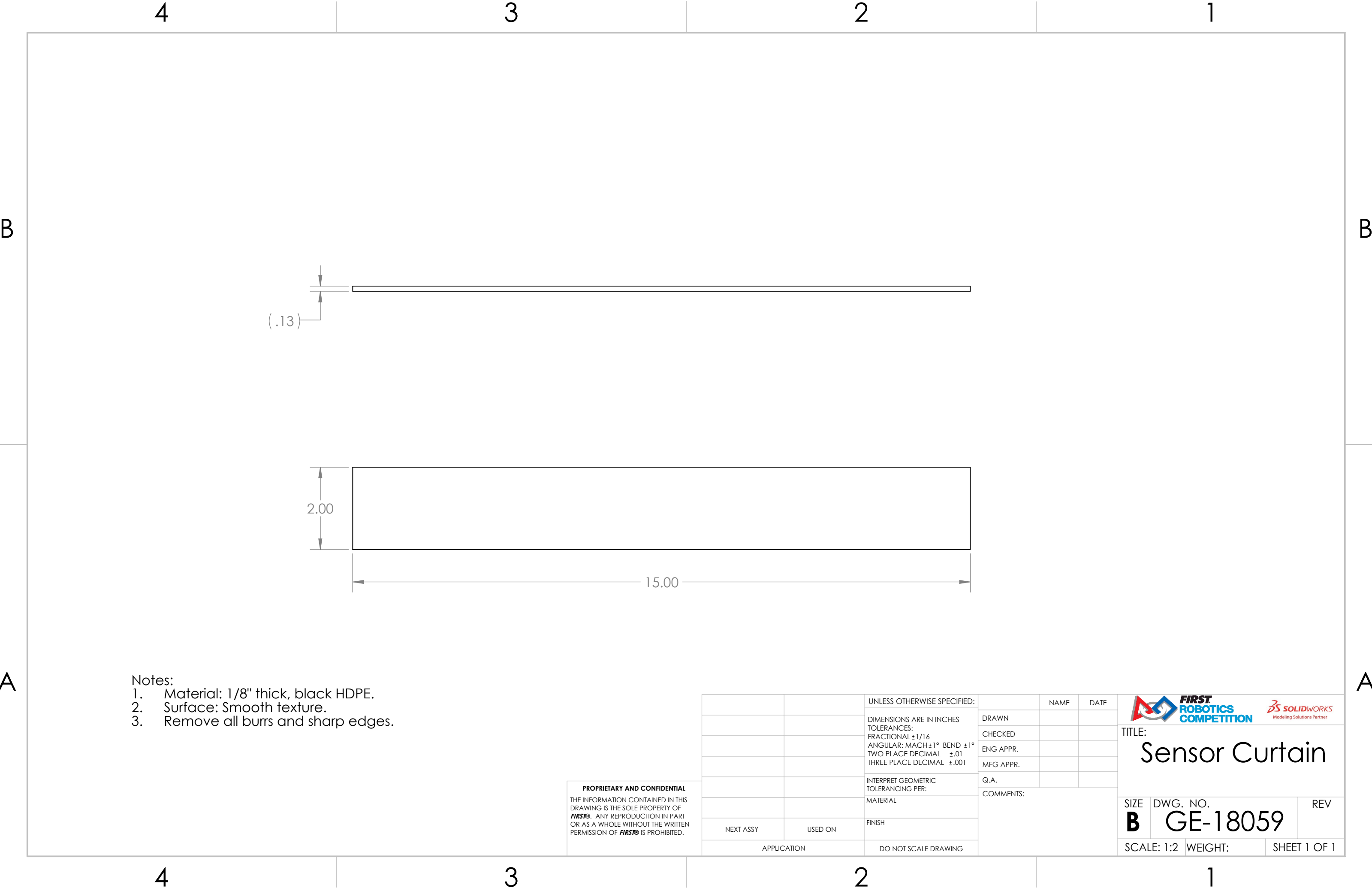


Notes:

1. Material: 1/8" thick, black HDPE.
2. Surface: Smooth texture.
3. Remove all burrs and sharp edges



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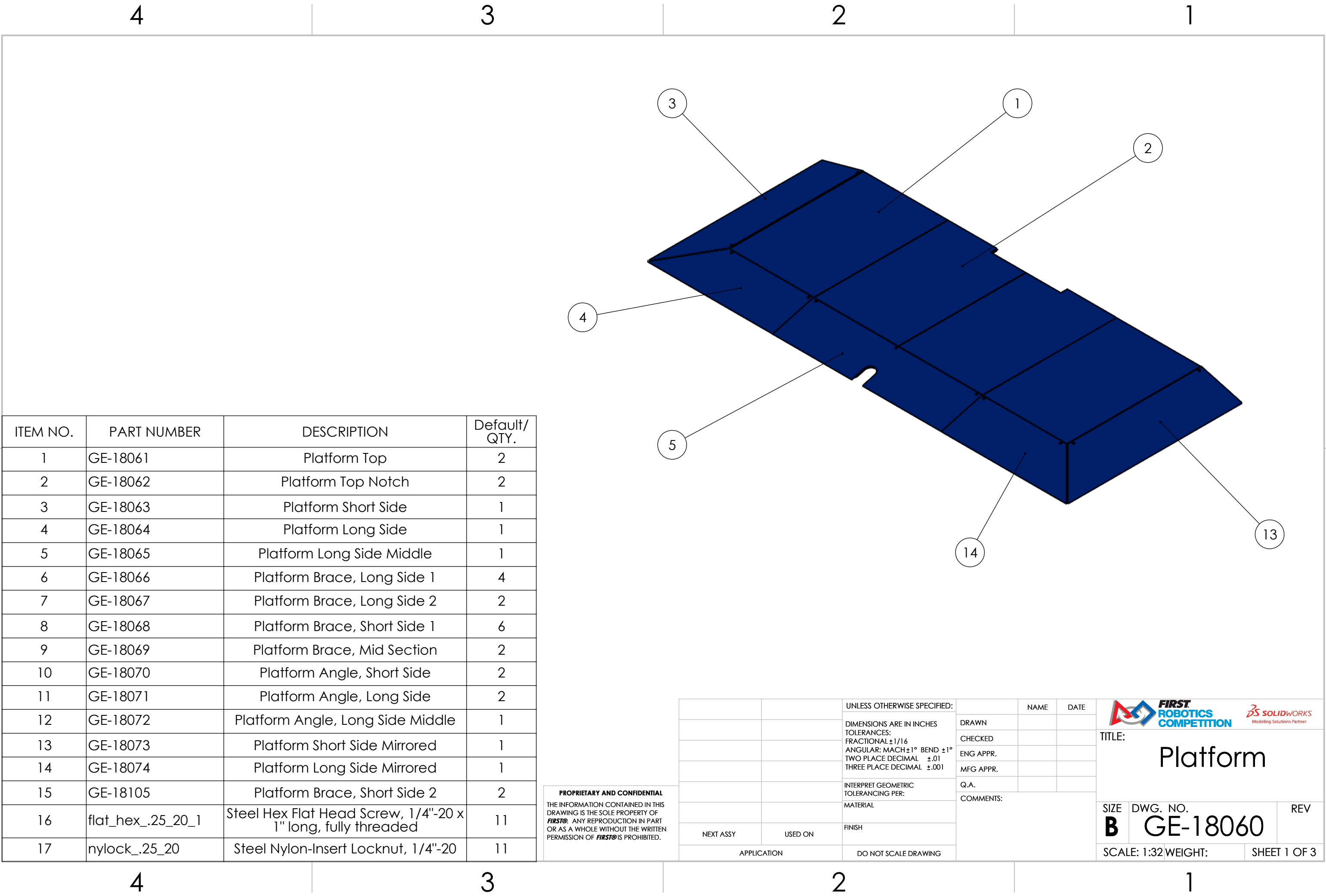
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			CHECKED						
			ENG APPR.						
			MFG APPR.						
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.						
		MATERIAL	COMMENTS:			SIZE DWG. NO. REV B GE-18058			
NEXT ASSY	USED ON	FINISH							
APPLICATION		DO NOT SCALE DRAWING							
						SCALE: 1:3		WEIGHT:	SHEET 1 OF 1



- Notes:
- 1. Material: 1/8" thick, black HDPE.
 - 2. Surface: Smooth texture.
 - 3. Remove all burrs and sharp edges.

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: <h1>Sensor Curtain</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:			SIZE	DWG. NO.	REV
NEXT ASSY	USED ON	FINISH				B	GE-18059	
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:2 WEIGHT: SHEET 1 OF 1		



4

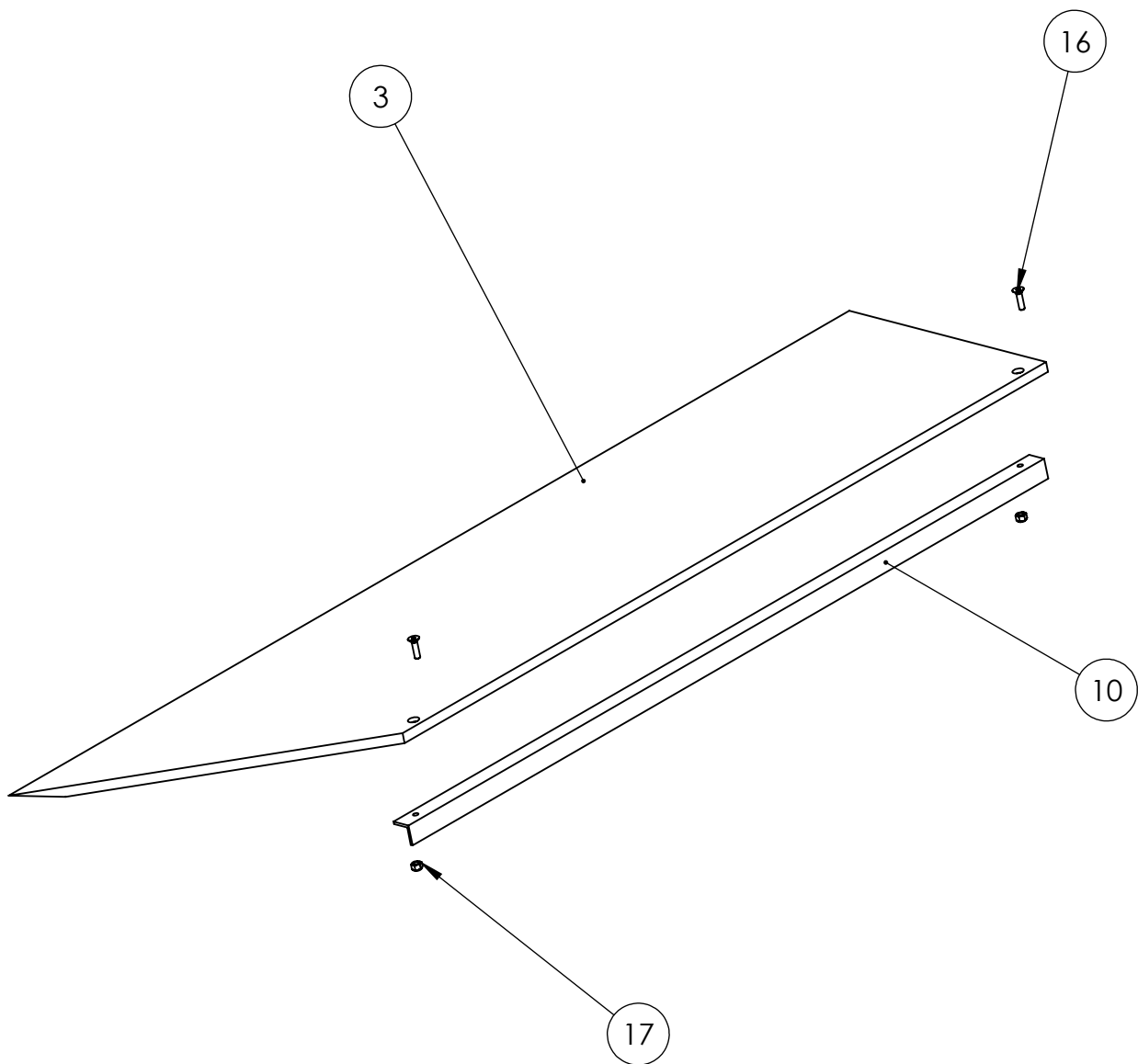
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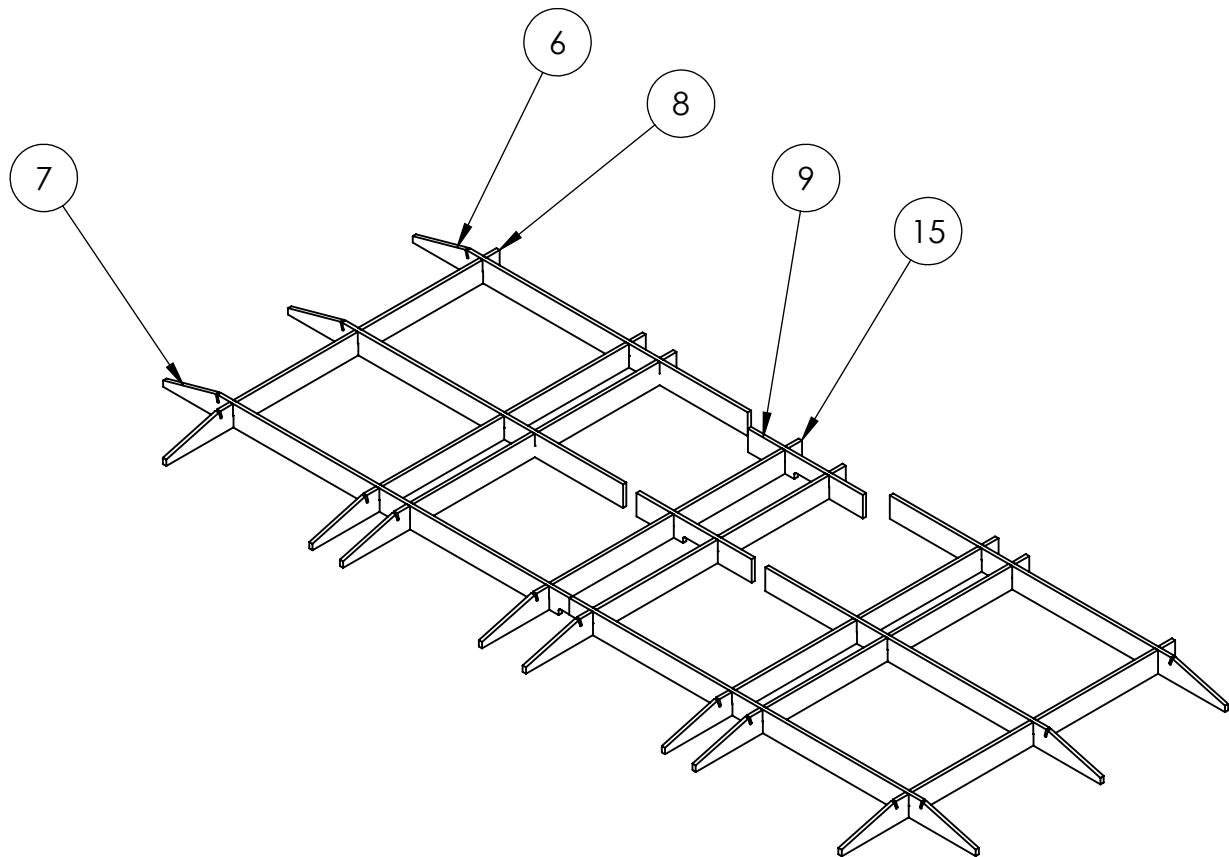
A



Notes:
Bolt Item 10 to Item 13 using Items 16 and 17. Repeat steps for the following Items, using Items 16 and 17 to fasten:



HDPE	Aluminum Angle
Item 4	Item 11
Item 5	Item 12
Item 13	Item 10
Item 14	Item 11

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Notes:
Slot Items 6, 7, 8, 9, 15 together.

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



TITLE:
Platform

SIZE **B** DWG. NO. **GE-18060** REV

SCALE: 1:32 WEIGHT: SHEET 2 OF 3

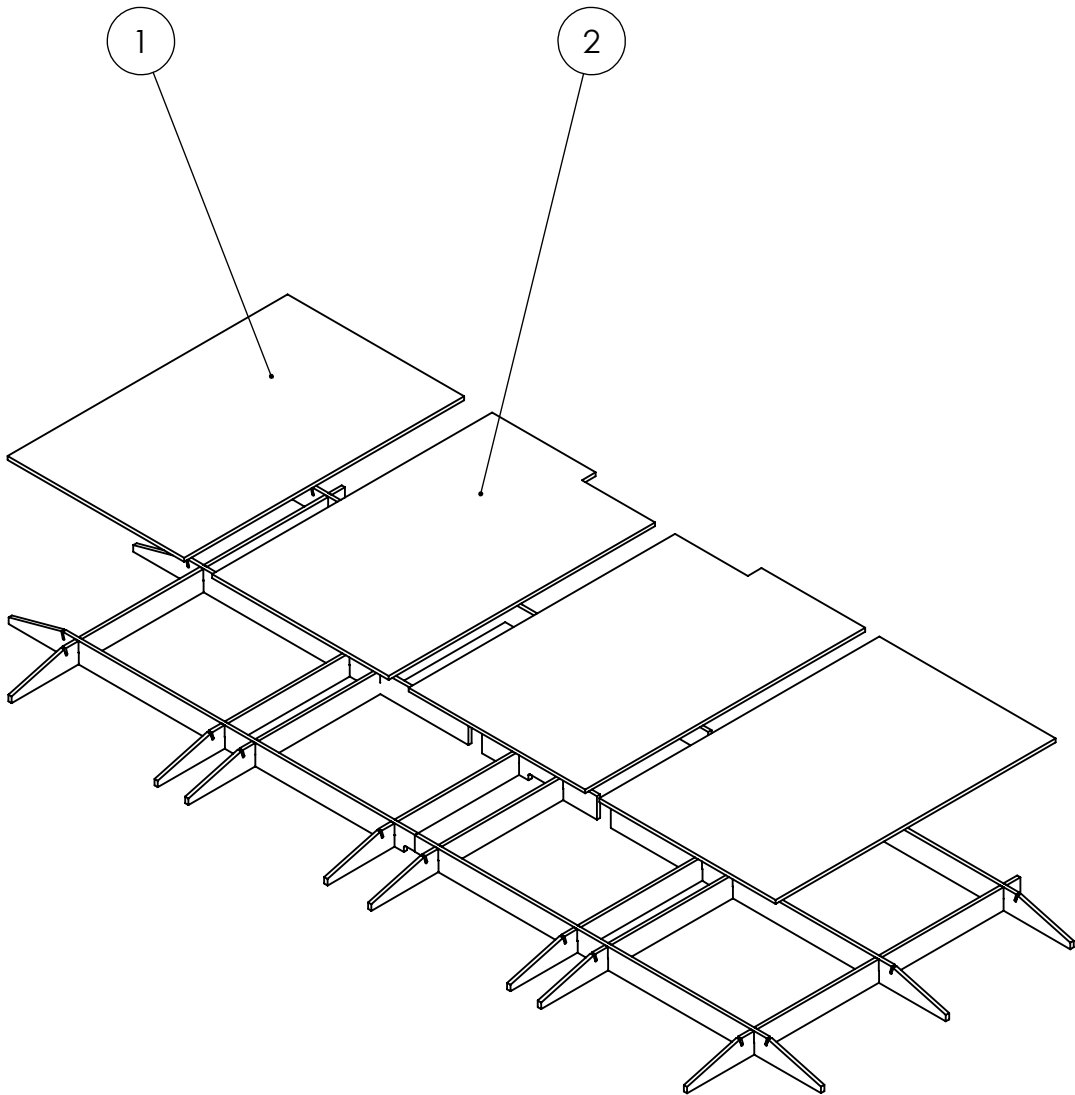
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Notes:
Attach Items 1 and 2 using hook and loop.

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14



13

Notes:
Attach Items 3, 4, 5, 13, and 14 by sliding the aluminum angles into the slots on Items 6, 7, 8, 9, 15.

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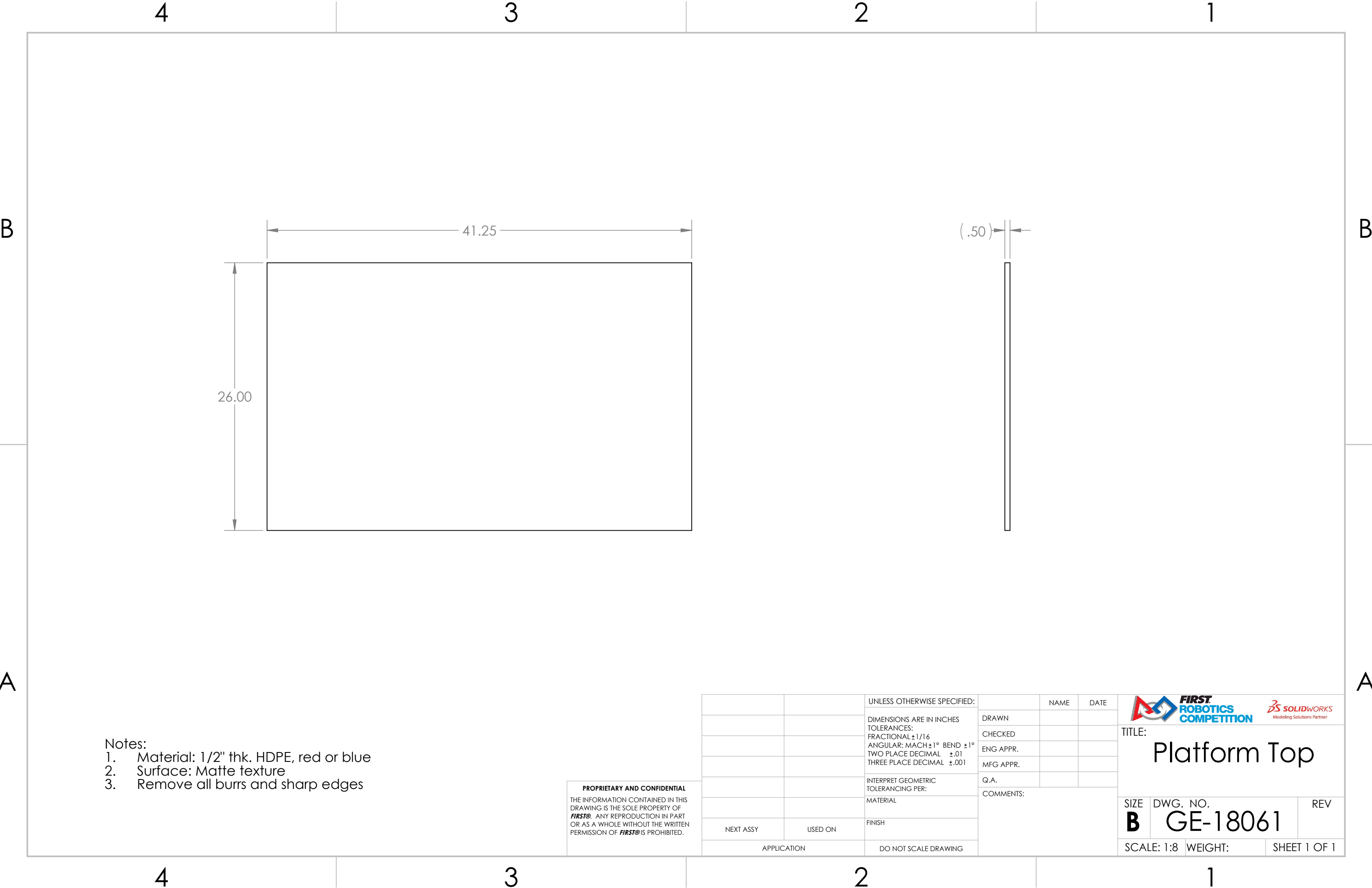
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: <h1>Platform</h1>			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18060			
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING							SCALE: 1:32

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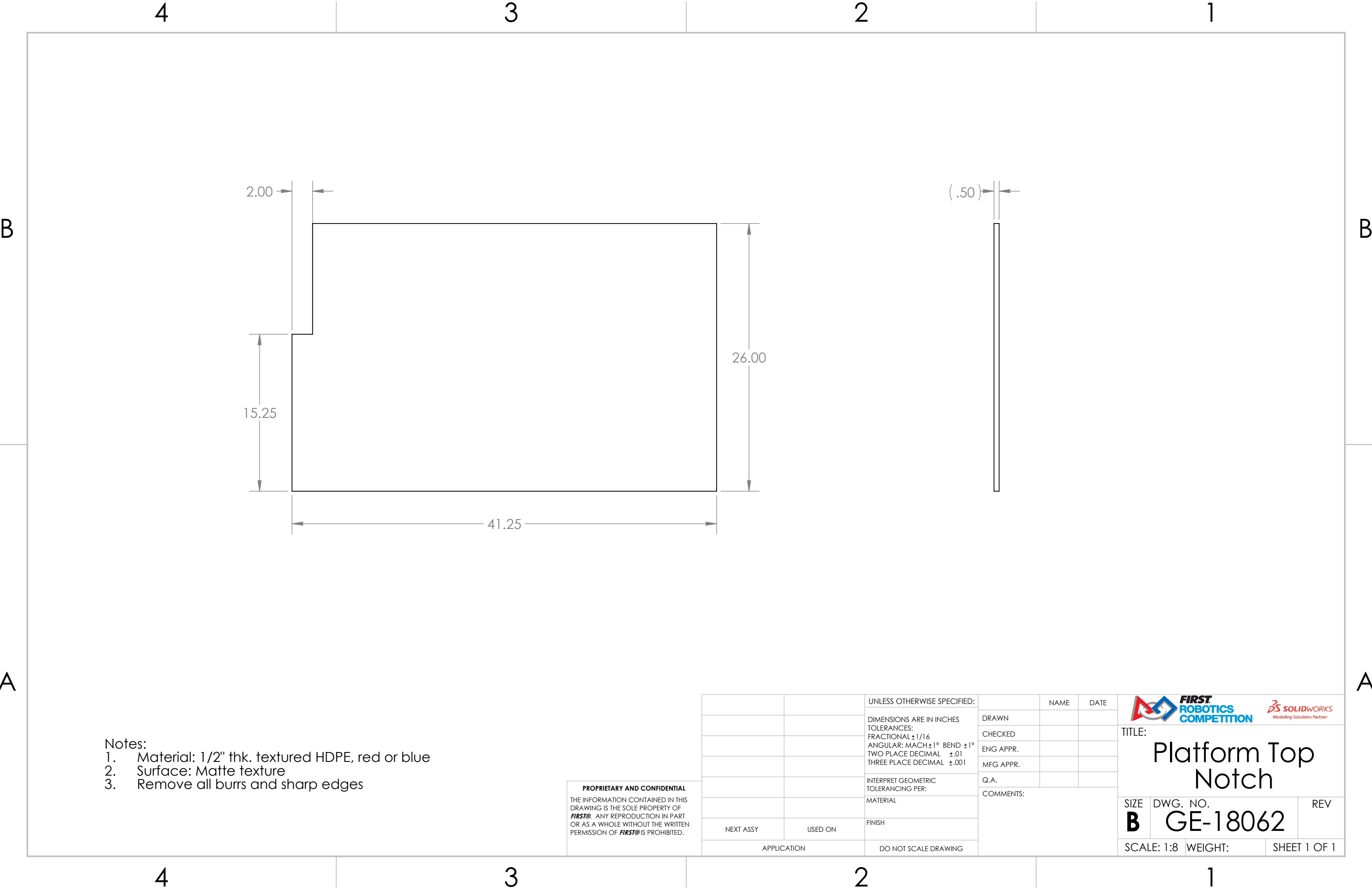
1



- Notes:
- 1. Material: 1/2" thk. HDPE, red or blue
 - 2. Surface: Matte texture
 - 3. Remove all burrs and sharp edges



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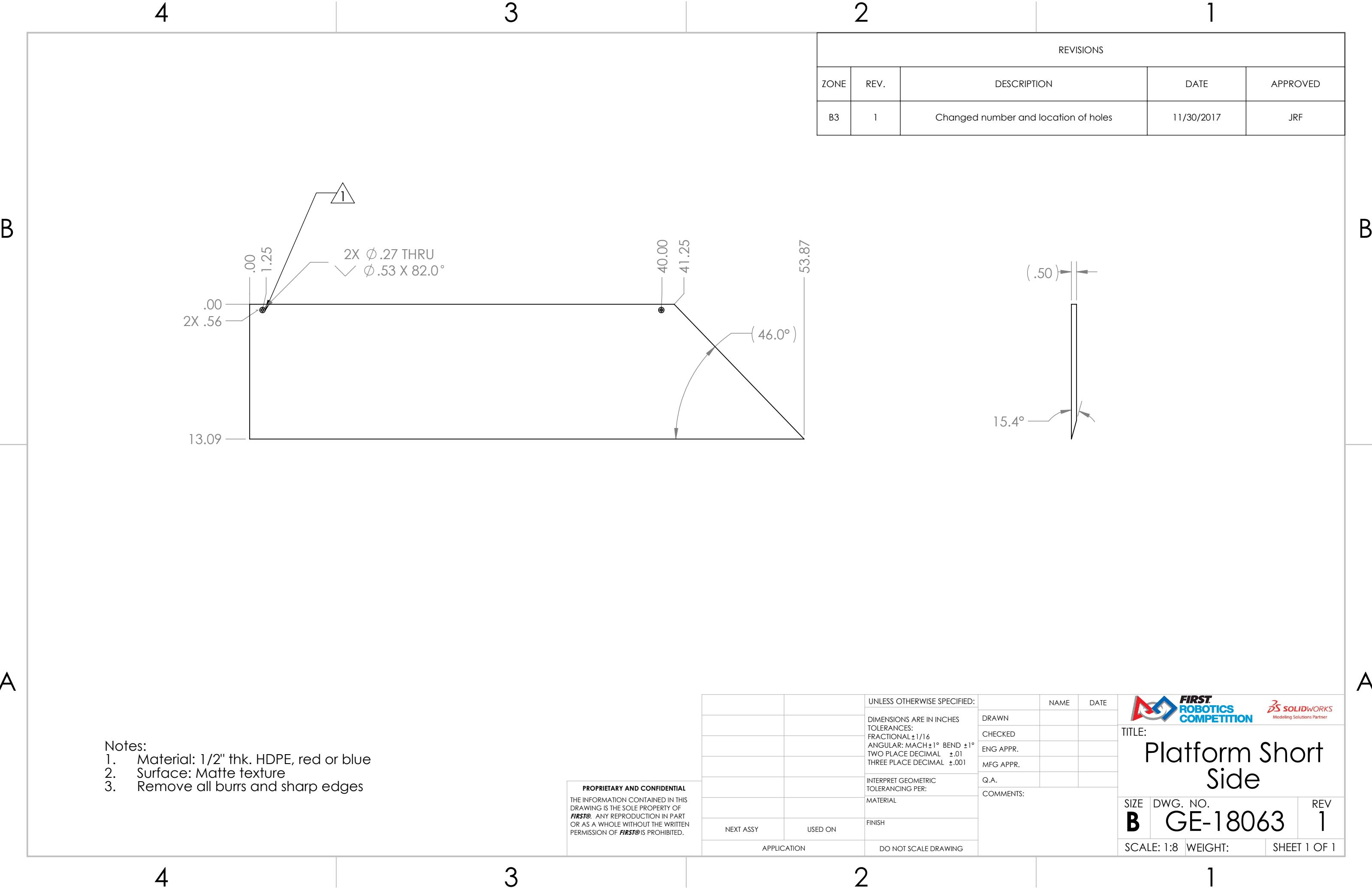
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Platform Top		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18061		
		MATERIAL	COMMENTS:					
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING						
						SCALE: 1:8	WEIGHT:	SHEET 1 OF 1



- Notes:
- 1. Material: 1/2" thk. textured HDPE, red or blue
 - 2. Surface: Matte texture
 - 3. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div> <div>TITLE: Platform Top Notch</div>
		DIMENSIONS ARE IN INCHES	DRAWN			
		TOLERANCES:	CHECKED			
		FRACTIONAL $\pm 1/16$	ENG APPR.			
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.			
		TWO PLACE DECIMAL $\pm .01$	Q.A.			COMMENTS:
		THREE PLACE DECIMAL $\pm .001$				
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL				SIZE DWG. NO. REV
		FINISH				B GE-18062
NEXT ASSY	USED ON					SCALE: 1:8 WEIGHT: SHEET 1 OF 1
APPLICATION		DO NOT SCALE DRAWING				



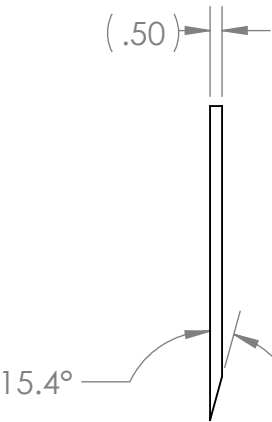
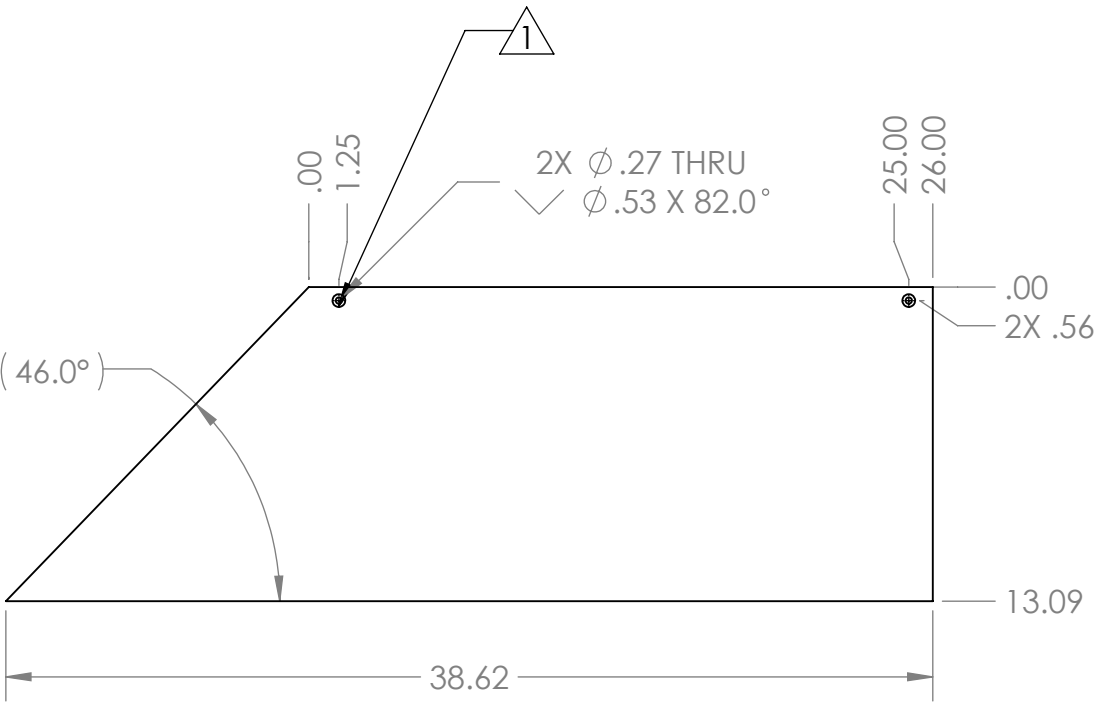
4

3

2



1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B3	1	Changed number and location of holes; decreased length of part	11/30/17	JRF

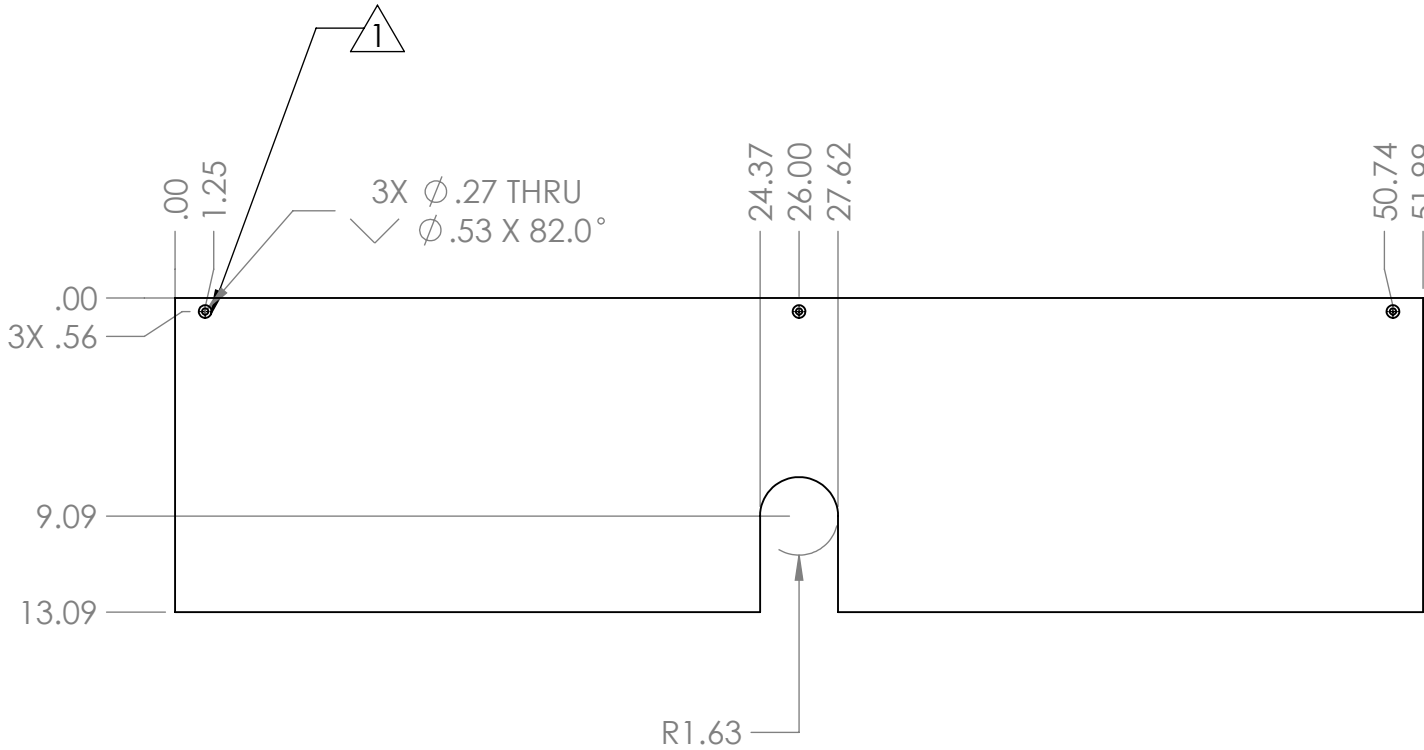


- Notes:
- 1. Material: 1/2" thk. HDPE, red or blue
 - 2. Surface: Matte texture
 - 3. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <h1>Platform Long Side</h1>		
		TOLERANCES:	CHECKED					
		FRACTIONAL $\pm 1/16$	ENG APPR.					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18064 1		
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL				SCALE: 1:8 WEIGHT: SHEET 1 OF 1		
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B3	1	Changed numbed and location of holes; increased length of part	11/30/17	JRF



- Notes:
- Material: 1/2" thk. textured HDPE, red or blue
 - Surface: Matte texture
 - Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Platform Long Side Middle		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18065 1		
		MATERIAL	COMMENTS:					
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8 WEIGHT:		SHEET 1 OF 1

4

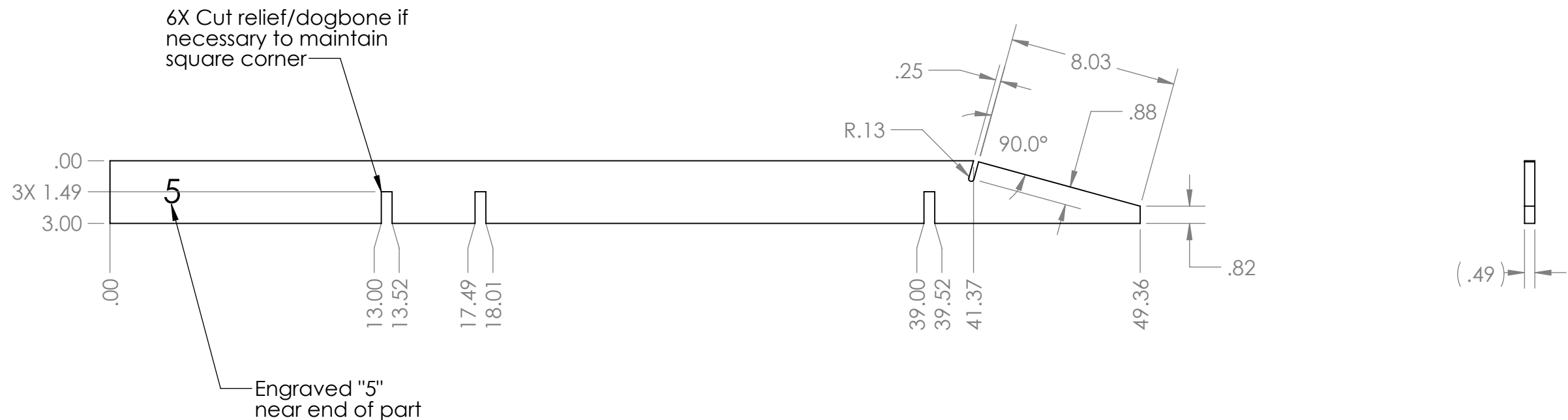
3

2

1

B

B





A

A

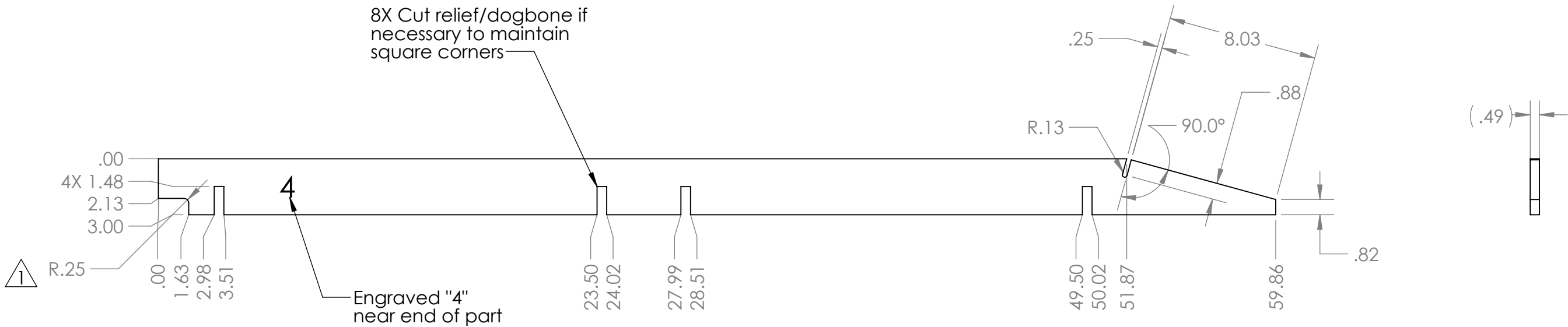
Notes:

1. Material: 1/2" thk. textured HDPE, any color
2. Surface: Smooth texture
3. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Platform Brace, Long Side 1		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18066		
		MATERIAL	COMMENTS:					
		FINISH						
NEXT ASSY	USED ON					SCALE: 1:6 WEIGHT: SHEET 1 OF 1		
APPLICATION		DO NOT SCALE DRAWING						



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B4	1	Added dimension to specify fillet radius.	1/3/2018	CPO



- Notes:
1. Material: 1/2" thk. HDPE, any color
 2. Surface: Smooth texture
 3. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN		
			CHECKED		
			ENG APPR.		
			MFG APPR.		
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		
		MATERIAL	COMMENTS:		
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



TITLE:
**Platform Brace,
Long Side 2**

SIZE
B

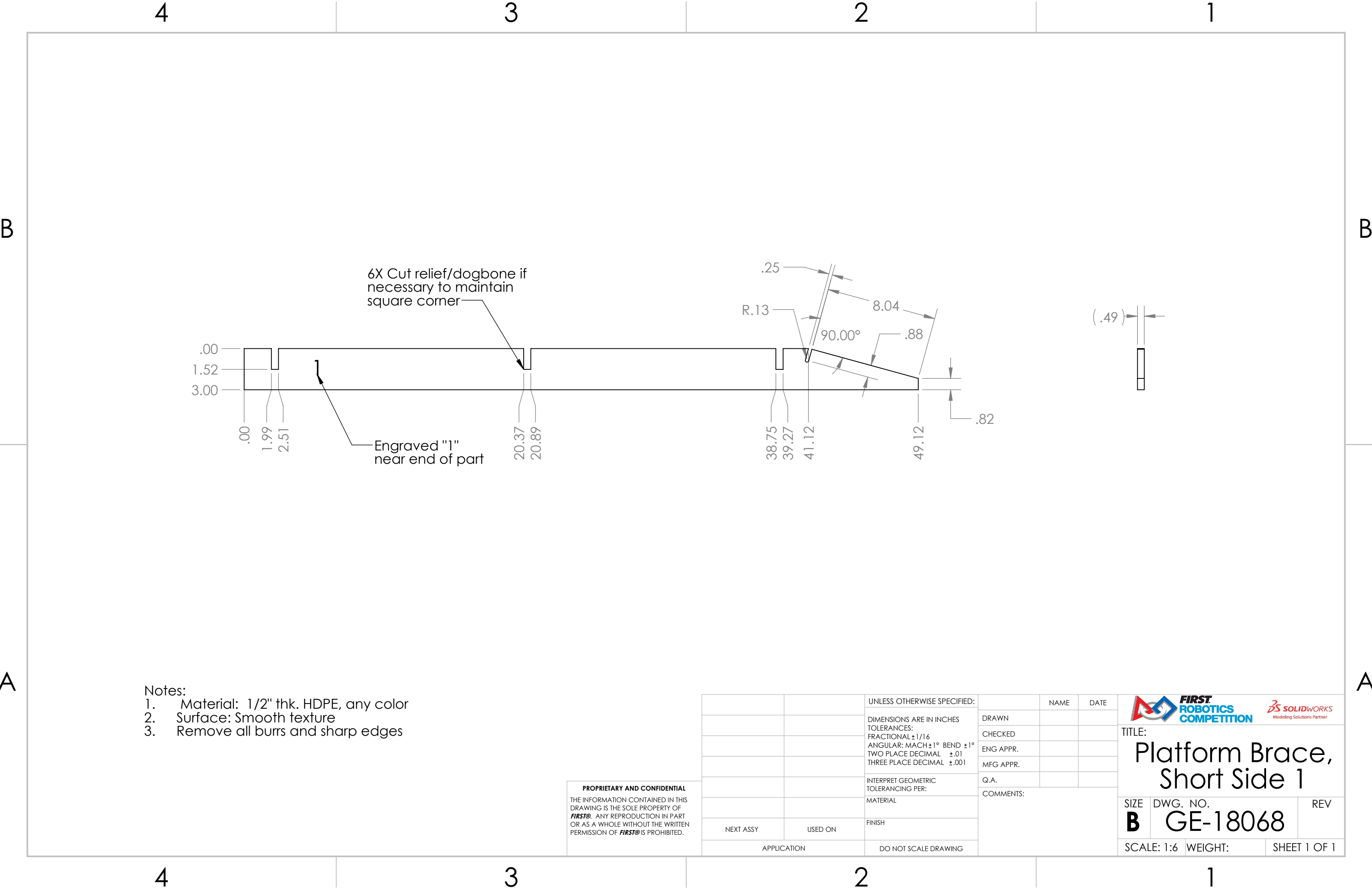
DWG. NO.
GE-18067

REV
1

SCALE: 1:6

WEIGHT:

SHEET 1 OF 1



A



A

B

B

- Notes:
1. Material: 1/2" thk. HDPE, any color
 2. Surface: Smooth texture
 3. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div>FIRST ROBOTICS COMPETITION</div></div> <div><div>SOLIDWORKS Modeling Solutions Partner</div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Platform Brace, Short Side 1		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18068		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:6 WEIGHT: SHEET 1 OF 1		

4

3

2

1

4

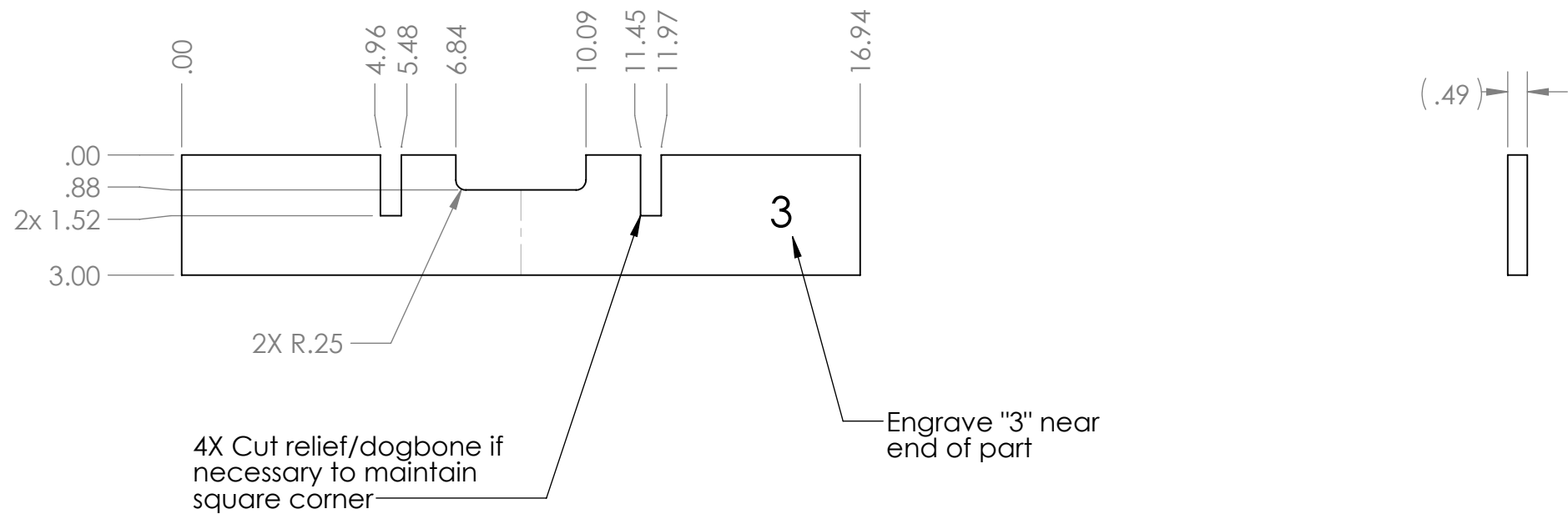
3

2

1

B

B





A

A

- Notes:
- 1. Material: 1/2" thk. HDPE, any color
 - 2. Surface: Smooth texture
 - 3. Remove all burrs and sharp edges

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Platform Brace, Mid Section		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18069		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						

4

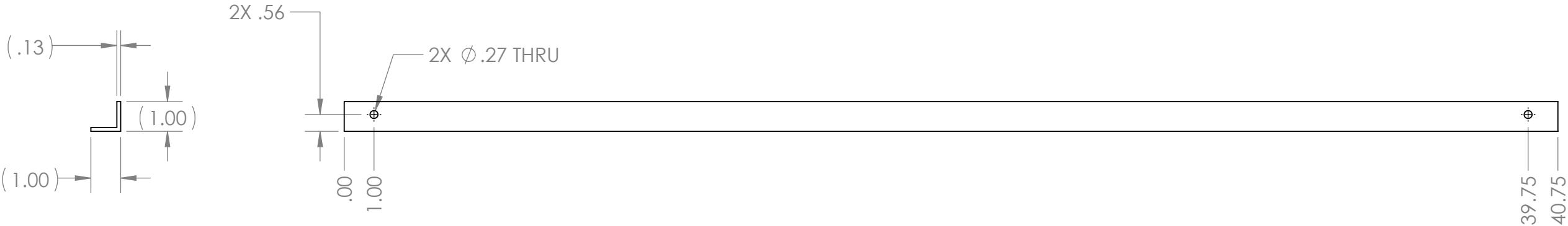
3

2

1

B

B





A

A

- Notes:
- 1. Material: 1" x 1" x .125" thick angle, 6061 aluminum
 - 2. Remove all burrs and sharp edges

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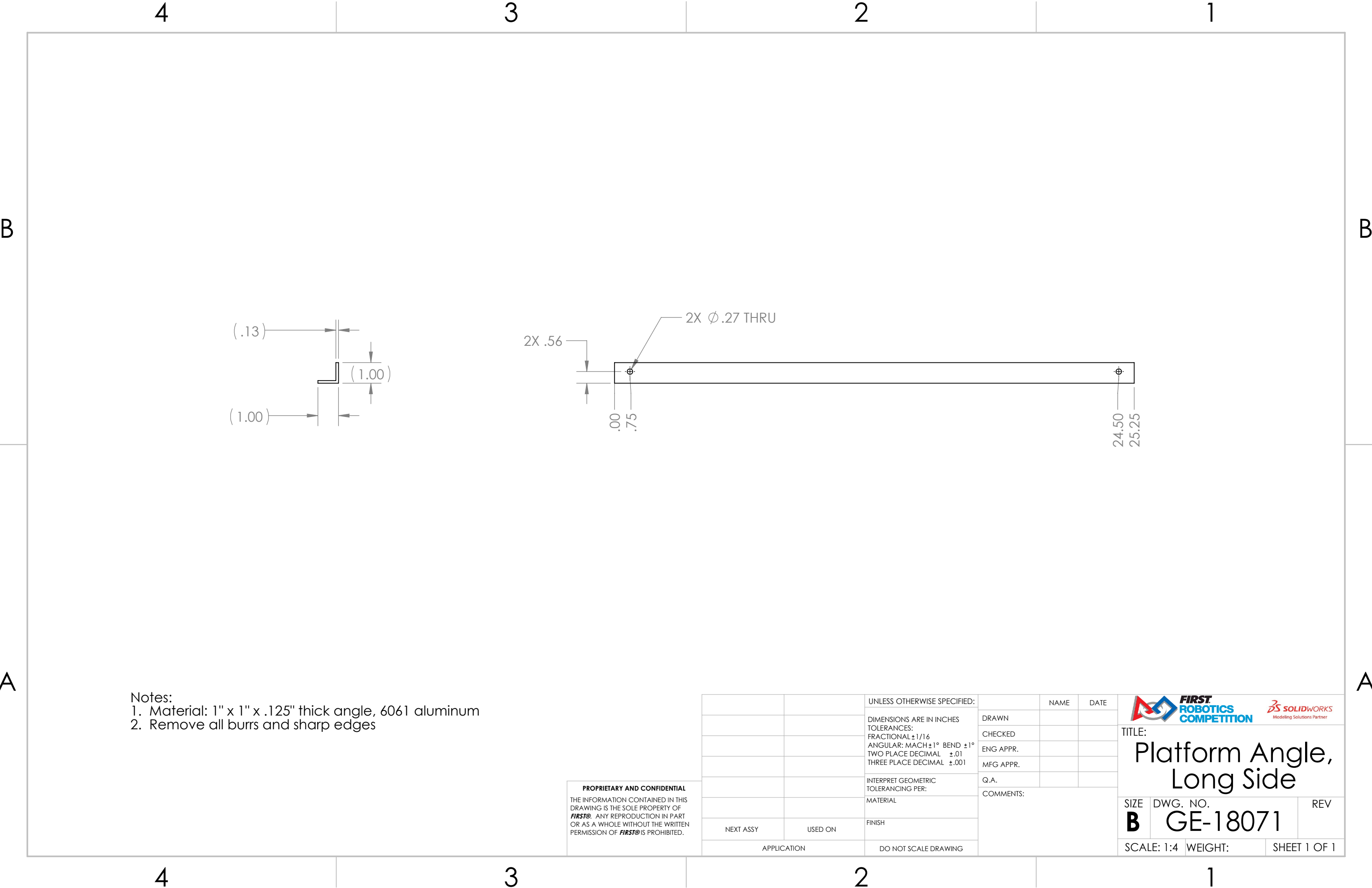
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Platform Angle, Short Side		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18070		
		MATERIAL						
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:4 WEIGHT:		SHEET 1 OF 1

4

3



2

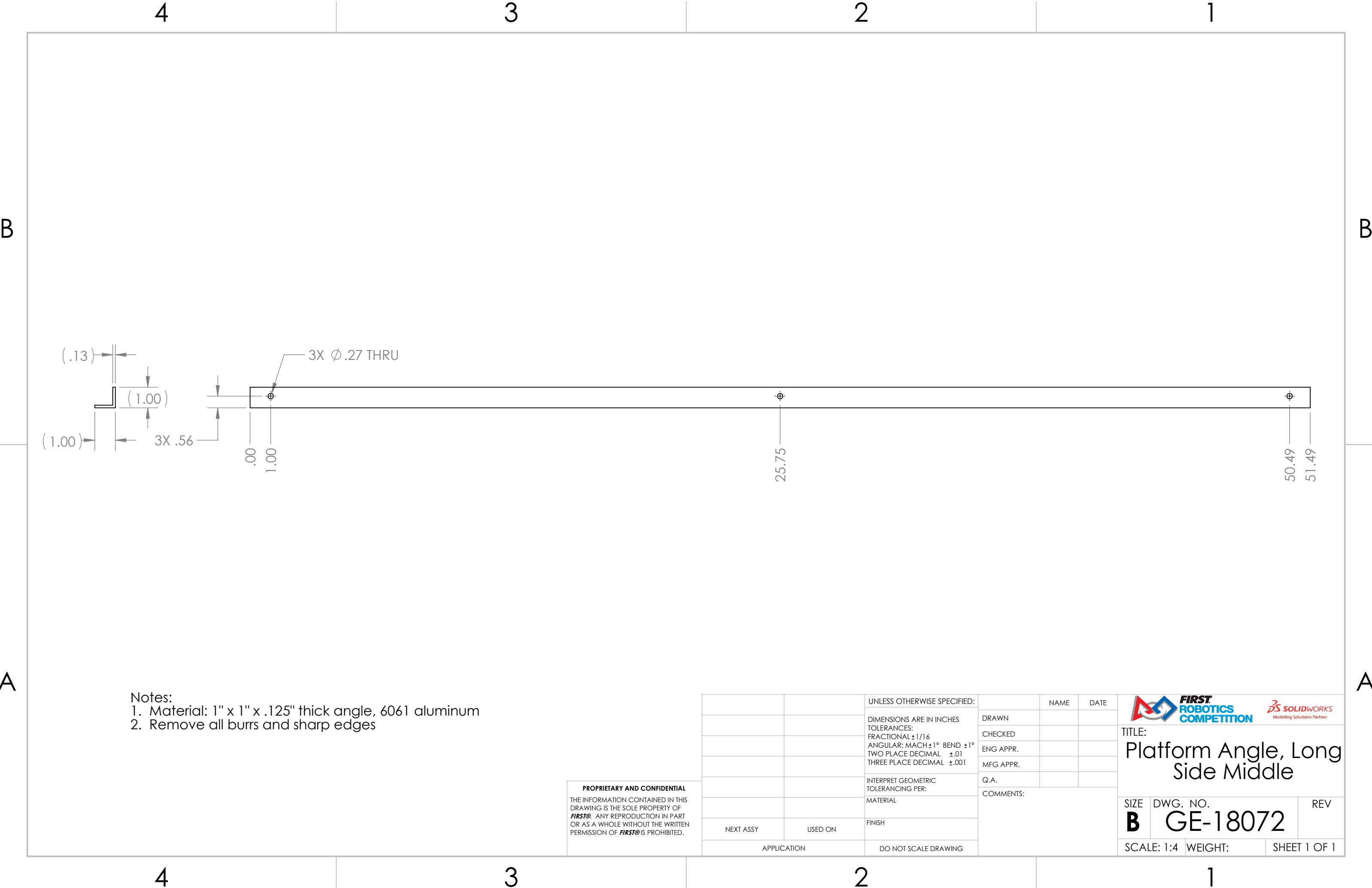
1



- Notes:
- 1. Material: 1" x 1" x .125" thick angle, 6061 aluminum
 - 2. Remove all burrs and sharp edges



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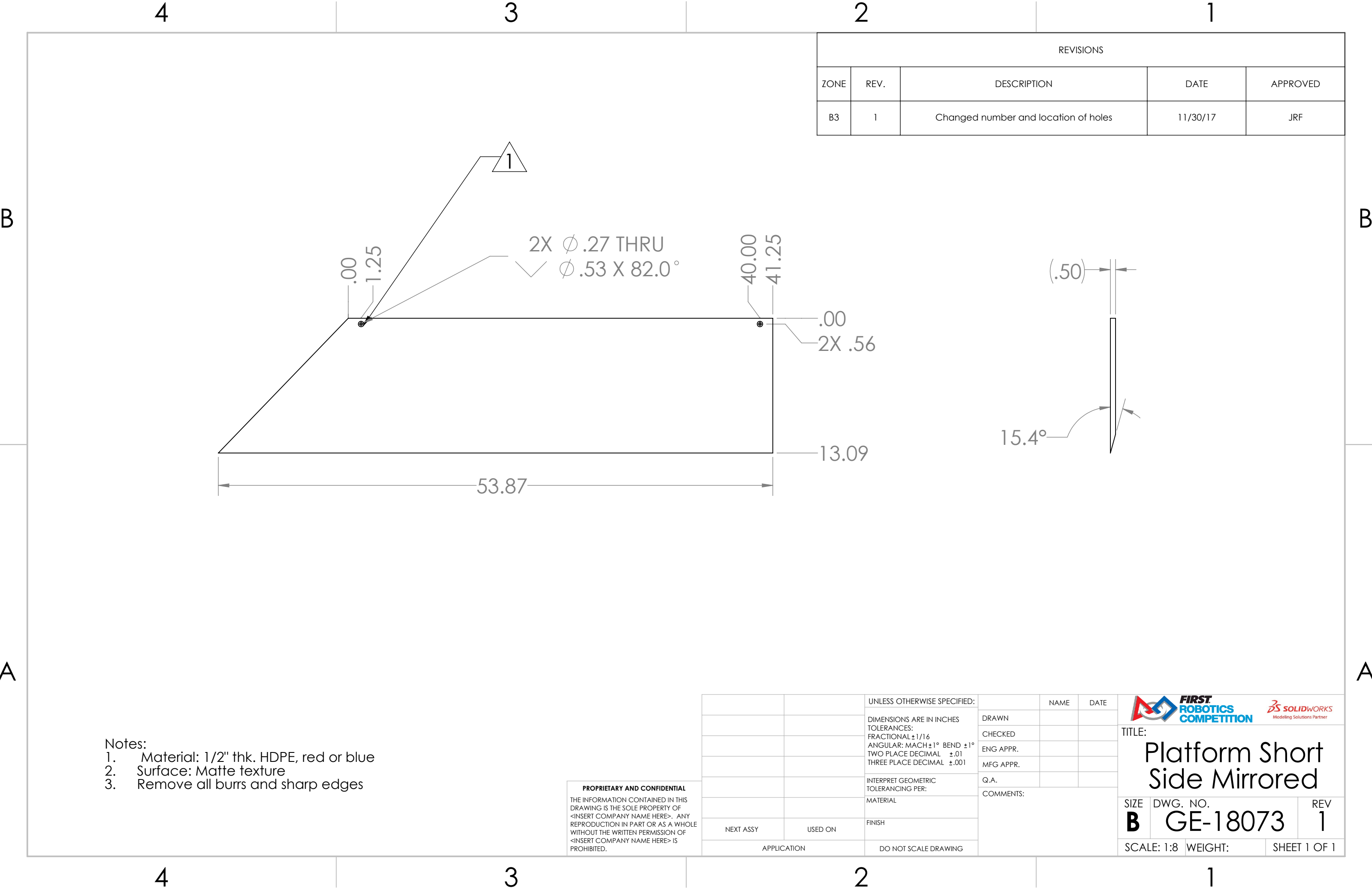
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Platform Angle, Long Side		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18071		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:4 WEIGHT: SHEET 1 OF 1		



Notes:
1. Material: 1" x 1" x .125" thick angle, 6061 aluminum
2. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Platform Angle, Long Side Middle		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18072		
		MATERIAL	COMMENTS:					
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING	SCALE: 1:4 WEIGHT: SHEET 1 OF 1					



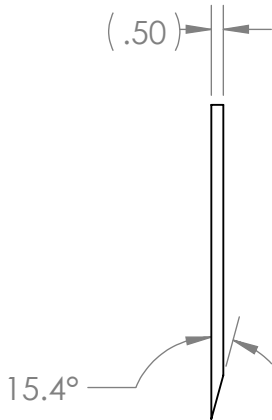
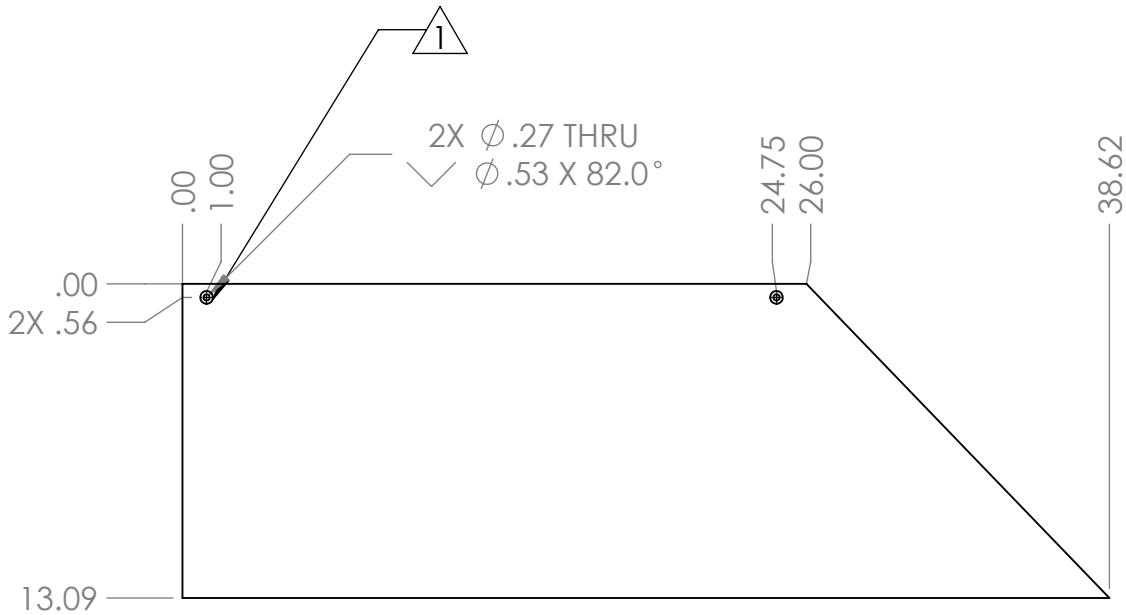
4

3

2

1



REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
B3	1	Changed number and location of holes; decreased length of part	11/30/17	JRF



Notes:

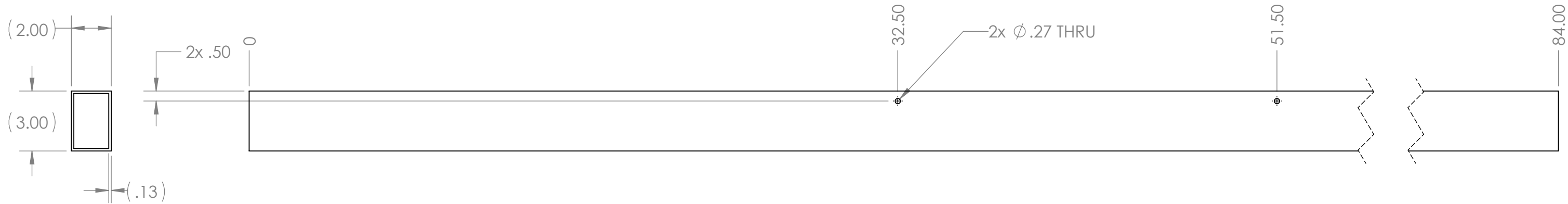
- 1. Material: 1/2" thk. HDPE, red or blue
- 2. Surface: Matte texture
- 3. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div> <div>TITLE: Platform Long Side Mirrored</div>	
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN				
			CHECKED				
			ENG APPR.				
			MFG APPR.				
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			COMMENTS:	
		MATERIAL					
		FINISH					
NEXT ASSY	USED ON					SIZE B	
APPLICATION		DO NOT SCALE DRAWING				DWG. NO. GE-18074	
						REV 1	
						SCALE: 1:8 WEIGHT: SHEET 1 OF 1	

B

B





- Notes:
- 1. Material: 3" x 2" x 1/8" thk. Rectangular Tube, 6061 Aluminum.
 - 2. Remove all burrs and sharp edges.

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Scale Base Outrigger</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18075		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:5 WEIGHT: SHEET 1 OF 1		

4

3

2

1

4

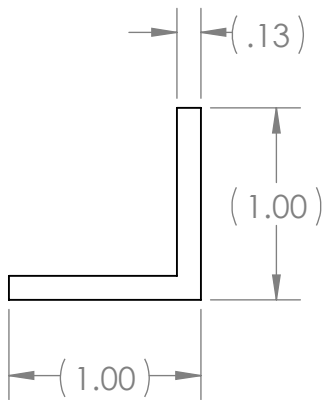
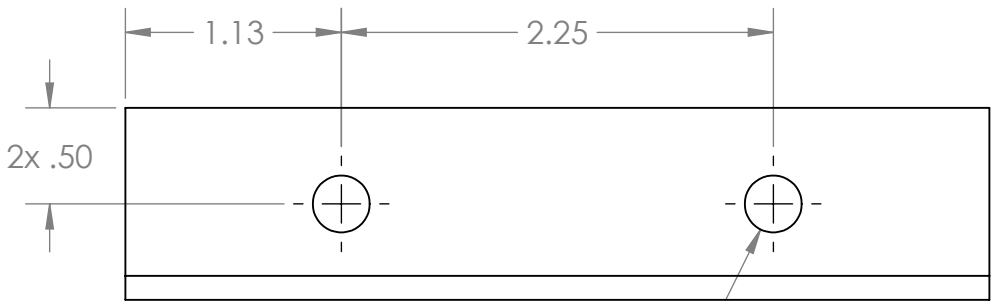
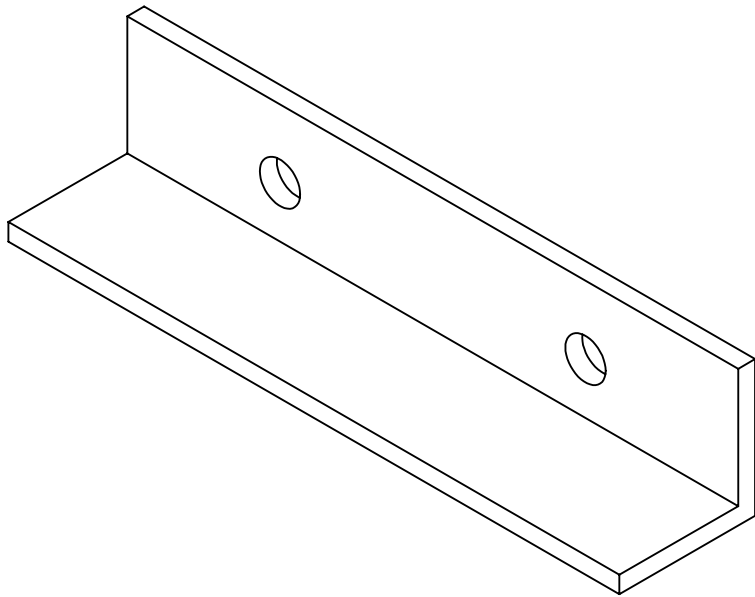
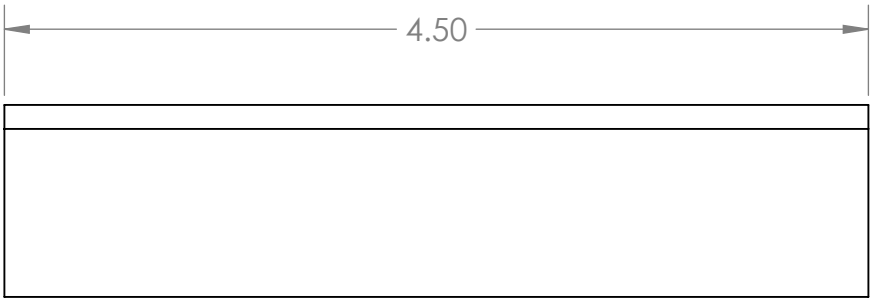
3

2

1

B

B





2x Ø .30 THRU

A

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- Notes:
- 1. Material: 1" x 1" x 1/8" thk. 90 degree angle, 6061 Aluminum.
 - 2. Remove all burrs and sharp edges.

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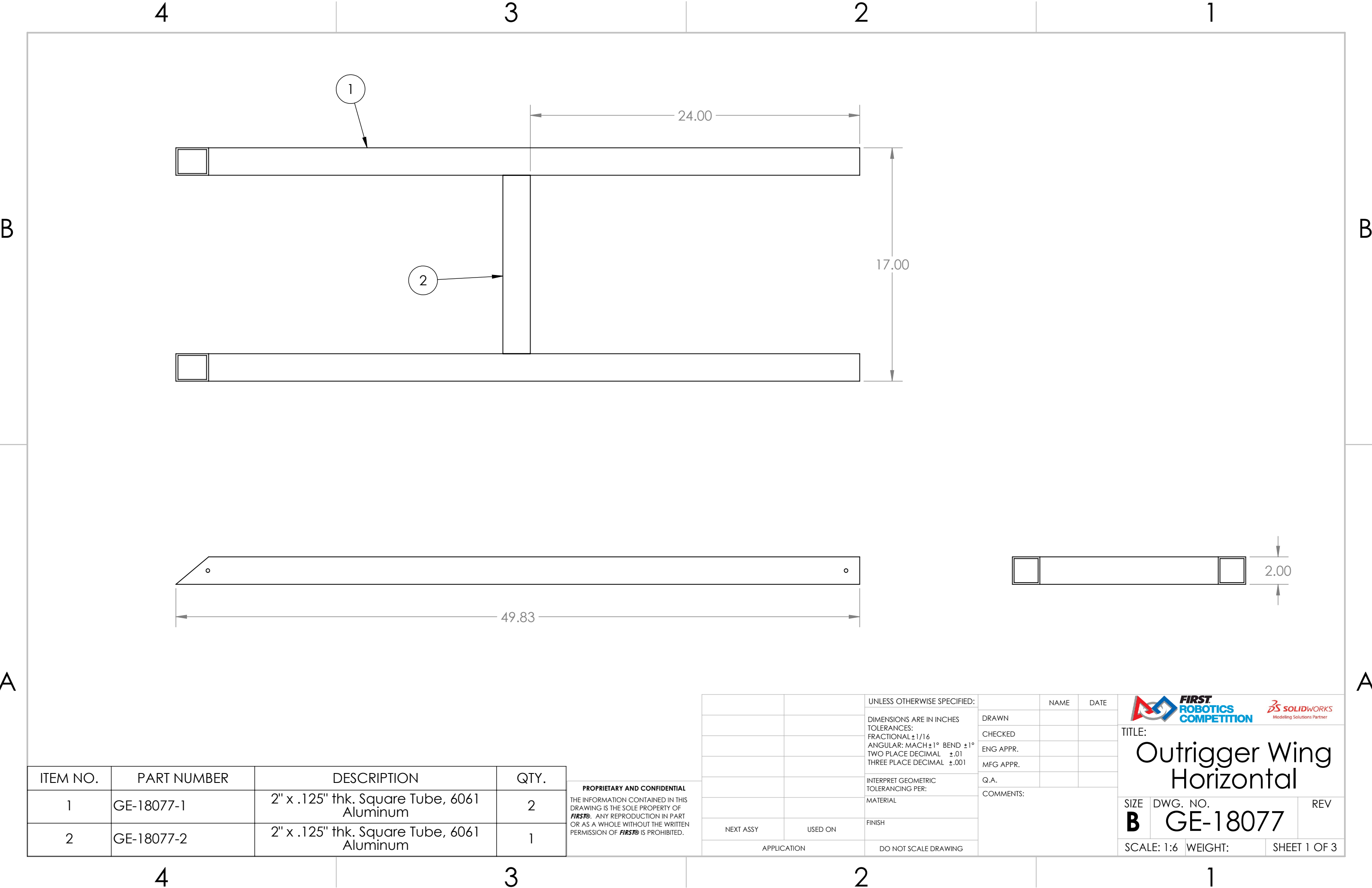
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		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <h1>Scale Angle Brace</h1>		
		TOLERANCES:	CHECKED					
		FRACTIONAL ±1/16	ENG APPR.					
		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.					
		TWO PLACE DECIMAL ±.01						
		THREE PLACE DECIMAL ±.001						
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:					
		FINISH				SIZE B	DWG. NO. GE-18076	REV
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:1	WEIGHT:	SHEET 1 OF 1

4

3

2



1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18077-1	2" x .125" thk. Square Tube, 6061 Aluminum	2
2	GE-18077-2	2" x .125" thk. Square Tube, 6061 Aluminum	1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



TITLE:
Outrigger Wing Horizontal

SIZE
B

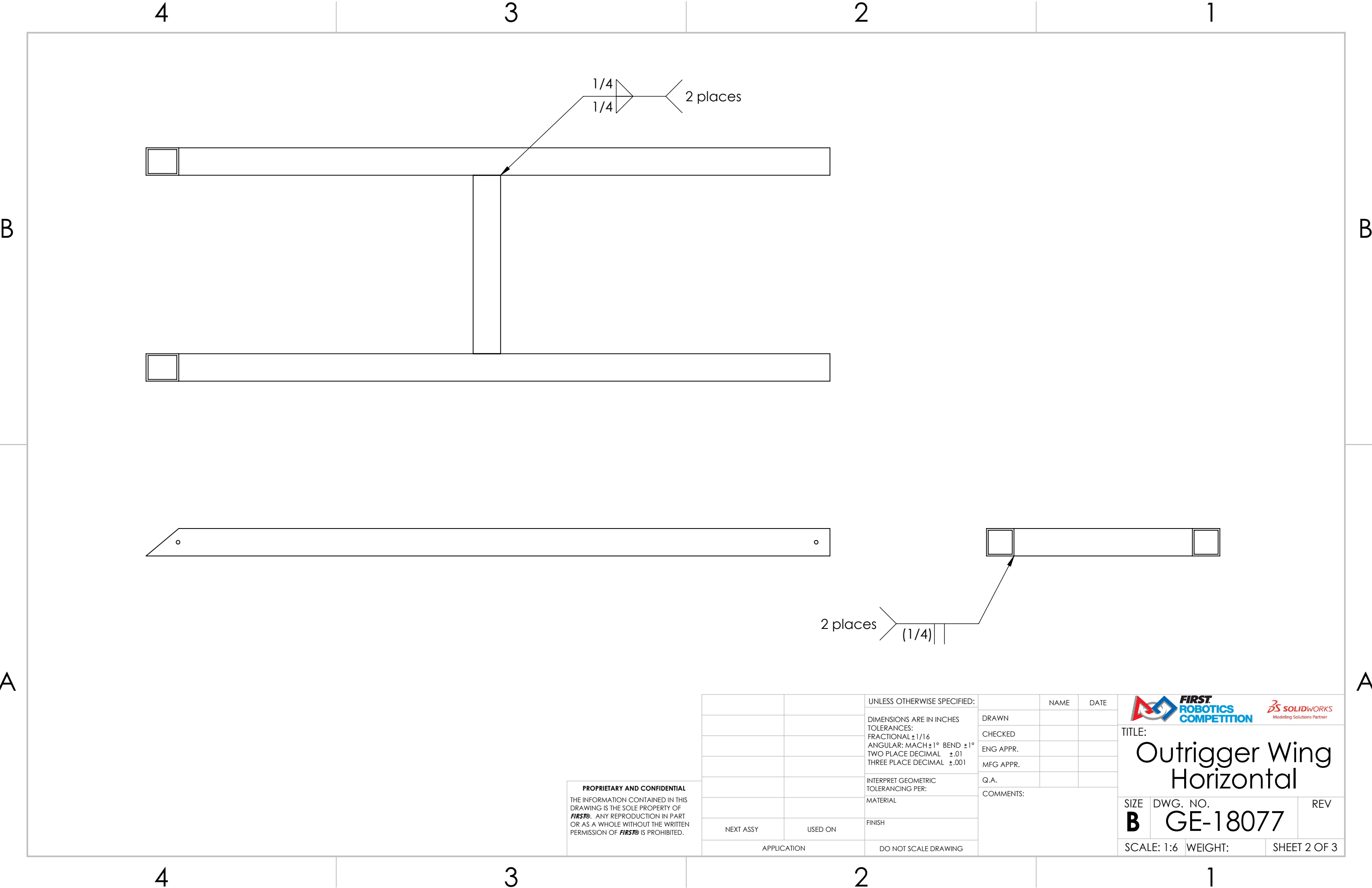
DWG. NO.
GE-18077

REV

SCALE: 1:6



WEIGHT:

SHEET 1 OF 3



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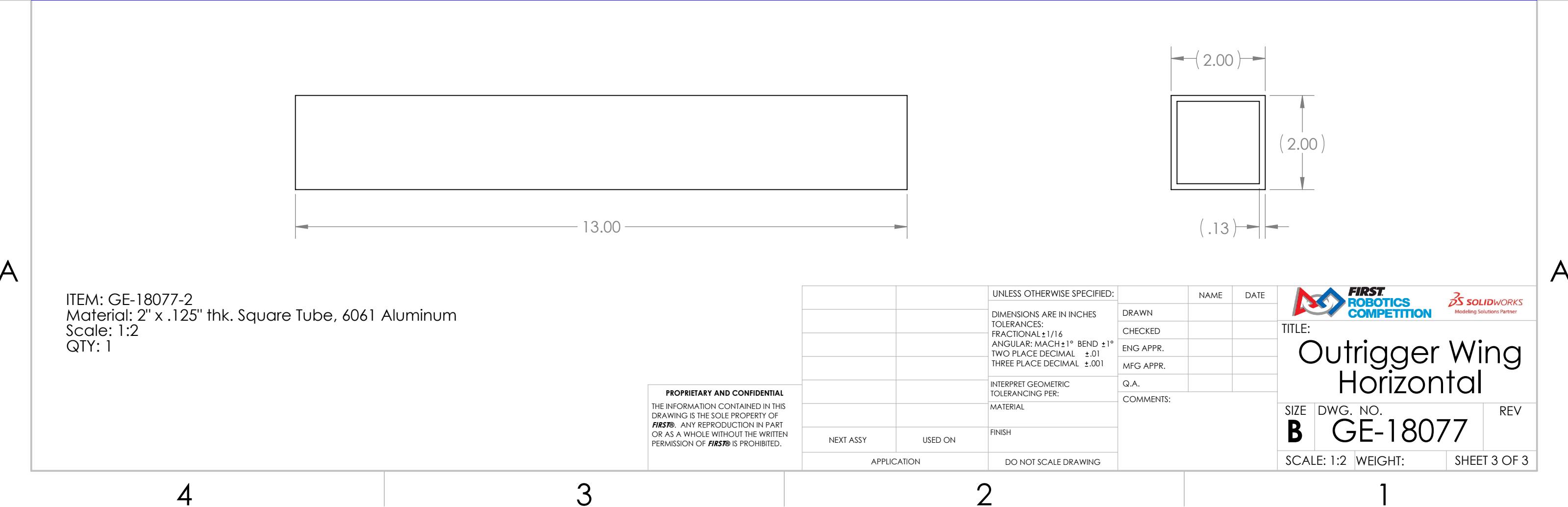
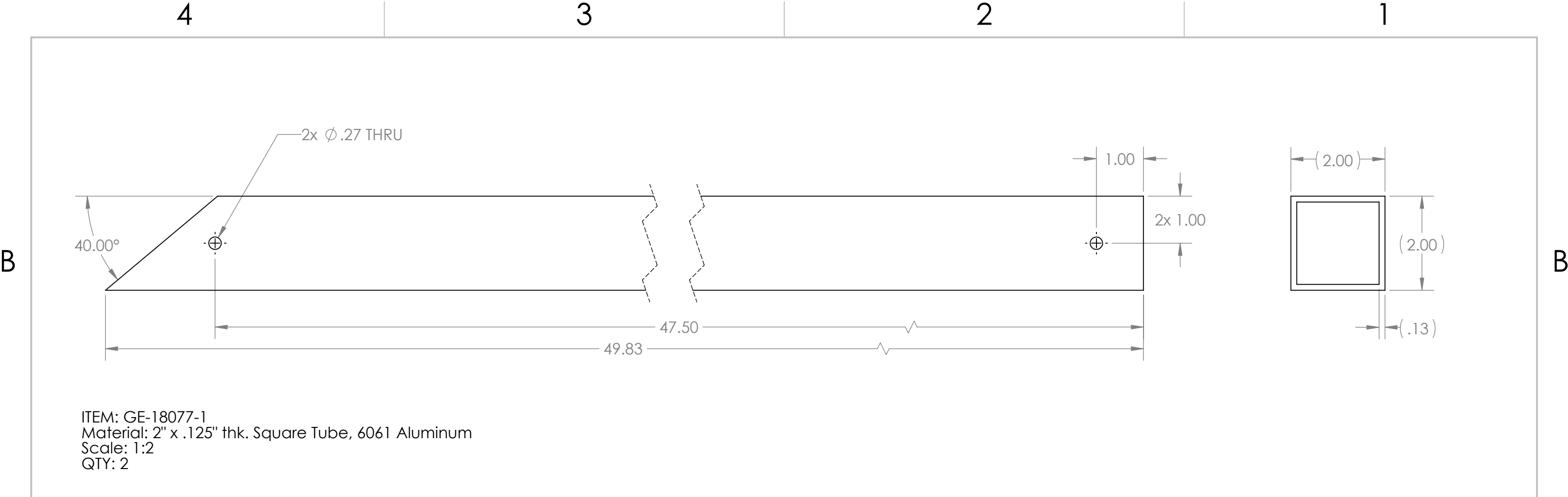
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			





TITLE:
**Outrigger Wing
Horizontal**

SIZE	DWG. NO.	REV
B	GE-18077	

SCALE: 1:6	WEIGHT:	SHEET 2 OF 3
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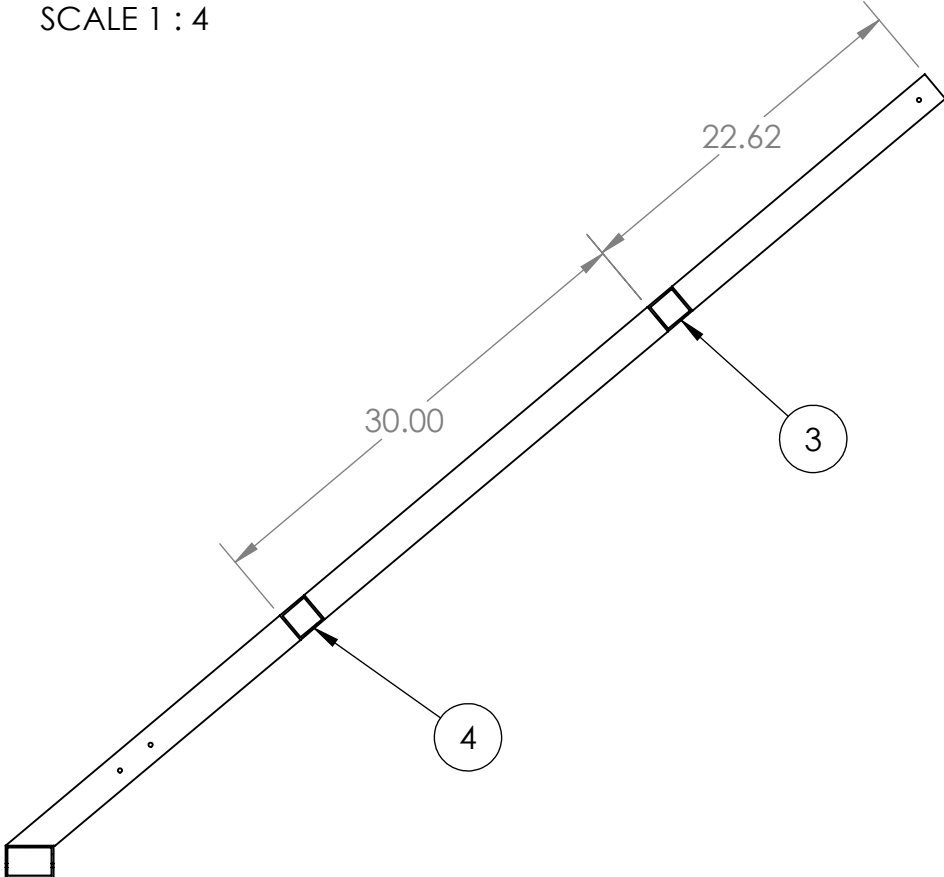
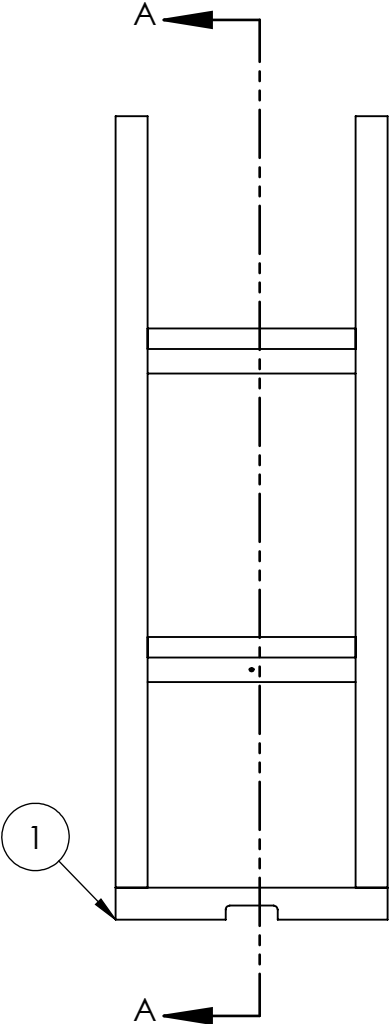
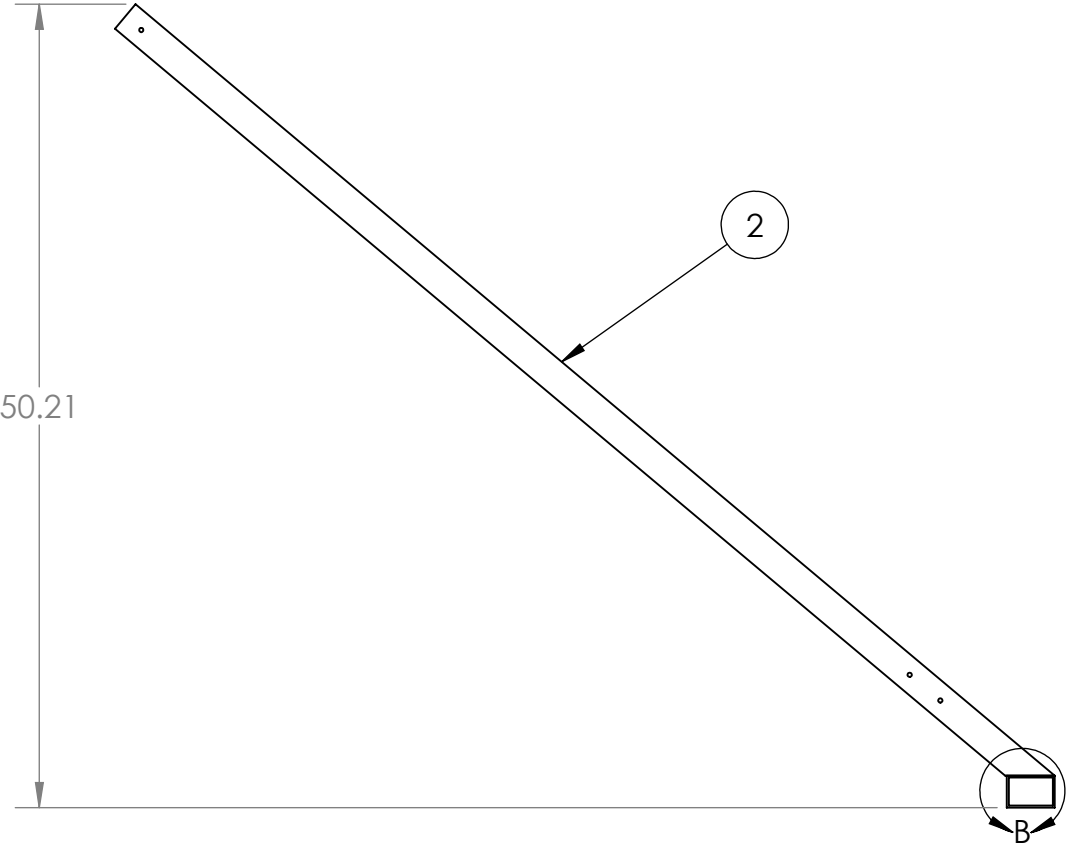
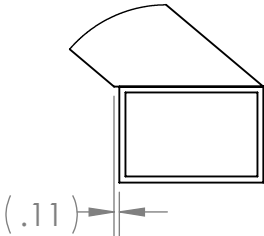
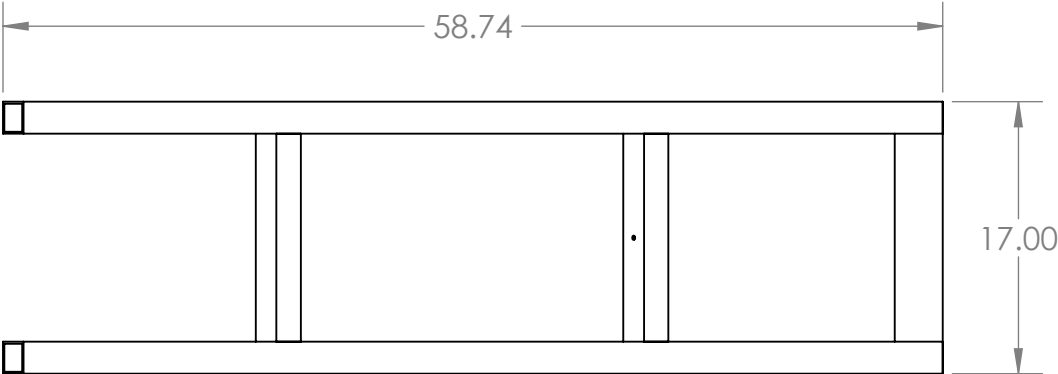
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		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.						
		TWO PLACE DECIMAL $\pm .01$							
		THREE PLACE DECIMAL $\pm .001$							
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			COMMENTS:			
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON					SIZE B	DWG. NO. GE-18077	REV	
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:2		WEIGHT:	SHEET 3 OF 3

4

3

2

1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18078-1	3" x 2" x .125" thk. Rectangular Tube, 6061 Aluminum	1
2	GE-18078-2	2" x .125" thk. Square Tube, 6061 Aluminum	2
3	GE-18078-3	2" x .125" thk. Square Tube, 6061 Aluminum	1
4	GE-18078-4	2" x .125" thk. Square Tube, 6061 Aluminum	1

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UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN INCHES		DRAWN	
TOLERANCES:		CHECKED	
FRACTIONAL $\pm 1/16$		ENG APPR.	
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$		MFG APPR.	
TWO PLACE DECIMAL $\pm .01$		Q.A.	
THREE PLACE DECIMAL $\pm .001$		COMMENTS:	
INTERPRET GEOMETRIC TOLERANCING PER:			
MATERIAL			
FINISH			
NEXT ASSY	USED ON		
APPLICATION		DO NOT SCALE DRAWING	

TITLE:		SIZE	DWG. NO.	REV
Outrigger Wing Diagonal		B	GE-18078	
SCALE: 1:12		WEIGHT:	SHEET 1 OF 4	

4

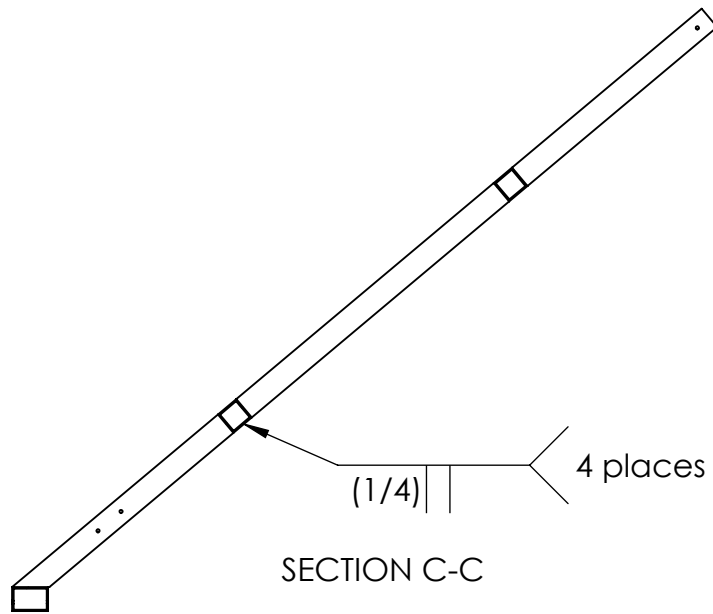
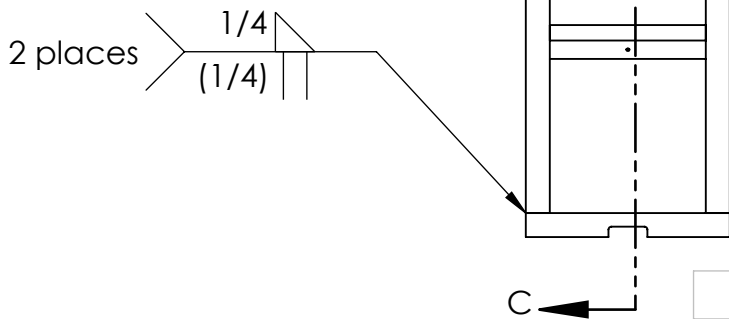
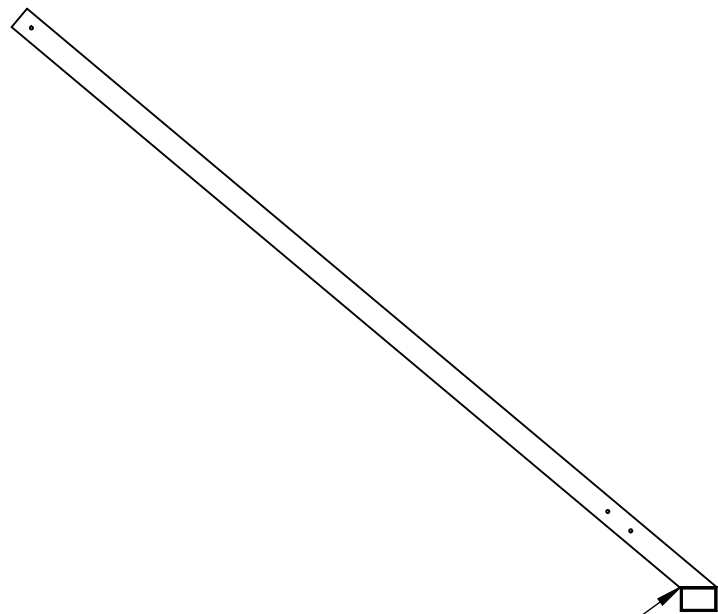
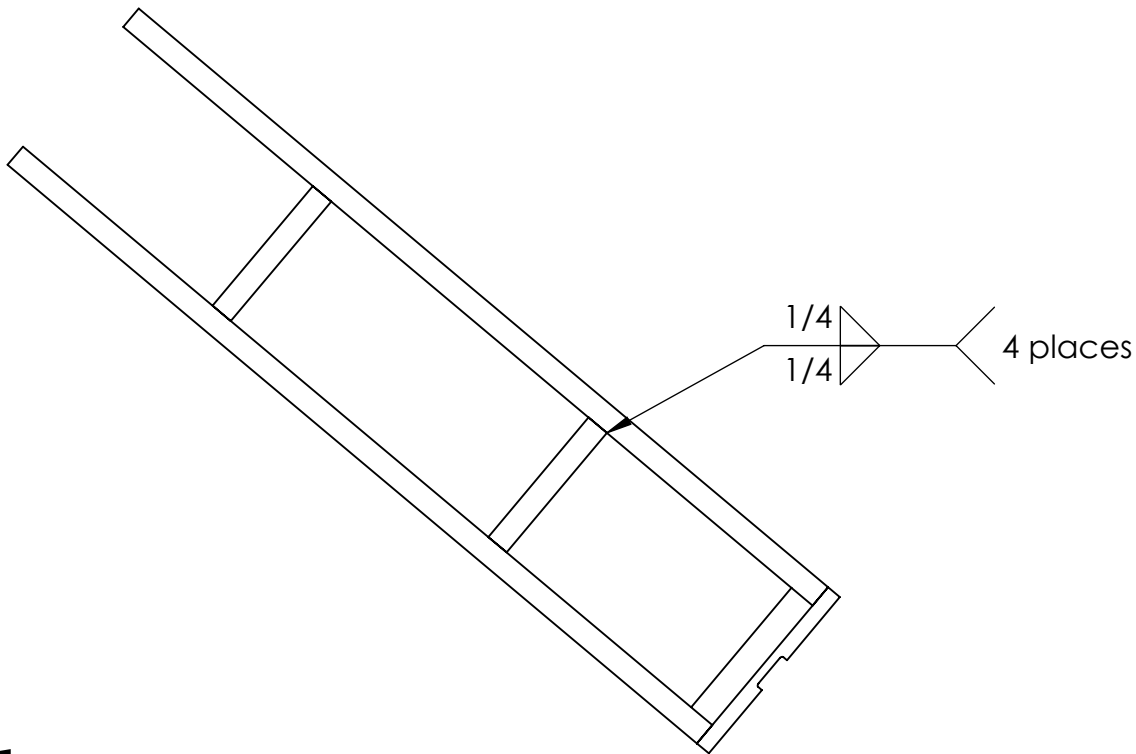
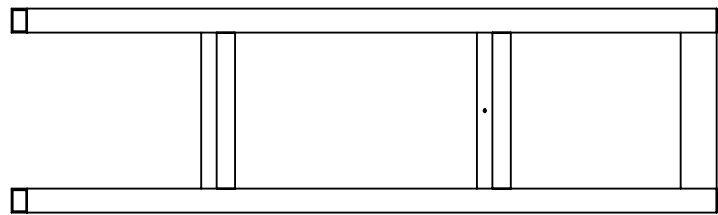
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1

B

B





SECTION C-C

A

A

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div>FIRST ROBOTICS COMPETITION</div></div> <div><div>SOLIDWORKS Modeling Solutions Partner</div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <div>Outrigger Wing Diagonal</div>		
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			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV <div>BGE-18078</div>		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						
						SCALE: 1:16	WEIGHT:	SHEET 2 OF 4

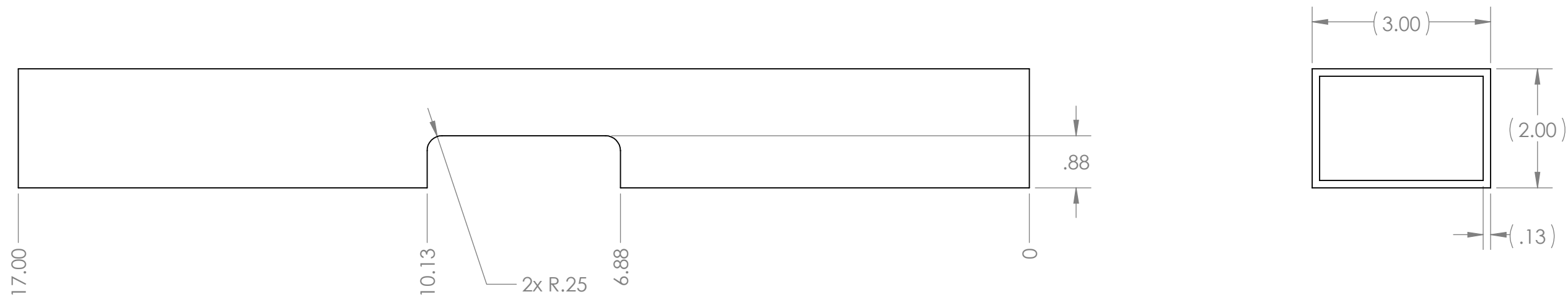
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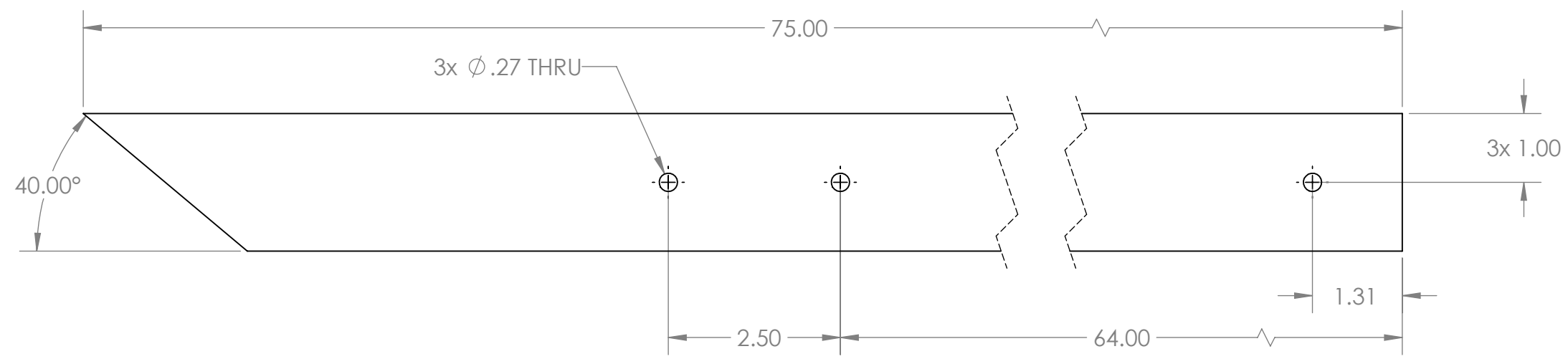
B



B

Item: GE-18078-1
Material: 3" x 2" x .125" thk. Rectangular Tube, 6061 Aluminum
Scale: 1:2
QTY: 1



A



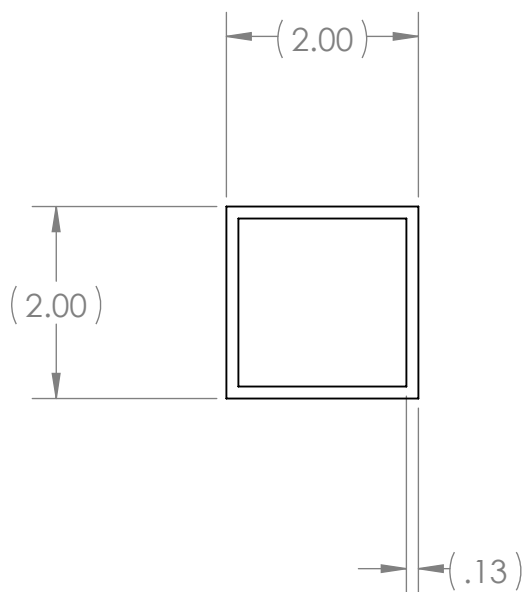
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Item: GE-18078-2
Material: 2" x .125" thk. Square Tube, 6061 Aluminum
Scale: 1:2
QTY: 2

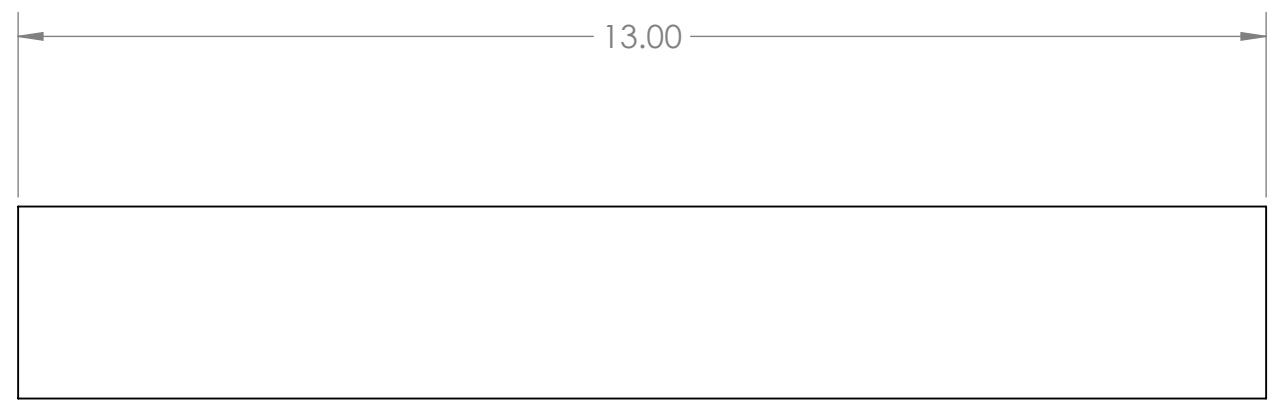
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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div><div>FIRST ROBOTICS COMPETITION</div></div><div><div>SOLIDWORKS Modeling Solutions Partner</div></div></div>			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Outrigger Wing Diagonal			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18078 SCALE: 1:2 WEIGHT: SHEET 3 OF 4			
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING							

B

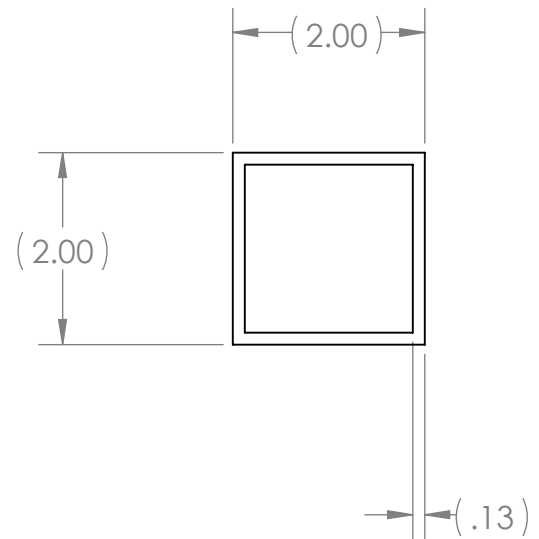


Item: GE-18078-3
Material: 2" x .125" thk. Square Tube, 6061 Aluminum
Scale: 1:2
QTY: 1

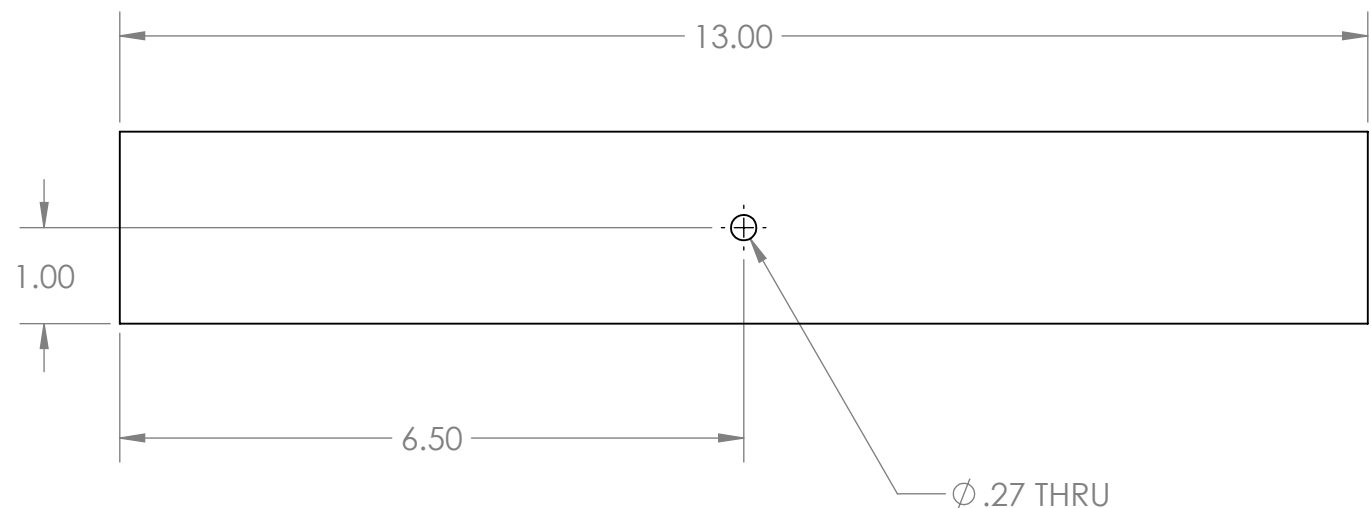


B

A




Item: GE-18078-4
Material: 2" x .125" thk. Square Tube, 6061 Aluminum
Scale: 1:2
QTY: 1



A

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL ±1/16	ENG APPR.		
		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.		
		TWO PLACE DECIMAL ±.01	Q.A.		
		THREE PLACE DECIMAL ±.001	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



TITLE:

Outrigger Wing Diagonal

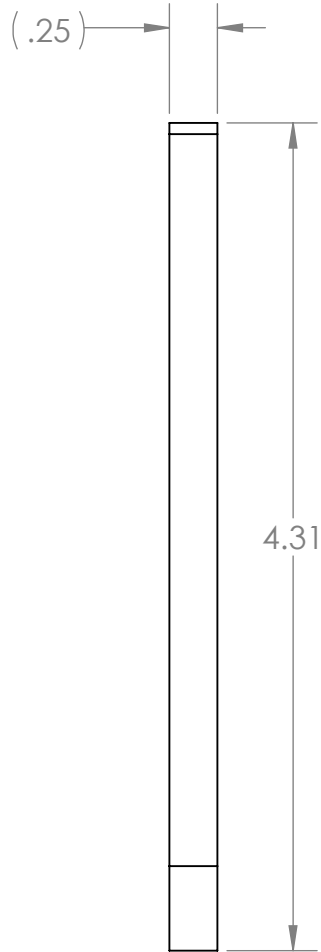
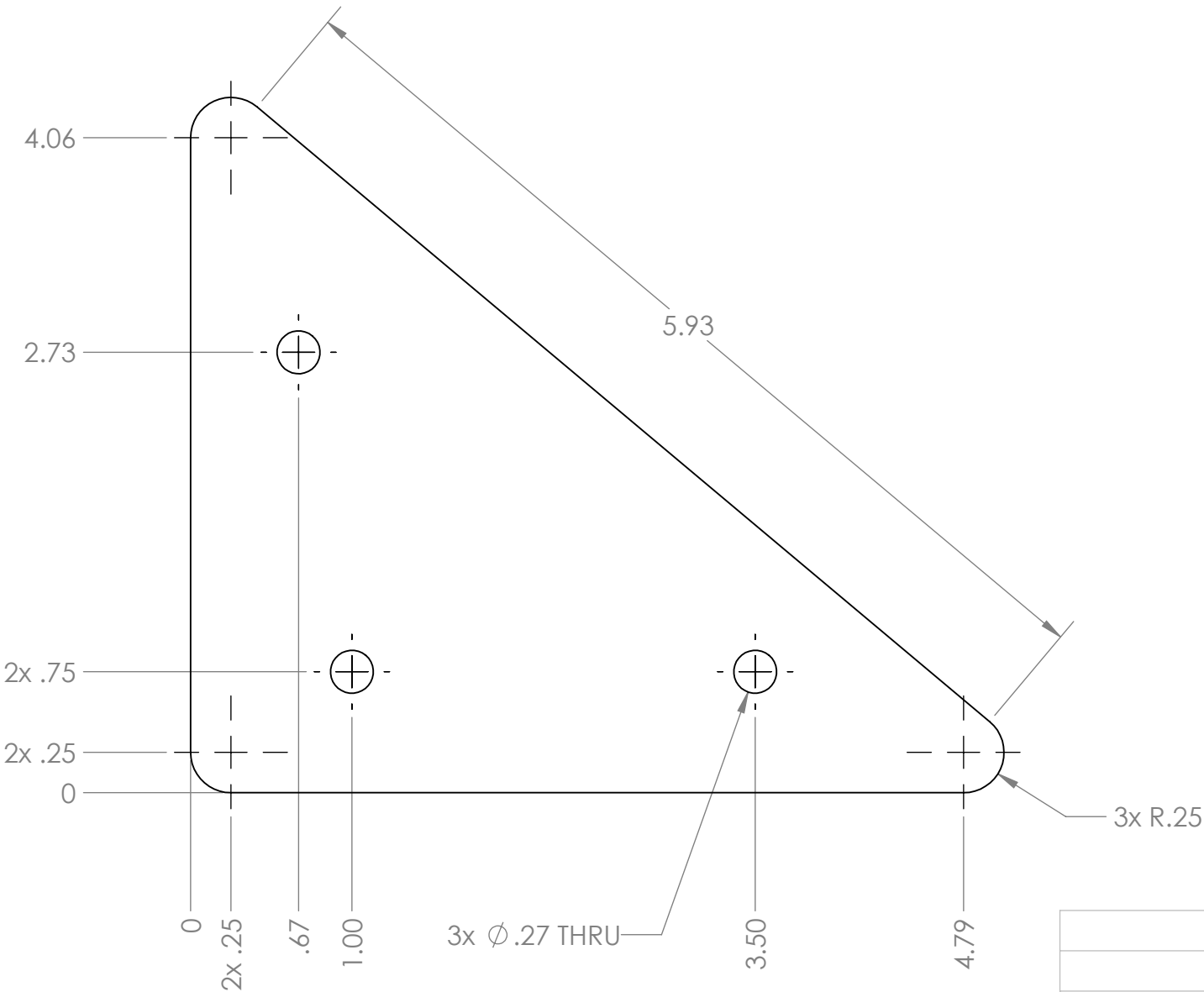
SIZE	DWG. NO.	REV
B	GE-18078	
SCALE: 1:2	WEIGHT:	SHEET 4 OF 4

4

3



2

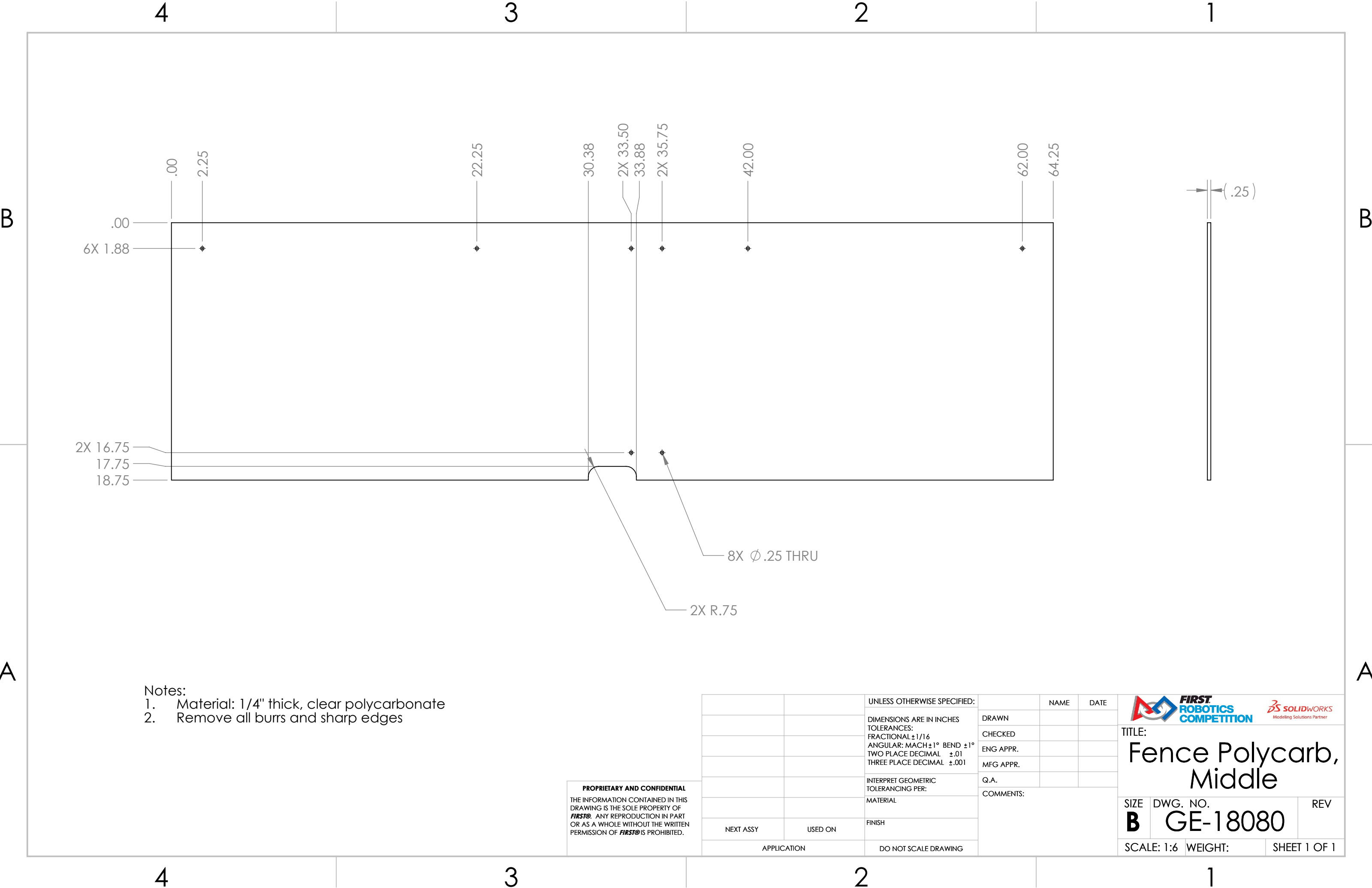
1



- Notes:
- Material: 1/4" thick, 6061 Aluminum
 - Remove all burrs and sharp edges.



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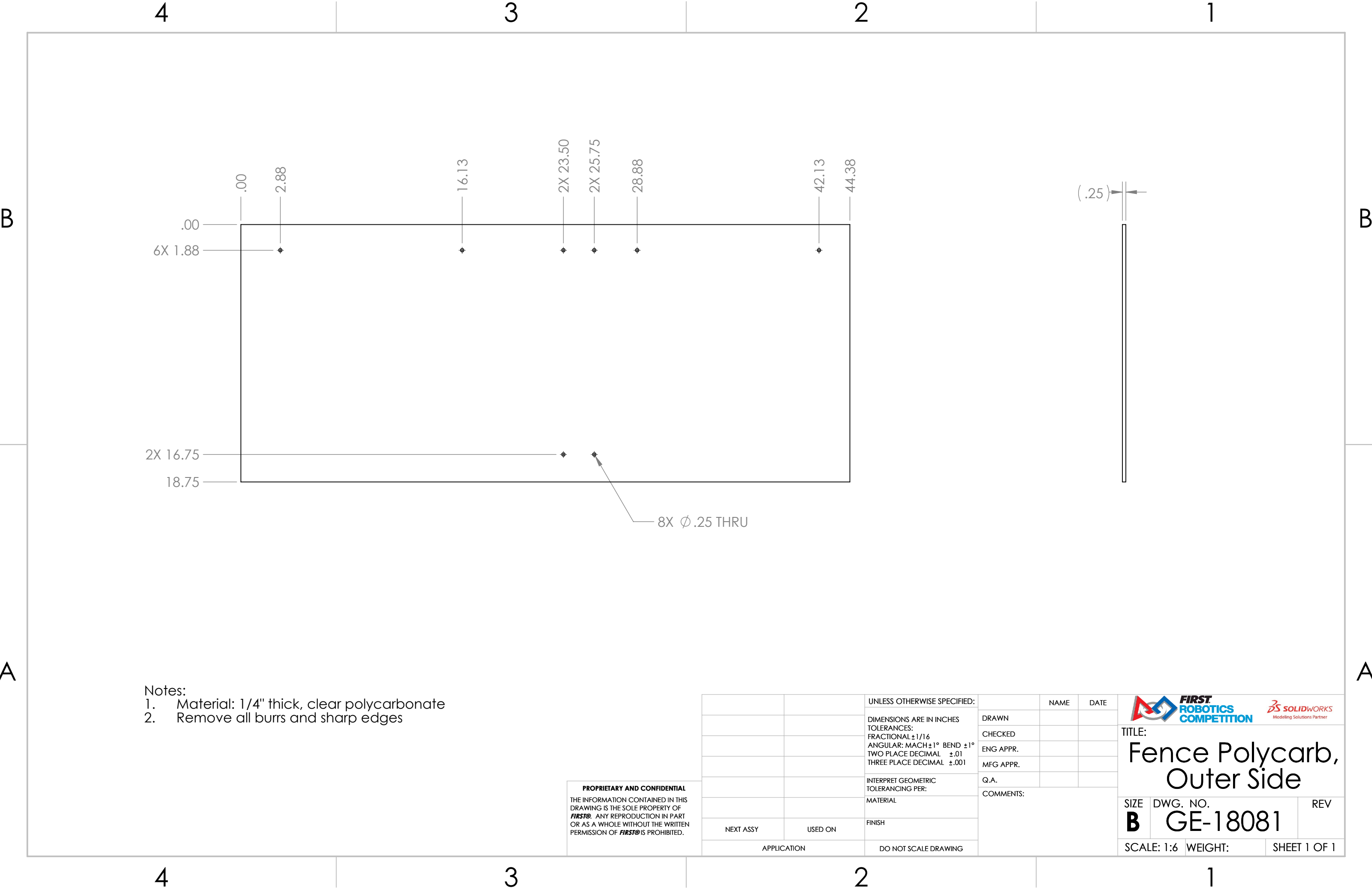
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			DRAWN			
			CHECKED			
			ENG APPR.			
			MFG APPR.			
			Q.A.			
			COMMENTS:			
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING				



- Notes:
- 1. Material: 1/4" thick, clear polycarbonate
 - 2. Remove all burrs and sharp edges



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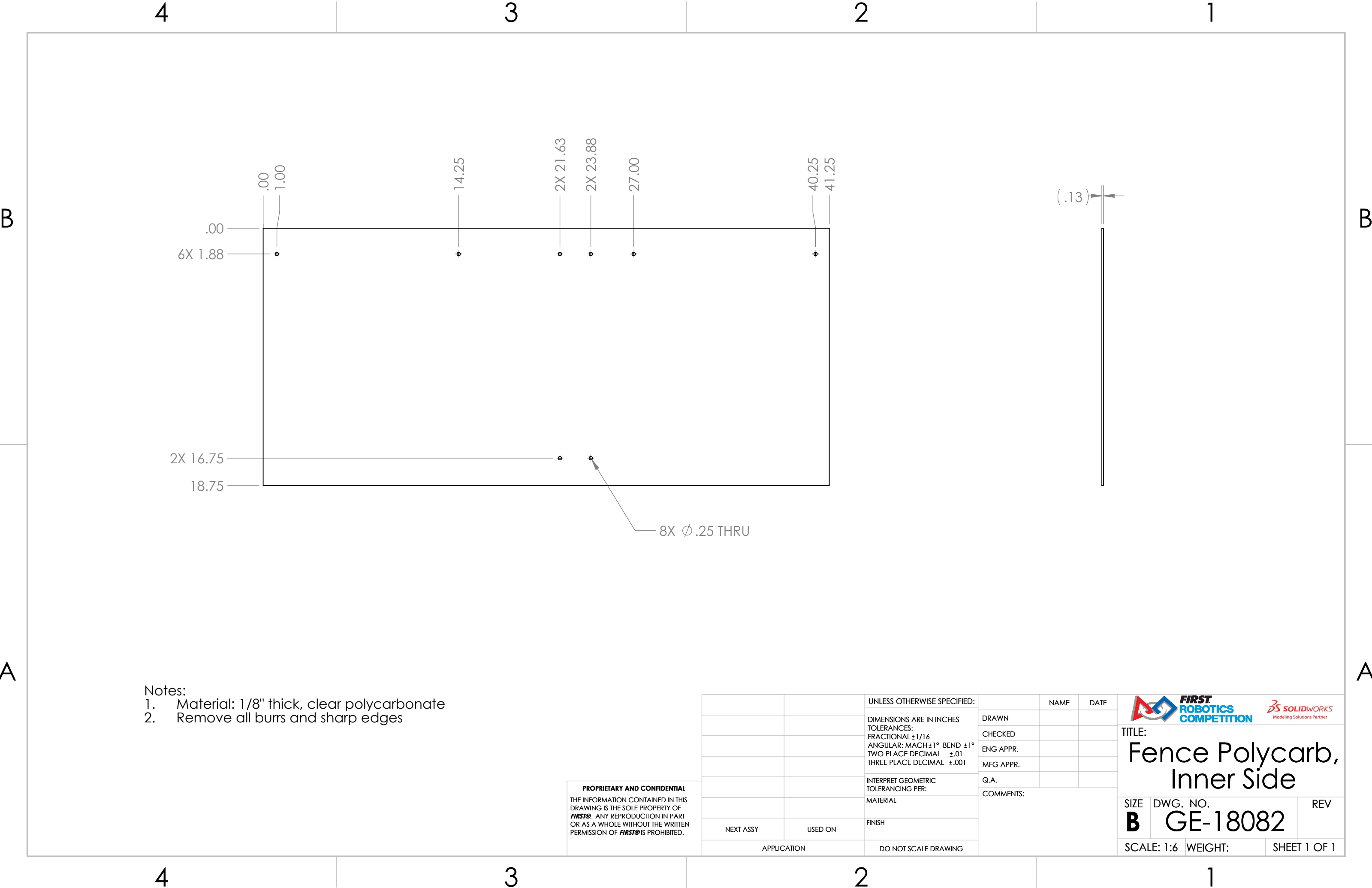
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			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18080		
		MATERIAL						
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:6 WEIGHT: SHEET 1 OF 1		



- Notes:
- 1. Material: 1/4" thick, clear polycarbonate
 - 2. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div> <div>TITLE: Fence Polycarb, Outer Side</div>	
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		TOLERANCES:	CHECKED				
		FRACTIONAL $\pm 1/16$	ENG APPR.				
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.				
		TWO PLACE DECIMAL $\pm .01$	Q.A.			SIZE DWG. NO. REV B GE-18081	
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:				
		INTERPRET GEOMETRIC TOLERANCING PER:					
		MATERIAL				SCALE: 1:6	WEIGHT:
		FINISH					SHEET 1 OF 1
NEXT ASSY	USED ON	APPLICATION	DO NOT SCALE DRAWING				



B

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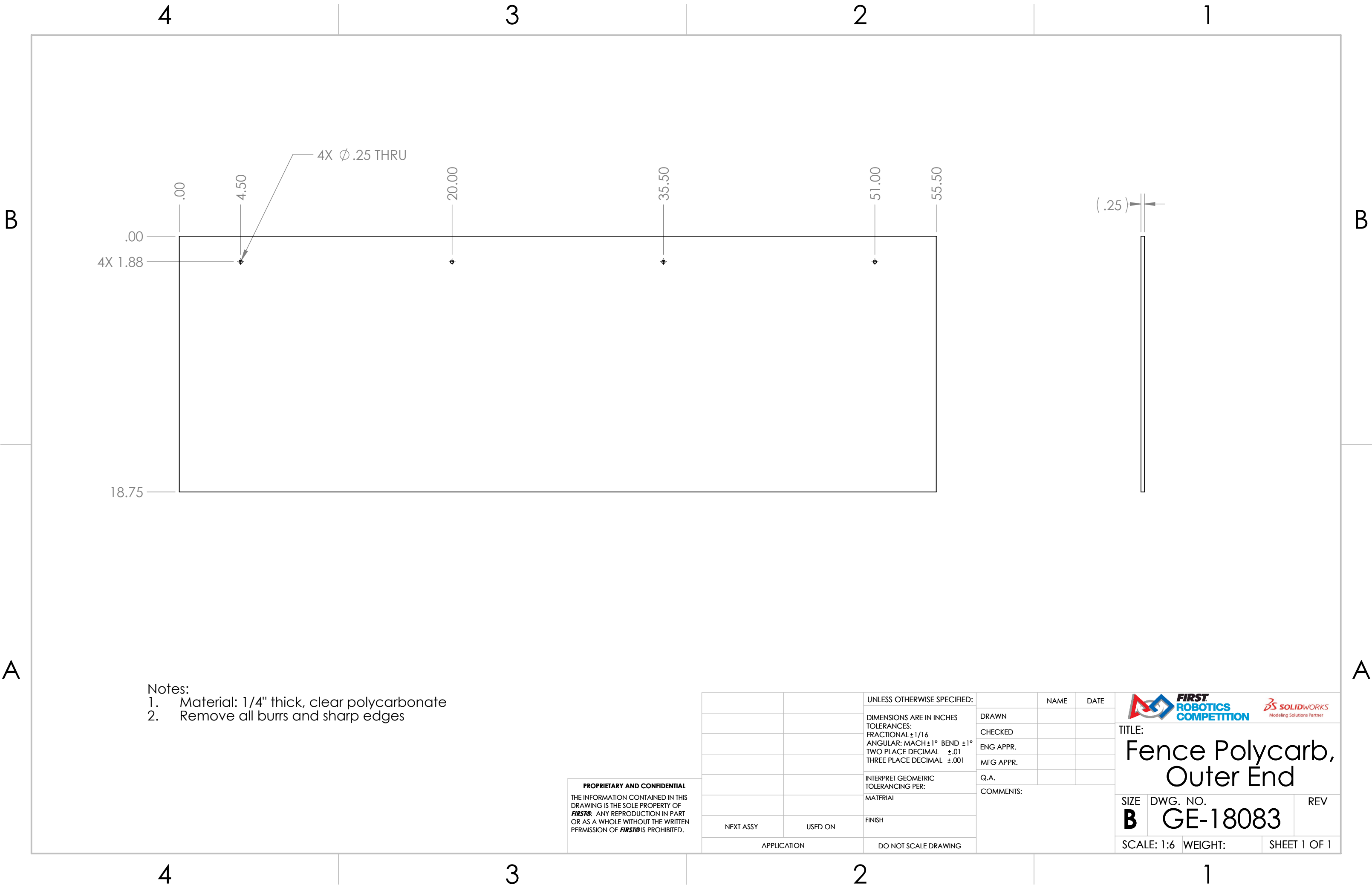
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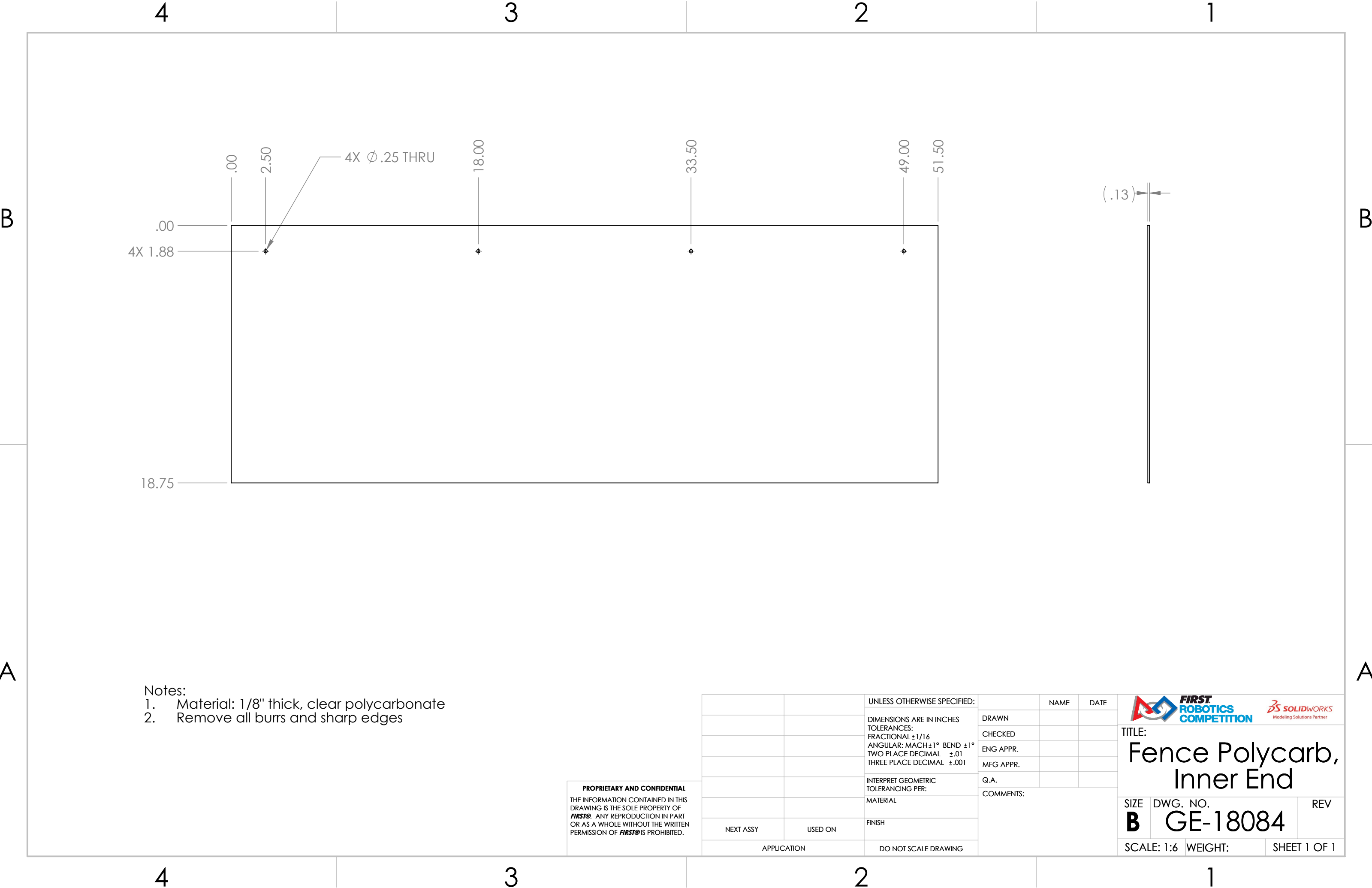
Notes:

1. Material: 1/8" thick, clear polycarbonate
2. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Fence Polycarb, Inner Side		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18082		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:6 WEIGHT: SHEET 1 OF 1		





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B

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Notes:

1. Material: 1/8" thick, clear polycarbonate
2. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Fence Polycarb, Inner End		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:			SIZE	DWG. NO.	REV
NEXT ASSY	USED ON	FINISH				B	GE-18084	
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:6	WEIGHT:	SHEET 1 OF 1

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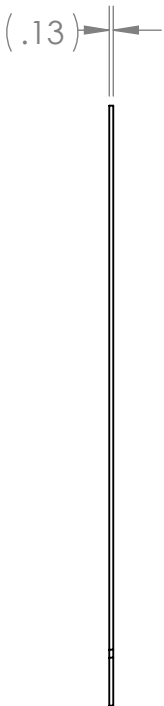
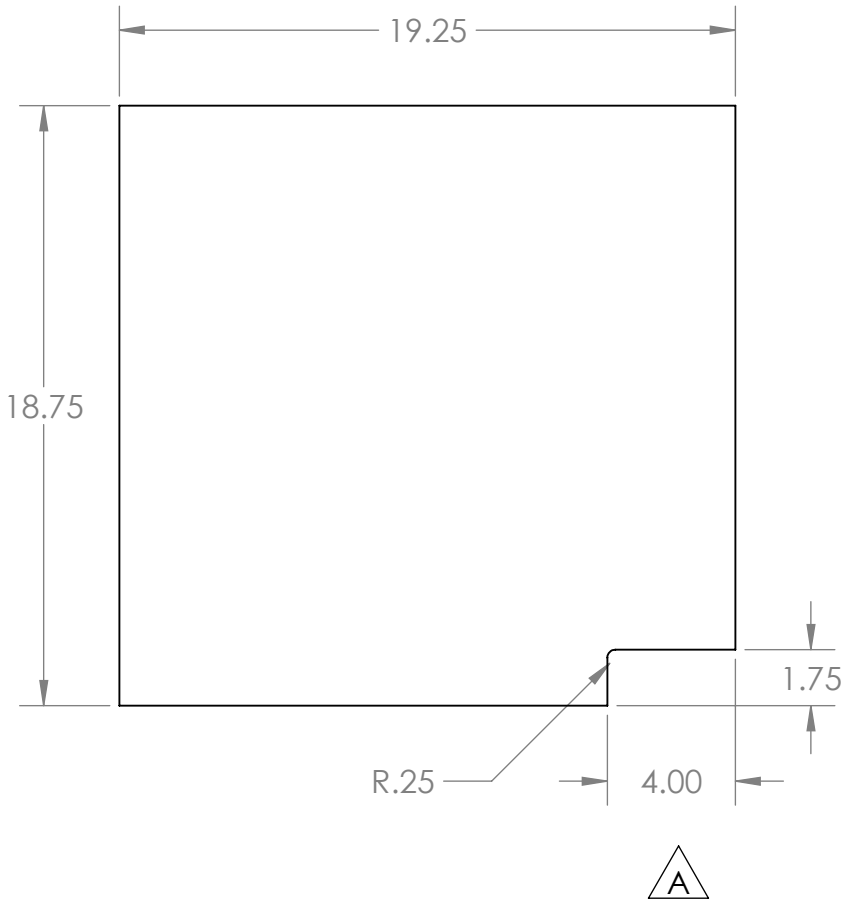
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1

REVISIONS				
ZONE	REV.	DESCRIPTION	DATE	APPROVED
A3	A	Added notch	12/2/2017	DAF



- Notes:
1. Material: 1/8" thick, clear polycarbonate
 2. Remove all burrs and sharp edges

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 			
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Fence Polycarb, Guard			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18085 A			
		MATERIAL							
NEXT ASSY	USED ON	FINISH							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:6		WEIGHT:	SHEET 1 OF 1

4

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2

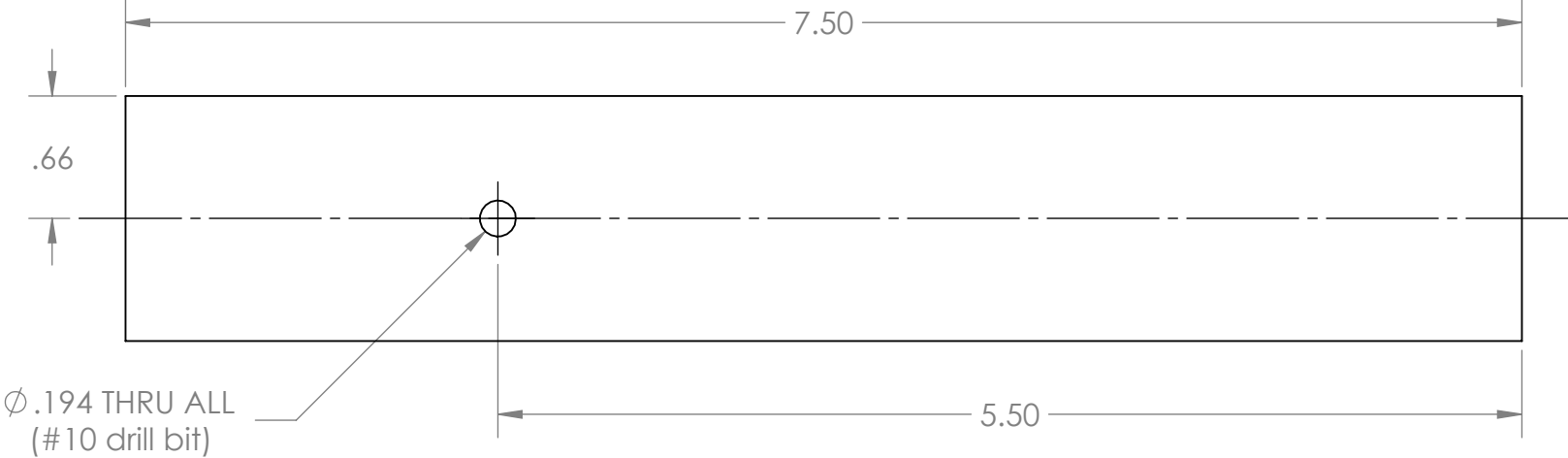
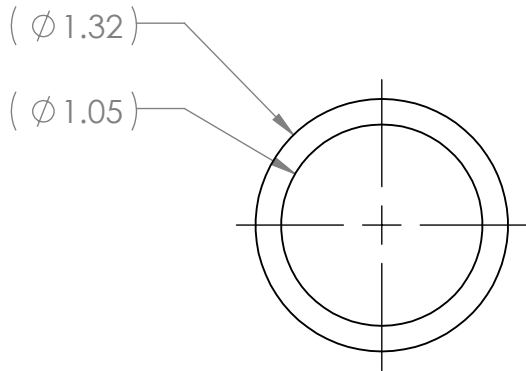
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- Notes:
- 1. Material: 1" Schedule 40 Pipe, 6061 Aluminum
 - 2. Remove all burrs and sharp edges

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL ±1/16	ENG APPR.		
		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.		
		TWO PLACE DECIMAL ±.01	Q.A.		
		THREE PLACE DECIMAL ±.001	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			



TITLE: Fence Pin					
SIZE B	DWG. NO. GE-18086			REV A	
SCALE: 1:1		WEIGHT:		SHEET 1 OF 1	

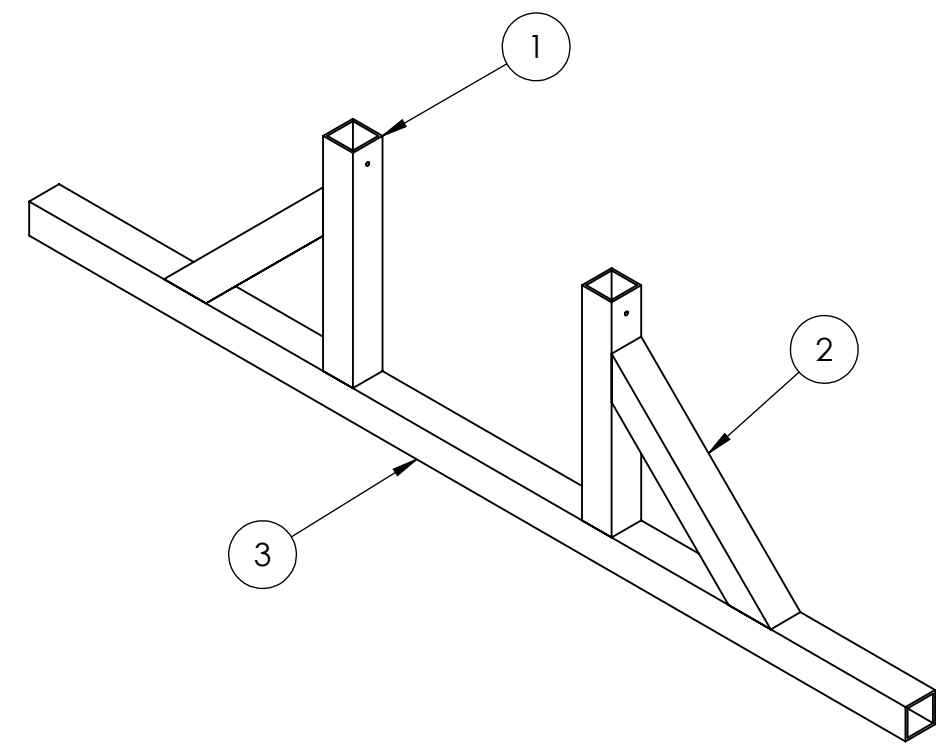
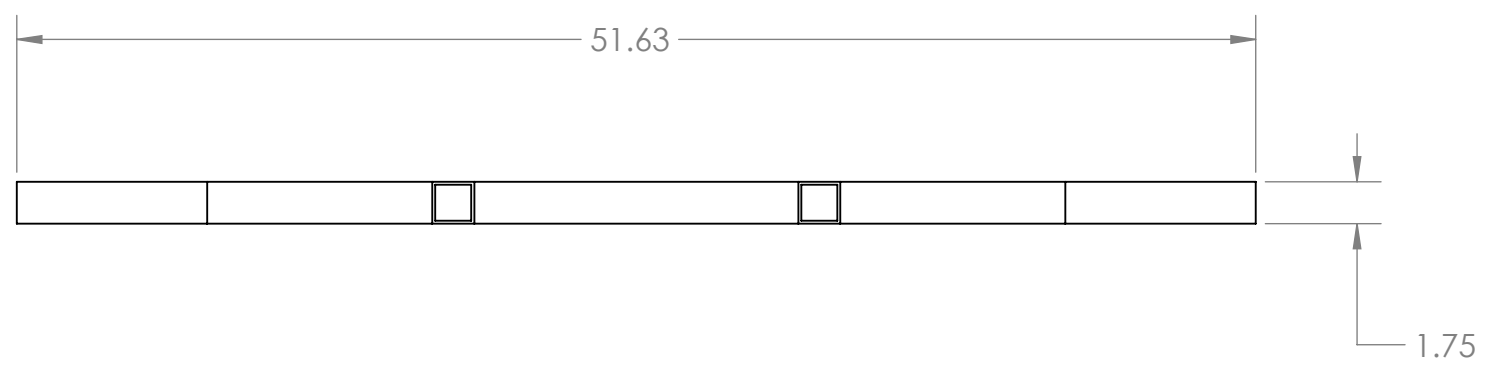
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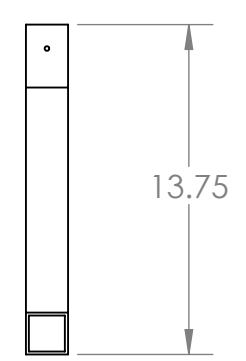
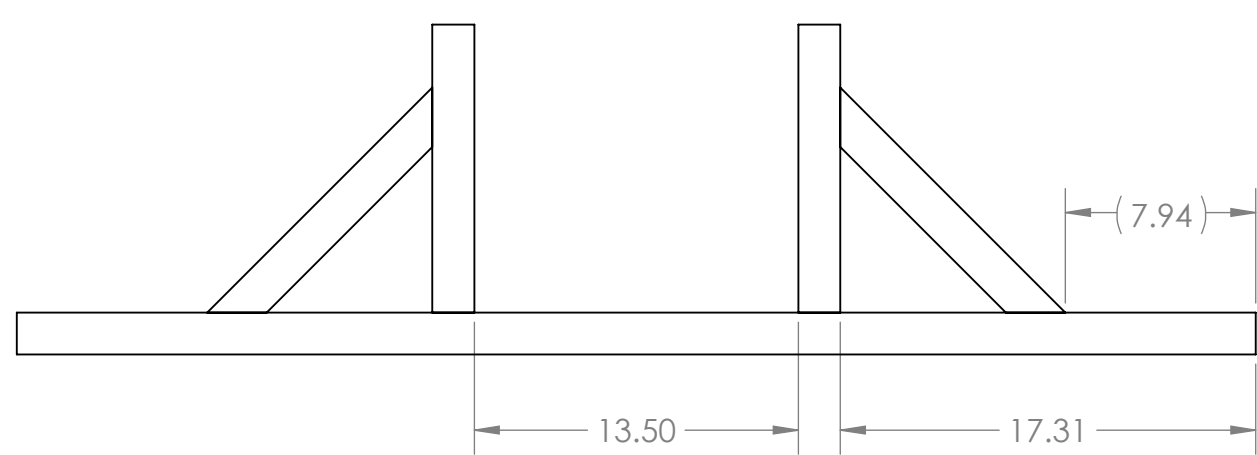
1

B



B



A



A

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18087-1	1.75" x .125" thk. Square Tube, 6063 Aluminum	2
2	GE-18087-2	1.75" x .125" thk. Square Tube, 6063 Aluminum	2
3	GE-18087-3	1.75" x .125" thk. Square Tube, 6063 Aluminum	1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div></div><div>TITLE: Switch Fence Brace</div><div>SIZE B DWG. NO. GE-18087 REV</div><div>SCALE: 1:8 WEIGHT: SHEET 1 OF 3</div></div>		
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN					
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:					
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						

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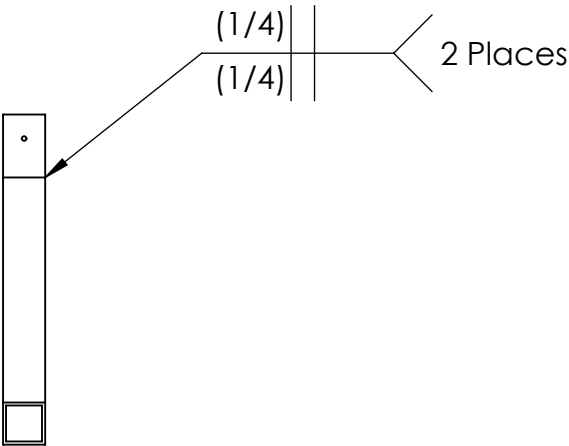
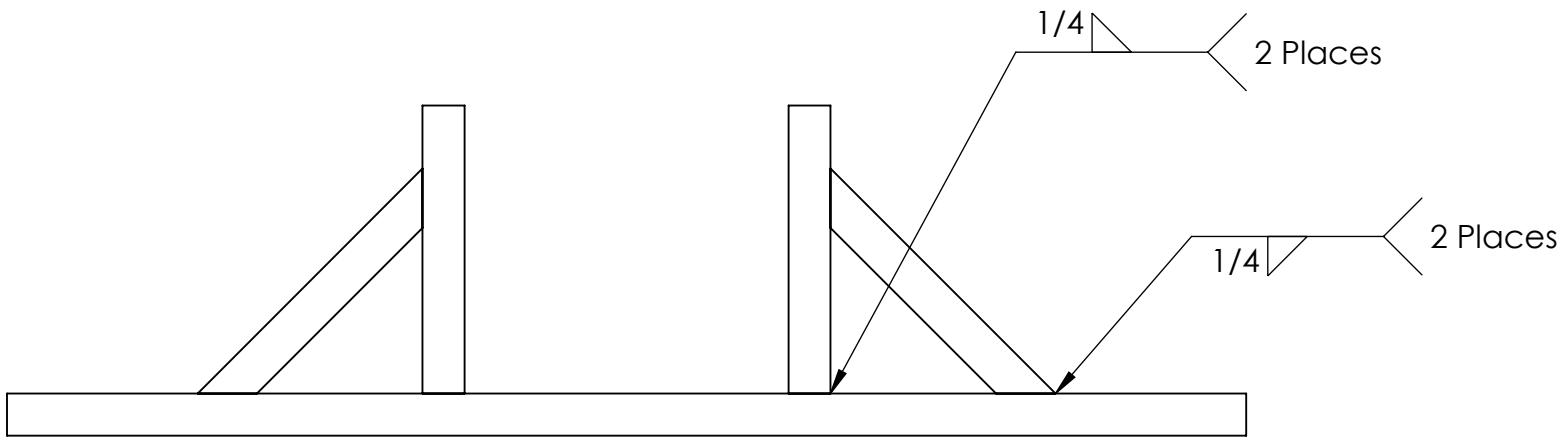
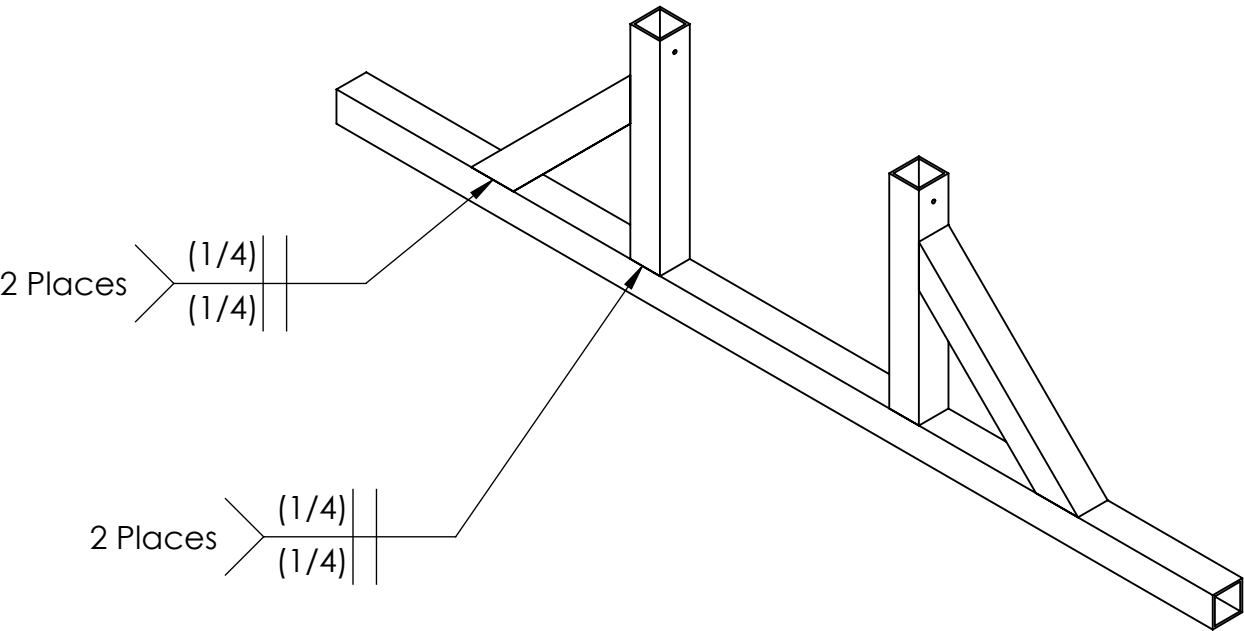
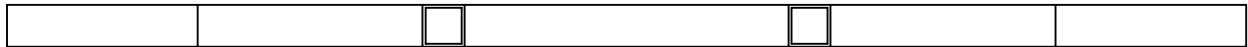
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			DRAWN			
			CHECKED			
			ENG APPR.			
			MFG APPR.			
			Q.A.			
			COMMENTS:			
NEXT ASSY	USED ON					SIZE DWG. NO. REV
						B GE-18087
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8 WEIGHT: SHEET 2 OF 3

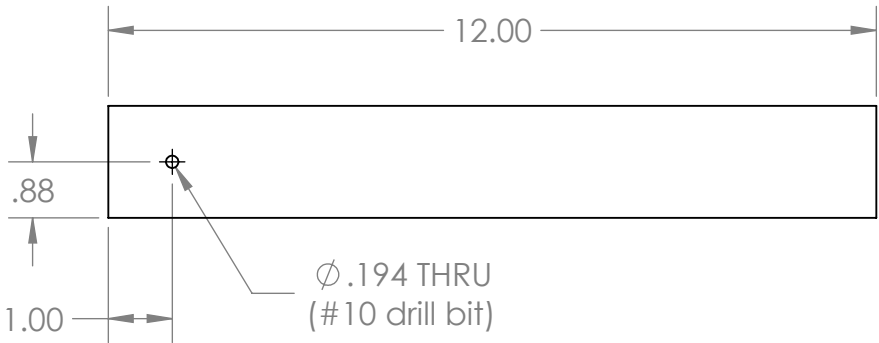
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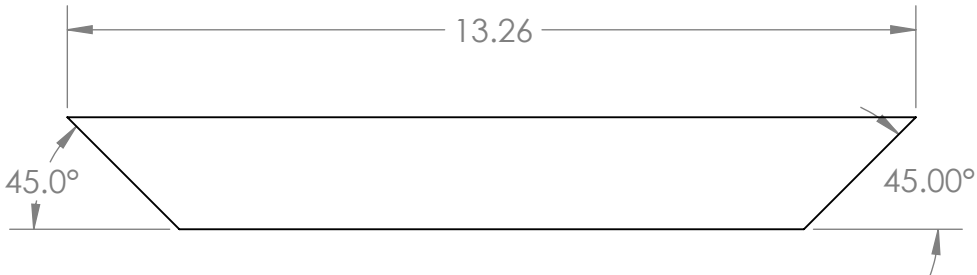
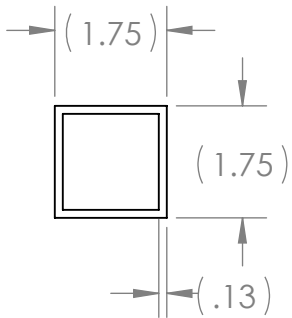
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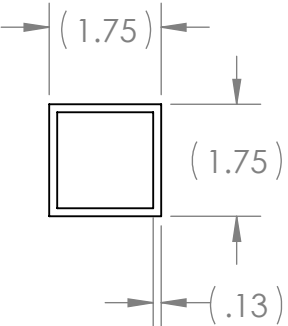
B



Item: GE-18087-1
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
QTY: 2

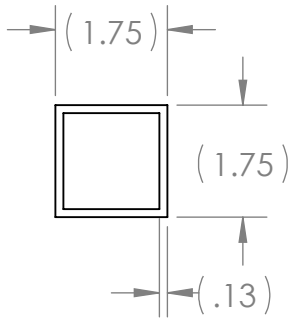
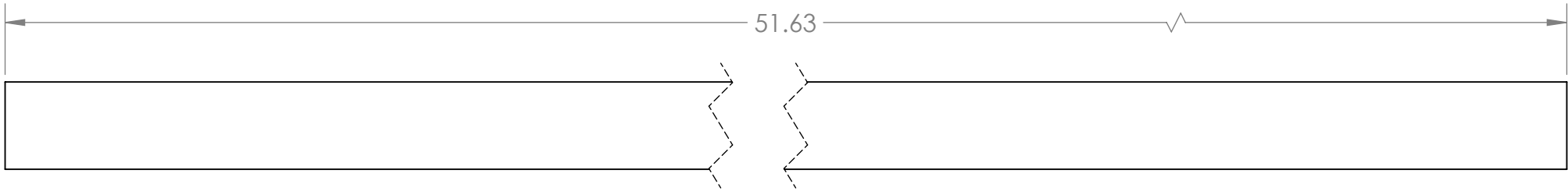


Item: GE-18087-2
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
QTY: 2



B



A



A

Item: GE-18087-3
Material: 1.75" x .125" thk. Square Tube, 6063 Aluminum
QTY: 1

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		UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$ INTERPRET GEOMETRIC TOLERANCING PER: MATERIAL FINISH		NAME	DATE	<div></div> <div>TITLE: Switch Fence Brace</div> <div>SIZE B DWG. NO. GE-18087 REV</div> <div>SCALE: 1:3 WEIGHT: SHEET 3 OF 3</div>
			DRAWN			
			CHECKED			
			ENG APPR.			
			MFG APPR.			
			Q.A.			COMMENTS:
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING				

4

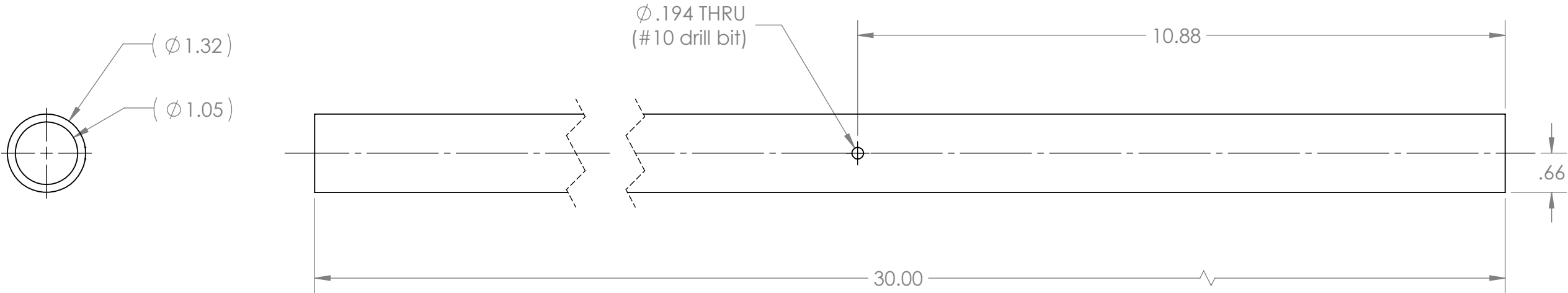
3

2

1

B

B





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- Notes:
- 1. Material: 1" Schedule 40 Pipe, 6061 Aluminum
 - 2. Remove all burrs and sharp edges

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: Switch Fence Brace Pin			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18088			
		MATERIAL	COMMENTS:						
NEXT ASSY	USED ON	FINISH							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:2		WEIGHT:	SHEET 1 OF 1

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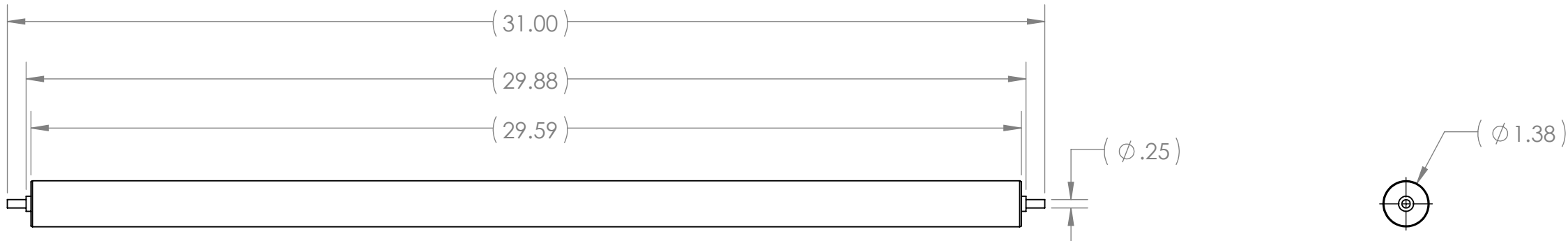
3

2

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B

B





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Notes:

- 1. Description: 1-3/8 Dia. Conveyor Roller, for 30" frame width
- 2. Material: Galvanized Steel
- 3. Source: McMaster-Carr
- 4. Item#: 2282T25

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN	daf	11/26/17	TITLE: Roller, Conveyor	
			CHECKED				
			ENG APPR.				
			MFG APPR.				
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18090	
		MATERIAL	COMMENTS:				
		FINISH					
NEXT ASSY	USED ON					SCALE: 1:4 WEIGHT: SHEET 1 OF 1	
APPLICATION		DO NOT SCALE DRAWING					

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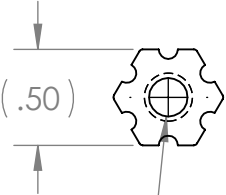
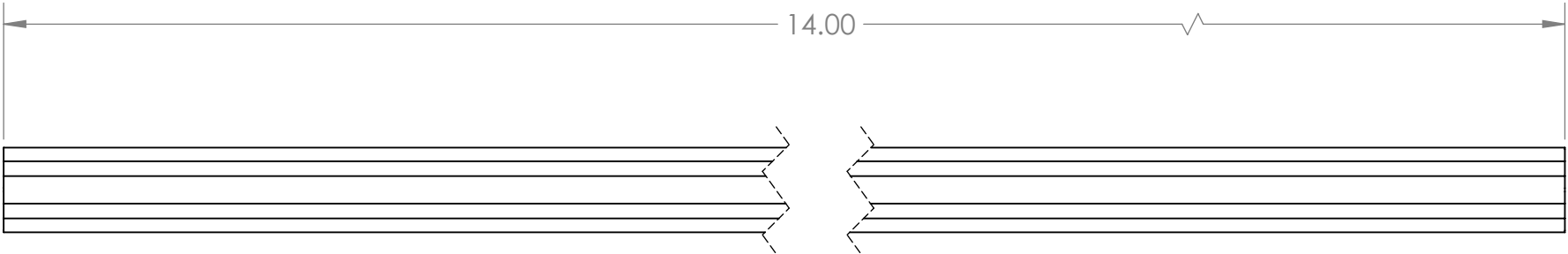
3

2

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B



B



2X 1/4-20 UNC ⌵ .50 Both Ends

- Notes:
- 1. Material: Aluminum
 - 2. Vendor: AndyMark
 - 3. Remove all burrs or sharp edges

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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE	 			
		DIMENSIONS ARE IN INCHES	DRAWN	DAF	11/26/17	TITLE: <h1>Churro, 14"</h1>		
		TOLERANCES: FRACTIONAL $\pm 1/16$	CHECKED					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	ENG APPR.					
		TWO PLACE DECIMAL $\pm .01$	MFG APPR.					
		THREE PLACE DECIMAL $\pm .001$	Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18091		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:1	WEIGHT:	SHEET 1 OF 1

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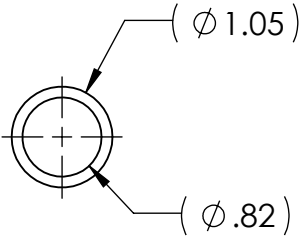
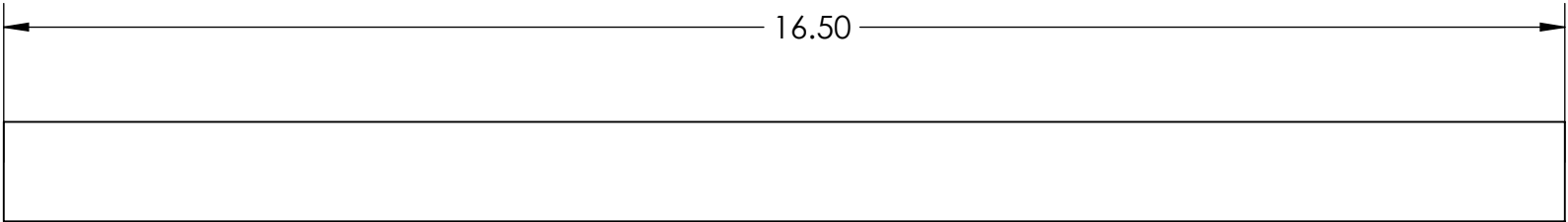
3

2

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B



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Notes:

- 1. Material: 3/4" Schedule 40 Pipe, White PVC
- 2. Remove all burrs and sharp edges

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN	DAF	11/26/17	TITLE: Handle, Chute		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18092		
		MATERIAL	COMMENTS:					
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

4

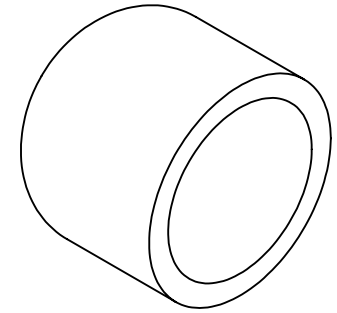
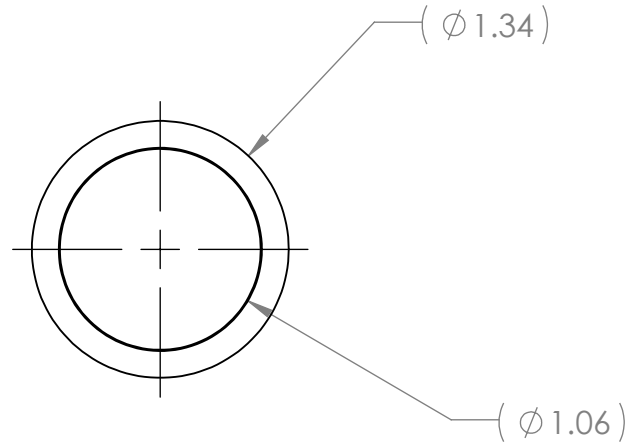
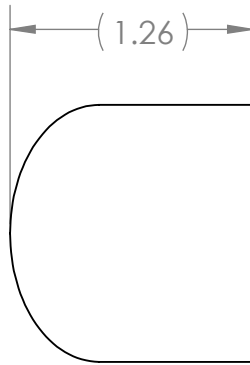
3

2

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Notes:

1. Description: End Cap for 3/4" Schedule 40 Pipe
2. Material: White PVC

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			



FIRST
ROBOTICS
COMPETITION

SOLIDWORKS
Modeling Solutions Partner

TITLE:

End Cap, PVC

SIZE	DWG. NO.	REV
A	GE-18093	
SCALE: 1:1	WEIGHT:	SHEET 1 OF 1

4

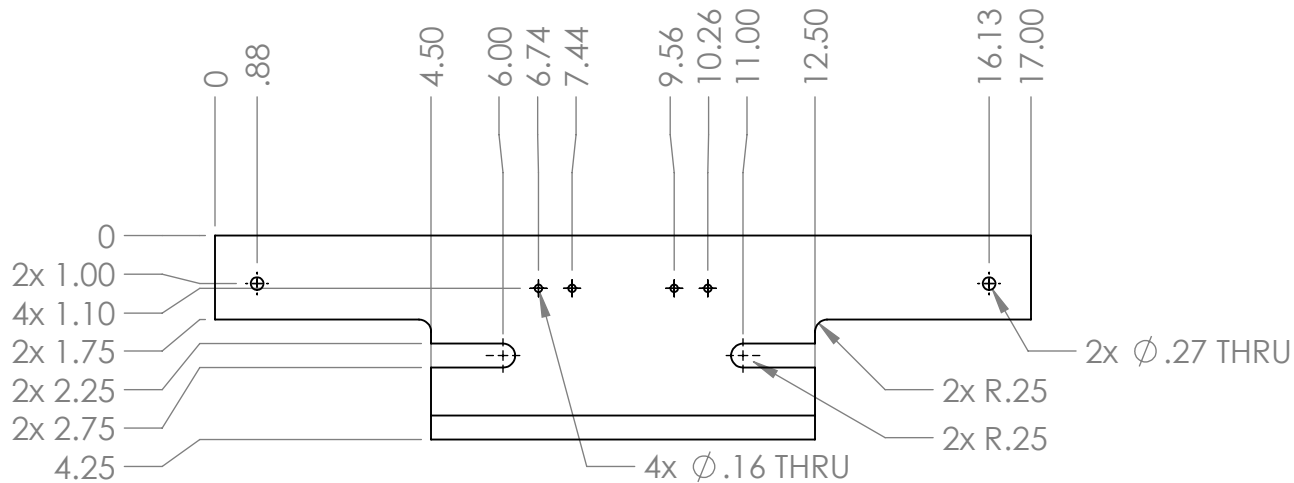
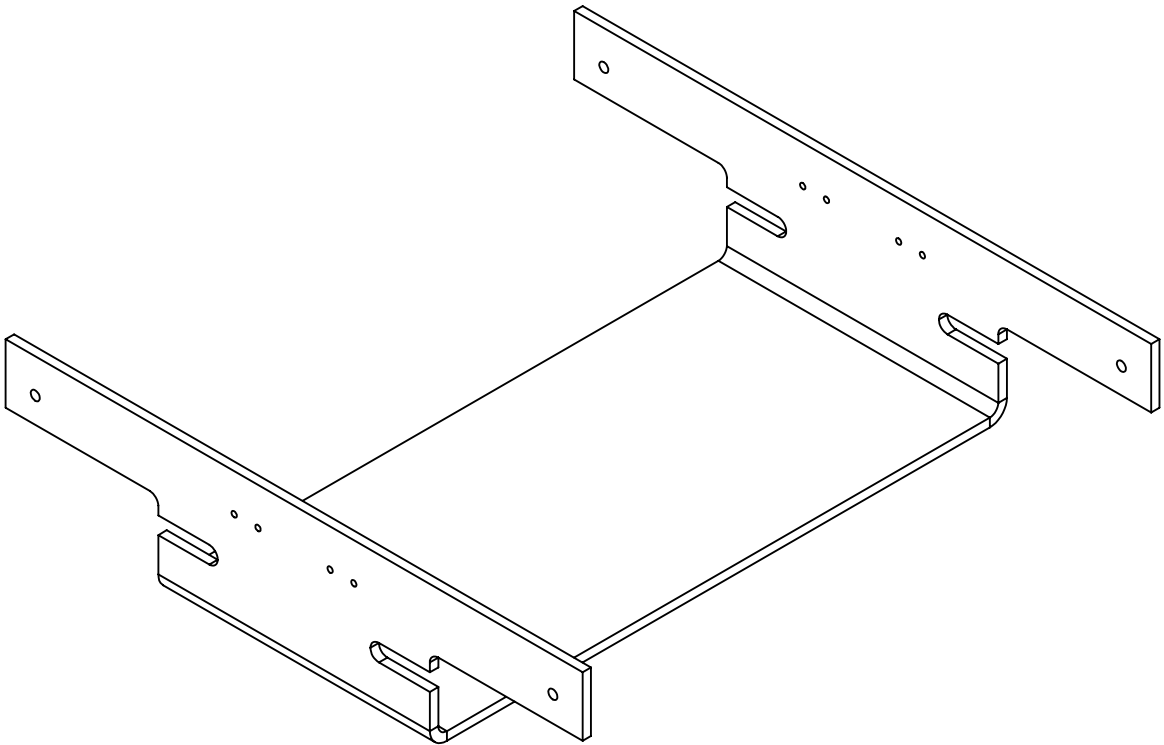
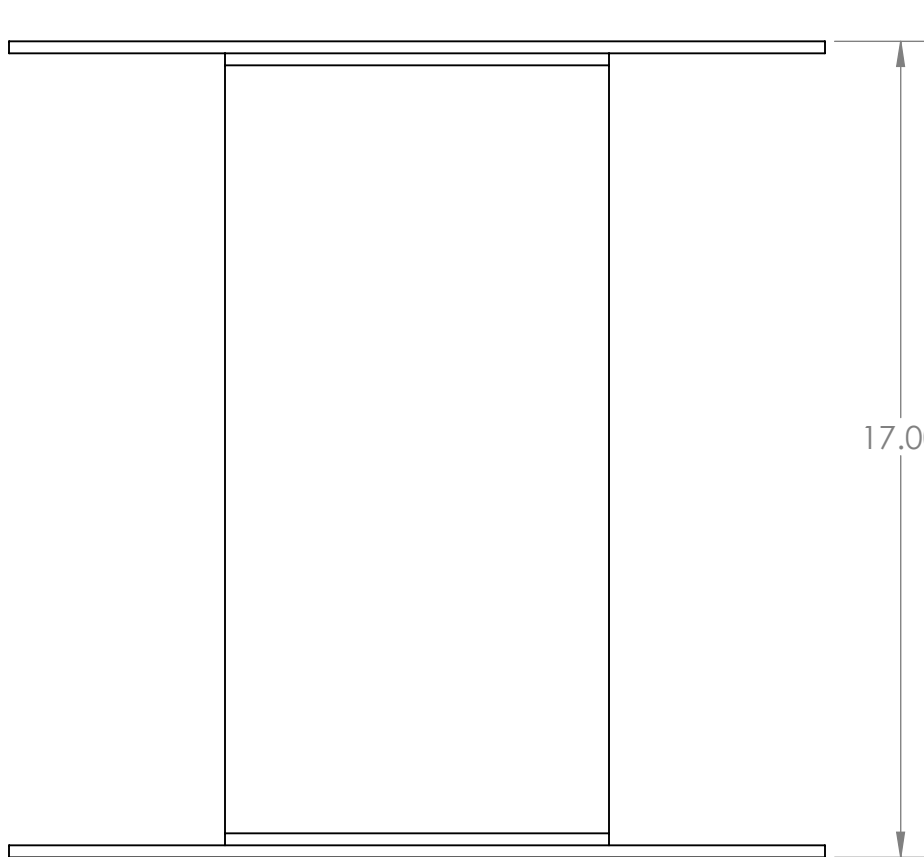
3

2

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B

B



- Notes:
1. Material: 1/4" thick, clear polycarbonate
 2. Remove all burrs and sharp edges.

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		DIMENSIONS ARE IN INCHES	DRAWN	Casey O'Connor	11/28/2017	
		TOLERANCES:	CHECKED			
		FRACTIONAL $\pm 1/16$	ENG APPR.			
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.			
		TWO PLACE DECIMAL $\pm .01$	Q.A.			TITLE: Scale Sensor Mount
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			
		INTERPRET GEOMETRIC TOLERANCING PER:				SIZE DWG. NO. REV
		MATERIAL				B GE-18094
		FINISH				
NEXT ASSY	USED ON					SCALE: 1:4 WEIGHT: SHEET 1 OF 1
APPLICATION		DO NOT SCALE DRAWING				

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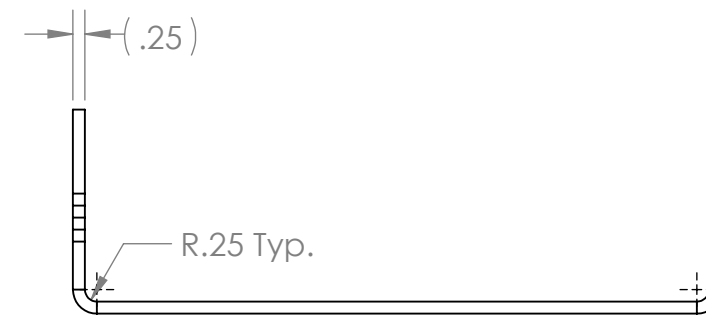
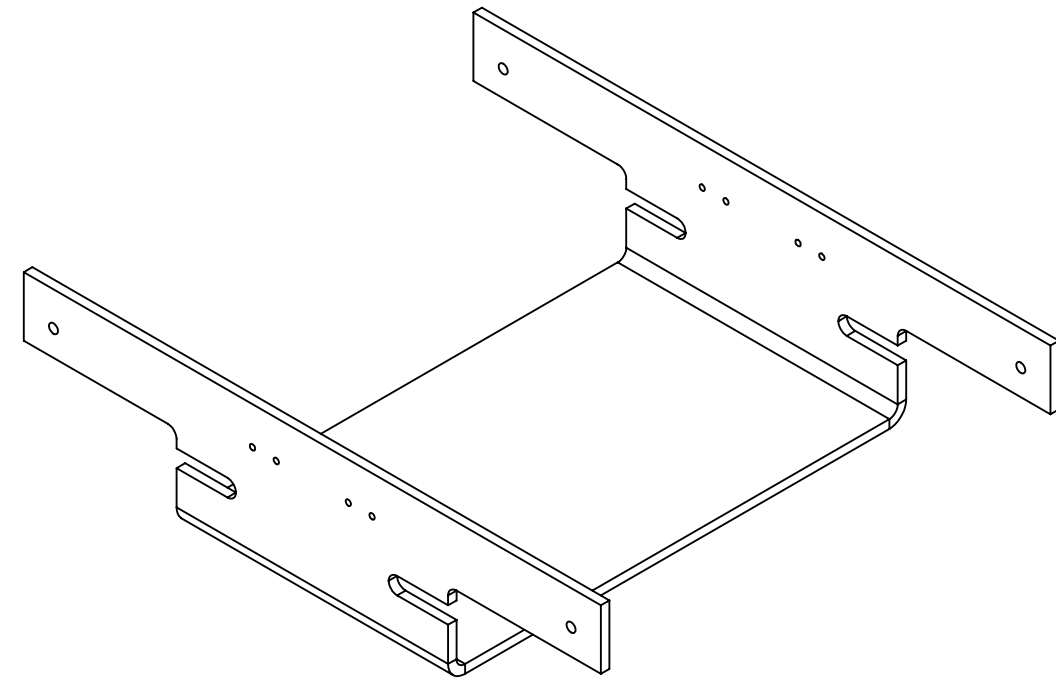
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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN	Casey O'Connor	11/28/2017	TITLE: <h1>Switch Sensor Mount</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18095		
		MATERIAL	COMMENTS:					
		FINISH						
NEXT ASSY	USED ON					SCALE: 1:4 WEIGHT: SHEET 1 OF 1		
APPLICATION		DO NOT SCALE DRAWING						

1

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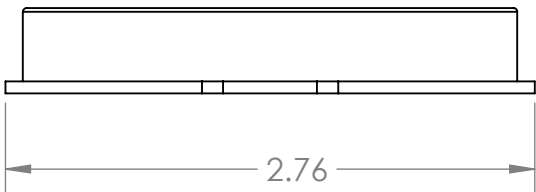
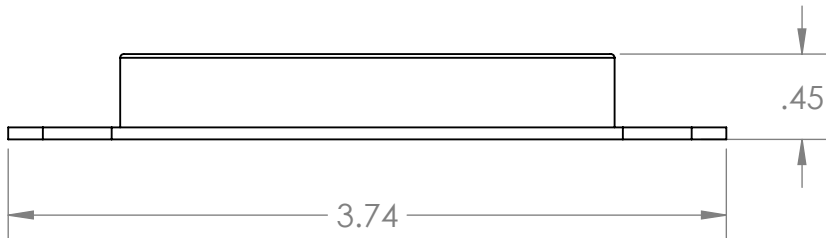
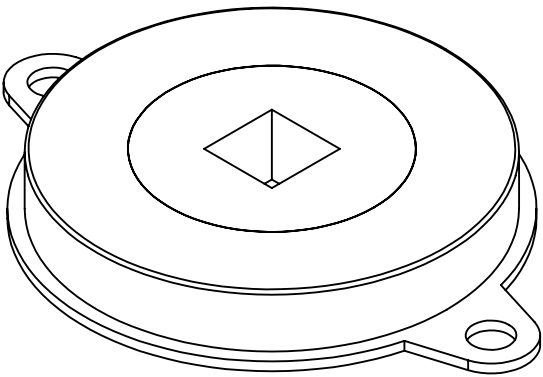
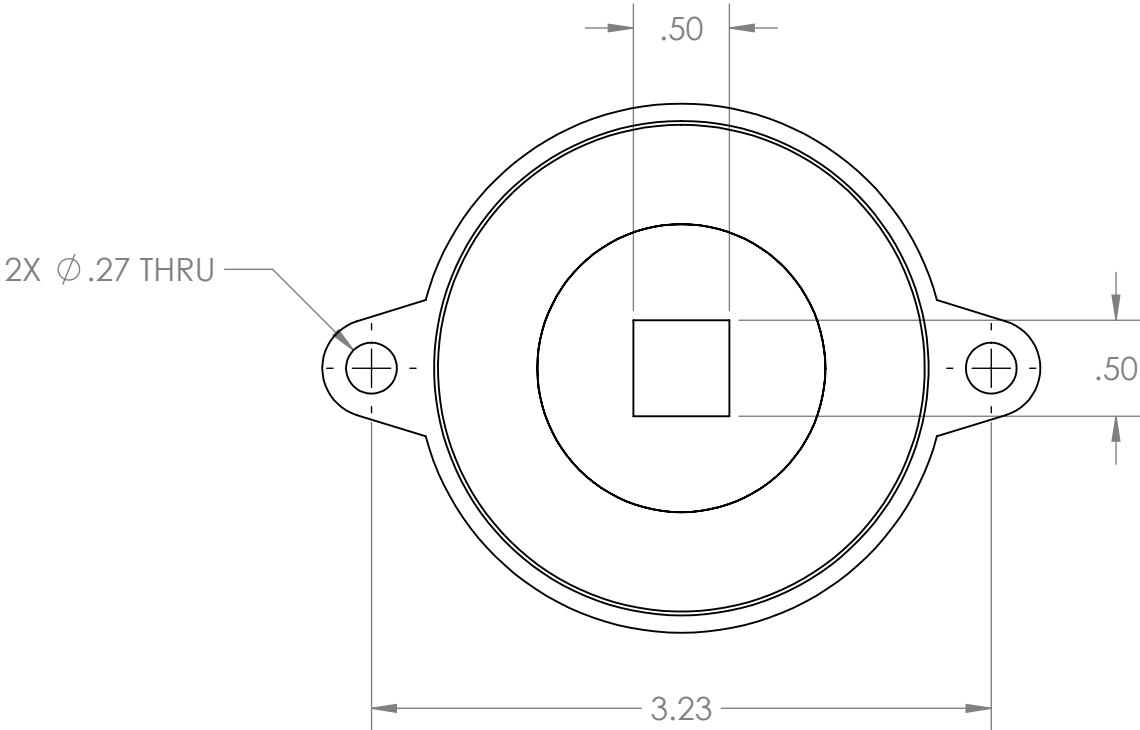
1

B

B

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- Notes:
1. Description: Rotary Speed Limiter, Opening for Square shaft, 1437 in.-oz Maximum Torque
 2. Source: McMaster-Carr
 3. Item #: 6597K24
 4. Equivalent substitutions allowed

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			
			TITLE:		
			Scale/Switch Damper		
SIZE	DWG. NO.	REV			
B	GE-18097				
SCALE: 1:1	WEIGHT:	SHEET 1 OF 1			

4

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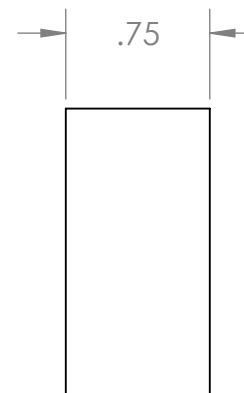
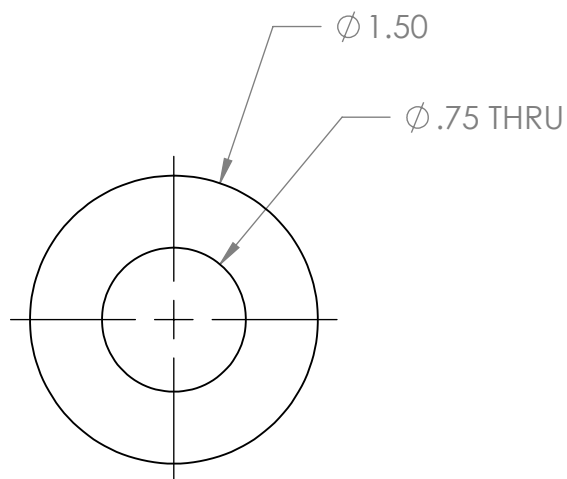
2

1

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1

B



B

Notes:

1. Description: Nylon Unthreaded Spacer
2. Source: McMaster-Carr
3. Item#: 94639A891
4. Equivalent substitutions allowed

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NEXT ASSY

USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL $\pm 1/16$
 ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
 TWO PLACE DECIMAL $\pm .01$
 THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
 TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME

DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:


**FIRST
 ROBOTICS
 COMPETITION**

SOLIDWORKS
 Modeling Solutions Partner

TITLE:

Switch Shaft Spacer

SIZE

DWG. NO.

REV

A**GE-18098**

SCALE: 1:1

WEIGHT:

SHEET 1 OF 1

2

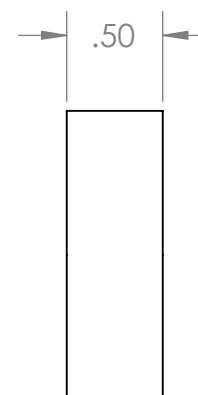
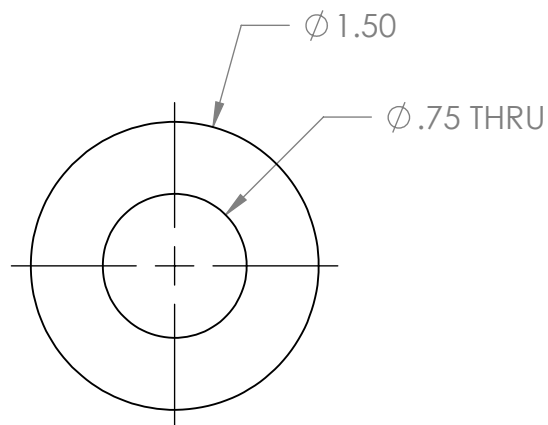
1

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B



B

Notes:

1. Description: Nylon Unthreaded Spacer
2. Source: McMaster-Carr
3. Item#: 94639A889
4. Equivalent substitutions allowed

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NEXT ASSY

USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
 TOLERANCES:
 FRACTIONAL $\pm 1/16$
 ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
 TWO PLACE DECIMAL $\pm .01$
 THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
 TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

NAME

DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



FIRST
ROBOTICS
COMPETITION

SOLIDWORKS
 Modeling Solutions Partner

TITLE:

Scale Shaft
 Spacer

SIZE

DWG. NO.

REV

A**GE-18099**

SCALE: 1:1

WEIGHT:

SHEET 1 OF 1

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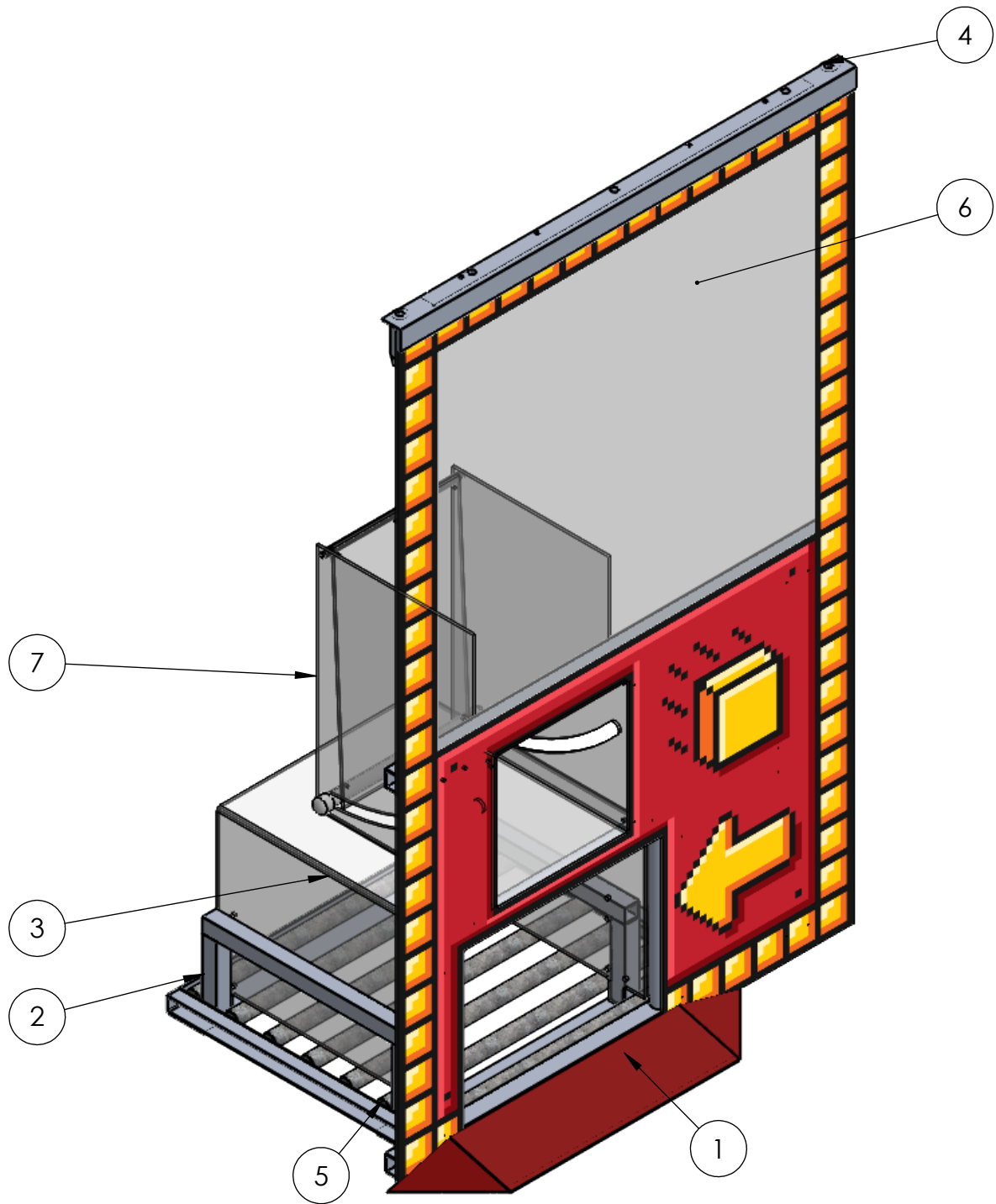
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ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	GE-18009	Exchange Frame	1
2	GE-18006	Roller Base	1
3	GE-18008	Roller Tunnel	1
4	GE-18015	Top Rail, Exchange	1
5	2282T25	Roller, Conveyor	7
6	GE-18010	Exchange Plastic	1
7	GE-18101	Assembly, Chute	1
8	GE-18127	Ramp, Exchange	1

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		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <h1>Assembly, Exchange</h1>					
		TOLERANCES:	CHECKED								
		FRACTIONAL $\pm 1/16$	ENG APPR.								
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.								
		TWO PLACE DECIMAL $\pm .01$	Q.A.								
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18100					
		INTERPRET GEOMETRIC TOLERANCING PER:									
		MATERIAL									
		FINISH				SCALE: 1:12 WEIGHT: SHEET 1 OF 2					
NEXT ASSY	USED ON										
APPLICATION		DO NOT SCALE DRAWING									

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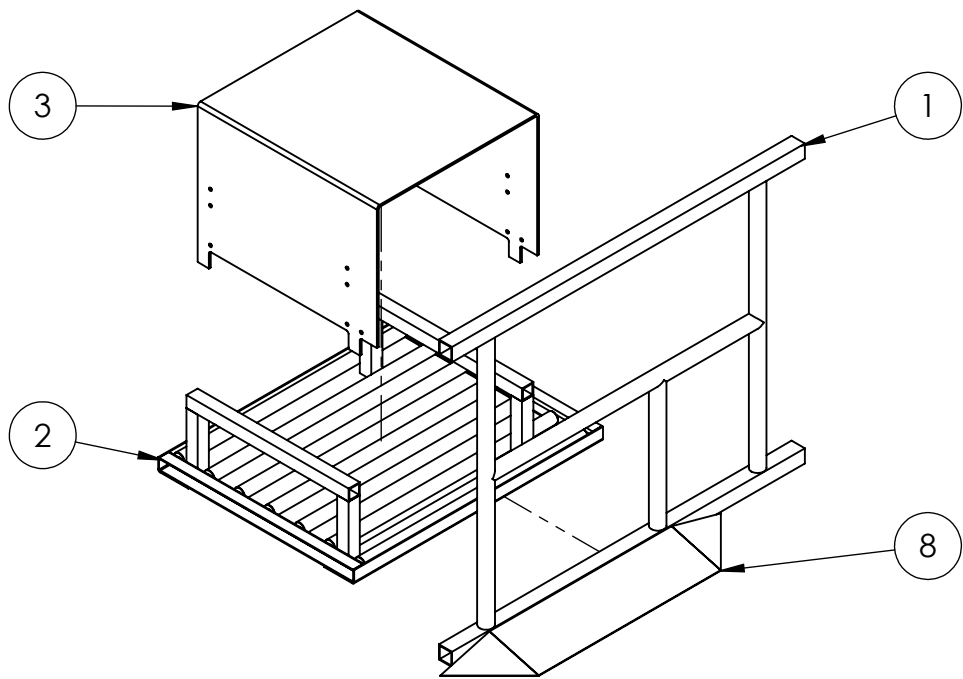
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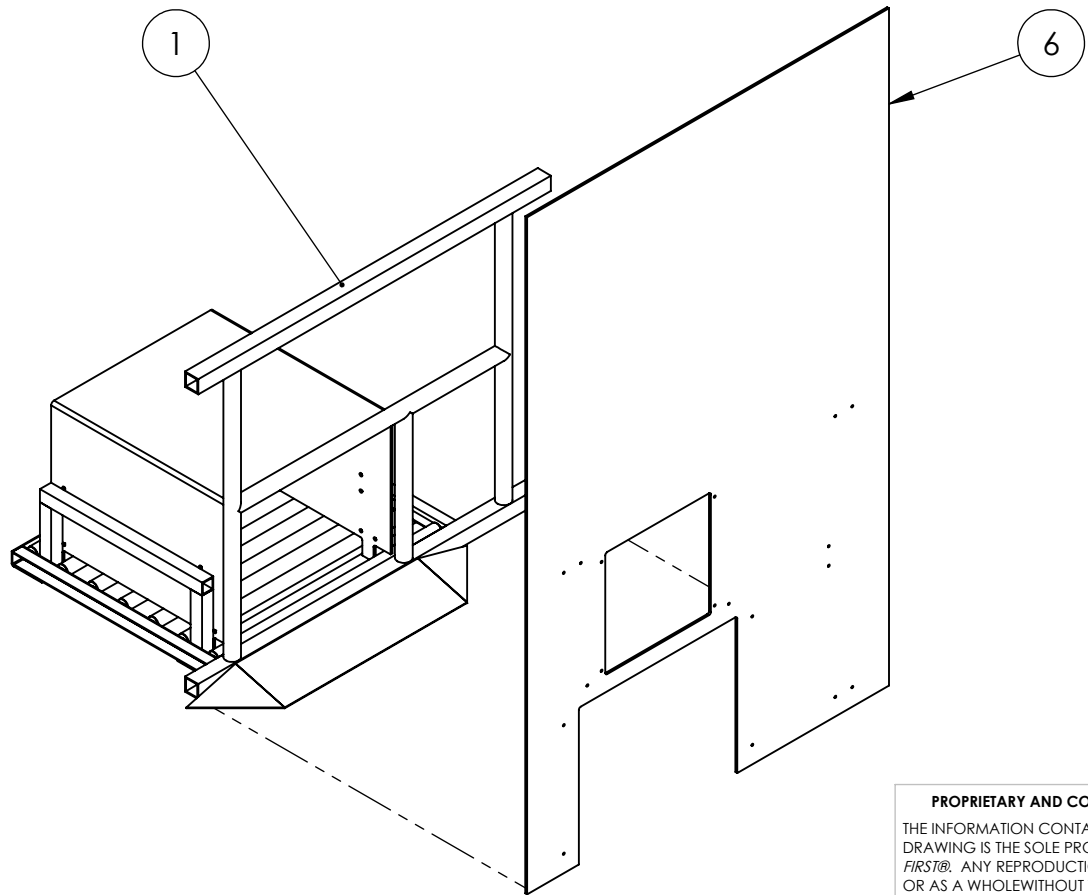
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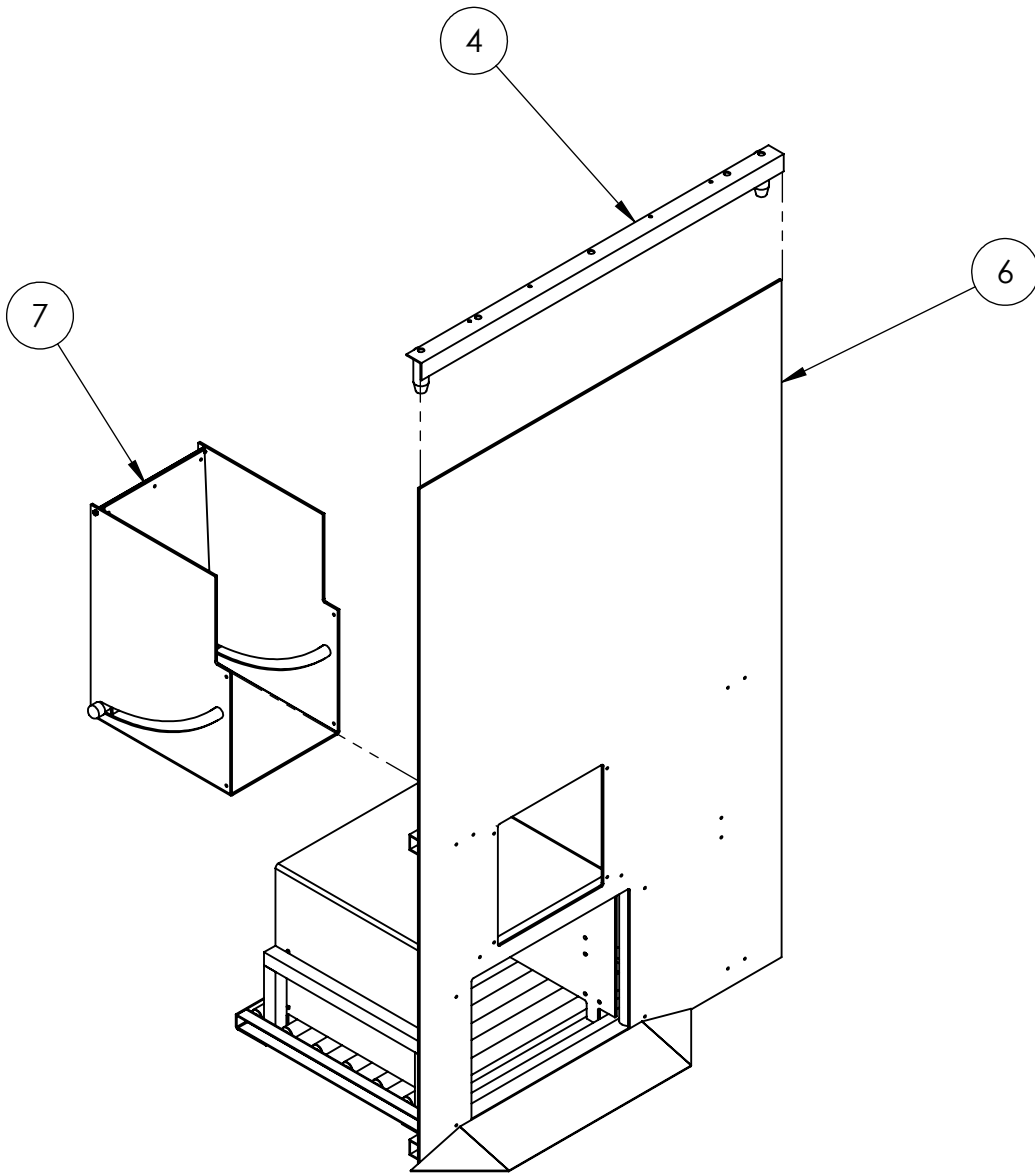


- Notes:
1. Attach Item 1 to field perimeter.
 2. Place Item 8 in front of Item 1.
 3. Place Item 2 behind Item 1, with rails centered on the opening.
 4. Center item 3 on rollers, flush with edges of guard and rail.





- Notes:
1. Attach Item 6 to Item 1 using cable ties.

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- Notes:
1. Attach Item 7 to Item 6 using cable ties.
 2. Add Item 4.

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 FIRST ROBOTICS COMPETITION  Modeling Solutions Partner
		DIMENSIONS ARE IN INCHES		DRAWN		
		TOLERANCES:		CHECKED		
		FRACTIONAL $\pm 1/16$		ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$		MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$		Q.A.		TITLE: Assembly, Exchange
		THREE PLACE DECIMAL $\pm .001$		COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL				SIZE DWG. NO. REV
		FINISH				B GE-18100
NEXT ASSY		USED ON				SCALE: 1:18 WEIGHT: SHEET 2 OF 2
APPLICATION		DO NOT SCALE DRAWING				

4

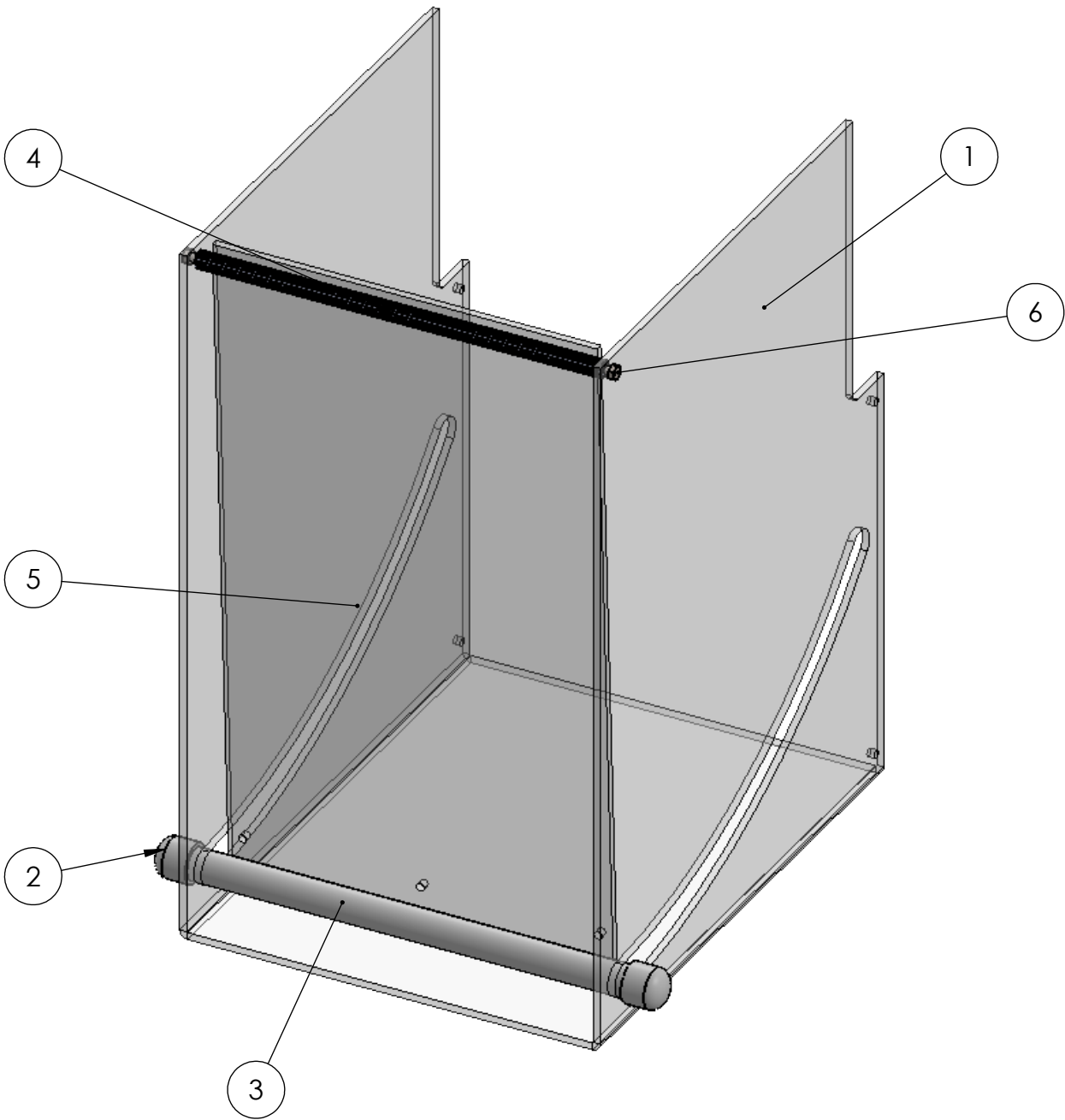
3

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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18025	Chute Body	1
2	4880K52	End Cap, PVC	2
3	GE-18092	Handle, Chute	1
4	GE-18091	Churro, 14"	1
5	GE-18027	Pusher Panel	1
6	HBOLT 0.2500-20x0.25x0.25-N	1/4-20 Hex Bolt .25"	2



4

3

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	  TITLE: Assembly, Chute	
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN				
			CHECKED				
			ENG APPR.				
			MFG APPR.				
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV	
		MATERIAL	COMMENTS:				
NEXT ASSY	USED ON	FINISH				B	GE-18101
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:5	WEIGHT: SHEET 1 OF 3

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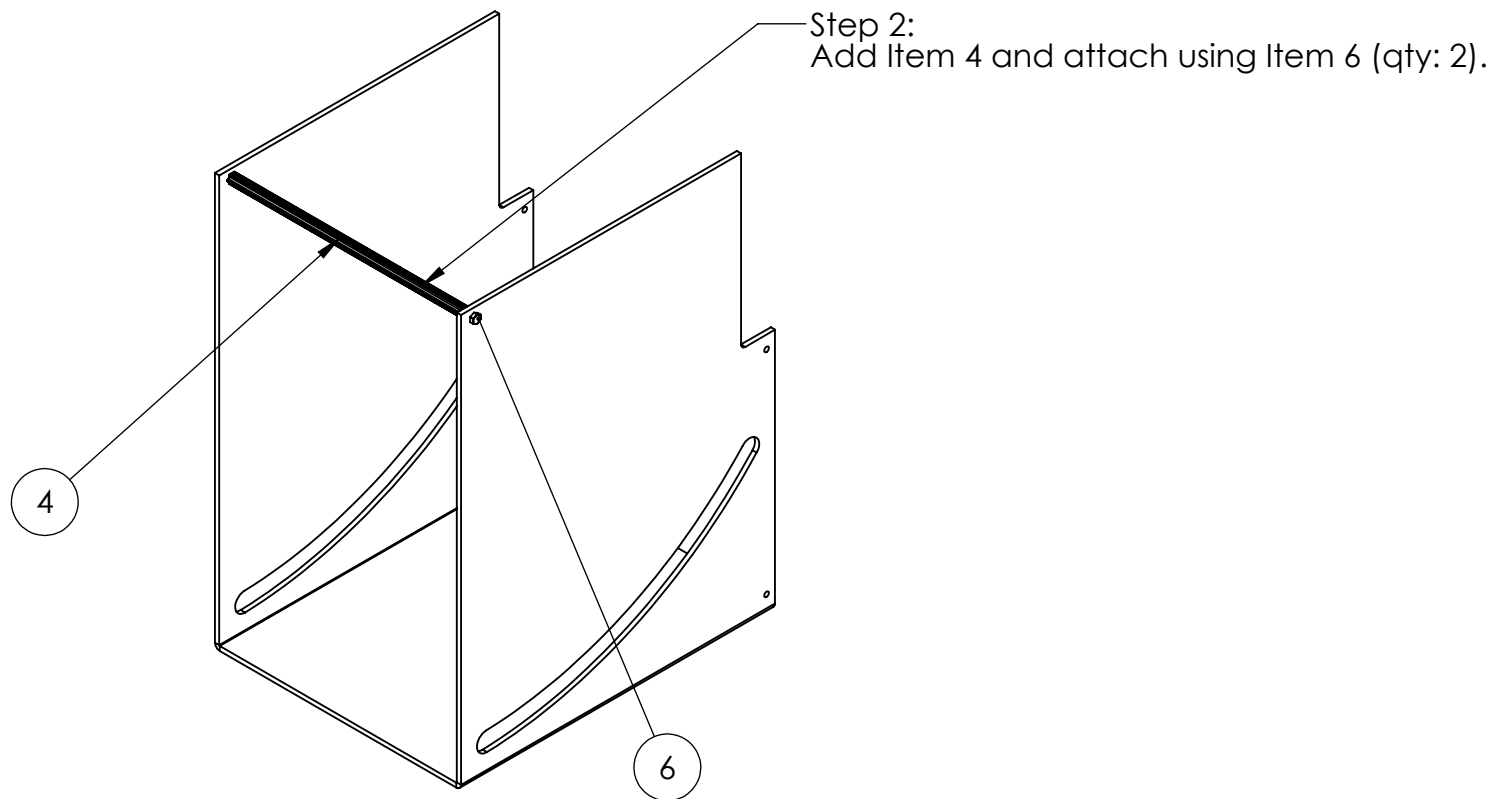
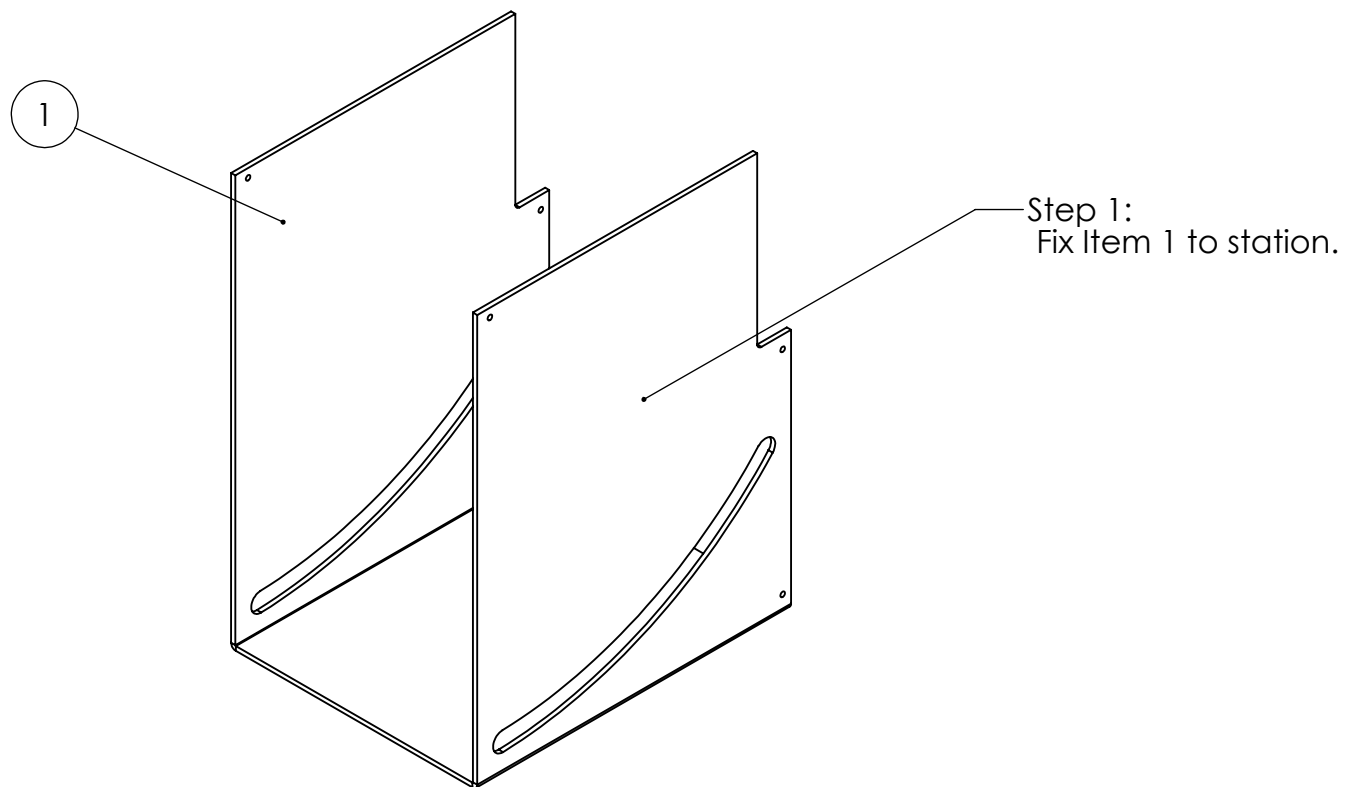
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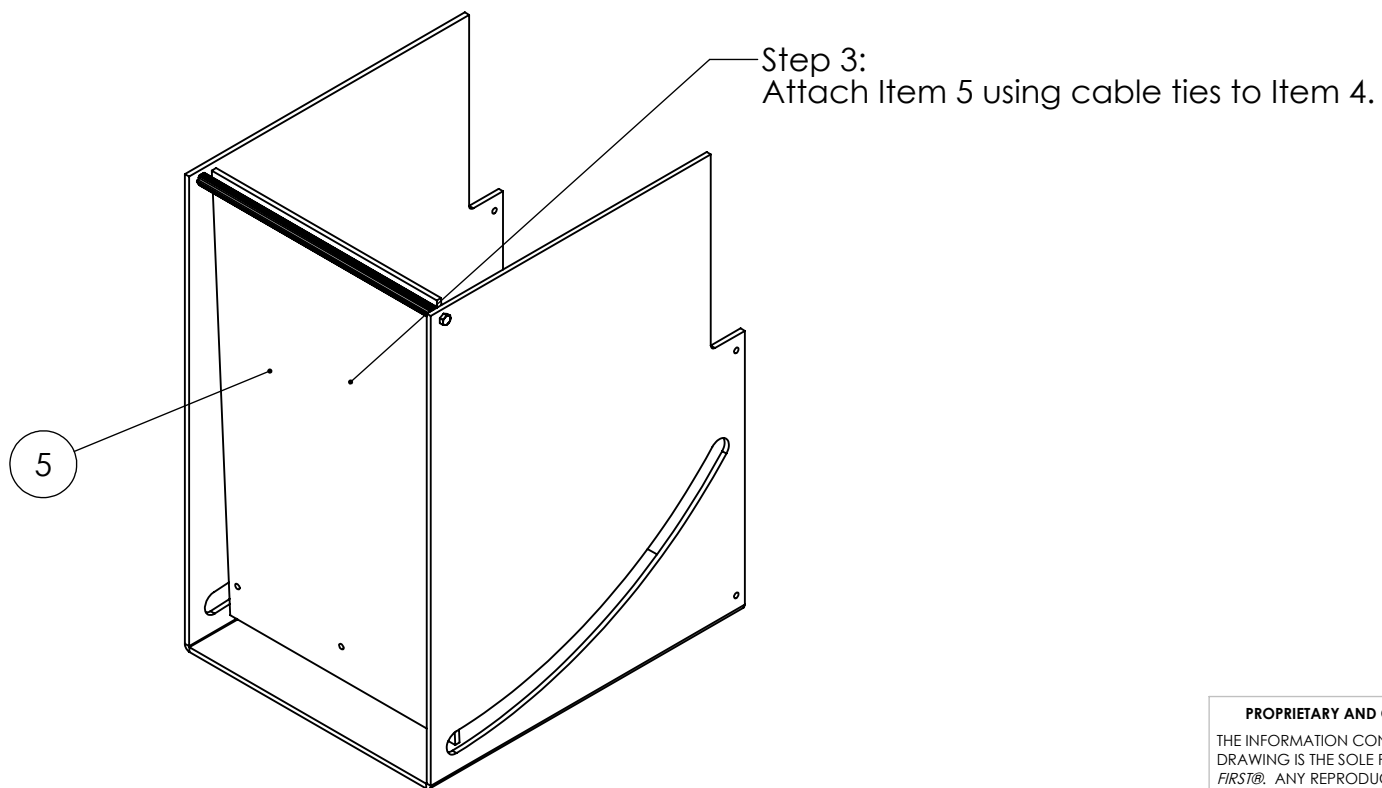
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			DRAWN			
			CHECKED			
			ENG APPR.			
			MFG APPR.			
			Q.A.			SIZE DWG. NO. REV B GE-18101
			COMMENTS:			
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING	SCALE: 1:8 WEIGHT: SHEET 2 OF 3			

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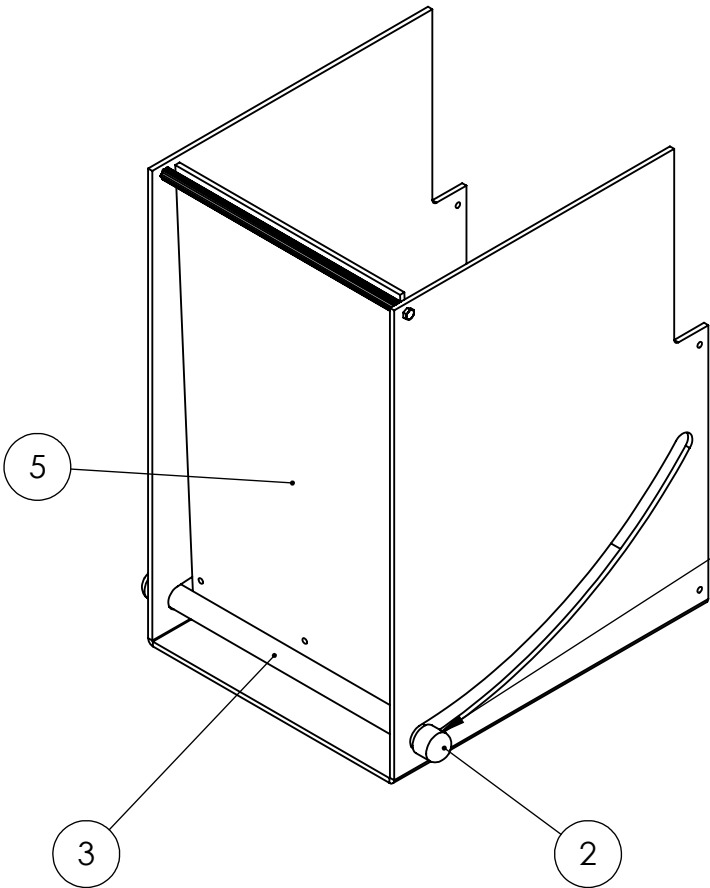
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Step 4:
Attach Item 3 with Item 2 (endcaps). Use
cable ties to secure to Item 5.

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		DIMENSIONS ARE IN INCHES	DRAWN					
		TOLERANCES:	CHECKED					
		FRACTIONAL $\pm 1/16$	ENG APPR.					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.			COMMENTS:		
		THREE PLACE DECIMAL $\pm .001$						
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL				SIZE	DWG. NO.	REV
		FINISH				B	GE-18101	
NEXT ASSY	USED ON					SCALE: 1:8	WEIGHT:	SHEET 3 OF 3
APPLICATION		DO NOT SCALE DRAWING						

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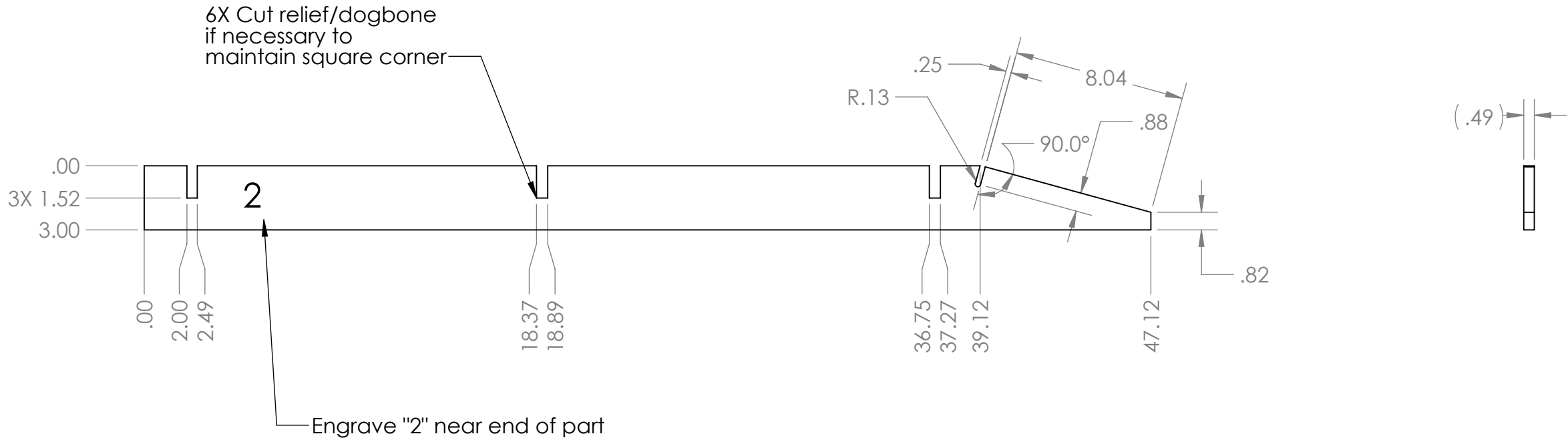
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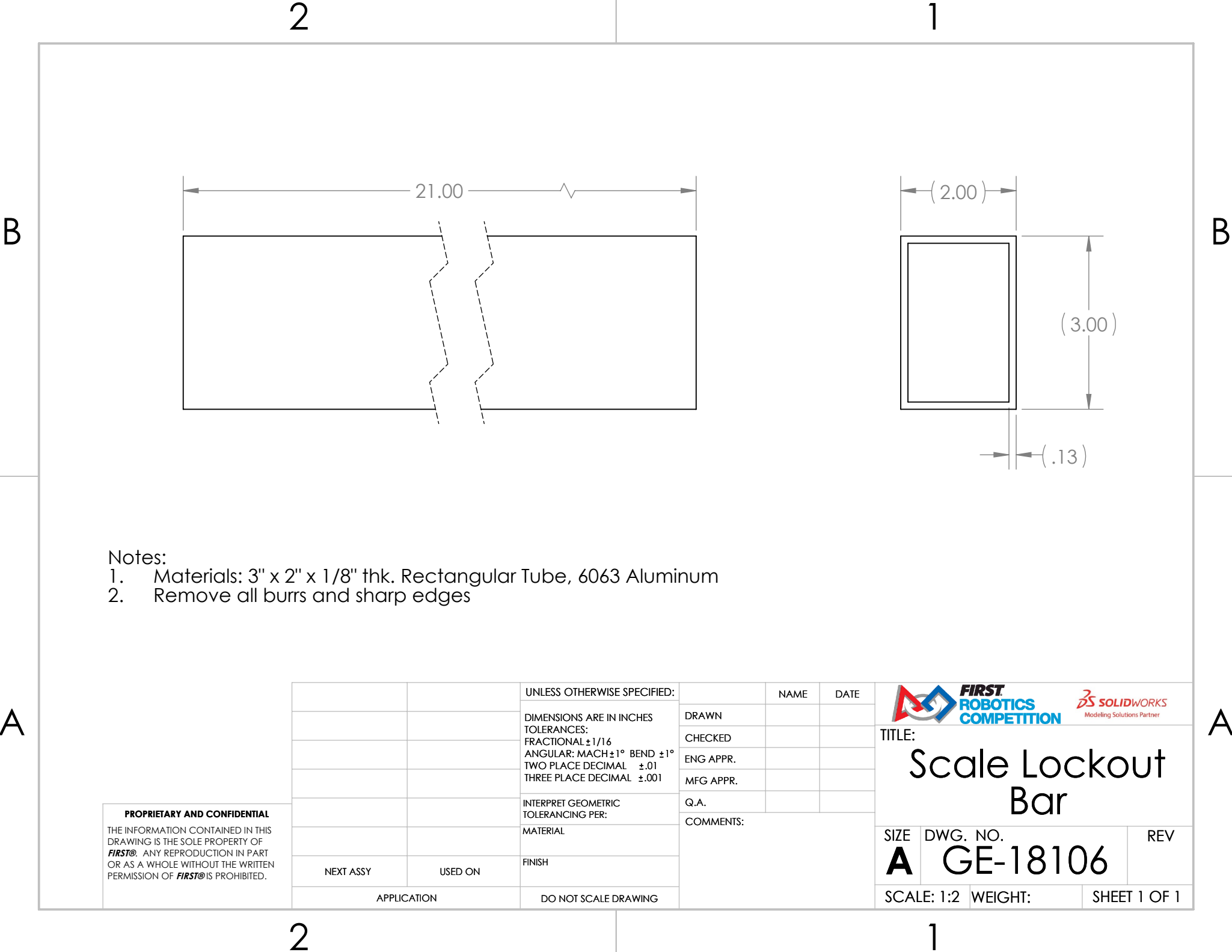
A



- Notes:
1. Material: 1/2" HDPE, any color
 2. Surface: Smooth texture
 3. Remove all burrs and sharp edges

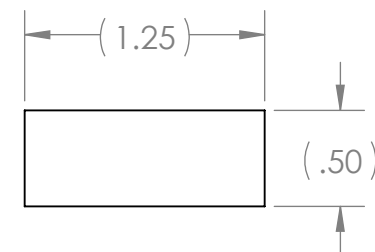
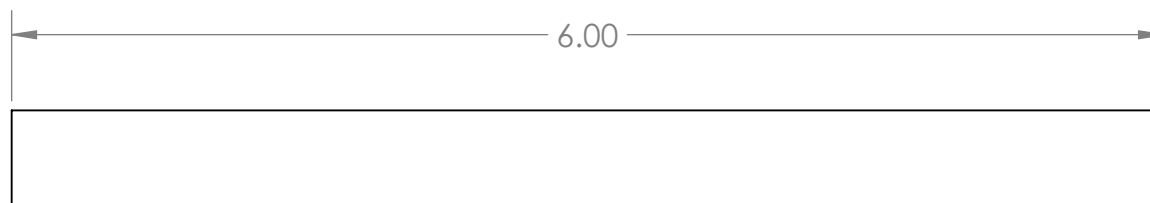
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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: Platform Brace, Short Side 2			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18105			
		MATERIAL							
NEXT ASSY	USED ON	FINISH							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:6 WEIGHT: SHEET 1 OF 1			



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Notes:

1. Material: 1.25" x .5" Low-carbon Steel Bar
2. Remove all burrs and sharp edges

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NEXT ASSY

USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

DO NOT SCALE DRAWING

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:

NAME

DATE



FIRST
ROBOTICS
COMPETITION



Modeling Solutions Partner

TITLE:

Scale/Switch
Counterweight

SIZE

DWG. NO.

REV

A**GE-18107**

SCALE: 1:1

WEIGHT:

SHEET 1 OF 1

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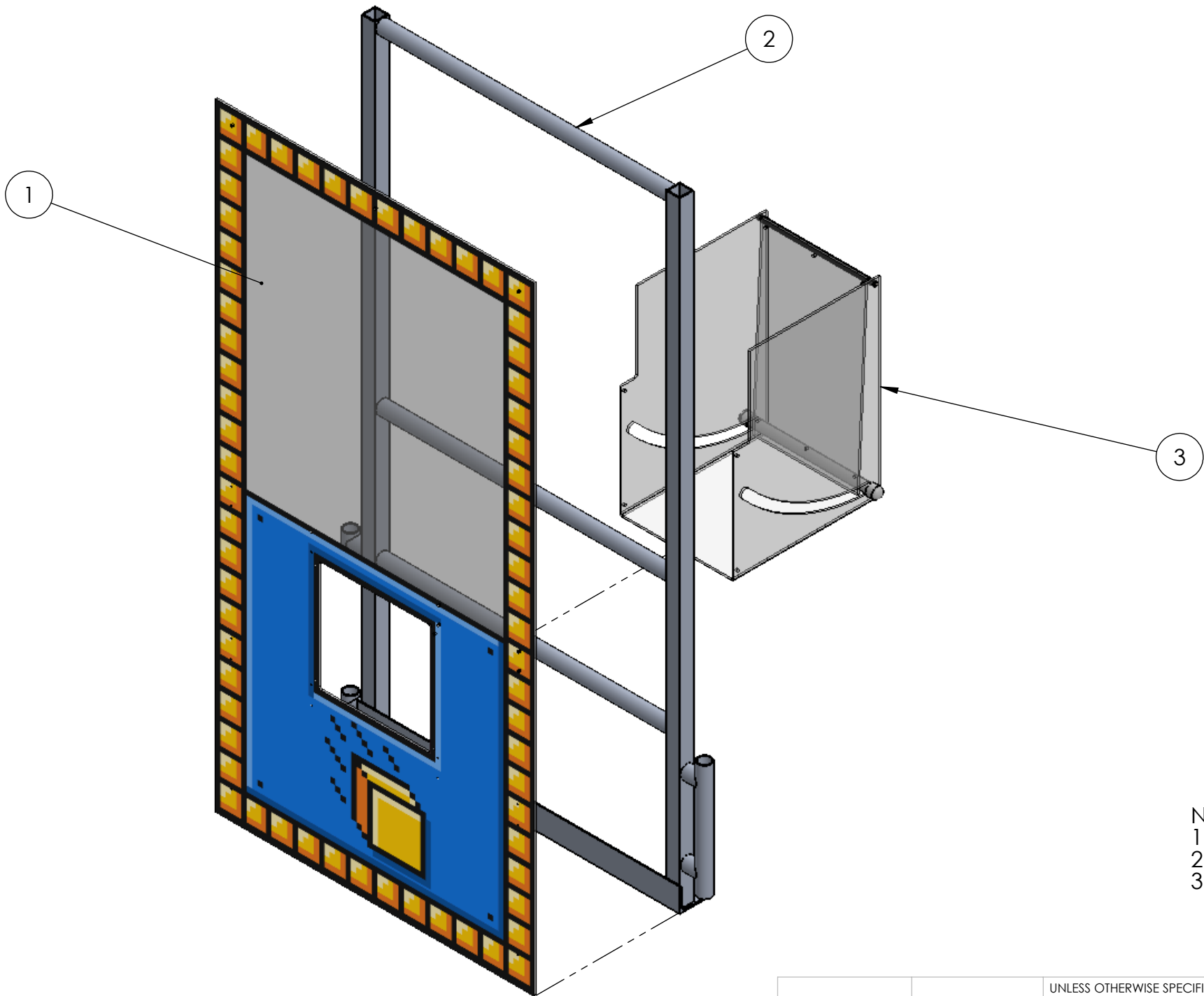
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- Notes:
- 1. Attach Item 2 to field perimeter.
 - 2. Attach Item 1 to Item 2 using cable ties.
 - 3. Attach Item 3 to Item 1 using cable ties.

ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	GE-18004	Panel, Portal	1
2	GE-18011	Portal Frame - Left	1
3	GE-18101	Assembly, Chute	1

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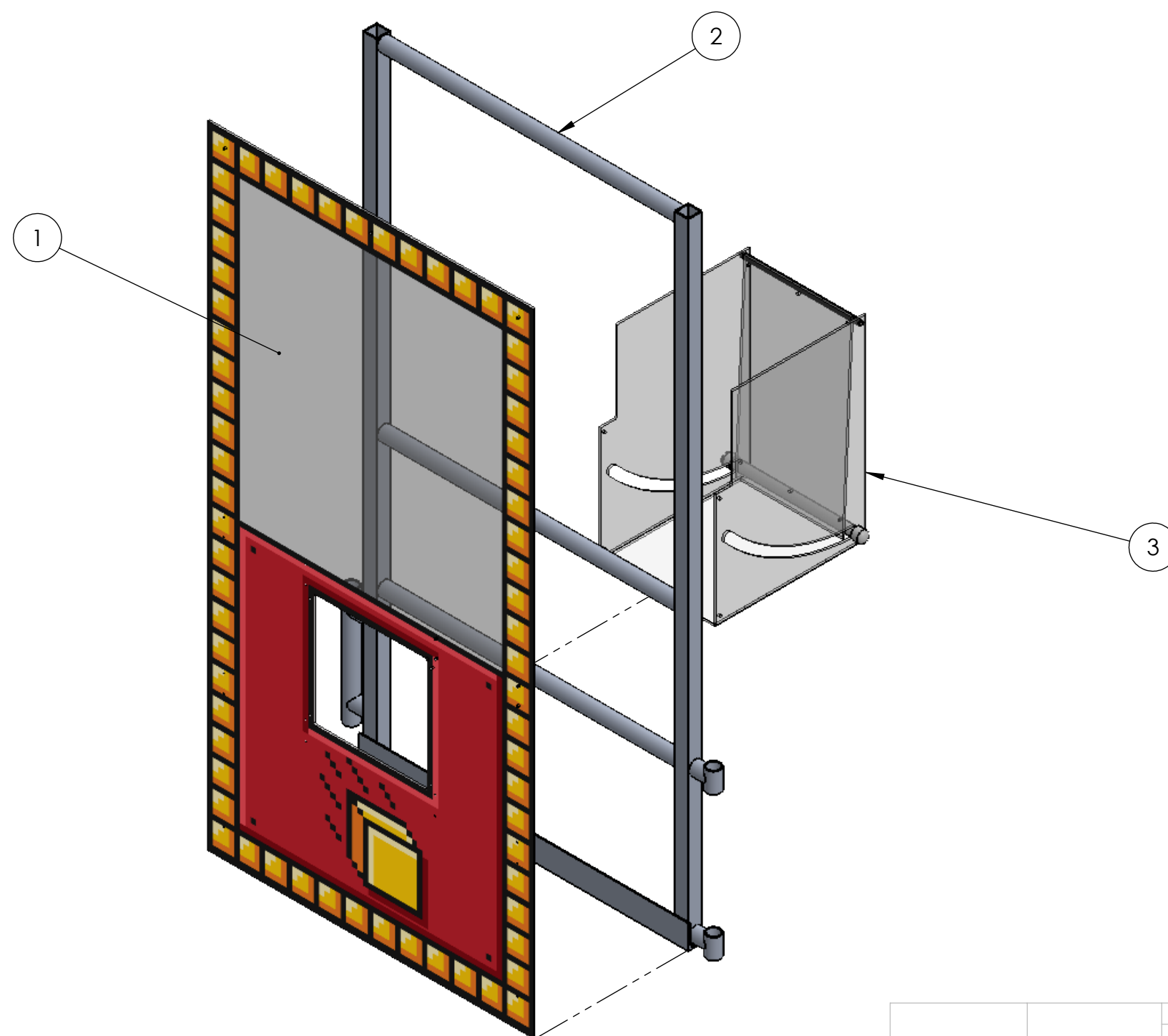
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		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: Portal - Left			
		TOLERANCES:	CHECKED						
		FRACTIONAL $\pm 1/16$	ENG APPR.						
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.						
		TWO PLACE DECIMAL $\pm .01$	Q.A.						
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18108			
		INTERPRET GEOMETRIC TOLERANCING PER:							
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:12		WEIGHT:	SHEET 1 OF 1

4

3

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Notes:

1. Attach Item 2 to field perimeter.
2. Attach Item 1 to Item 2 using cable ties.
3. Attach Item 3 to Item 1 using cable ties.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18004	Panel, Portal	1
2	GE-18012	Portal Frame - Right	1
3	GE-18101	Assembly, Chute	1

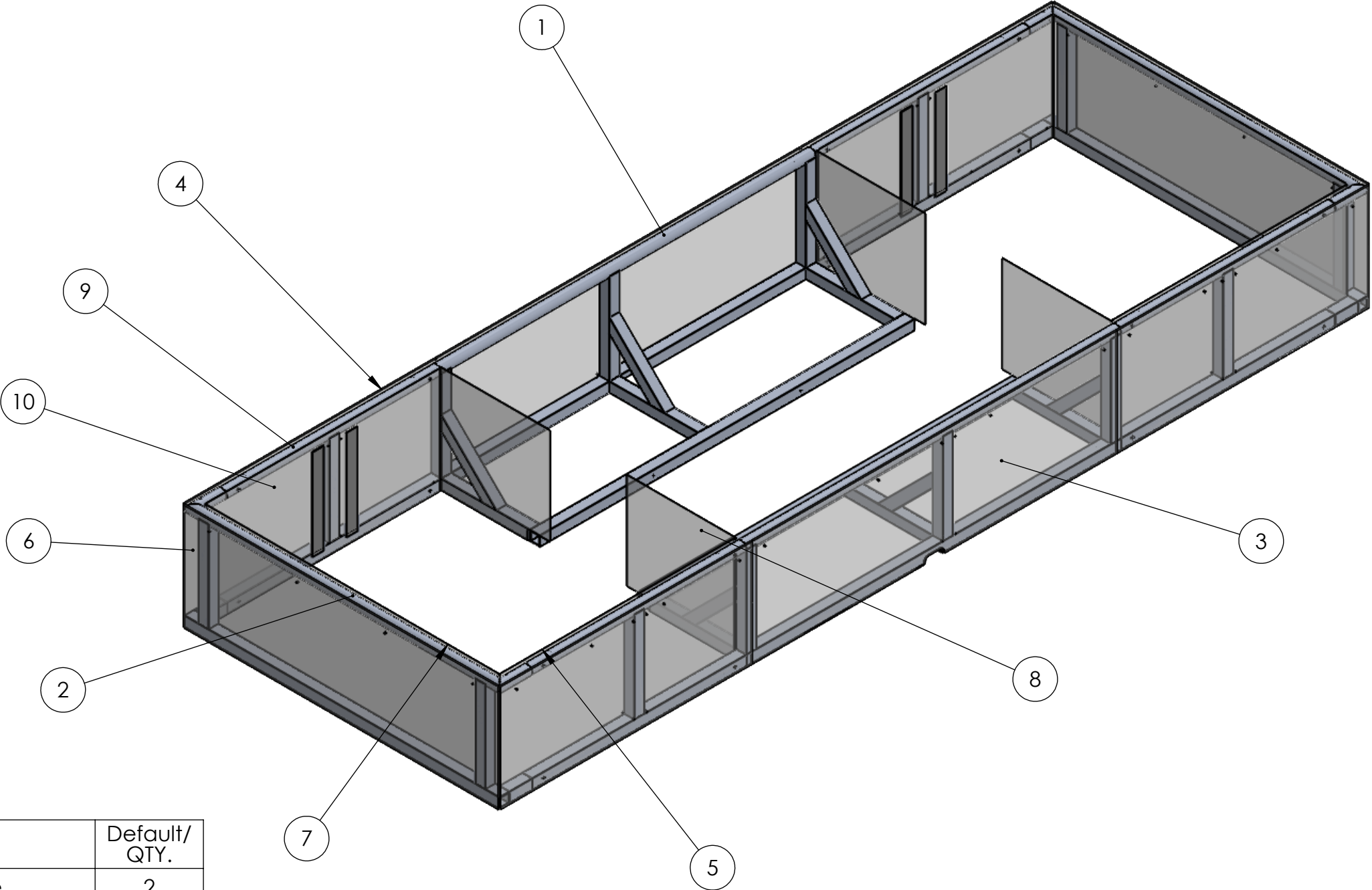
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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE	 
		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$			TITLE:
		THREE PLACE DECIMAL $\pm .001$			Portal - Right
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.		
		MATERIAL	COMMENTS:		SIZE DWG. NO. REV
					B GE-18109
NEXT ASSY	USED ON	FINISH			SCALE: 1:12 WEIGHT: SHEET 1 OF 1
APPLICATION		DO NOT SCALE DRAWING			

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ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	GE-18051	Side Frame, Fence	2
2	GE-18052	End Frame, Fence	2
3	GE-18080	Fence Polycarb, Middle	2
4	GE-18081	Fence Polycarb, Outer Side	4
5	GE-18082	Fence Polycarb, Inner Side	2
6	GE-18083	Fence Polycarb, Outer End	2
7	GE-18084	Fence Polycarb, Inner End	2
8	GE-18085	Fence Polycarb, Guard	4
9	GE-18111	Connecting Frame Assembly	4
10	GE-18115	Vision Fence Polycarbonate	2

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 			
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <h1>Fence Assembly</h1>			
		TOLERANCES:	CHECKED						
		FRACTIONAL $\pm 1/16$	ENG APPR.						
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.						
		TWO PLACE DECIMAL $\pm .01$	Q.A.						
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18110			
		INTERPRET GEOMETRIC TOLERANCING PER:							
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:32		WEIGHT:	SHEET 1 OF 3

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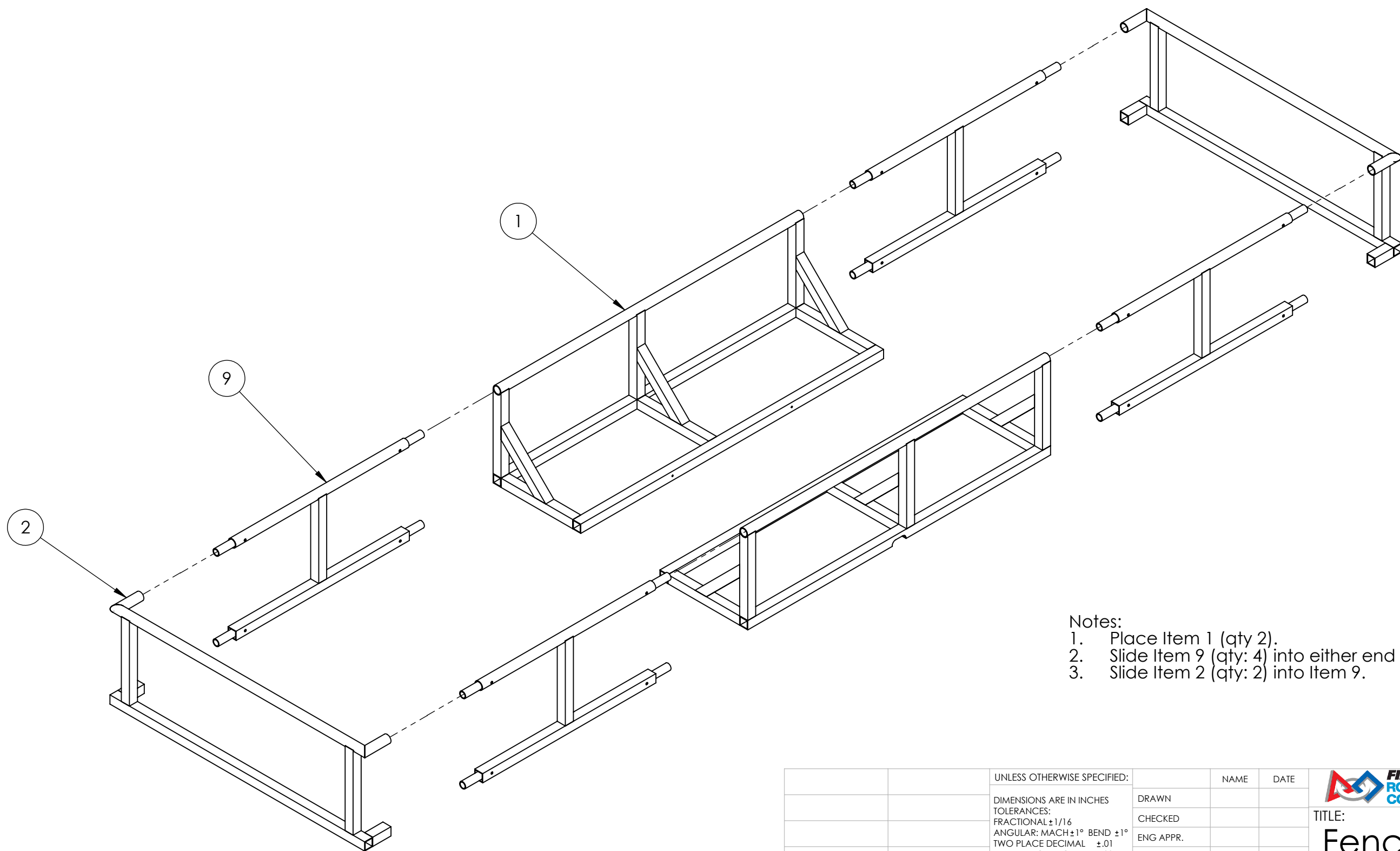
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- Notes:
- 1. Place Item 1 (qty 2).
 - 2. Slide Item 9 (qty: 4) into either end of Item 1.
 - 3. Slide Item 2 (qty: 2) into Item 9.

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		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <div>Fence Assembly</div>			
		TOLERANCES:	CHECKED						
		FRACTIONAL $\pm 1/16$	ENG APPR.						
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.						
		TWO PLACE DECIMAL $\pm .01$	Q.A.						
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV <div><div>B</div><div>GE-18110</div><div></div></div>			
		INTERPRET GEOMETRIC TOLERANCING PER:							
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:32		WEIGHT:	SHEET 2 OF 3

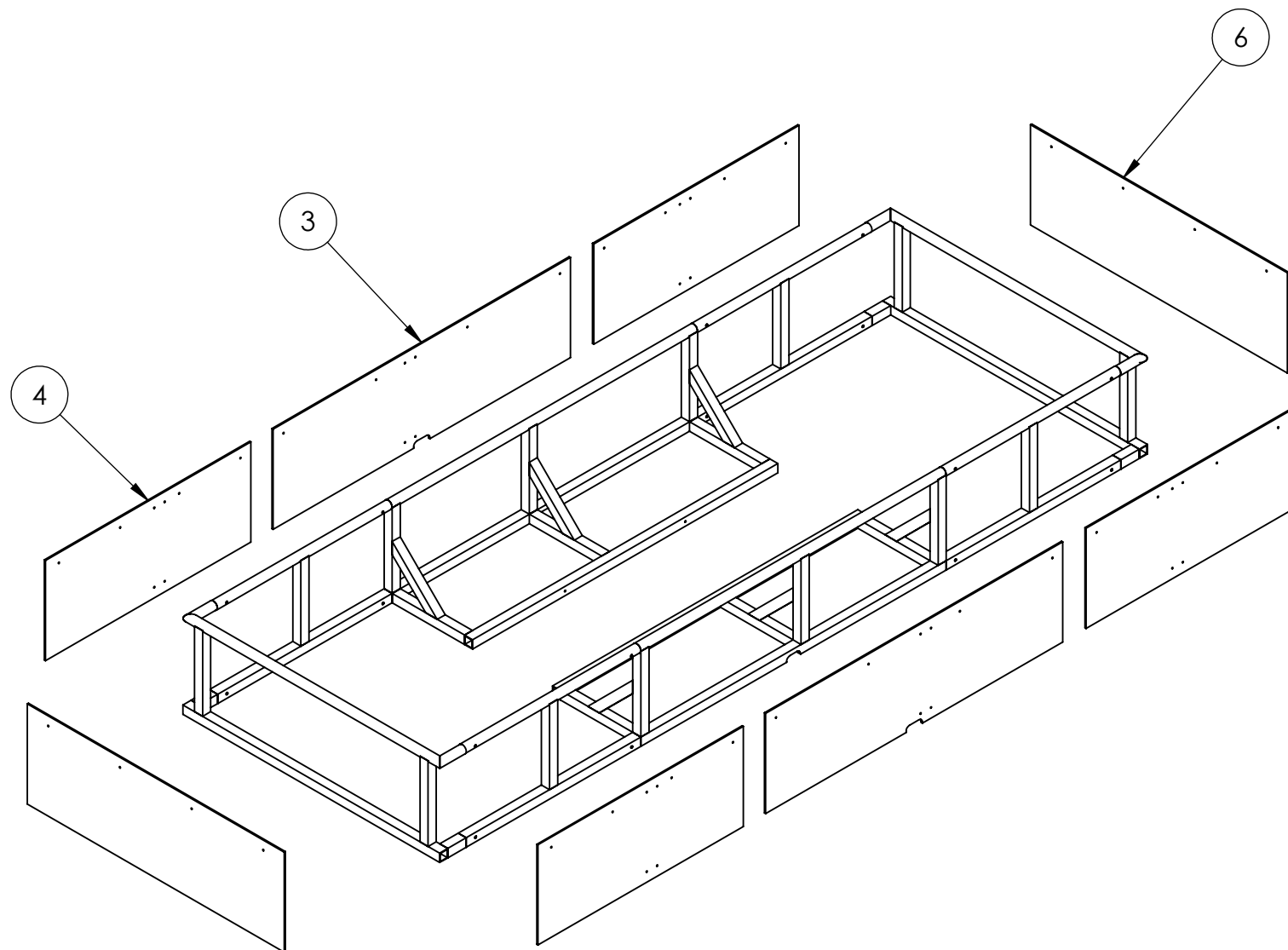
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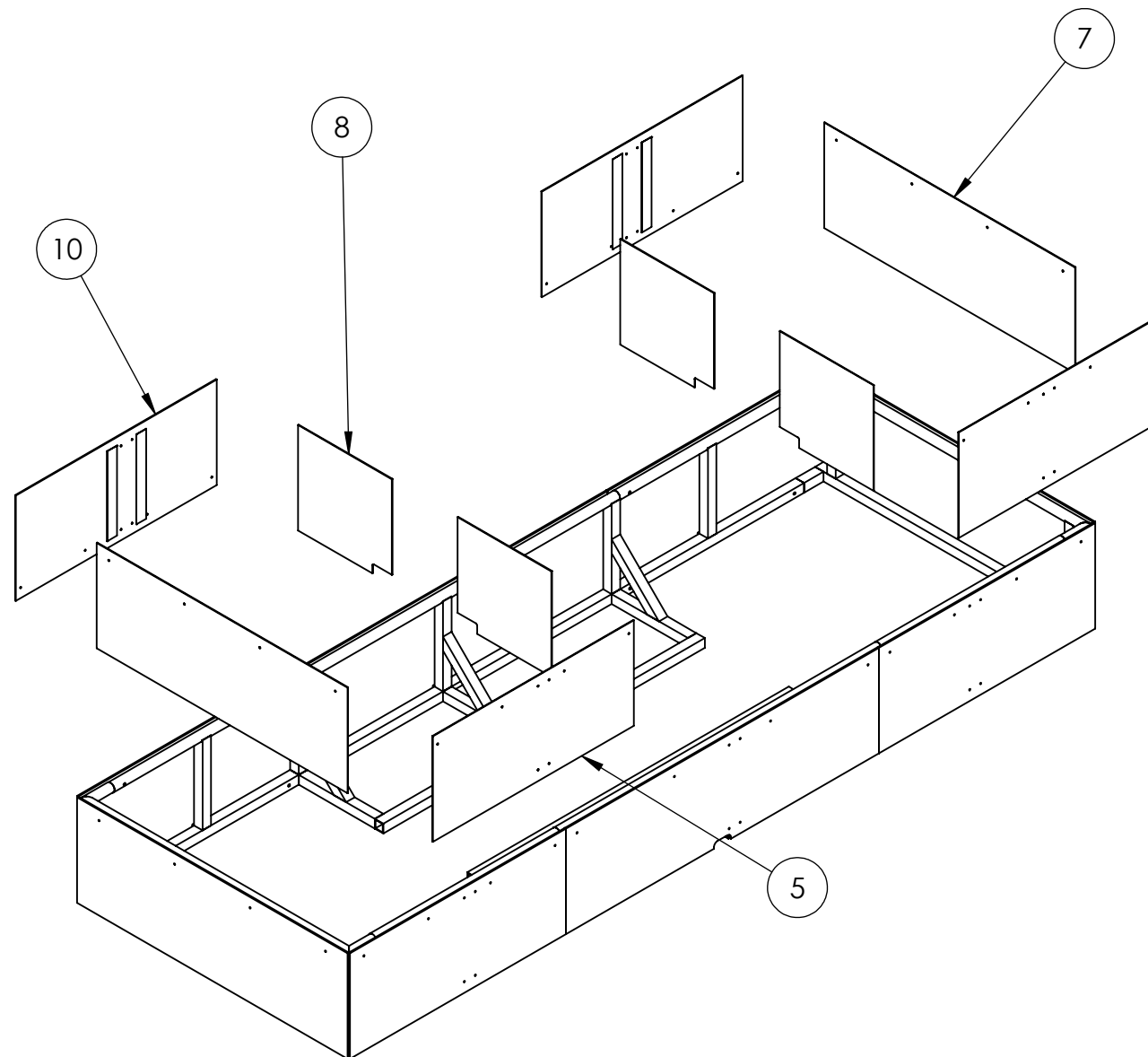
B



Notes:

1. Attach Items 3 (qty: 2), 4 (qty: 4), 6 (qty: 2) with cable ties on top of panel and through vertical supports, and hook and loop on bottom.

A



Notes:

1. Attach Items 5 (qty: 2), 7 (qty: 2), 10 (qty: 2) with cable ties through top holes and around vertical supports.
2. Attach Item 8 (qty: 4) with hook and loop.

B

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TOLERANCES:
FRACTIONAL: $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:
MATERIAL

FINISH

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



TITLE:

Fence Assembly

SIZE DWG. NO. REV

B GE-18110

SCALE: 1:32 WEIGHT: SHEET 3 OF 3

NEXT ASSY

USED ON

APPLICATION

DO NOT SCALE DRAWING

4

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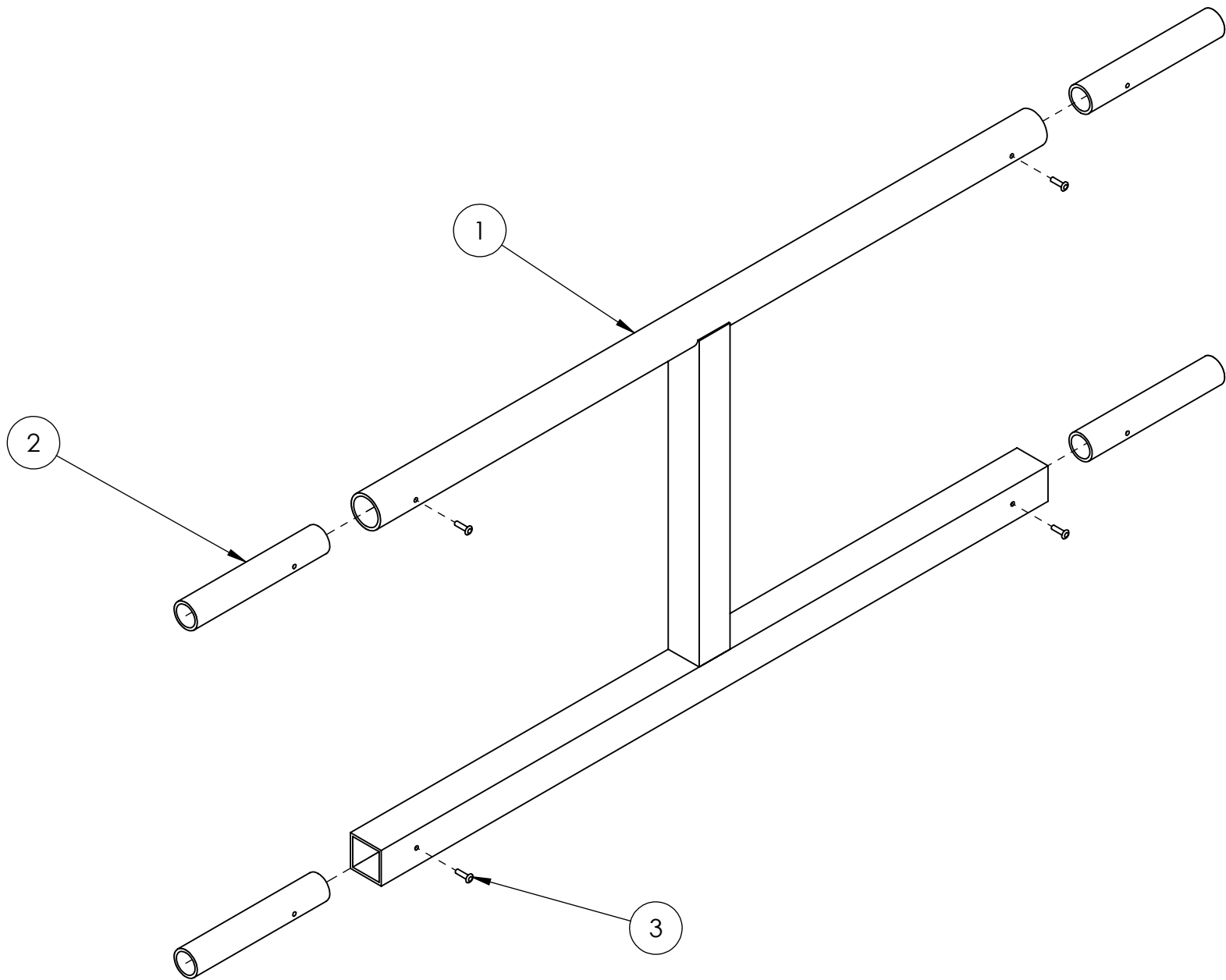
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ITEM NO.	PART NUMBER	DESCRIPTION	Default/Qty.
1	GE-18053	Connecting Frame, Fence	1
2	GE-18086	Fence Pin	4
3	rivet_.1875_.376-.5	3/16" Aluminum Rivet, .376-.5 Grip Range	4

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Connecting Frame Assembly</h1>			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18111			
		MATERIAL							
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:16		WEIGHT:	SHEET 1 OF 1

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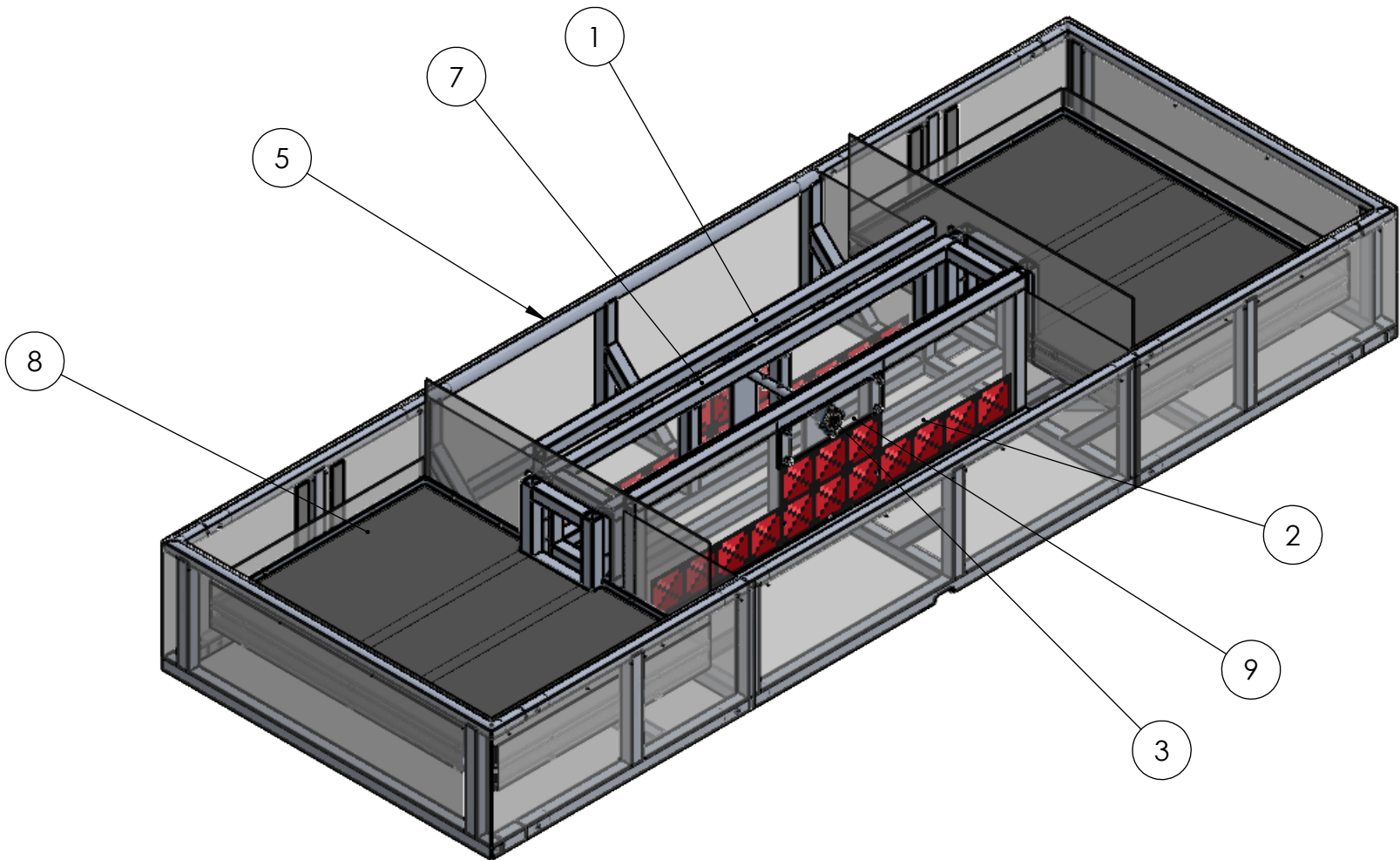
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ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	GE-18016	Switch Frame	1
2	GE-18024	Switch Base Cover Polycarbonate	2
3	GE-18026	Switch/Scale Arm Shaft	1
4	GE-18098	Switch Shaft Spacer	2
5	GE-18110	Fence Assembly	1
6	GE-18113	Switch Fence Brace Assembly	2
7	GE-18114	Switch Arm Assembly	1
8	GE-18121	Basket Assembly	2
9	GE-18122	Bearing/Damper Assembly	2
10	hex_.25_20_2.75_partial	Steel Hex Head Screw, 1/4"-20 x 2-3/4" long, partially threaded	9
11	nylock_.25_20	Steel Nylon-Insert Locknut, 1/4"-20	12
12	hex_.25_20_1.5	Steel Hex Head Screw, 1/4"-20 x 1-1/2" long, fully threaded	3

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		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			
			TITLE: Switch Assembly		
			SIZE B	DWG. NO. GE-18112	REV
			SCALE: 1:32 WEIGHT:		SHEET 1 OF 3

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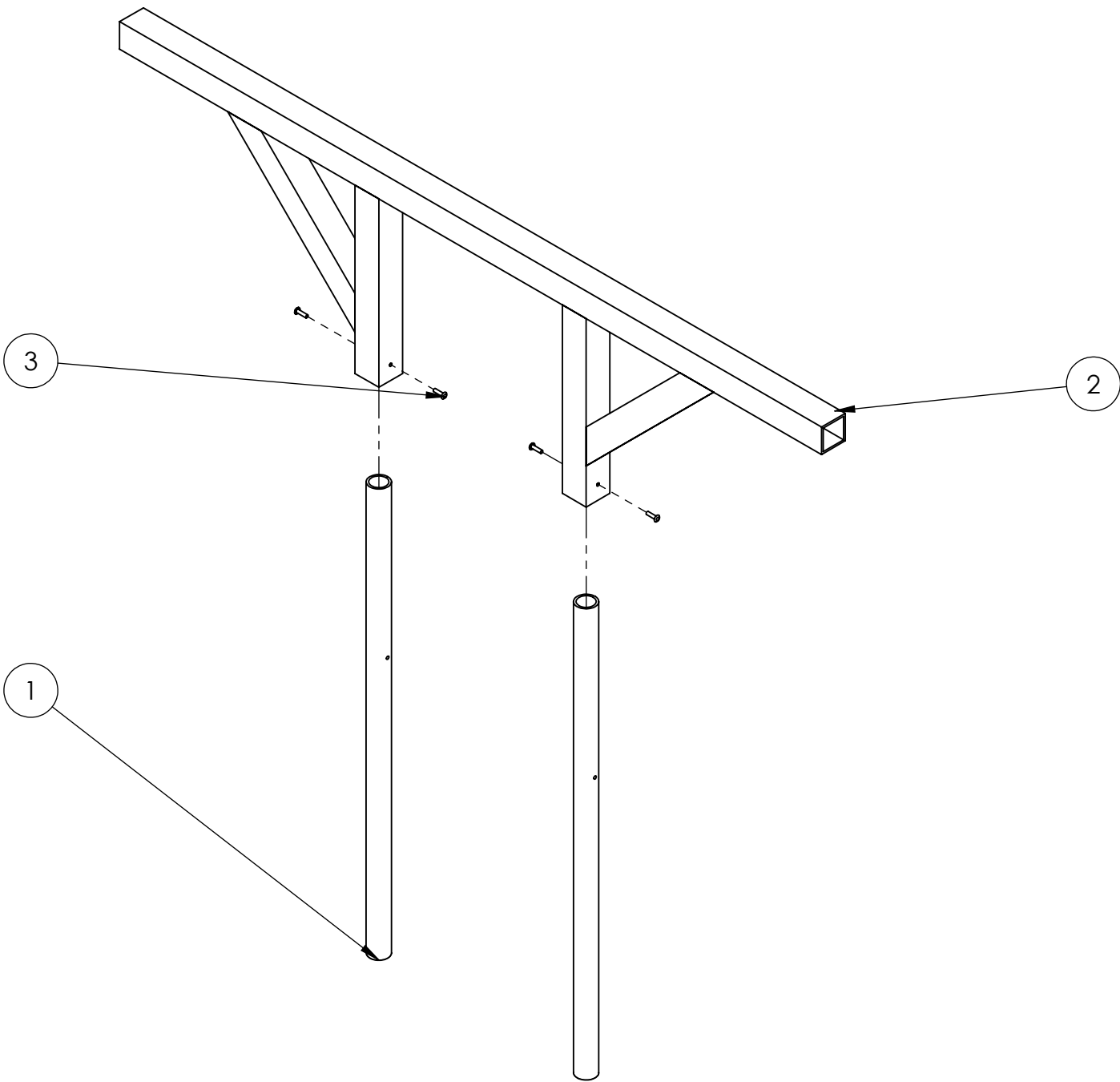
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ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	GE-18088	Switch Fence Brace Pin	2
2	GE-18087	Switch Fence Brace	1
3	rivet_.1875_.376-.5	3/16" Aluminum Rivet, .376-.5 Grip Range	4

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			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18113		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8 WEIGHT: SHEET 1 OF 1		

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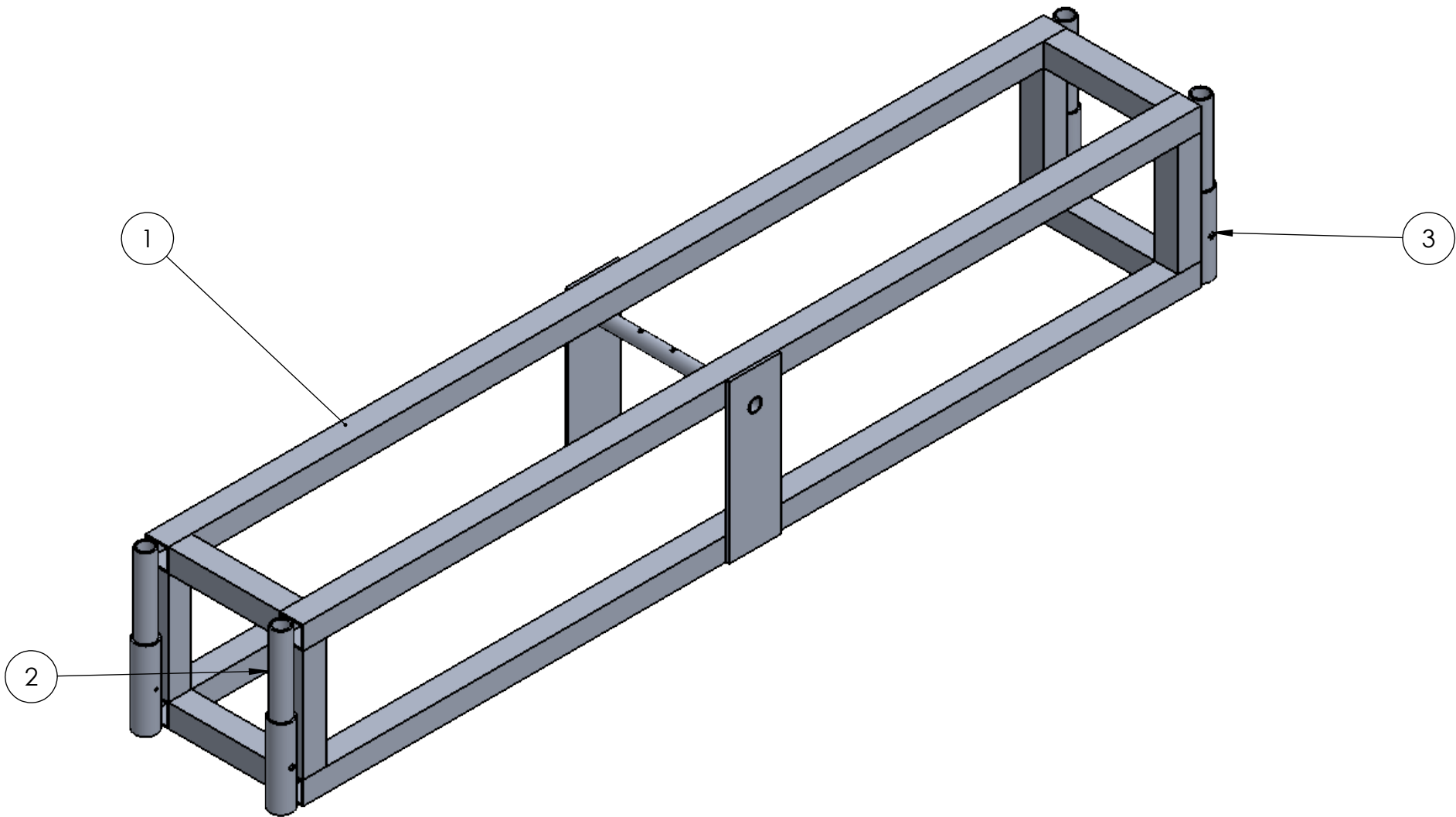
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ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	GE-18013	Switch Arm	1
2	GE-18028	Plate Mount Pin	4
3	rivet_.1875_.251-.375	3/16" Aluminum Rivet, .251-.375 Grip Range	4

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: <h1>Switch Arm Assembly</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.					
		MATERIAL	COMMENTS:			SIZE	DWG. NO.	REV
NEXT ASSY	USED ON	FINISH				B	GE-18114	
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8 WEIGHT: SHEET 1 OF 2		

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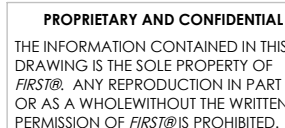
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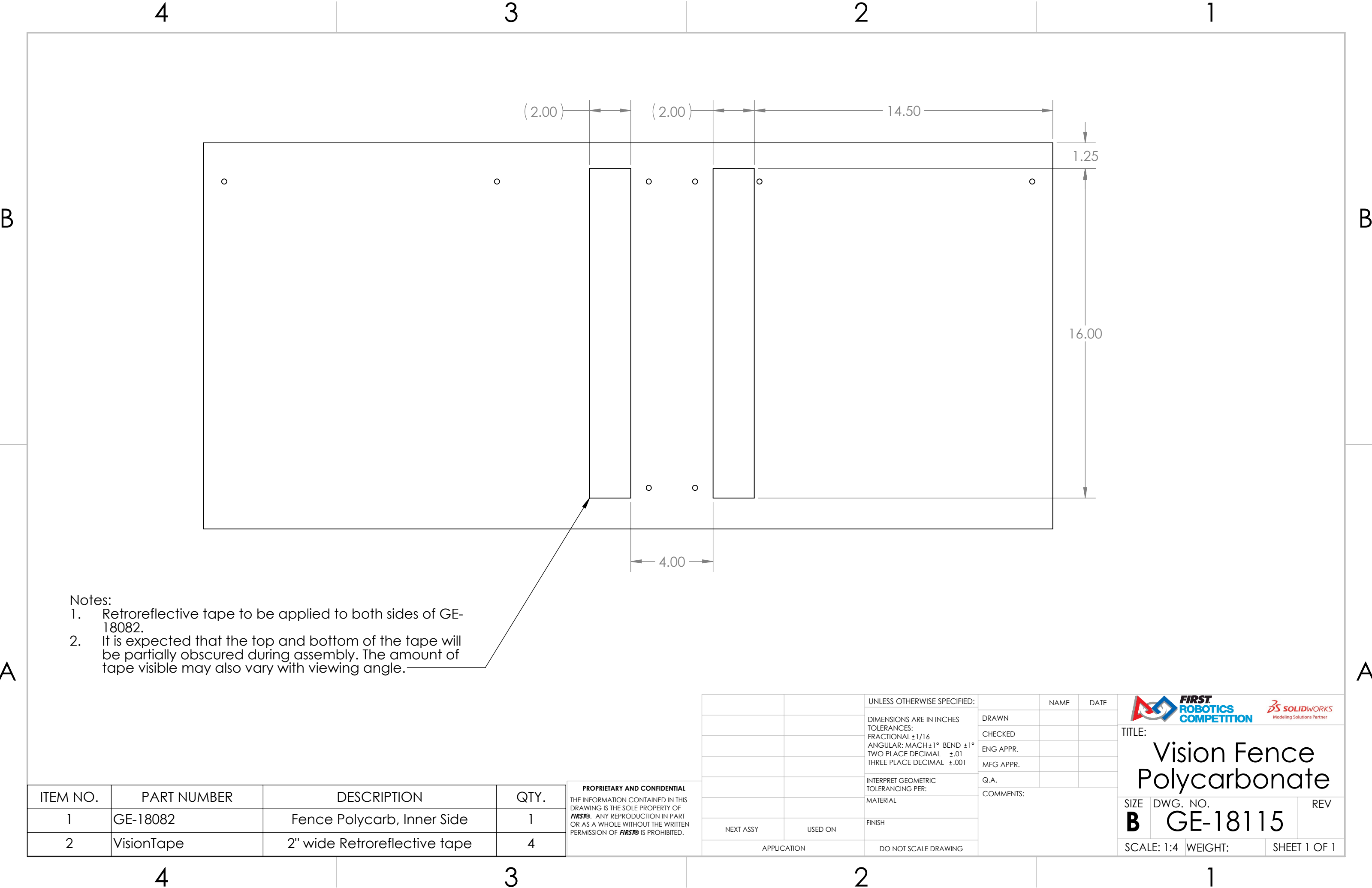
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1. Fasten Item 2 (qty: 4) to Item 1, using Item 3 (qty: 4).

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 FIRST ROBOTICS COMPETITION	 SOLIDWORKS Modeling Solutions Partner	
		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN					TITLE: <h1>Switch Arm Assembly</h1>
			CHECKED					
			ENG APPR.					
			MFG APPR.					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18114		
		MATERIAL	COMMENTS:					
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING	SCALE: 1:12 WEIGHT:			SHEET 2 OF 2		



1



- Notes:
- 1. Retroreflective tape to be applied to both sides of GE-18082.
 - 2. It is expected that the top and bottom of the tape will be partially obscured during assembly. The amount of tape visible may also vary with viewing angle.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18082	Fence Polycarb, Inner Side	1
2	VisionTape	2" wide Retroreflective tape	4

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div><div>FIRST ROBOTICS COMPETITION</div></div> <div><div>SOLIDWORKS Modeling Solutions Partner</div></div>		
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: Vision Fence Polycarbonate		
		TOLERANCES:	CHECKED					
		FRACTIONAL $\pm 1/16$	ENG APPR.					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18115		
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:4 WEIGHT: SHEET 1 OF 1		

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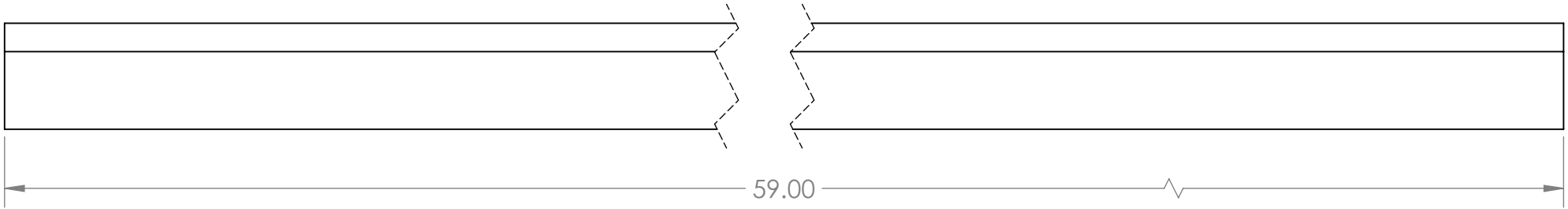
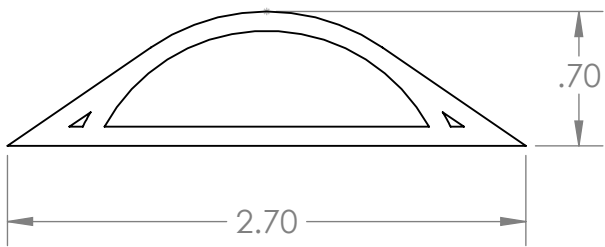
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- Notes:
- 1. Description: Cable Shield Cord Cover
 - 2. Source: Electriduct
 - 3. Item #: CSX-3 Black
 - 4. Equivalent substitutions allowed

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<div></div>		
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: <h1>Long Wire Protector</h1>		
		TOLERANCES:	CHECKED					
		FRACTIONAL $\pm 1/16$	ENG APPR.					
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.					
		TWO PLACE DECIMAL $\pm .01$	Q.A.					
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:			SIZE DWG. NO. REV B GE-18116		
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:1 WEIGHT: SHEET 1 OF 1		

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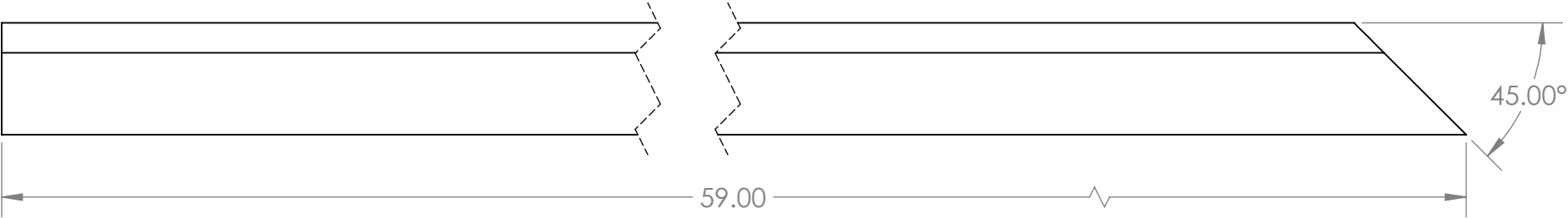
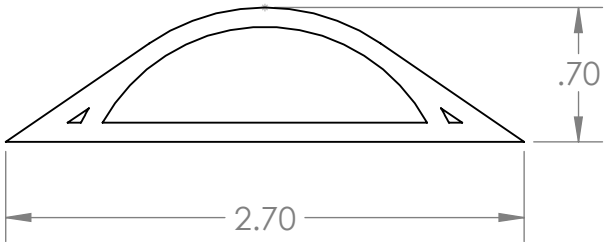
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- Notes:
- 1. Description: Cable Shield Cord Cover
 - 2. Source: Electriduct
 - 3. Item #: CSX-3 Black
 - 4. Equivalent substitutions allowed

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 	
		DIMENSIONS ARE IN INCHES	DRAWN				TITLE: Long Mitered Wire Protector
		TOLERANCES:	CHECKED				
		FRACTIONAL $\pm 1/16$	ENG APPR.				
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.				
		TWO PLACE DECIMAL $\pm .01$				SIZE DWG. NO. REV B GE-18117	
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:				
		INTERPRET GEOMETRIC TOLERANCING PER:					
		MATERIAL				SCALE: 1:1 WEIGHT: SHEET 1 OF 1	
		FINISH					
NEXT ASSY	USED ON						
APPLICATION		DO NOT SCALE DRAWING					

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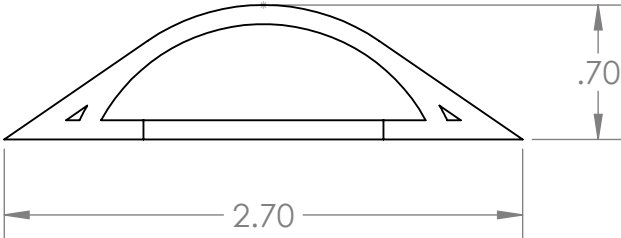
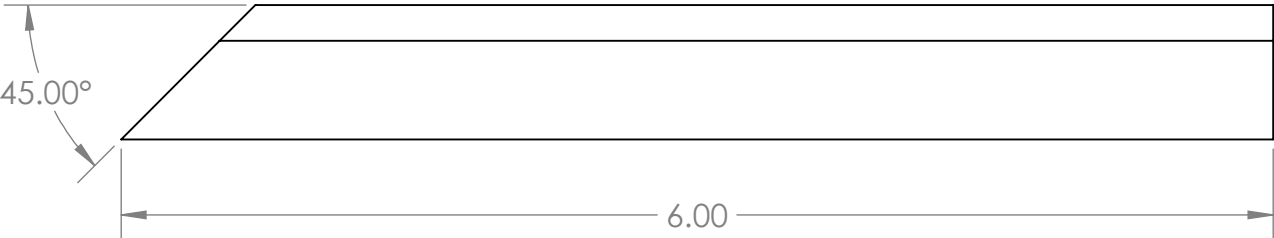
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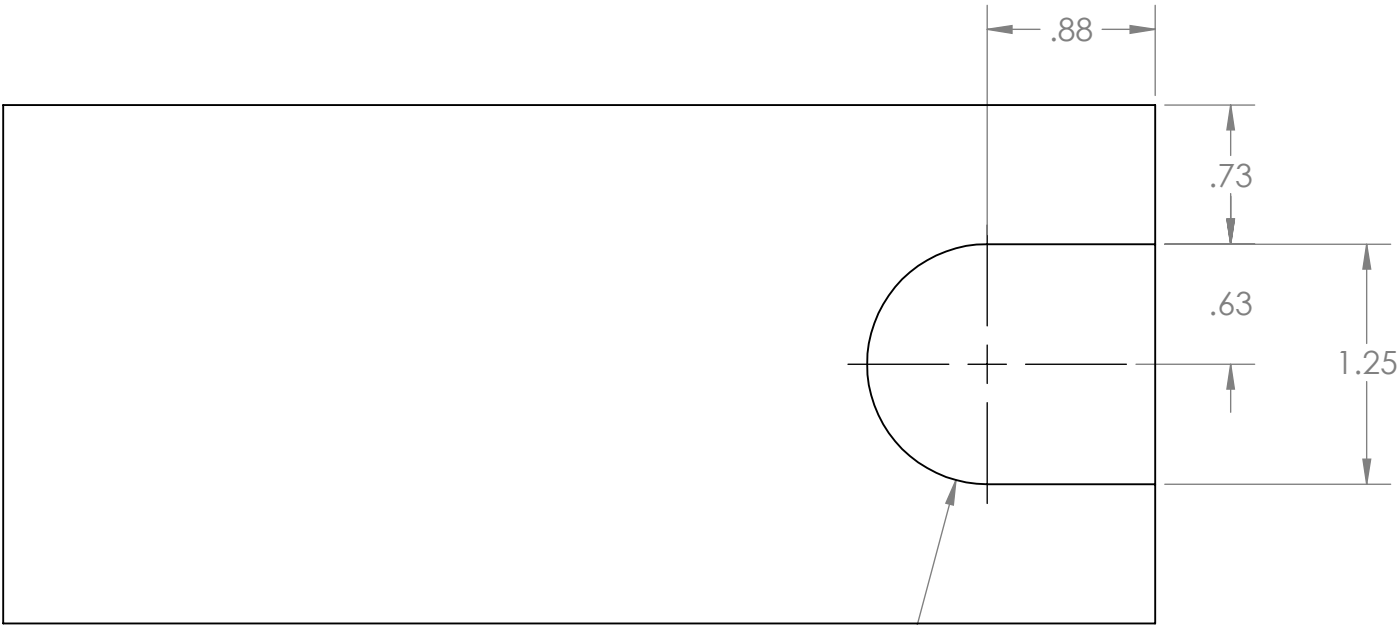
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- Notes:
1. Description: Cable Shield Cord Cover
 2. Source: Electriduct
 3. Item #: CSX-3 Black
 4. Equivalent substitutions allowed

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	  TITLE: Short Mitered Wire Protector
		DIMENSIONS ARE IN INCHES	DRAWN			
		TOLERANCES:	CHECKED			
		FRACTIONAL $\pm 1/16$	ENG APPR.			
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.			
		TWO PLACE DECIMAL $\pm .01$	Q.A.			COMMENTS:
		THREE PLACE DECIMAL $\pm .001$				
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL				SIZE DWG. NO. REV
		FINISH				B GE-18118
NEXT ASSY	USED ON					SCALE: 1:1 WEIGHT: SHEET 1 OF 1
APPLICATION		DO NOT SCALE DRAWING				

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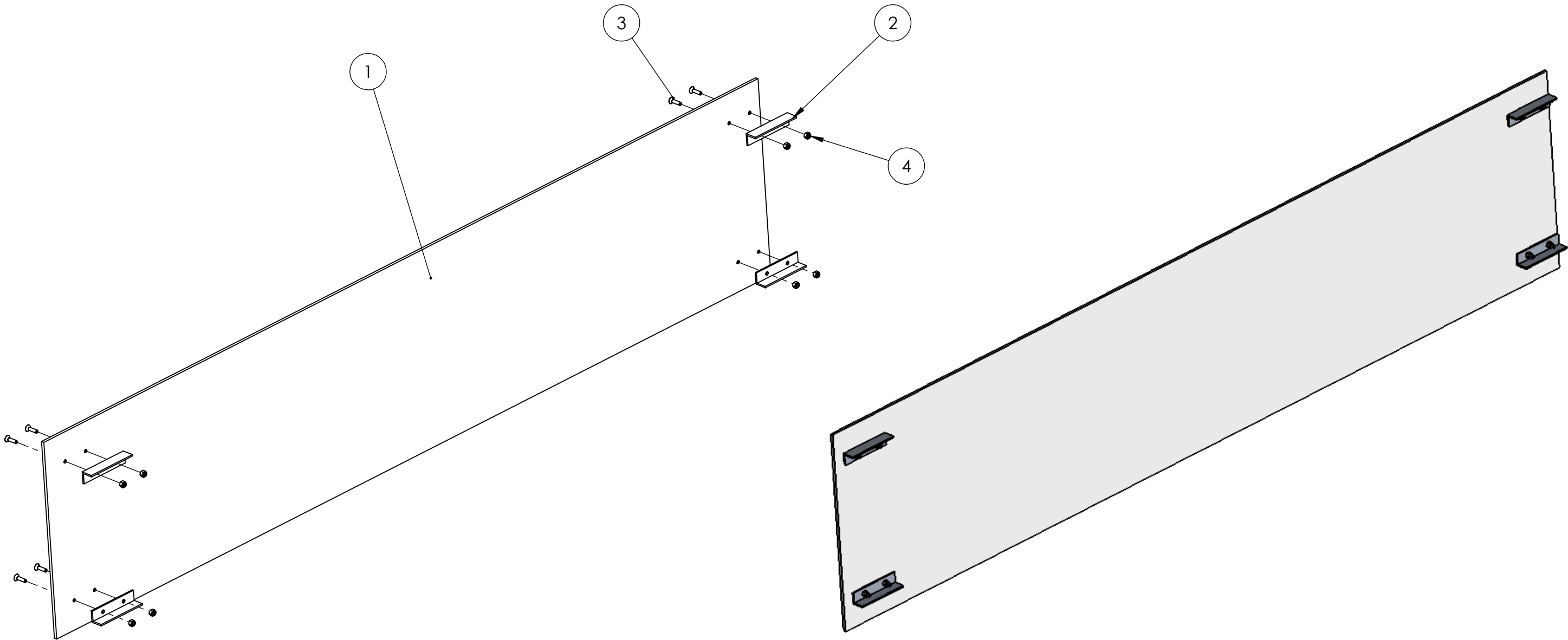
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18020	Scale Side Cover Polycarbonate	1
2	GE-18076	Scale Angle Brace	4
3	flat_hex_.25_20_1	Steel Hex Flat Head Screw, 1/4"-20 x 1" long, fully threaded	8
4	nylock_.25_20	Steel Nylon-Insert Locknut, 1/4"-20	8

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 			
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE: Scale Side Cover Polycarbonate Sub Assembly			
		TOLERANCES:	CHECKED						
		FRACTIONAL $\pm 1/16$	ENG APPR.						
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.						
		TWO PLACE DECIMAL $\pm .01$							
		THREE PLACE DECIMAL $\pm .001$							
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.						
		MATERIAL	COMMENTS:						
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING				SIZE B	DWG. NO. GE-18119		REV
						SCALE: 1:8		WEIGHT:	SHEET 1 OF 1

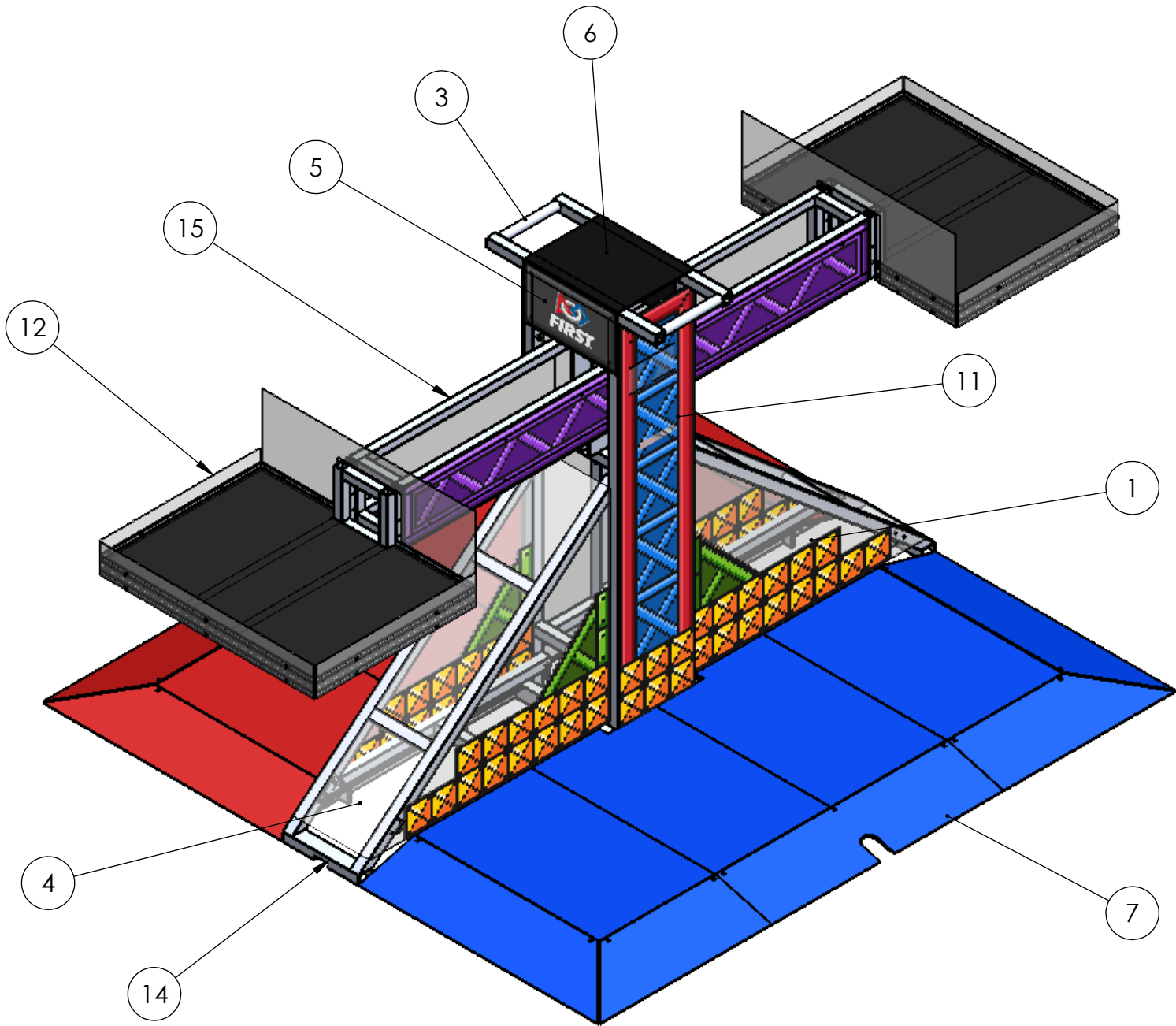
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ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	GE-18022	Scale Outrigger Side Cover Polycarbonate	4
2	GE-18026	Switch/Scale Arm Shaft	1
3	GE-18054	Scale Frame	1
4	GE-18055	Outrigger Top Polycarbonate	2
5	GE-18057	Scale Side HDPE	2
6	GE-18058	Scale Top HDPE	1
7	GE-18060	Platform	2
8	GE-18075	Scale Base Outrigger	2
9	GE-18099	Scale Shaft Spacer	2
10	GE-18106	Scale Lockout Bar	2
11	GE-18119	Scale Side Cover Polycarbonate Sub Assembly	2
12	GE-18121	Basket Assembly	2
13	GE-18122	Bearing/Damper Assembly	2
14	GE-18123	Outrigger Assembly	2
15	GE-18125	Scale Arm Assembly	1
16	hex_.5_13_5	Steel Hex Head Screw, 1/2"-13 x 5" long, fully threaded	4
17	hexnut_.5_13	Steel Hex Nut, 1/2"-13	8
18	hex_.25_20_1.5	Steel Hex Head Screw, 1/4"-20 x 1-1/2" long, fully threaded	3
19	nylock_.25_20	Steel Nylon-Insert Locknut, 1/4"-20	15
20	hex_.25_20_4.5_partial	Steel Hex Head Screw, 1/4"-20 x 4-1/2" long, partially threaded	4
21	flat_phil_.25_20_2.75	Steel Phillips Flat Head Screw, 1/4"-20 x 2-3/4" long, fully threaded	8
22	flat_phil_.25_20_5	Steel Phillips Flat Head Screw, 1/4"-20 x 5" long, fully threaded	8
23	wing_.25_20	Steel Wing Nut, 1/4"-20, 31/64" Base Diameter	8
24	washer_split_.26_.487	Steel Split Lock Washer for 1/4" Screw	8



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		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			
			 		
			TITLE: Scale Assembly		
SIZE B	DWG. NO. GE-18120	REV			
SCALE: 1:48		WEIGHT:	SHEET 1 OF 5		

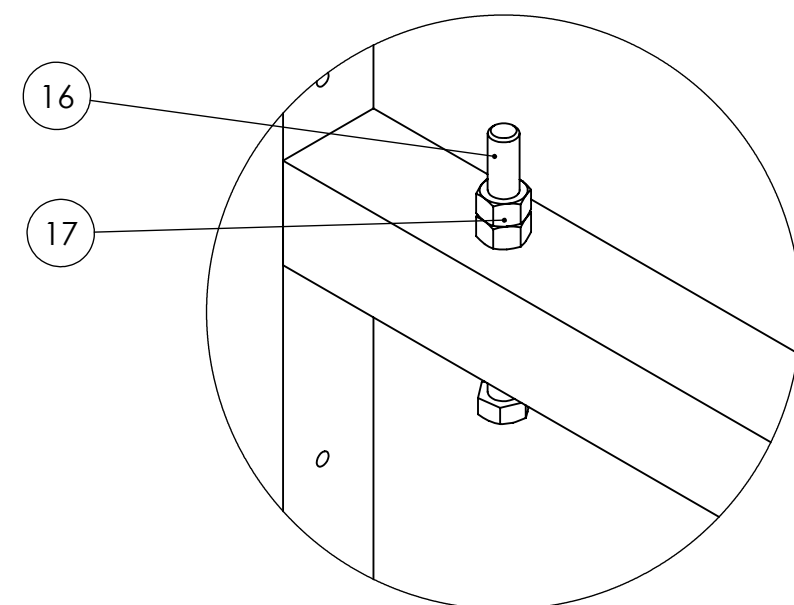
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1. Attach Items 8 (qty: 2) to Item 3 using Items 19 and 20.
2. Attach Items 14 (qty: 2) to Item 3 using Items 22, 23 and 24.
3. Bolt Items 16 (qty: 4) and 17 (qty: 8) through Item 3.

DO NOT SCALE DRAWING

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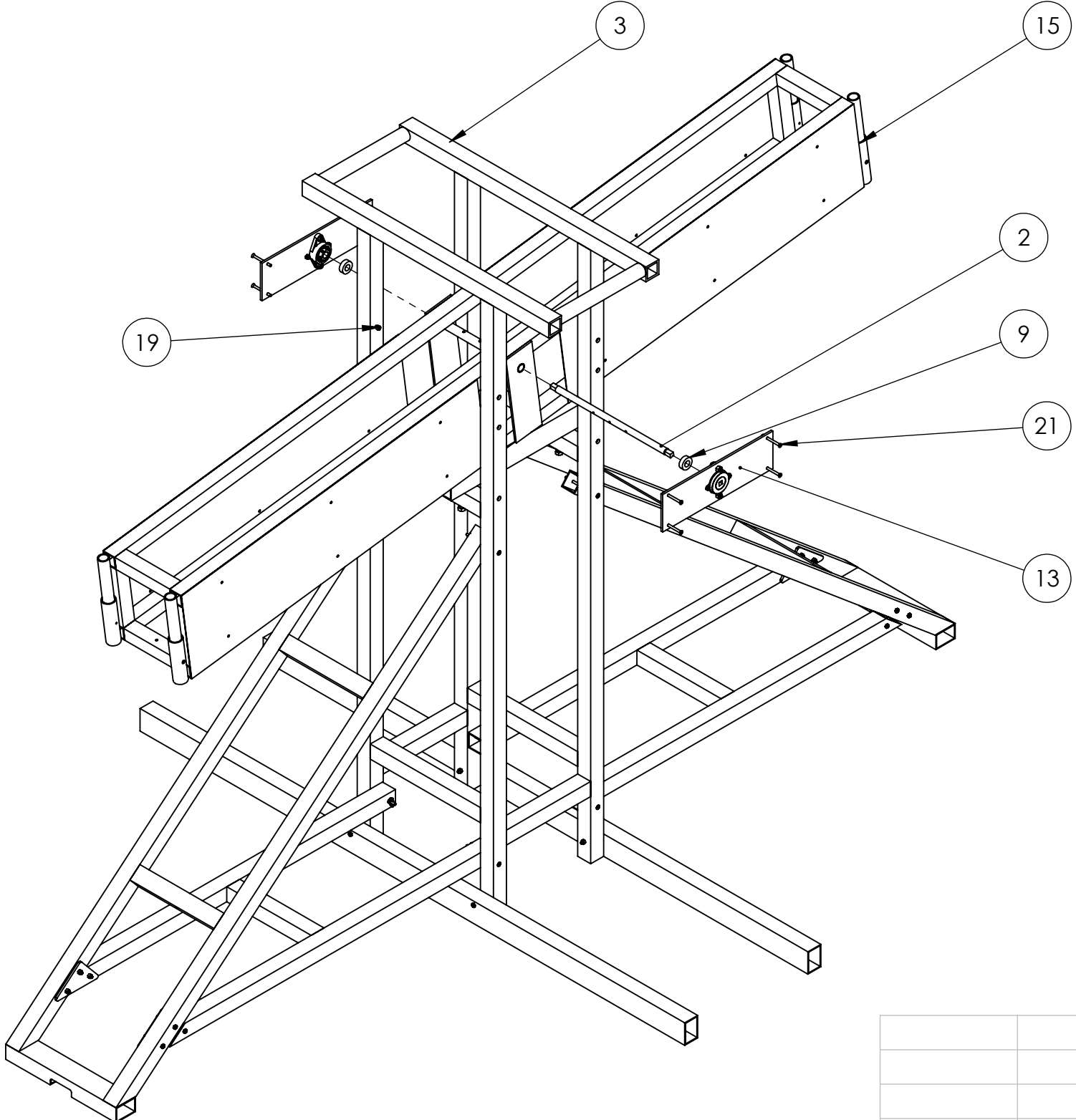
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- Notes:
- 1. Slide item 2 (the shaft) through the tube on Item 15. Slide Items 9 (qty: 2) to either side of Item 2.
 - 2. Align the shaft to the bearings and dampers of Item 13 (qty: 2). Bolt Items 13 to Item 3 using Items 21 and 23. Please note that Items 13 go to the inside of the frame of Item 3.

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		DIMENSIONS ARE IN INCHES	DRAWN			
		TOLERANCES:	CHECKED			
		FRACTIONAL ±1/16	ENG APPR.			
		ANGULAR: MACH ±1° BEND ±1°	MFG APPR.			
		TWO PLACE DECIMAL ±.01	Q.A.			
		THREE PLACE DECIMAL ±.001	COMMENTS:			
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL				
		FINISH				
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING				



TITLE:

Scale Assembly

SIZE	DWG. NO.	REV
B	GE-18120	

SCALE: 1:48	WEIGHT:	SHEET 3 OF 5
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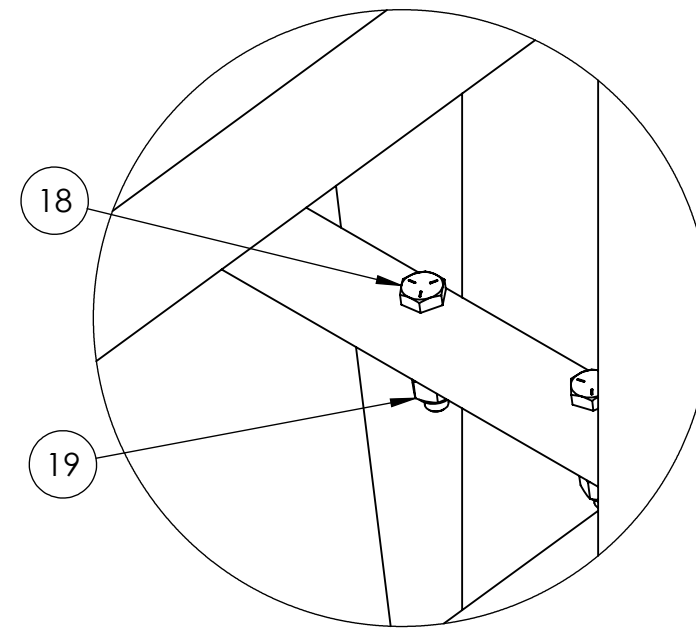
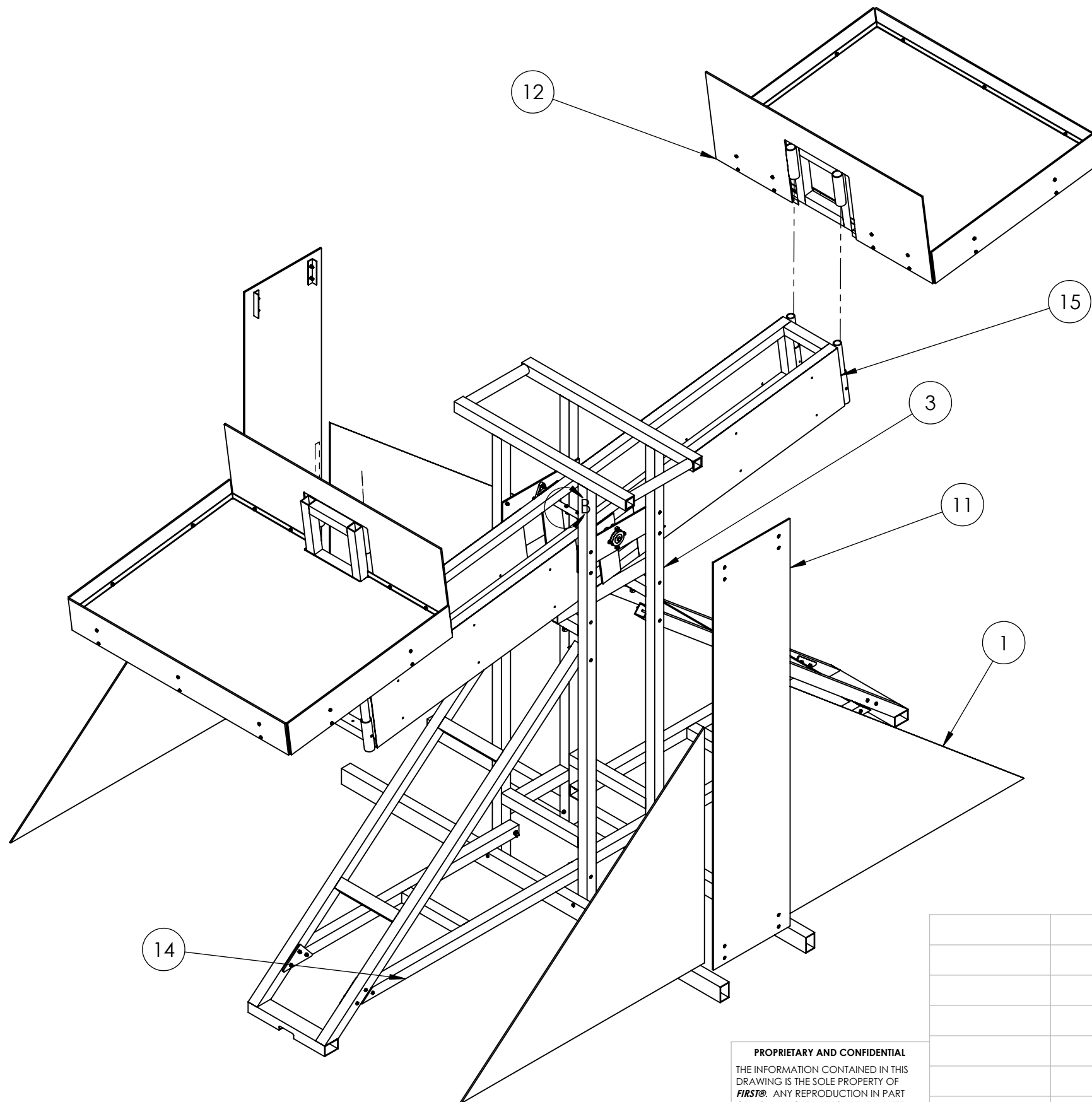
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DETAIL B
SCALE 1 : 2

Notes:

1. Align Item 2 (the shaft) through the tube of Item 17 and secure alignment using Items 18 (qty: 3) and 19 (qty: 3).
2. Slide Items 12 (qty: 2) onto the pins of Item 15.
3. Attach Items 11 to Item 3 using hook and loop.
4. Attach Items 1 to Items 14 using hook and loop.

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UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

NEXT ASSY

USED ON

APPLICATION

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



TITLE:

Scale Assembly

SIZE DWG. NO.

B GE-18120

REV

SCALE: 1:48 WEIGHT:

SHEET 4 OF 5

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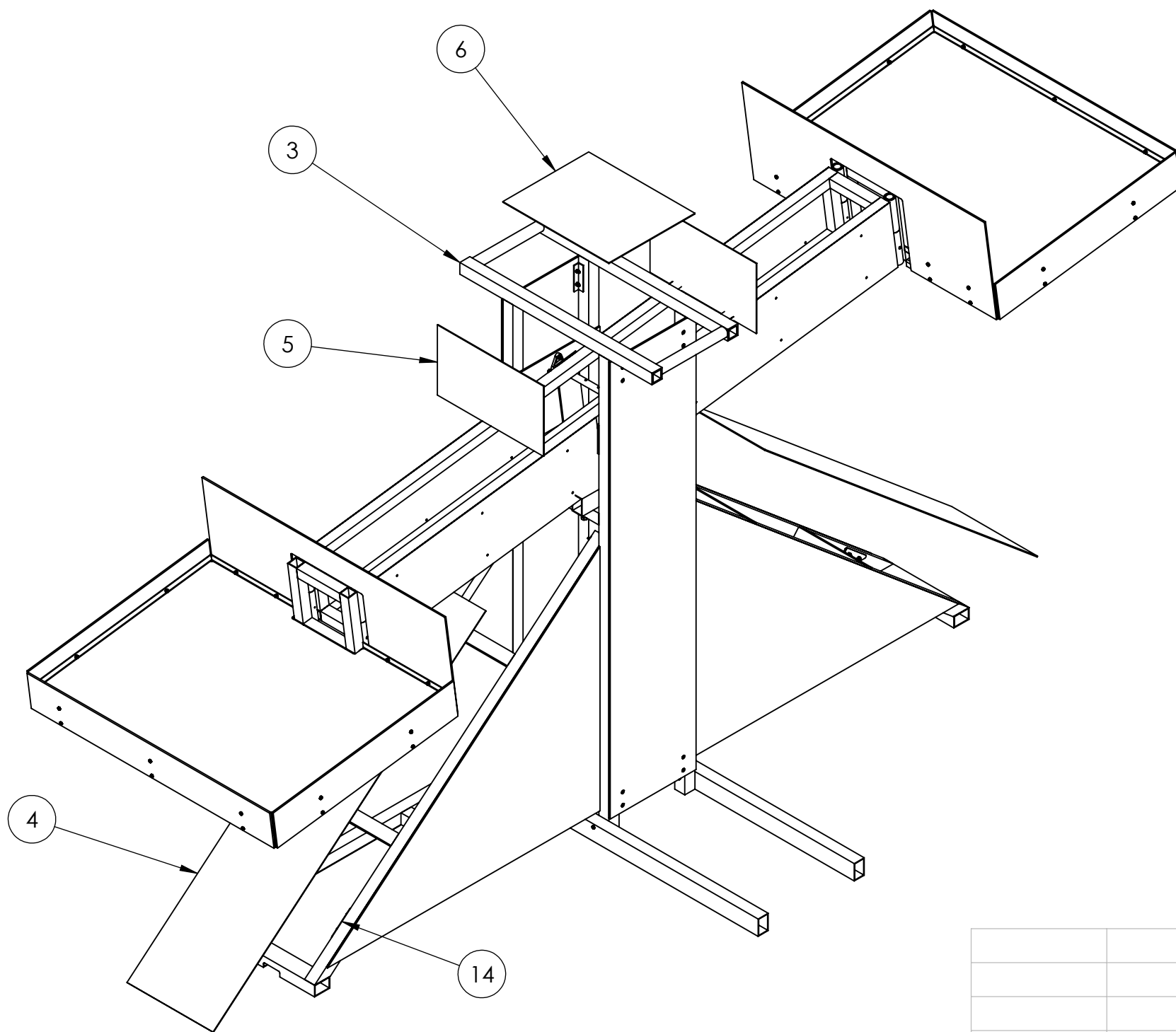
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- Notes:
1. Attach Items 5 and 6 to Item 3 using hook and loop.
 2. Attach items 4 to Items 16 using hook and loop.
 3. Build Items 7 (not shown) around the base of the Scale Assembly. See Assembly Drawing GE-18060 for details.

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		DIMENSIONS ARE IN INCHES	DRAWN						
		TOLERANCES:	CHECKED						
		FRACTIONAL $\pm 1/16$	ENG APPR.						
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.						
		TWO PLACE DECIMAL $\pm .01$				<div><div>SIZE</div><div>DWG. NO.</div><div>REV</div></div> <div><div>B</div><div>GE-18120</div></div>			
		THREE PLACE DECIMAL $\pm .001$							
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.						
		MATERIAL	COMMENTS:						
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:48		WEIGHT:	SHEET 5 OF 5

4

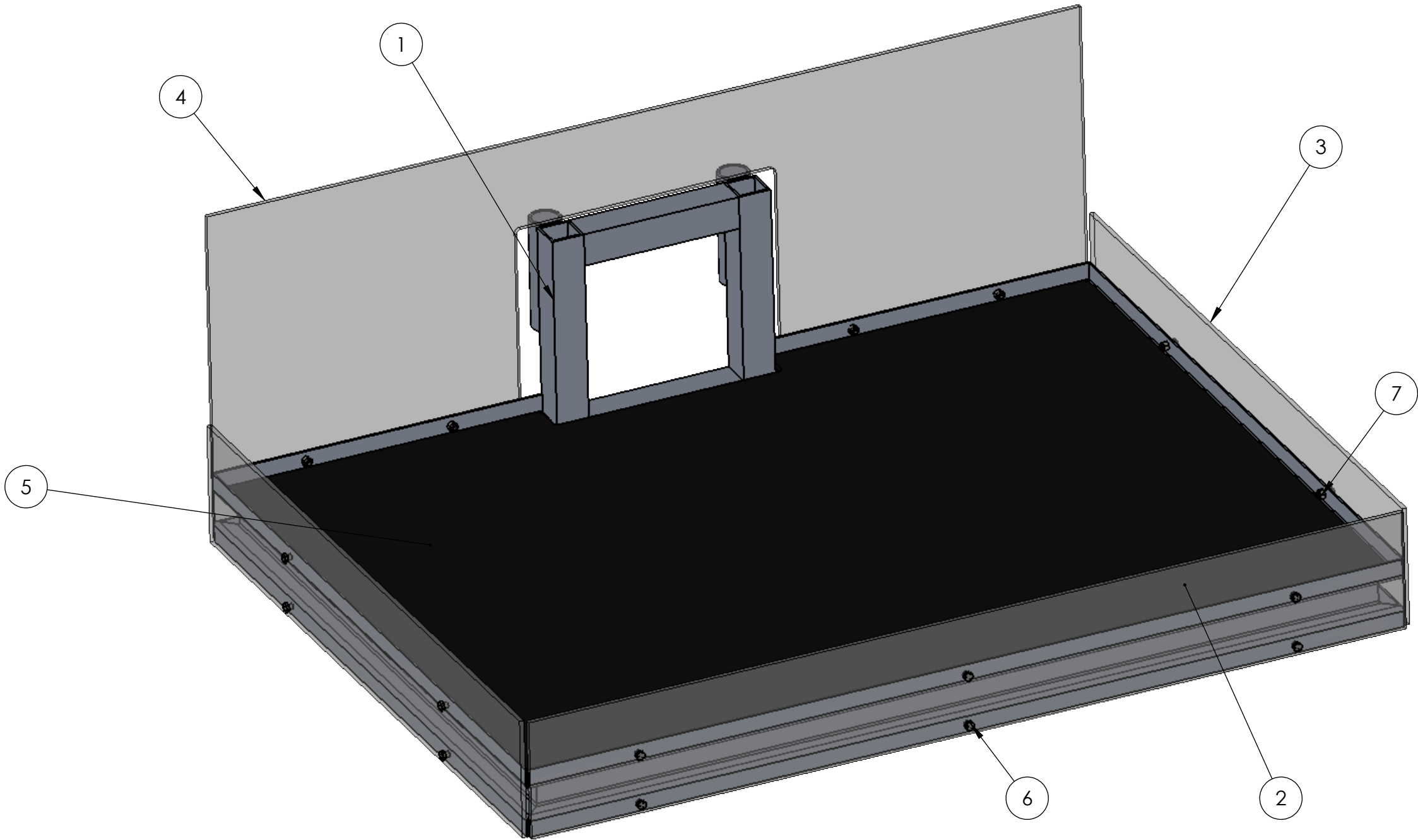
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18007	Scale Plate	1
2	GE-18018	Plate Front Wall	1
3	GE-18019	Plate Side Wall	2
4	GE-18017	Plate Back Wall	1
5	GE-18021	Scale and Switch Basket, Plate	1
6	hex_.25_20_.75	Steel Hex Head Screw, 1/4"-20 x 3/4" long, fully threaded	22
7	nylock_.25_20	Steel Nylon-Insert Locknut, 1/4"-20	22

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		DIMENSIONS ARE IN INCHES			DRAWN	
		TOLERANCES:			CHECKED	
		FRACTIONAL ±1/16			ENG APPR.	
		ANGULAR: MACH ±1° BEND ±1°			MFG APPR.	
		TWO PLACE DECIMAL ±.01			Q.A.	
		THREE PLACE DECIMAL ±.001			COMMENTS:	
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL				
		FINISH				
NEXT ASSY	USED ON					
APPLICATION		DO NOT SCALE DRAWING				



TITLE:
Basket Assembly

SIZE
B

DWG. NO.
GE-18121

REV

SCALE: 1:6

WEIGHT:

SHEET 1 OF 2

4

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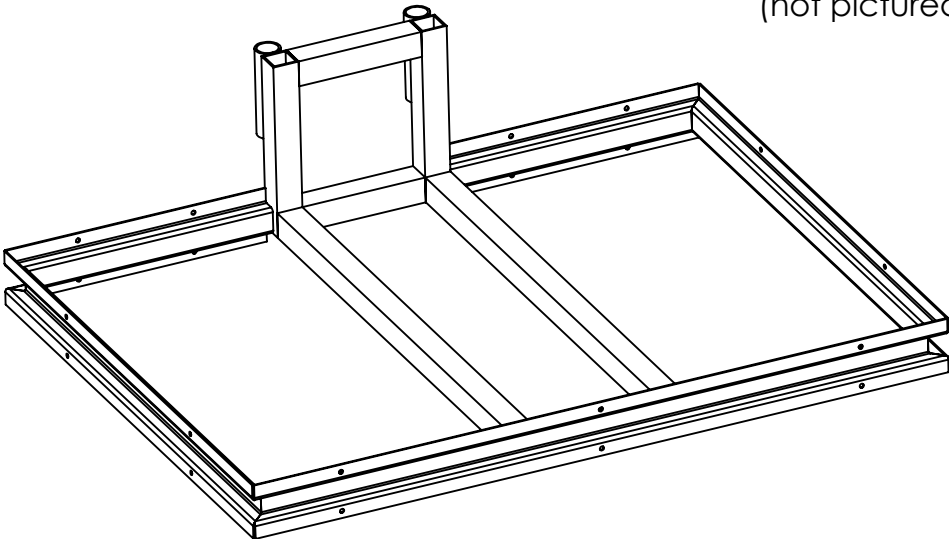
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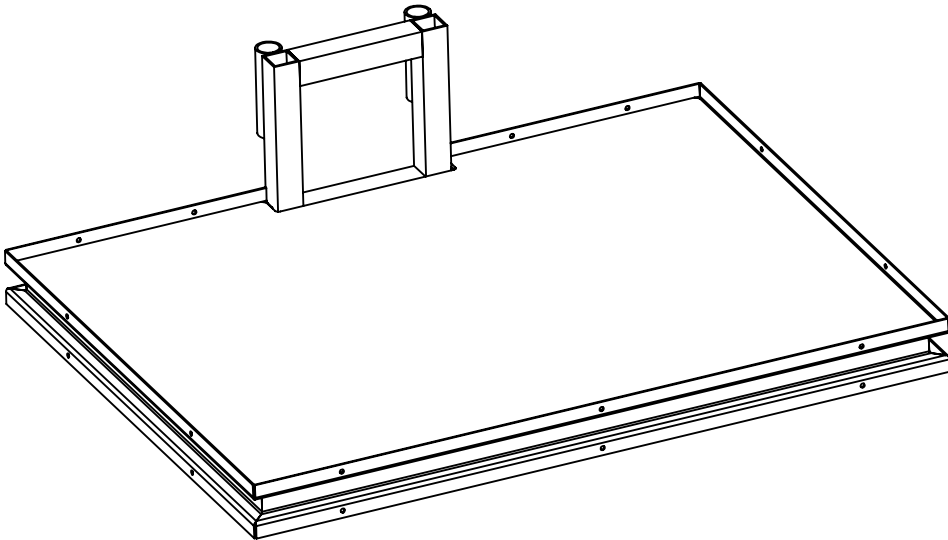
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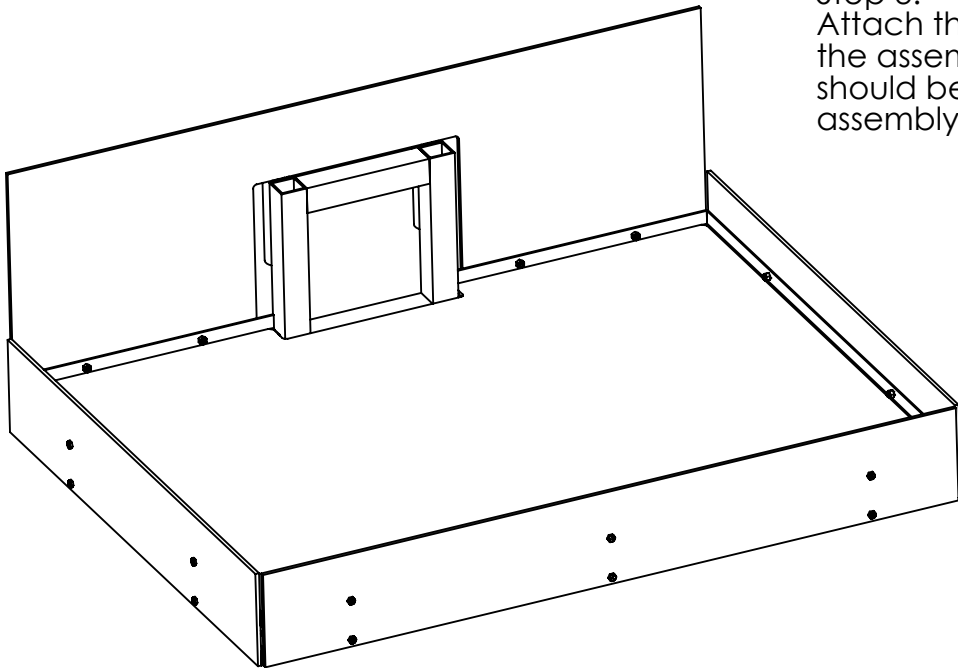
Step 1:
Acquire GE-18007 part.
Confirm all lights are mounted properly
(not pictured).





Step 2:
Place GE-18021 onto the
assembly, textured side up.

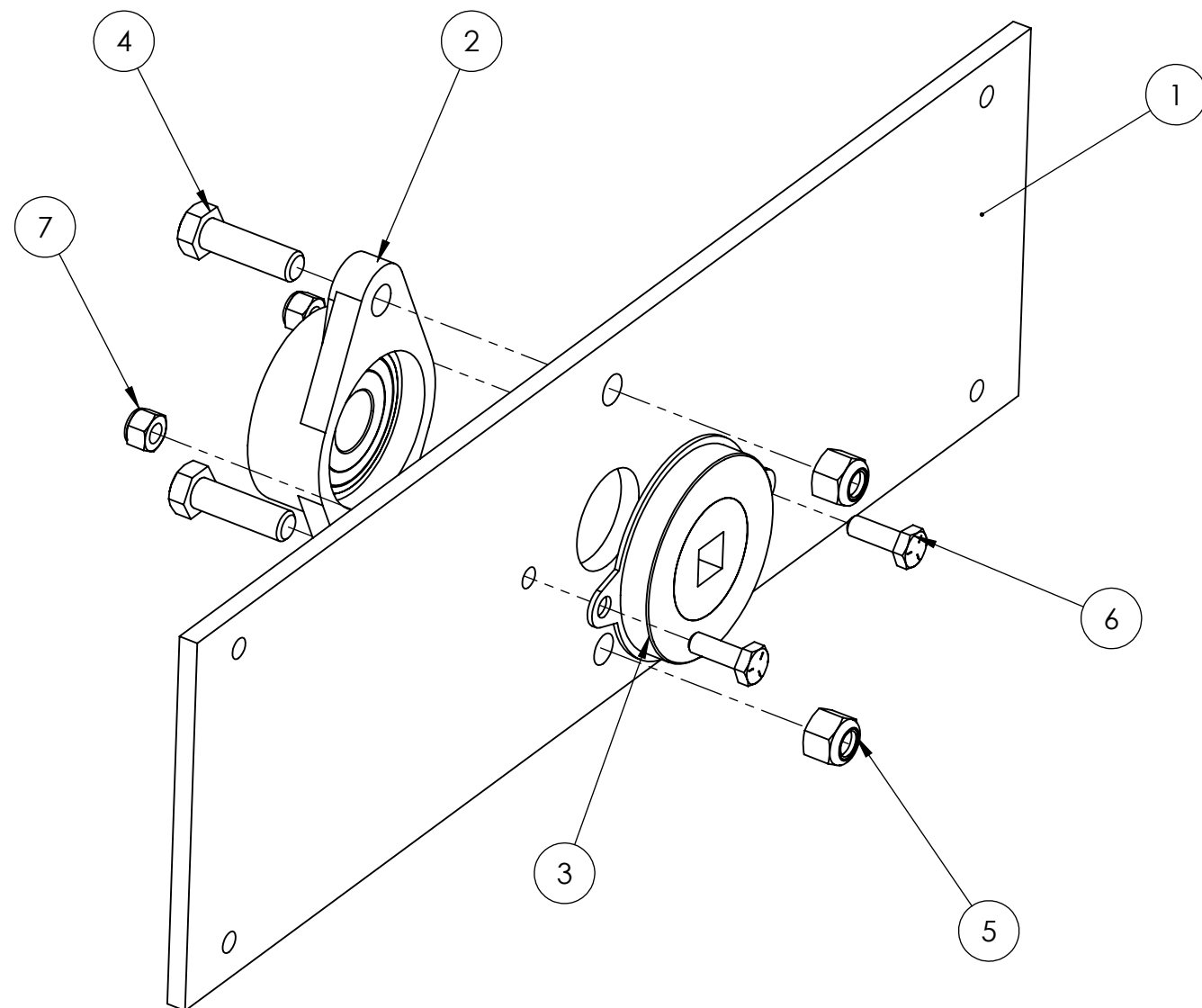
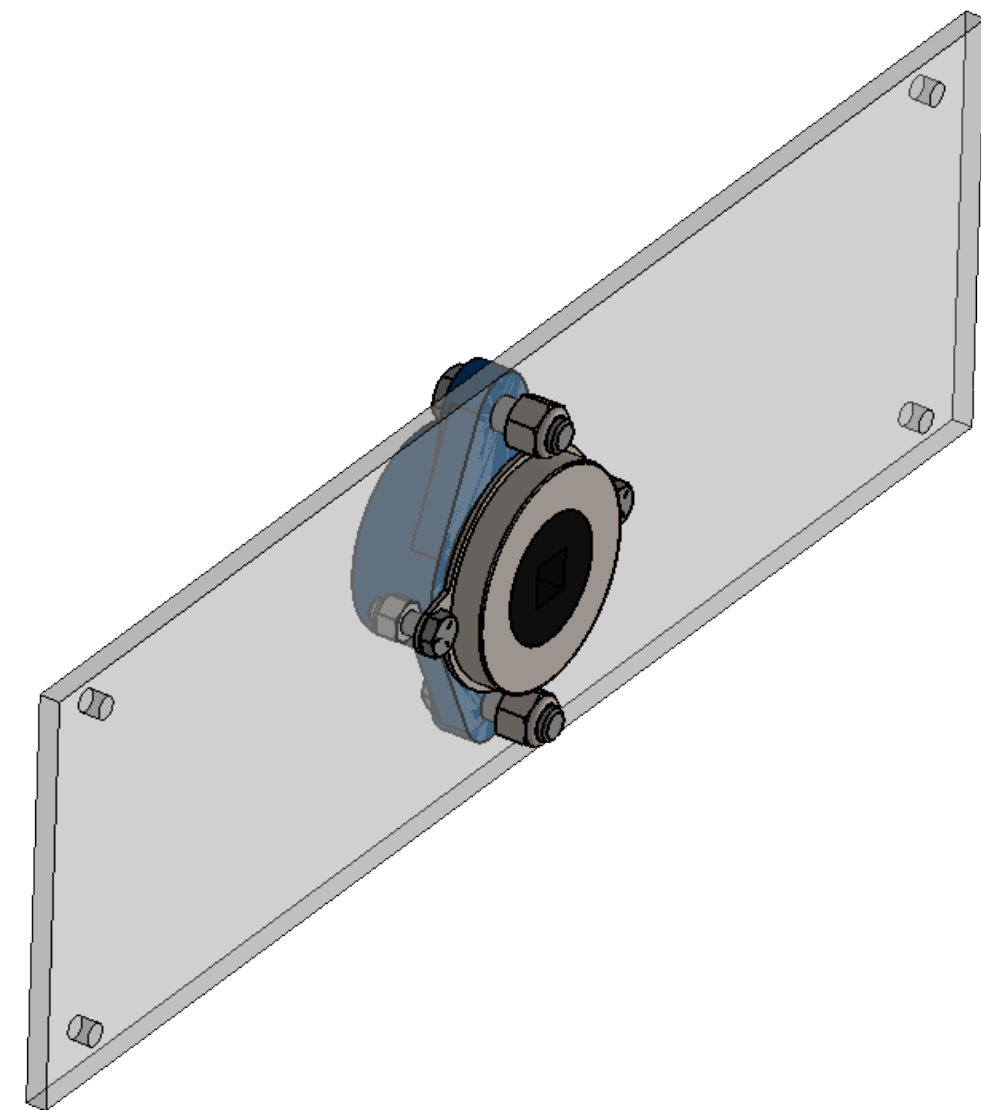


Step 3:
Attach the four plate walls to
the assembly. The bolt heads
should be on the outside of the
assembly.



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NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING						





Notes:
1. Bolts should not be fully tightened until mounted with a Switch/Scale Arm Shaft (GE-18026).

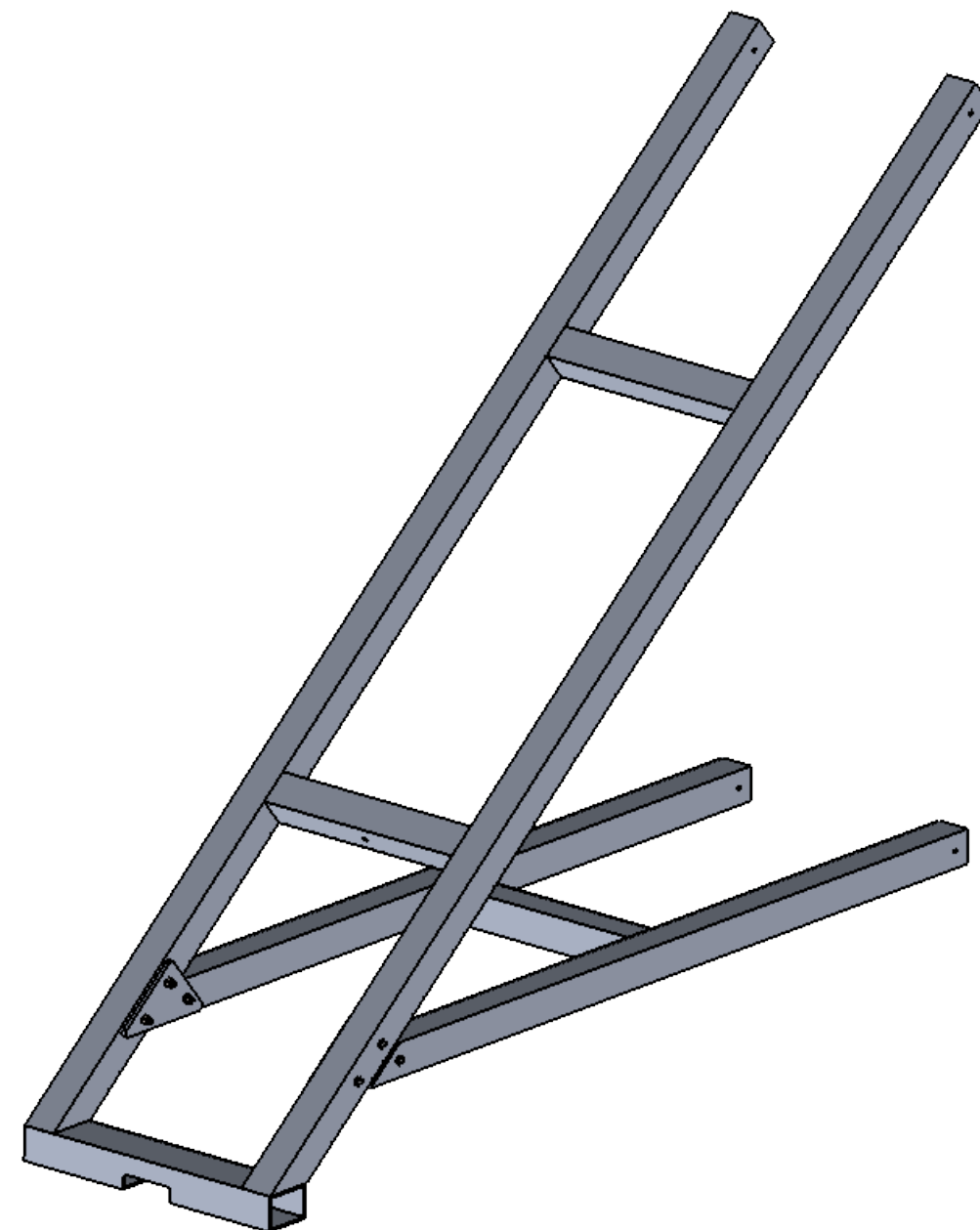
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18056	Bearing Damper Polycarbonate	1
2	GE-18096	Scale/Switch Bearing	1
3	GE-18097	Scale/Switch Damper	1
4	hex_.375_16_1.25	Steel Hex Head Screw, 3/8"-16 x 1-1/4" long, fully threaded	2
5	nylock_.375_16	Steel Nylong-Inster Locknut, 3/8"-16	2
6	hex_.25_20_.75	Steel Hex Head Screw, 1/4"-20 x 3/4" long, fully threaded	2
7	nylock_.25_20	Steel Nylon-Insert Locknut, 1/4"-20	2

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN				TITLE: Bearing/Damper Assembly
			CHECKED				
			ENG APPR.				
			MFG APPR.				
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV B GE-18122	
		MATERIAL	COMMENTS:				
		FINISH					
NEXT ASSY	USED ON						
APPLICATION		DO NOT SCALE DRAWING	SCALE: 1:2 WEIGHT: SHEET 1 OF 1				

1



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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.01 THREE PLACE DECIMAL ±.001	DRAWN			TITLE: <div>Outrigger Assembly</div>			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE DWG. NO. REV <div>BGE-18123</div>			
		MATERIAL	COMMENTS:						
		FINISH							
NEXT ASSY	USED ON								
APPLICATION		DO NOT SCALE DRAWING	SCALE: 1:10 WEIGHT: SHEET 1 OF 1						

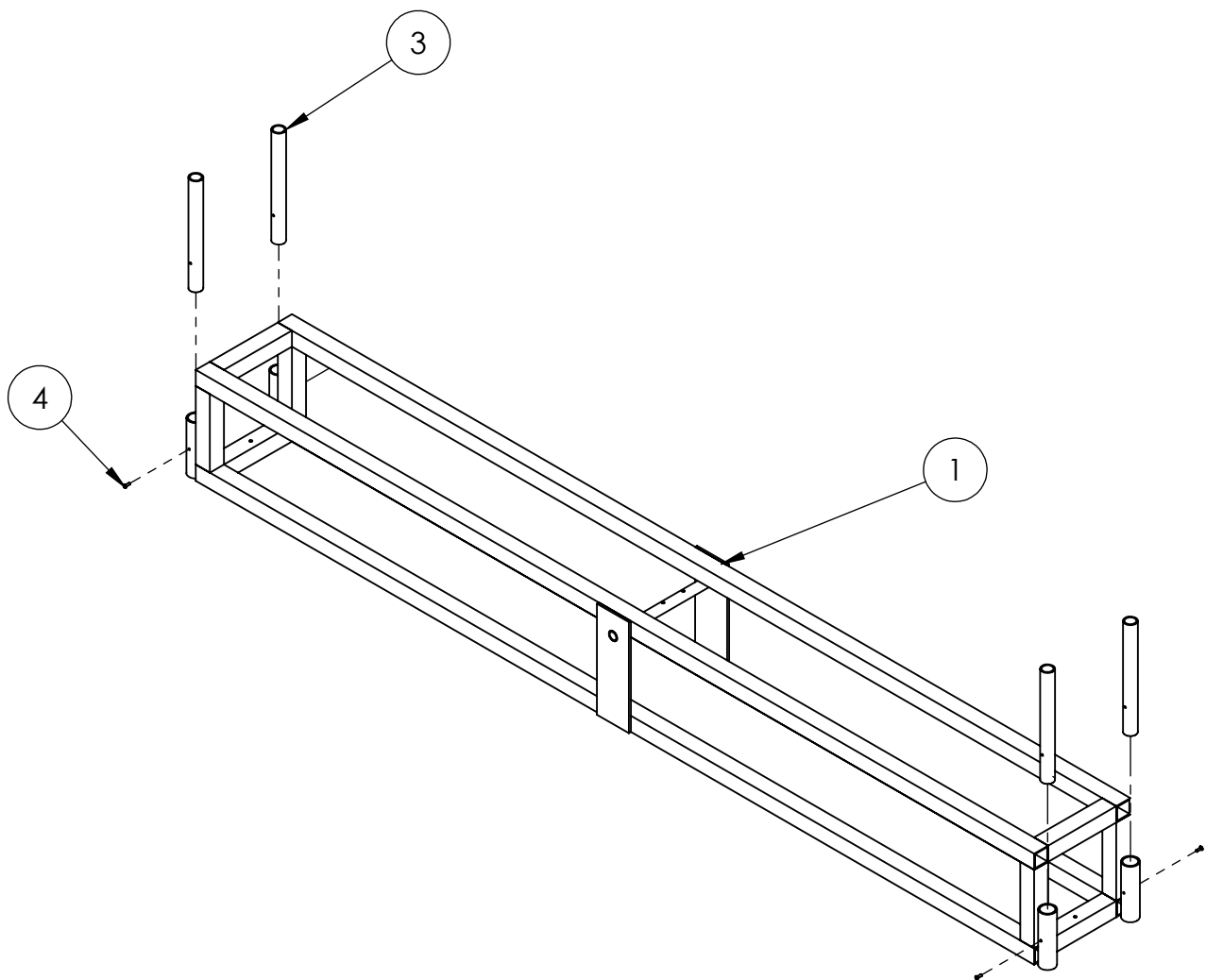
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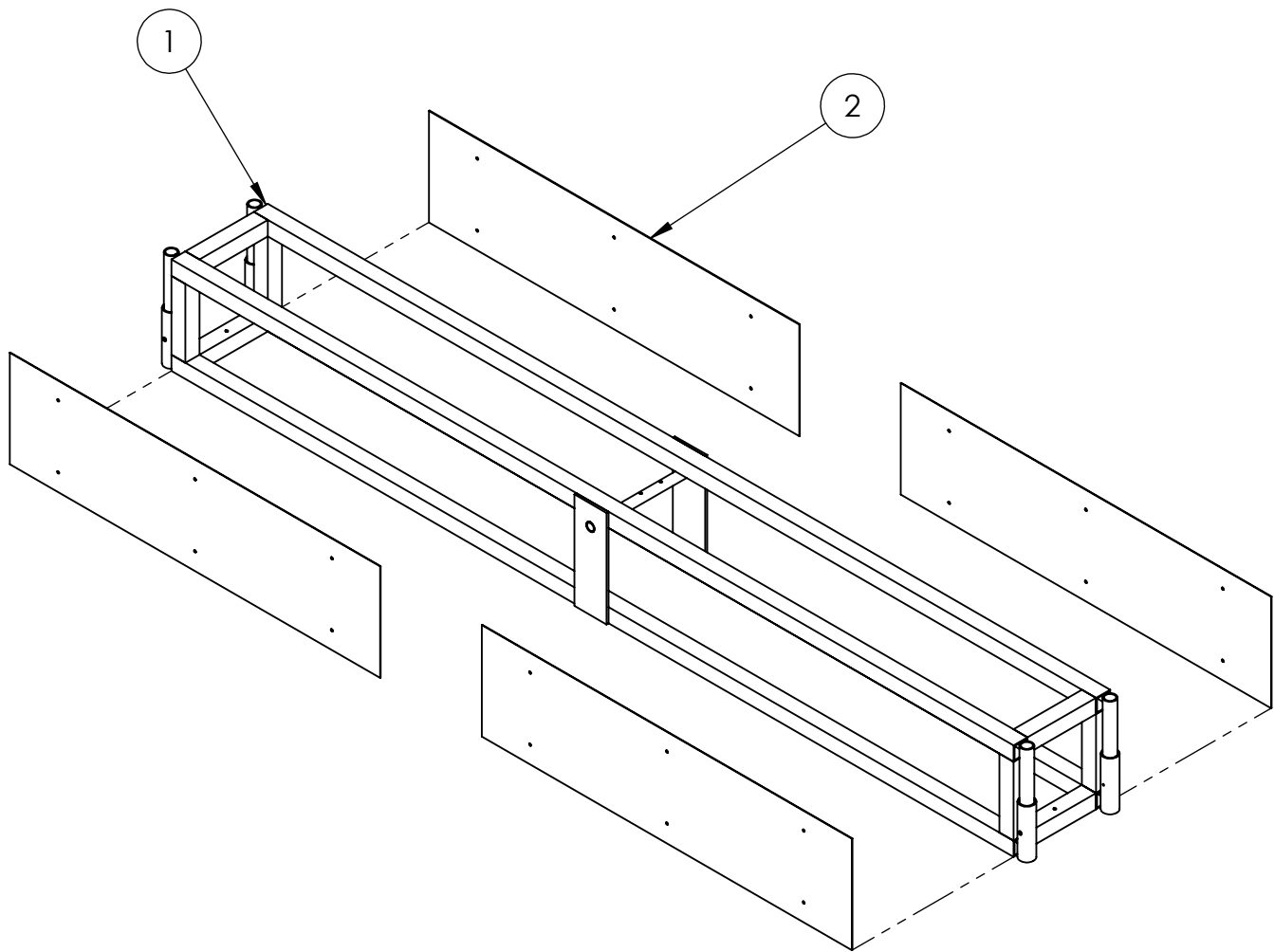
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Note:
1. Attach Item 3 (qty: 4) to Item 1 using Item 4 (qty: 4).



Note:
1. Attach Item 2 (qty: 4) to Item 1 with cable ties after the rest of GE-18120 is assembled.

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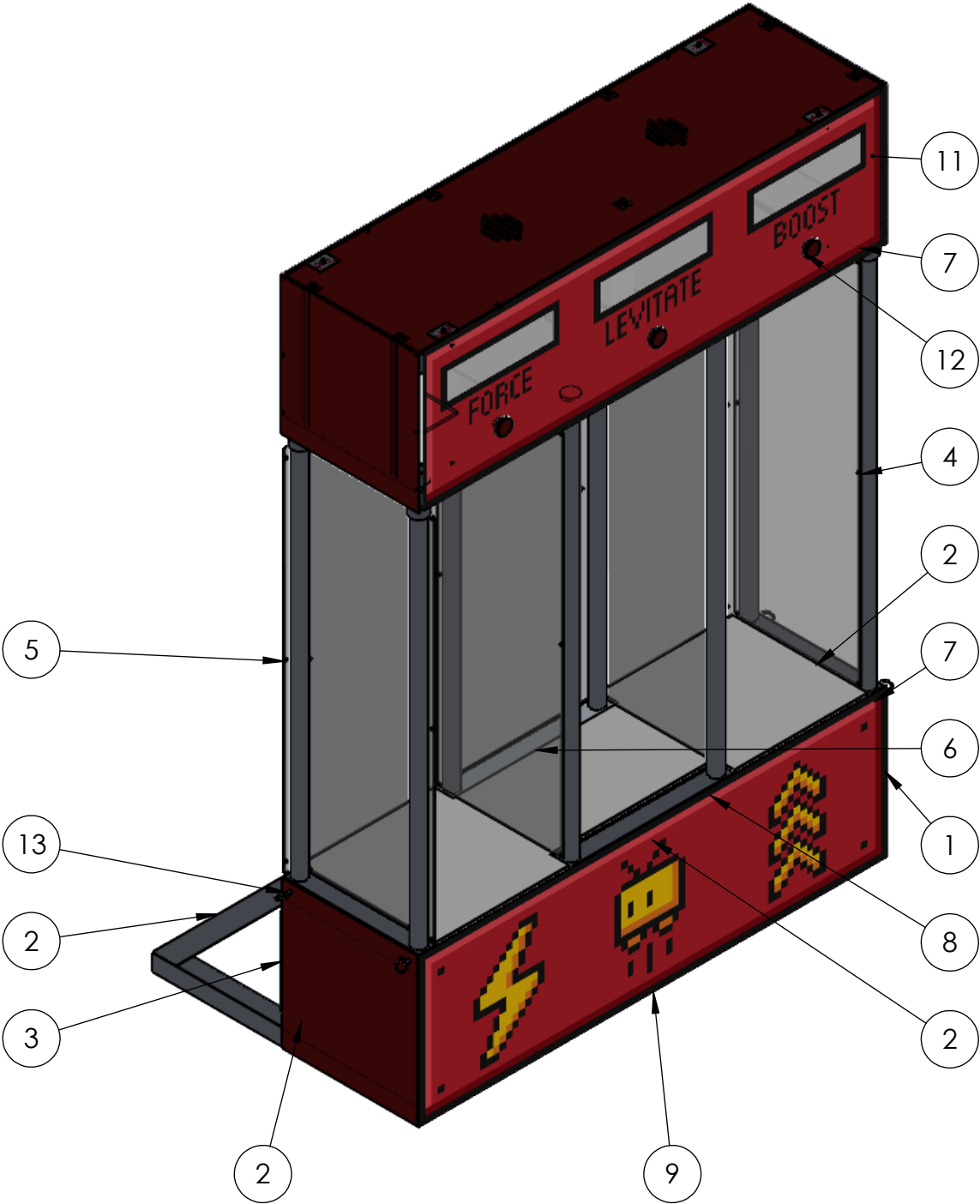
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			MFG APPR.					
			Q.A.					
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		MATERIAL						
NEXT ASSY	USED ON	FINISH						
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:24 WEIGHT: SHEET 2 OF 2		

B

A

ITEM NO.	PART NUMBER	DESCRIPTION	Default/ QTY.
1	GE-18031	Vault HDPE Bottom Side	2
2	GE-18032	Vault Base	1
3	GE-18035	Vault HDPE Bottom Back	1
4	GE-18036	Vault Polycarbonate Middle Insert	4
5	GE-18037	Vault Polycarbonate Backstop	1
6	GE-18038	Vault Polycarbonate Bottom Floor	1
7	GE-18039	Vault Support Pipes	4
8	GE-18040	Vault Middle Support Pipes	4
9	GE-18045	Vault Polycarbonate Bottom Front	1
10	GE-18047	Vault Top Frame	1
11	GE-18129	Vault Top Assembly	1
12	Vault_Button		3
13	pin_quick_ring_.25_2	SS Ring-Grip Quick-Release Pin, 1/4" diameter, 2" long	4
14	hex_.25_20_.75	Steel Hex Head Screw, 1/4"-20 x 3/4" long, fully threaded	12
15	nylock_.25_20	Steel Nylon-Insert Locknut, 1/4"-20	12

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES	DRAWN		
		TOLERANCES:	CHECKED		
		FRACTIONAL $\pm 1/16$	ENG APPR.		
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.		
		TWO PLACE DECIMAL $\pm .01$	Q.A.		
		THREE PLACE DECIMAL $\pm .001$	COMMENTS:		
		INTERPRET GEOMETRIC			
		TOLERANCING PER:			
		MATERIAL			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			
			TITLE: Vault Assembly		
			SIZE B	DWG. NO. GE-18126	REV
			SCALE: 1:12 WEIGHT:		SHEET 1 OF 3

B

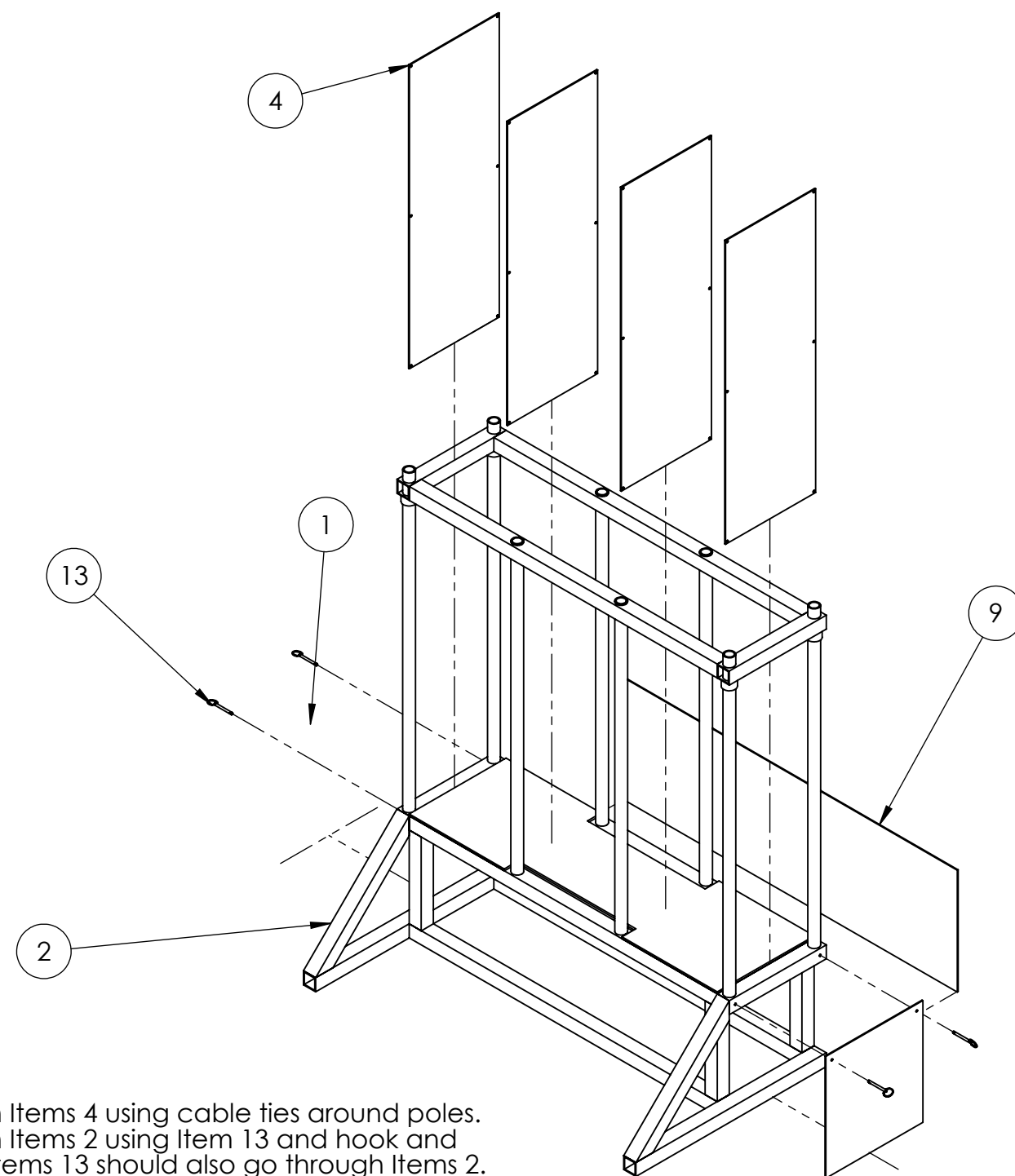
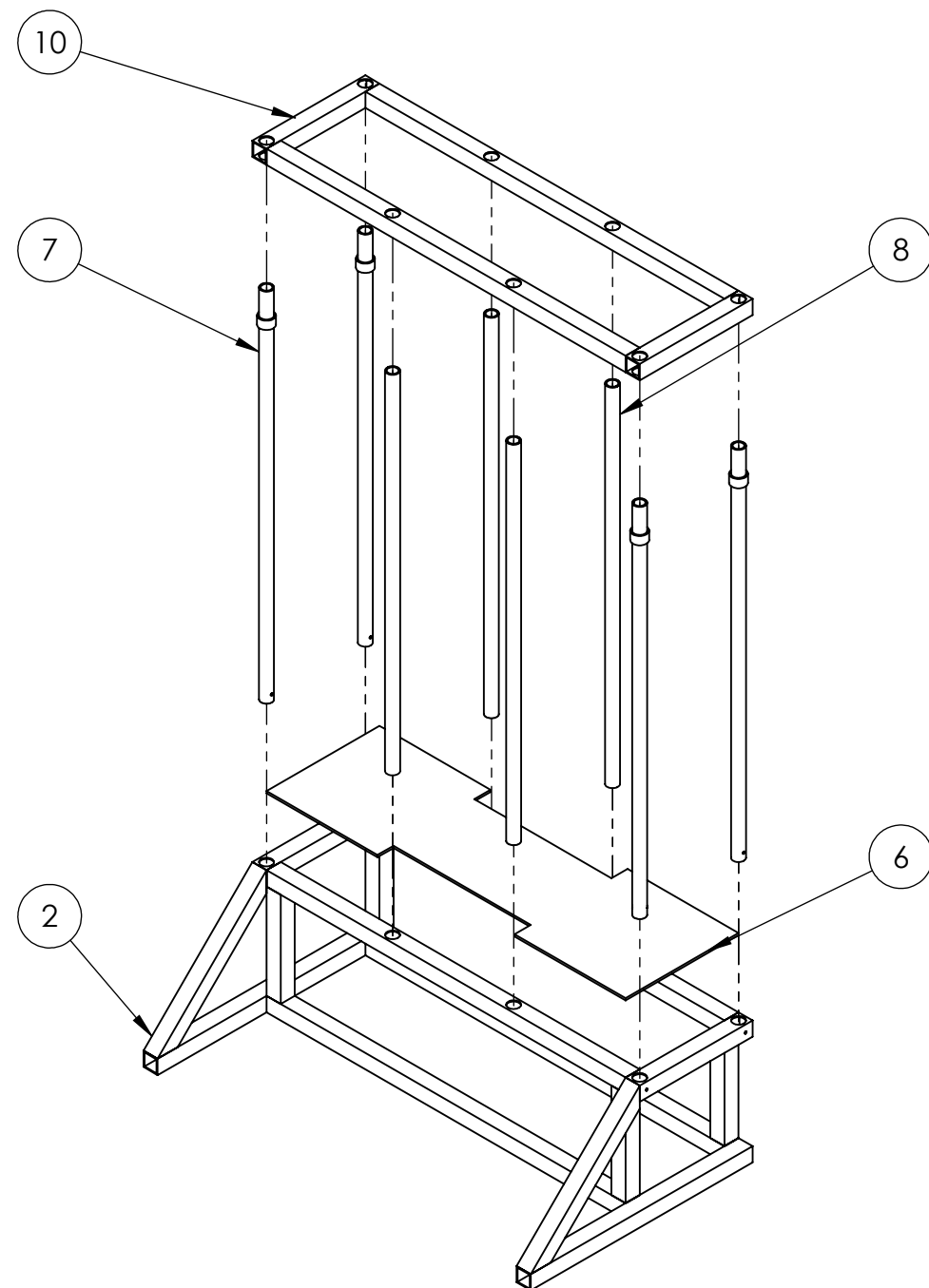
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Notes:

1. Attach Items 4 using cable ties around poles.
2. Attach Items 2 using Item 13 and hook and loop. Items 13 should also go through Items 2.
3. Attach Item 9 using hook and loop.

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DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .01$
THREE PLACE DECIMAL $\pm .001$

INTERPRET GEOMETRIC
TOLERANCING PER:

MATERIAL

FINISH

NEXT ASSY

USED ON

APPLICATION

DO NOT SCALE DRAWING

NAME DATE

DRAWN

CHECKED

ENG APPR.

MFG APPR.

Q.A.

COMMENTS:



TITLE:

Vault Assembly

SIZE DWG. NO.

B GE-18126

REV

SCALE: 1:12 WEIGHT:

SHEET 2 OF 3

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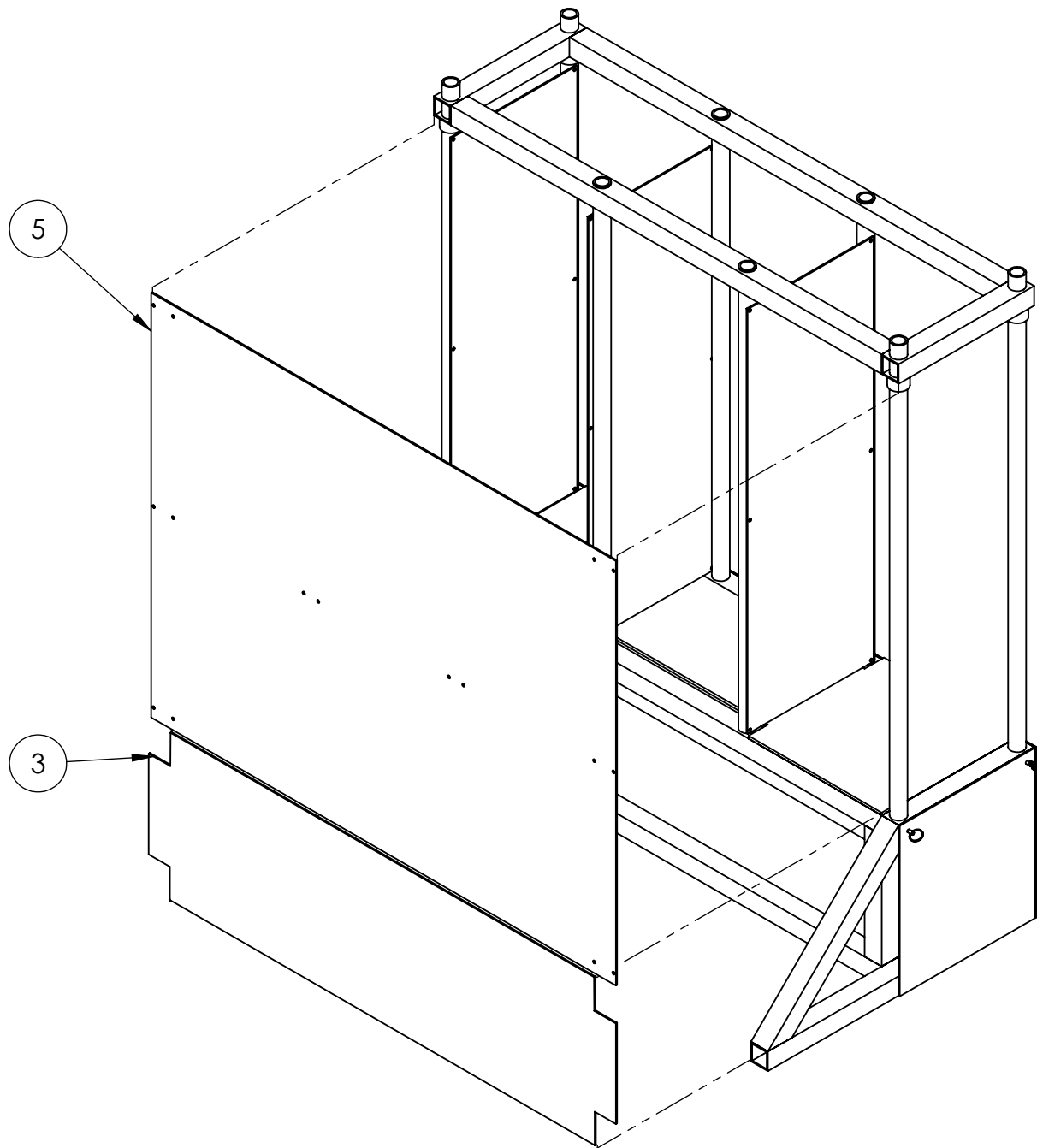
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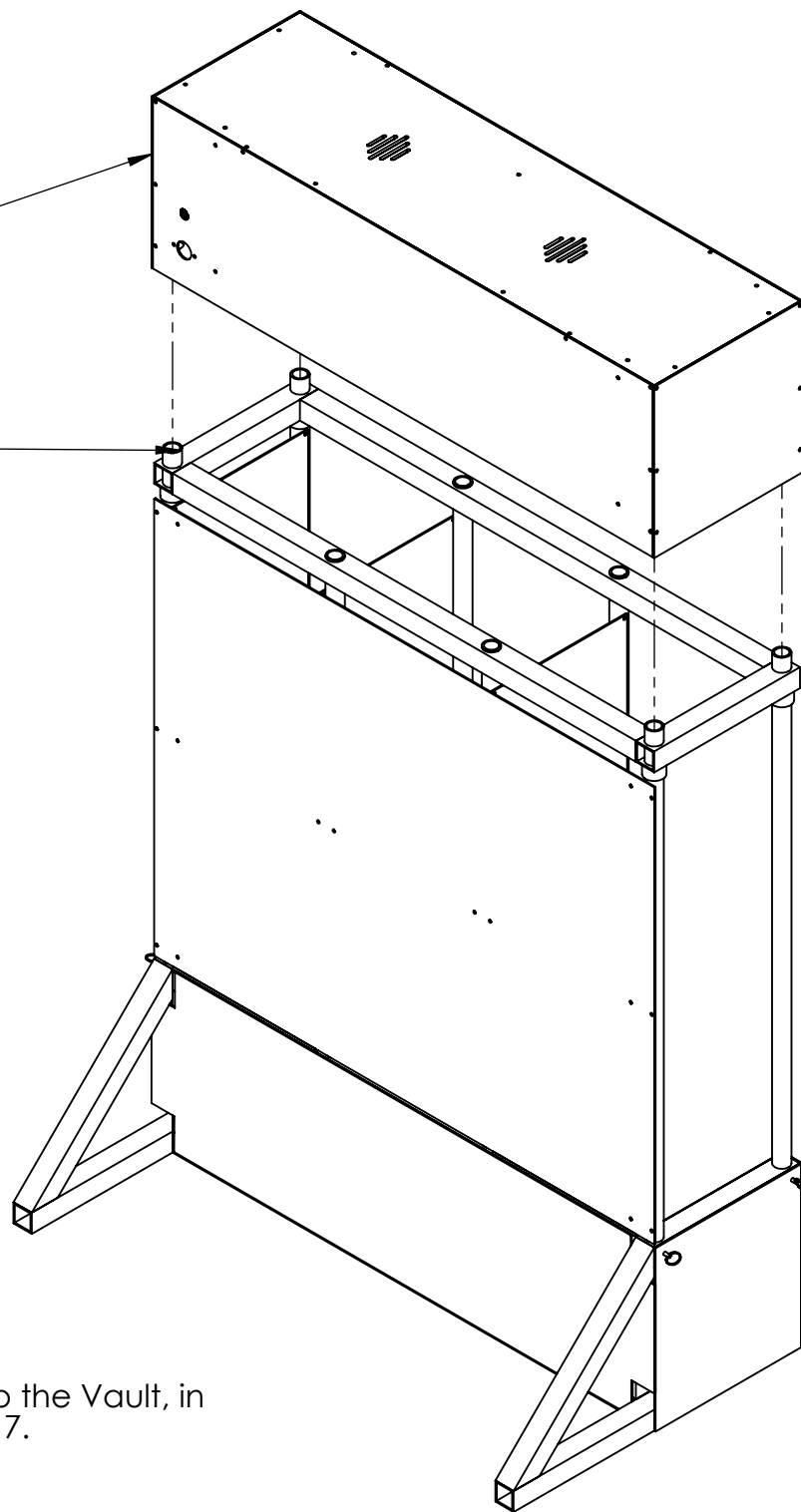


- Notes:
1. Attach Item 5 using cable ties around poles.
 2. Attach Item 3 using hook and loop.

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11



7



- Notes:
1. Place Item 11 onto the Vault, in alignment with Items 7.

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				TITLE: Vault Assembly		SIZE B
NEXT ASSY	USED ON			SCALE: 1:12	WEIGHT:	
APPLICATION	DO NOT SCALE DRAWING					
						DWG. NO. GE-18126
						REV
						SHEET 3 OF 3

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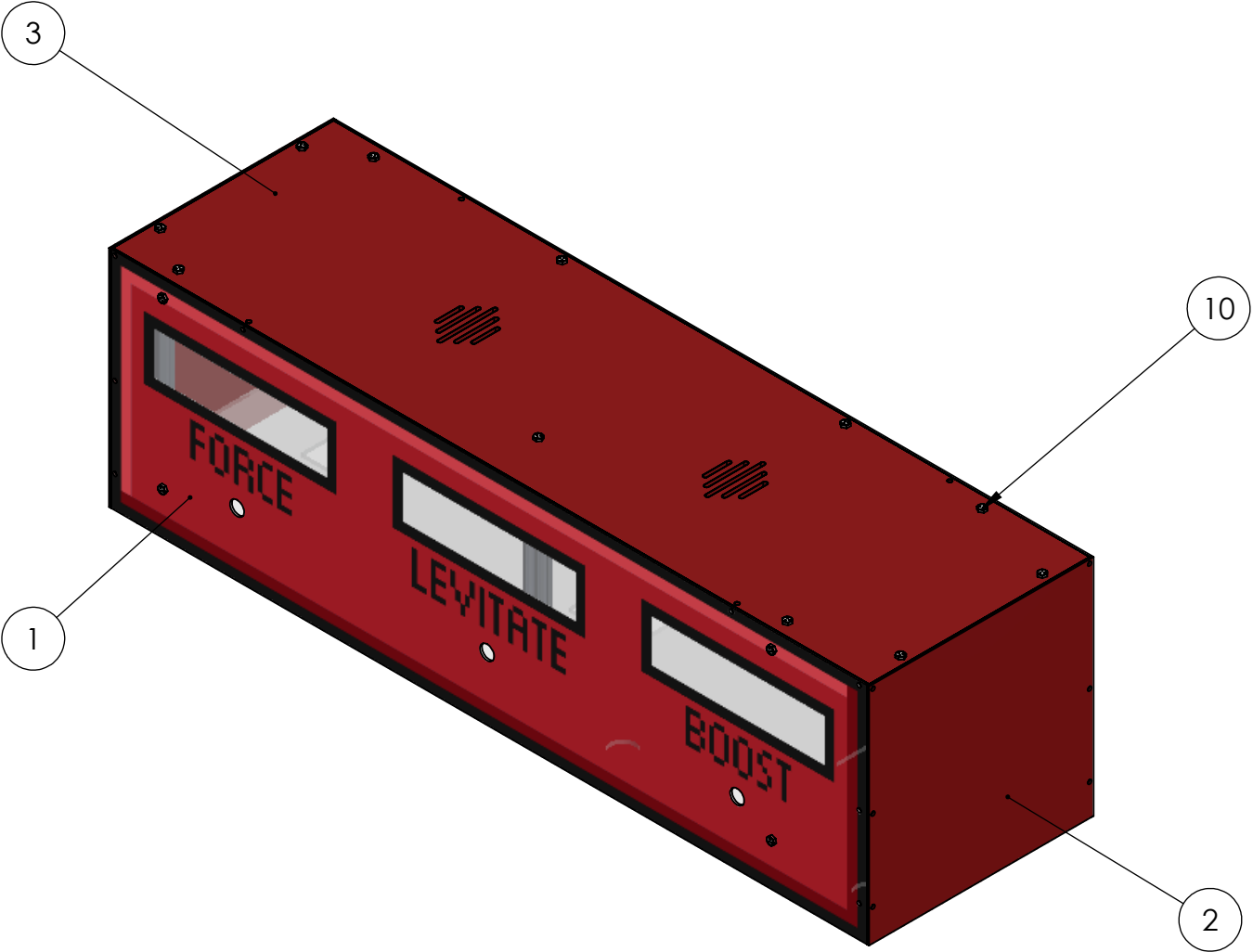
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B





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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	GE-18033	Vault polycarbonate Top Front Face	1
2	GE-18034	Vault HDPE Top Side	2
3	GE-18044	Vault HDPE Top	1
4	GE-18041	Vault Polycarbonate Top Backside	1
5	GE-18046	Vault Polycarbonate Top Base	1
6	GE-18030	80-20 Extrusion	7
7	GE-18048	Vault Bracket	8
8	flat_hex_.25_20_1	Steel Hex Flat Head Screw, 1/4"-20 x 1" long, fully threaded	11
9	nylock_.25_20	Steel Nylon-Insert Locknut, 1/4"-20	16
10	hex_.25_20_.75	Steel Hex Head Screw, 1/4"-20 x 3/4" long, fully threaded	19

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Vault Top Assembly</h1>			
			CHECKED						
			ENG APPR.						
			MFG APPR.						
			Q.A.						
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE		DWG. NO.	REV
		MATERIAL				B		GE-18129	
NEXT ASSY	USED ON	FINISH							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8		WEIGHT:	SHEET 1 OF 3

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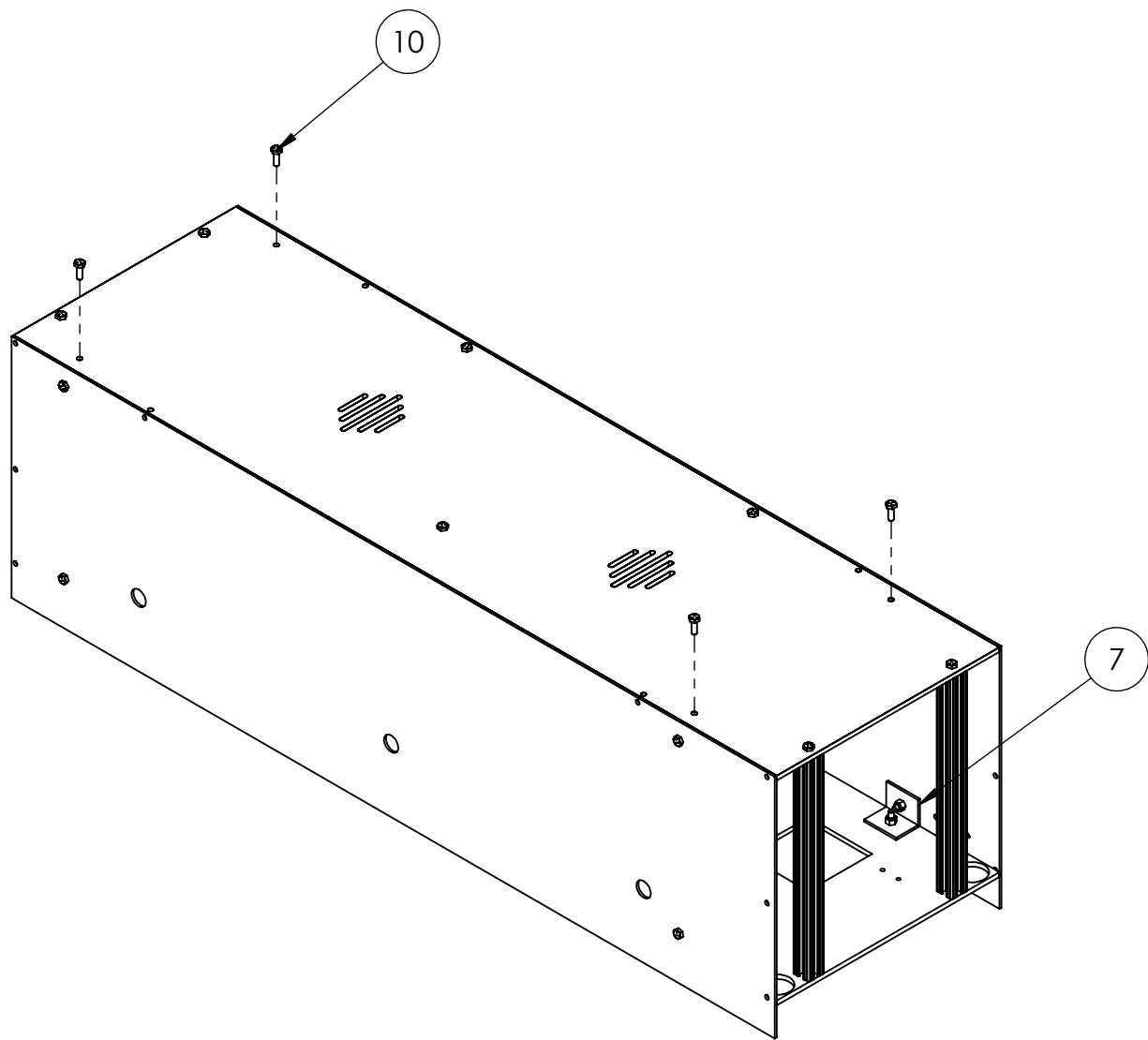
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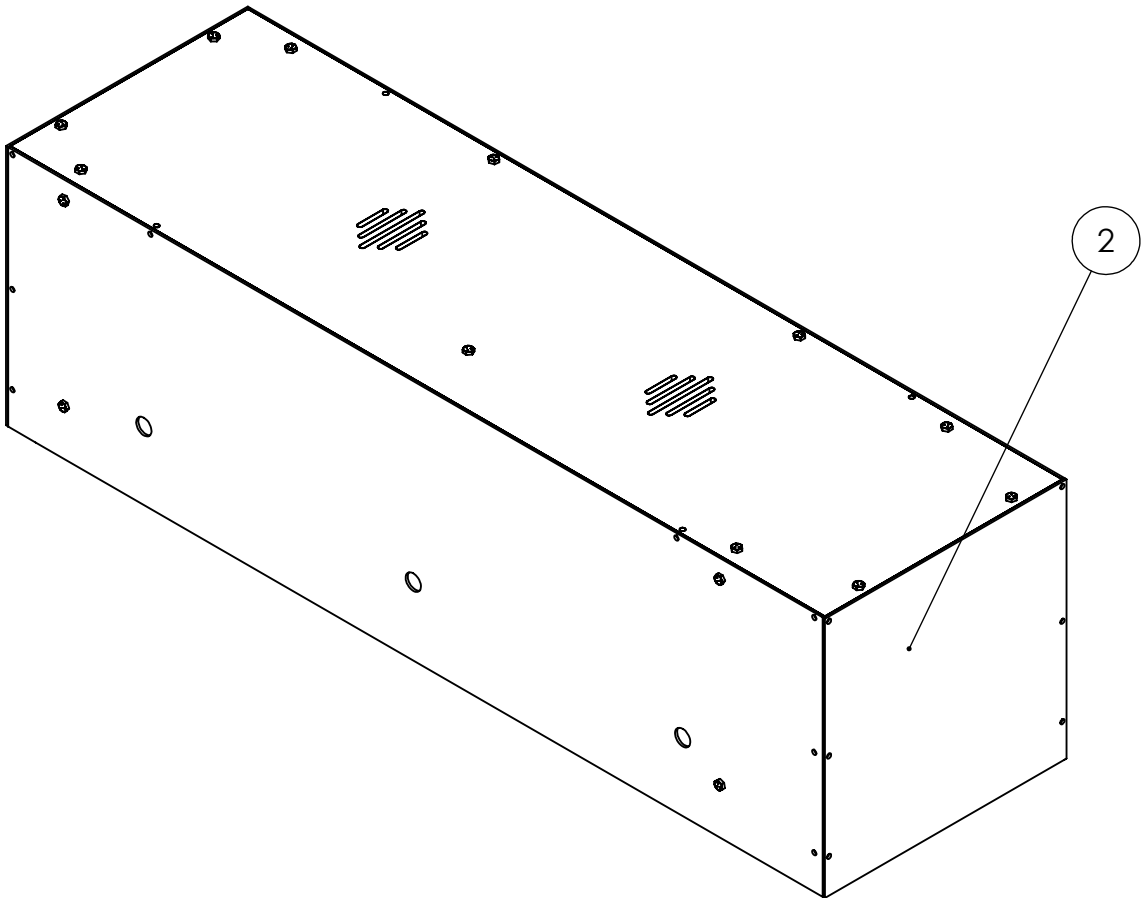
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2

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Notes:
1. Finish attaching top and faces using Items 10 and 7



Notes:
1. Attach Item 2 using cable ties
2. Repeat on opposite side

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		DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .01$ THREE PLACE DECIMAL $\pm .001$	DRAWN			TITLE: <h1>Vault Top Assembly</h1>		
			CHECKED					
			ENG APPR.					
			MFG APPR.					
			Q.A.					
		INTERPRET GEOMETRIC TOLERANCING PER:	COMMENTS:			SIZE DWG. NO. REV B GE-18129		
		MATERIAL						
		FINISH						
NEXT ASSY	USED ON							
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:8 WEIGHT: SHEET 3 OF 3		