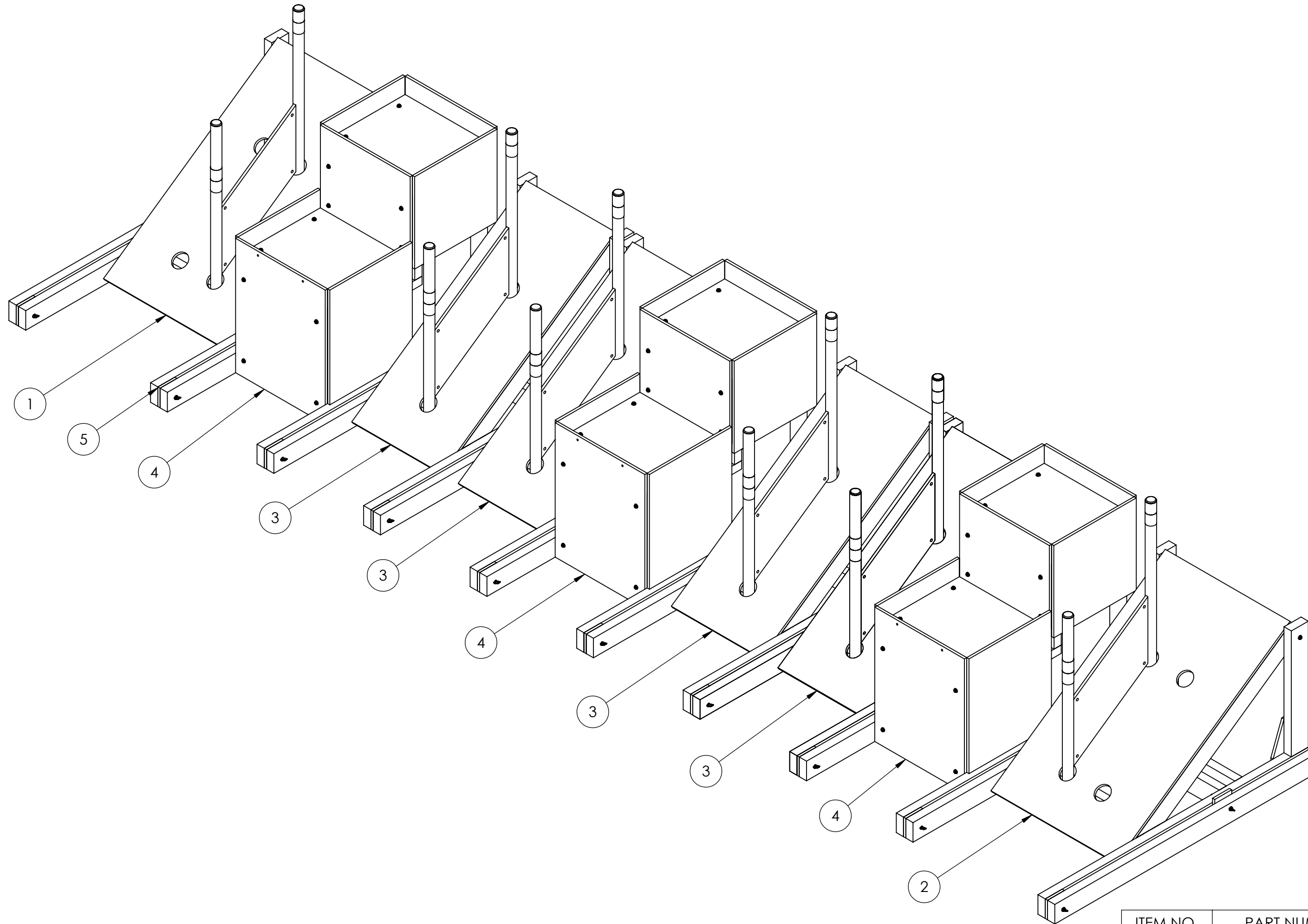




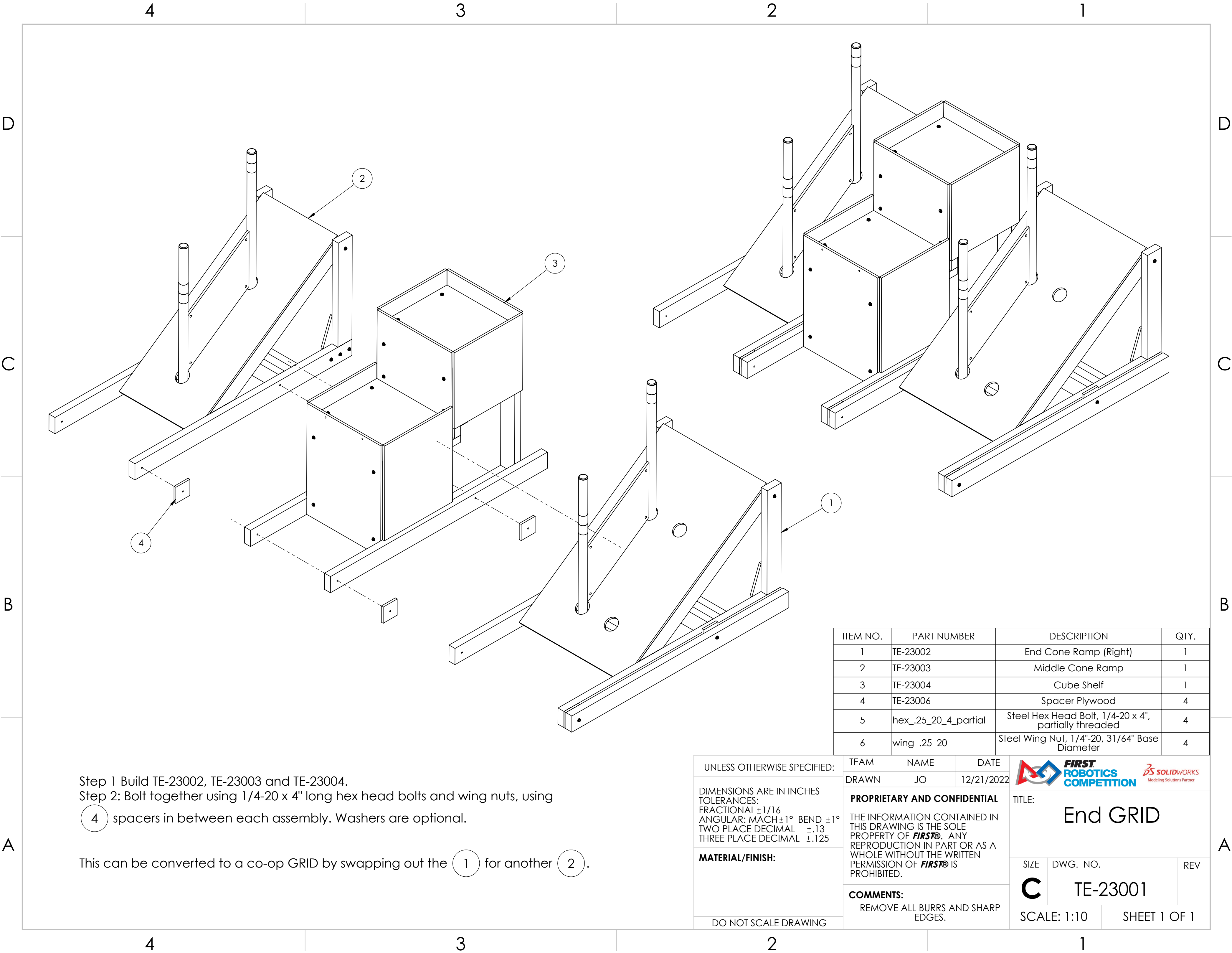
Step 1: Build a left and right version of TE-23006, 4x GE-23007 and 3x GE-23008.
Step 2: Bolt all assemblies together in the order shown above with 1/4-20 x 4" long hex head bolts and wing nuts. Washers are optional.

Use (5) spacers in between each assembly to ensure the spacing between them is correct (this also simulates the size of the beams).

Pay close attention to the End Cone Ramps, to ensure that they are not backwards. The poles should be closer to the middle of the assembly.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-23002	End Cone Ramp (Left)	1
2	TE-23002	End Cone Ramp (Right)	1
3	TE-23003	Middle Cone Ramp	5
4	TE-23004	Cube Shelf	3
5	TE-23006	Spacer Plywood	16
6	hex_.25_20_4_partial	Steel Hex Head Bolt, 1/4-20 x 4", partially threaded	20
7	wing_.25_20	Steel Wing Nut, 1/4"-20, 31/64" Base Diameter	20

UNLESS OTHERWISE SPECIFIED:		TEAM	NAME	DATE	 FIRST ROBOTICS COMPETITION  SOLIDWORKS Modeling Solutions Partner		
		DRAWN	JO	12/21/2022			
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125		PROPRIETARY AND CONFIDENTIAL			TITLE: Set of 3 GRIDs		
		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.					
		COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.					
MATERIAL/FINISH:					SIZE	DWG. NO.	REV
					C	TE-23000	
DO NOT SCALE DRAWING					SCALE: 1:13		SHEET 1 OF 1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-23002	End Cone Ramp (Right)	1
2	TE-23003	Middle Cone Ramp	1
3	TE-23004	Cube Shelf	1
4	TE-23006	Spacer Plywood	4
5	hex_.25_20_4_partial	Steel Hex Head Bolt, 1/4-20 x 4", partially threaded	4
6	wing_.25_20	Steel Wing Nut, 1/4"-20, 31/64" Base Diameter	4

Step 1 Build TE-23002, TE-23003 and TE-23004.
Step 2: Bolt together using 1/4-20 x 4" long hex head bolts and wing nuts, using 4 spacers in between each assembly. Washers are optional.

This can be converted to a co-op GRID by swapping out the 1 for another 2.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .13$
THREE PLACE DECIMAL $\pm .125$
MATERIAL/FINISH:
DO NOT SCALE DRAWING

TEAM	NAME	DATE
DRAWN	JO	12/21/2022

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF **FIRST**. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF **FIRST** IS PROHIBITED.

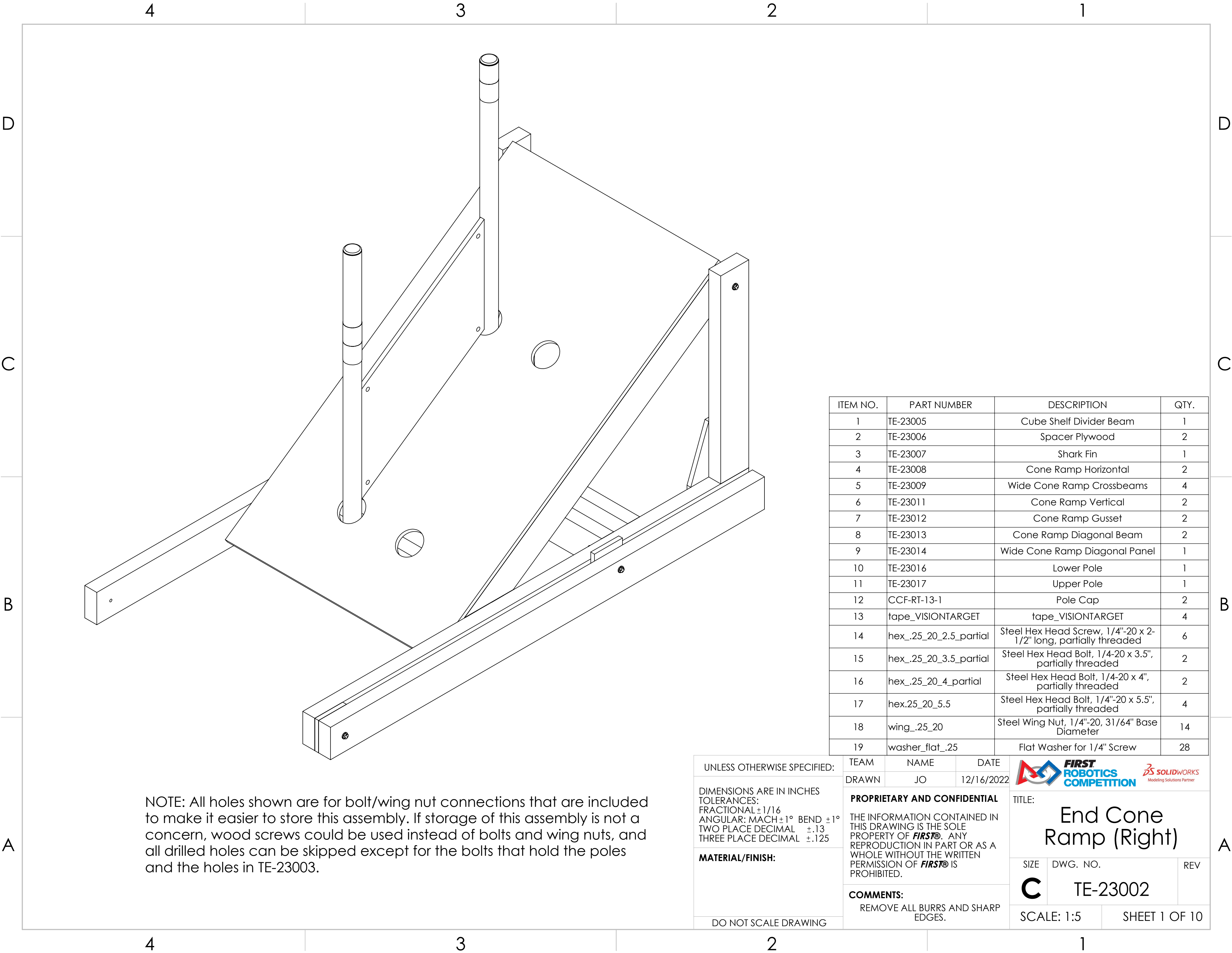
COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.



TITLE:
End GRID

SIZE	DWG. NO.	REV
C	TE-23001	

SCALE: 1:10	SHEET 1 OF 1
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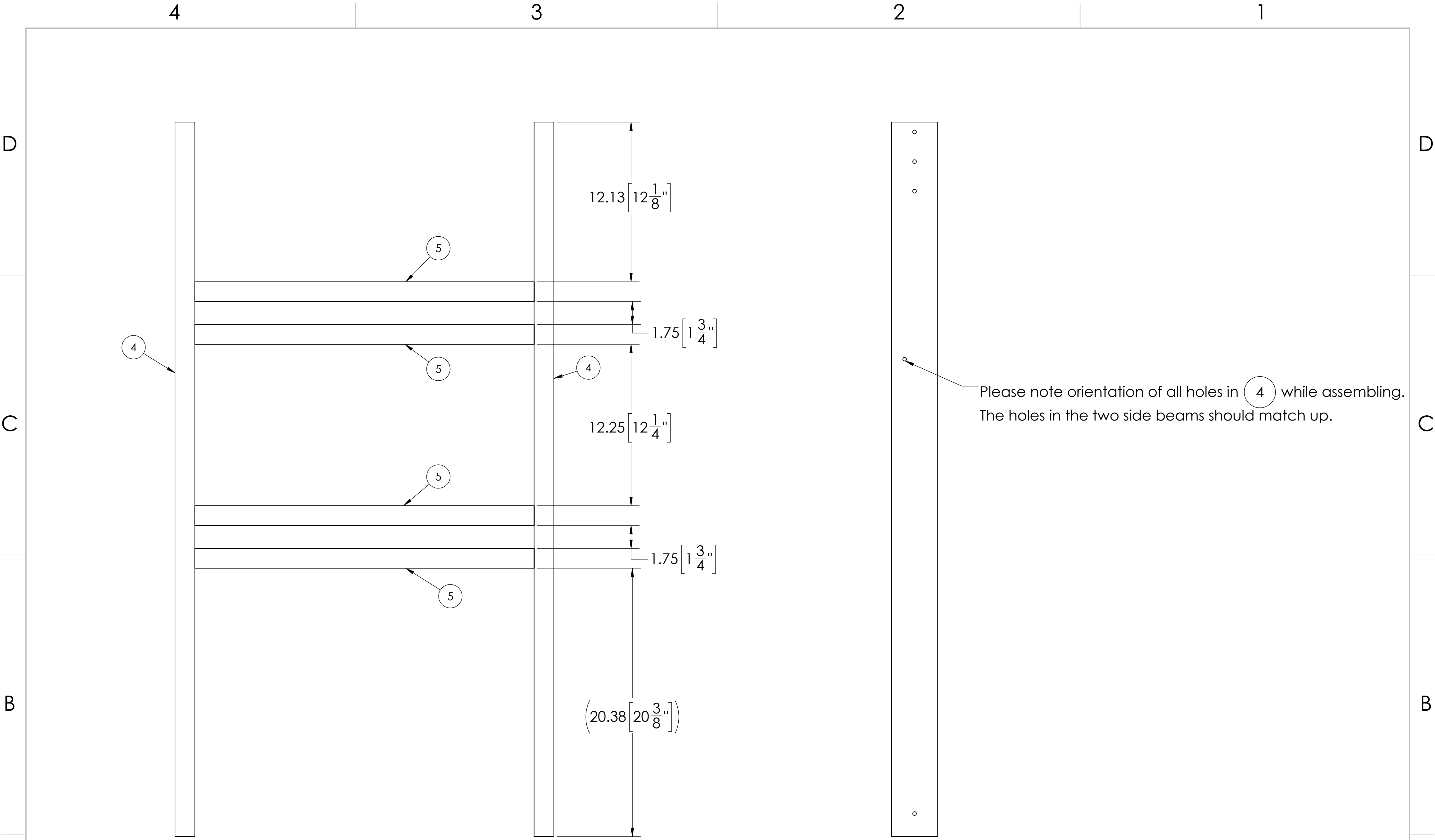


NOTE: All holes shown are for bolt/wing nut connections that are included to make it easier to store this assembly. If storage of this assembly is not a concern, wood screws could be used instead of bolts and wing nuts, and all drilled holes can be skipped except for the bolts that hold the poles and the holes in TE-23003.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-23005	Cube Shelf Divider Beam	1
2	TE-23006	Spacer Plywood	2
3	TE-23007	Shark Fin	1
4	TE-23008	Cone Ramp Horizontal	2
5	TE-23009	Wide Cone Ramp Crossbeams	4
6	TE-23011	Cone Ramp Vertical	2
7	TE-23012	Cone Ramp Gusset	2
8	TE-23013	Cone Ramp Diagonal Beam	2
9	TE-23014	Wide Cone Ramp Diagonal Panel	1
10	TE-23016	Lower Pole	1
11	TE-23017	Upper Pole	1
12	CCF-RT-13-1	Pole Cap	2
13	tape_VISIONTARGET	tape_VISIONTARGET	4
14	hex_.25_20_2.5_partial	Steel Hex Head Screw, 1/4"-20 x 2-1/2" long, partially threaded	6
15	hex_.25_20_3.5_partial	Steel Hex Head Bolt, 1/4-20 x 3.5", partially threaded	2
16	hex_.25_20_4_partial	Steel Hex Head Bolt, 1/4-20 x 4", partially threaded	2
17	hex.25_20_5.5	Steel Hex Head Bolt, 1/4"-20 x 5.5", partially threaded	4
18	wing_.25_20	Steel Wing Nut, 1/4"-20, 31/64" Base Diameter	14
19	washer_flat_.25	Flat Washer for 1/4" Screw	28

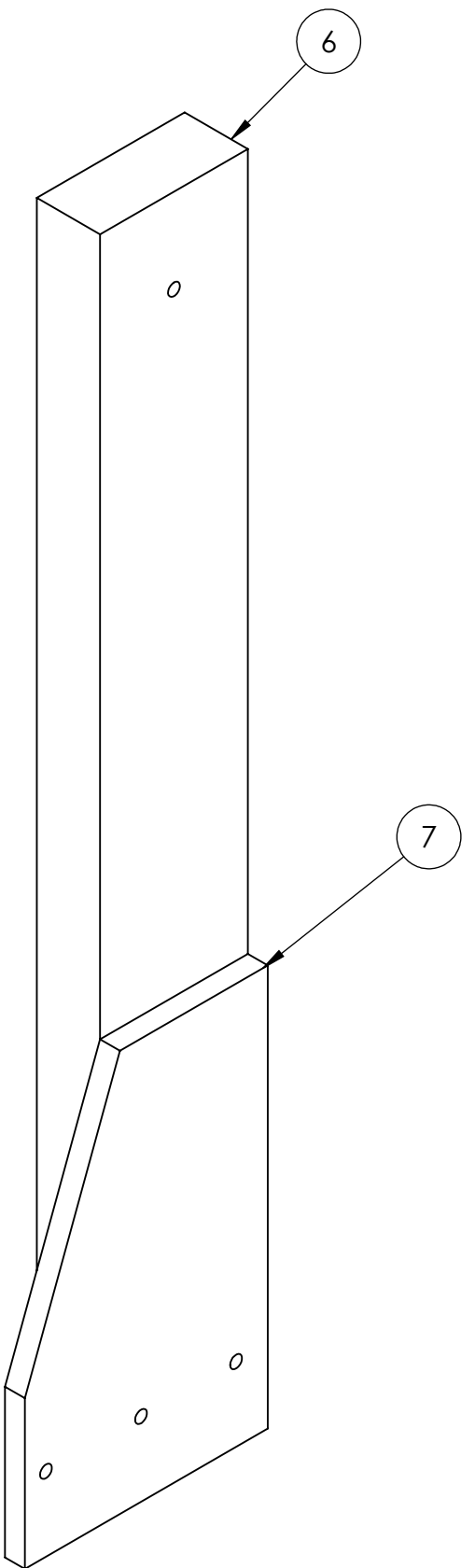
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MATERIAL/FINISH:		PROPRIETARY AND CONFIDENTIAL		
DO NOT SCALE DRAWING		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST IS PROHIBITED.		
		COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.		
		TITLE: End Cone Ramp (Right)		
		SIZE	DWG. NO.	REV
		C	TE-23002	
		SCALE: 1:5		SHEET 1 OF 10



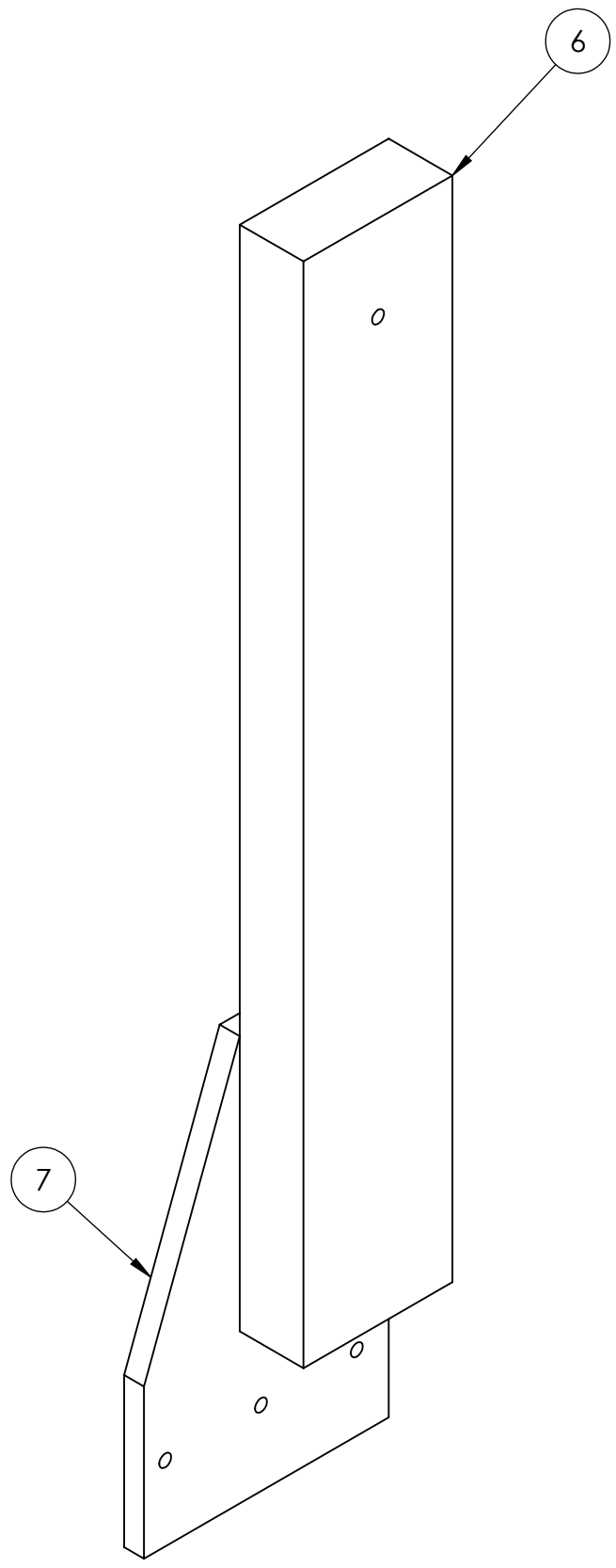


Step 1: Assemble floor frame of Cone Ramp with #8 wood screws as shown.

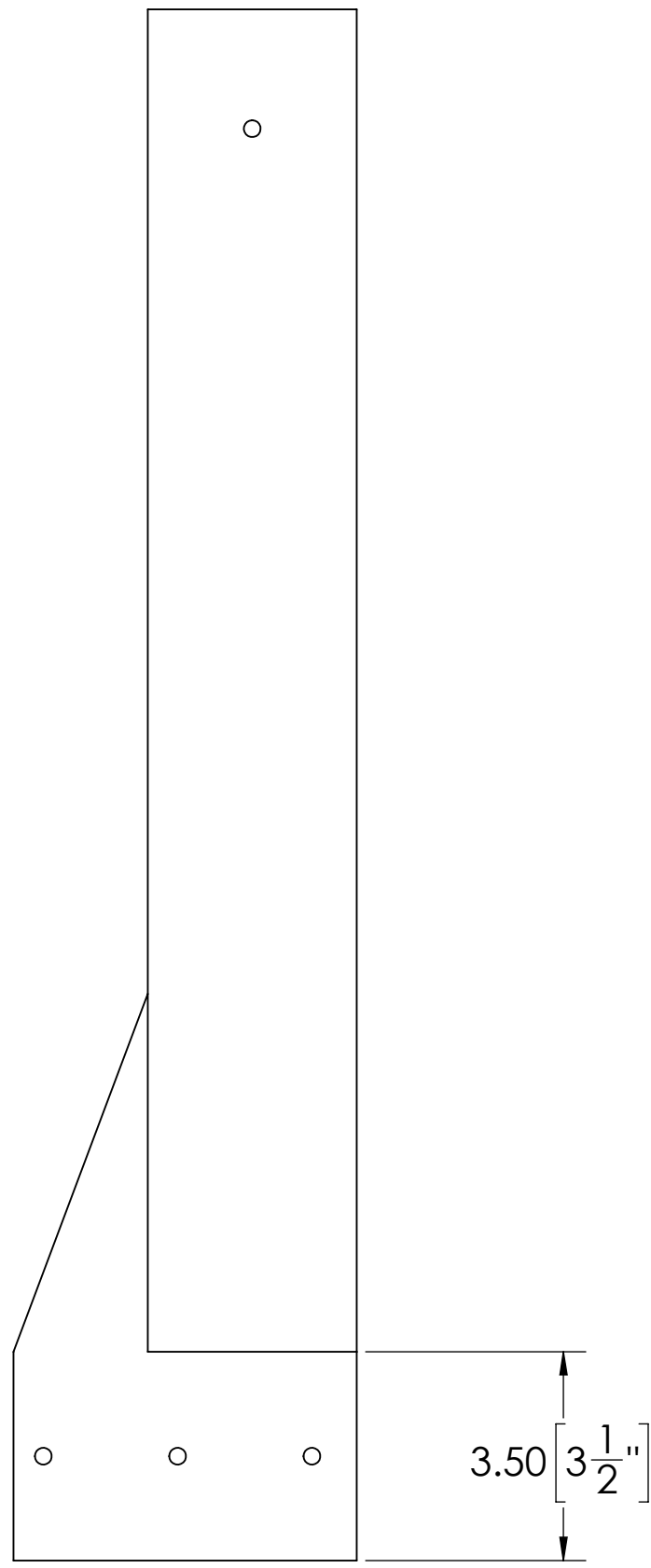
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE	 TITLE: End Cone Ramp (Right)		
	DRAWN	JO	12/16/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.					
COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			SIZE C	DWG. NO. TE-23002	REV	
			SCALE: 1:5		SHEET 2 OF 10	



Left hand

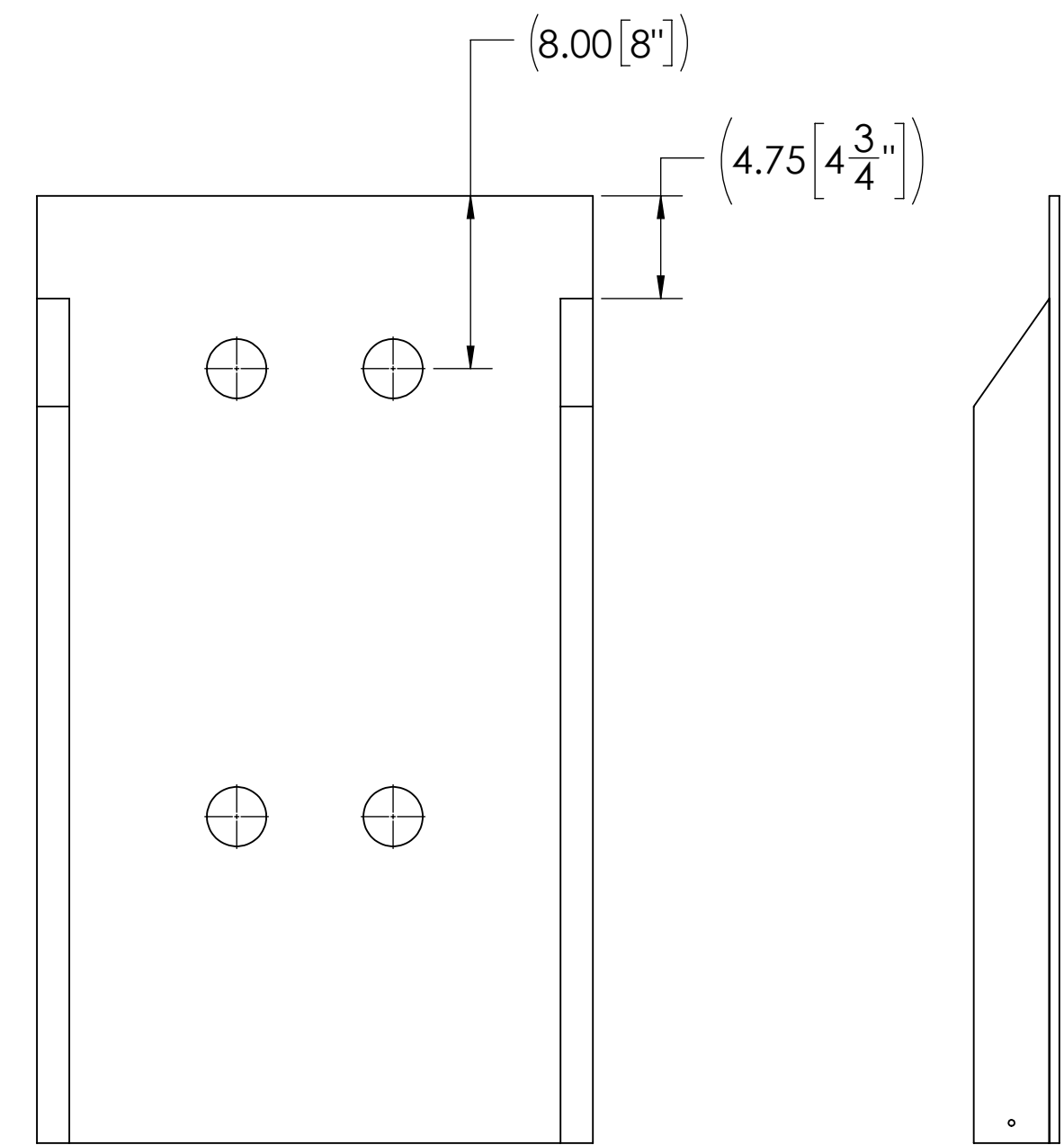
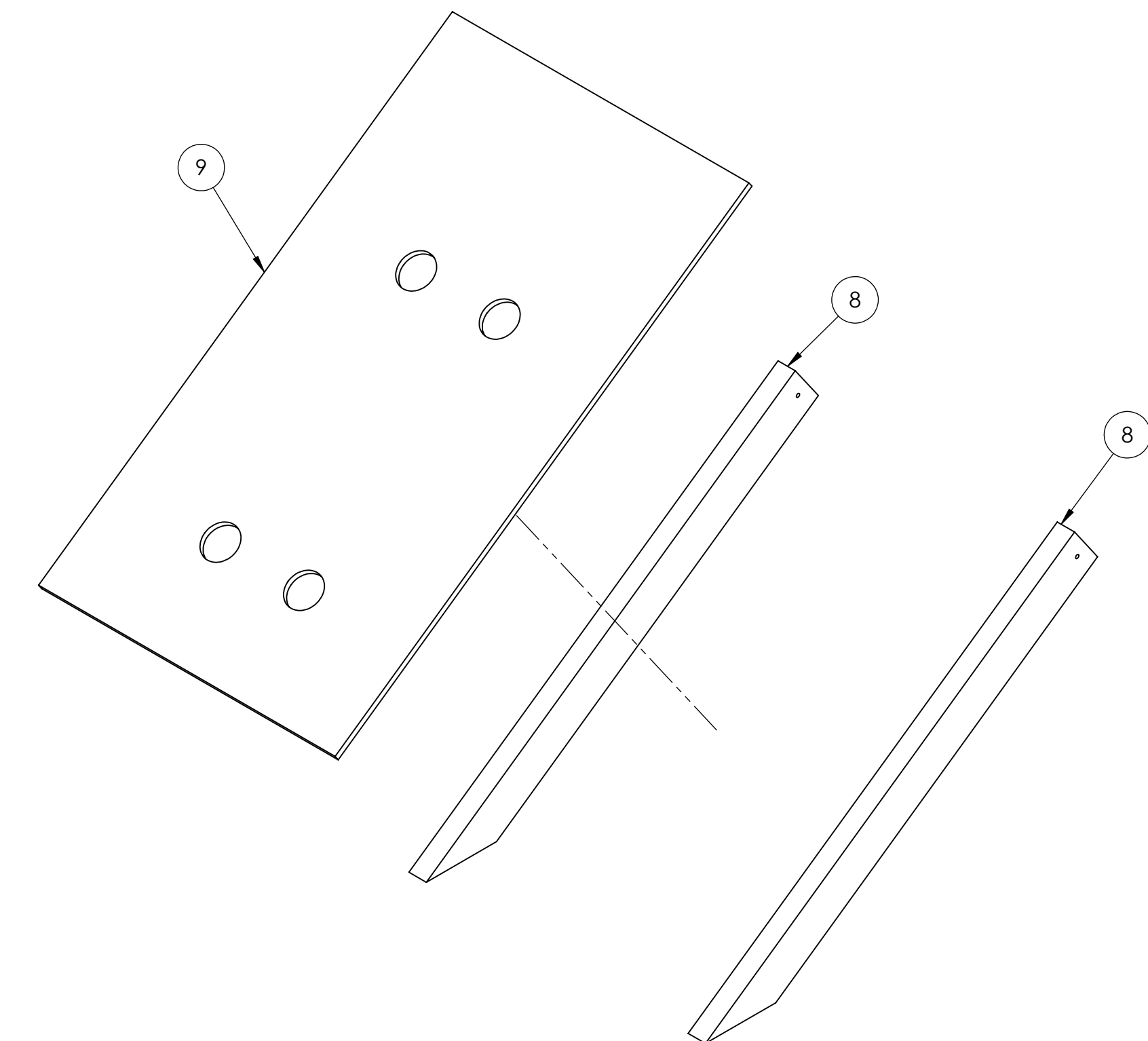


Right hand



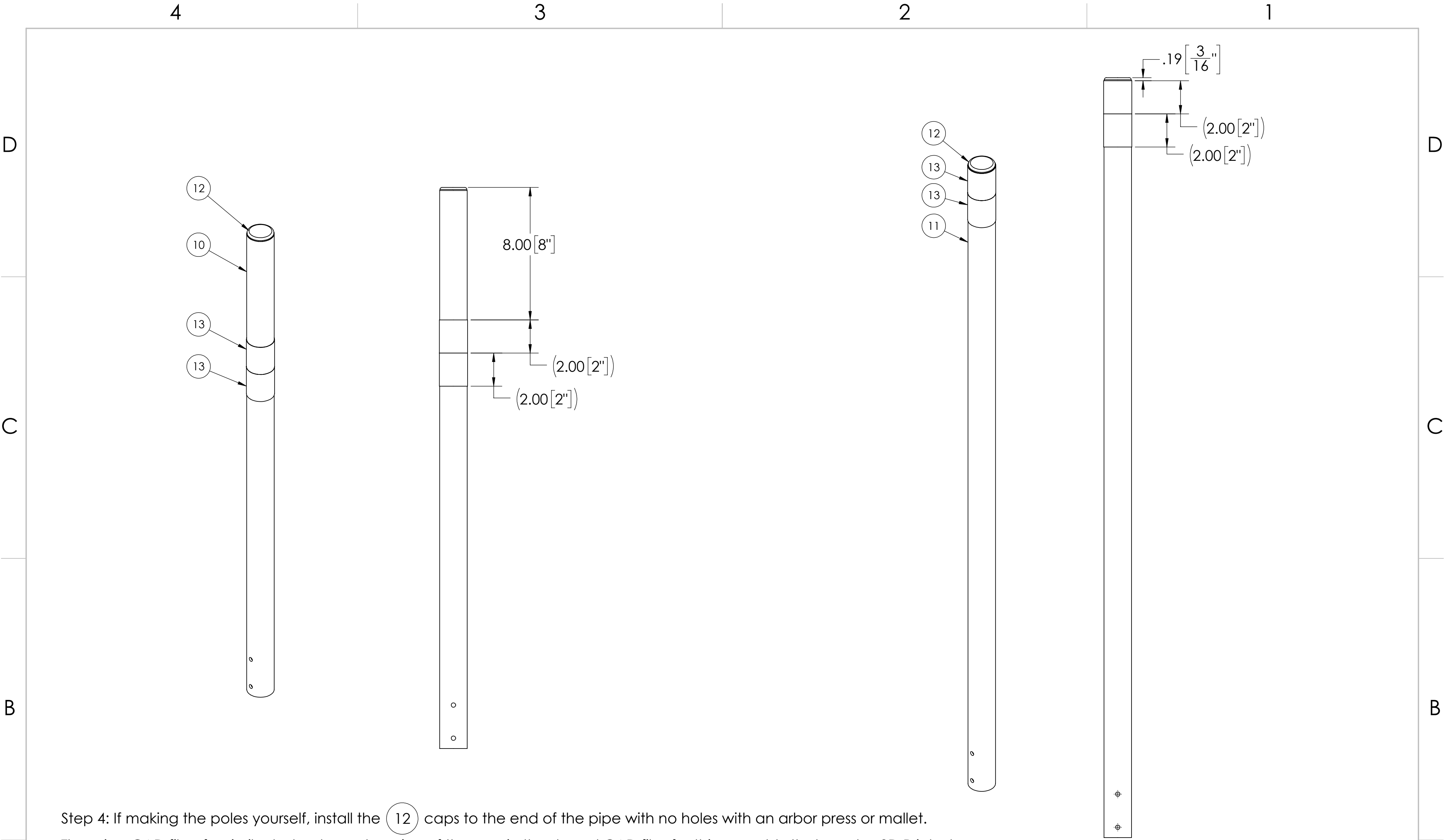
Step 2: Assemble 2x Cone Ramp Vertical assemblies using #8 wood screws as shown. Make a "left hand" and "right hand" version as shown.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/16 ANGULAR: MACH ± 1° BEND ± 1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE	 TITLE: End Cone Ramp (Right)			
	DRAWN	JO	12/16/2022				
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			SIZE	DWG. NO.	REV	
	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			C	TE-23002		
				SCALE: 1:3		SHEET 3 OF 10	



Step 3: Assemble Cone Ramp Diagonal Assembly with #8 wood screws as shown.
Note orientation of holes while assembling.

UNLESS OTHERWISE SPECIFIED:	TEAM	NAME	DATE			
	DRAWN	JO	12/16/2022			
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			TITLE: End Cone Ramp (Right)		
	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			SIZE	DWG. NO.	REV
				C	TE-23002	
DO NOT SCALE DRAWING				SCALE: 1:8		SHEET 4 OF 10

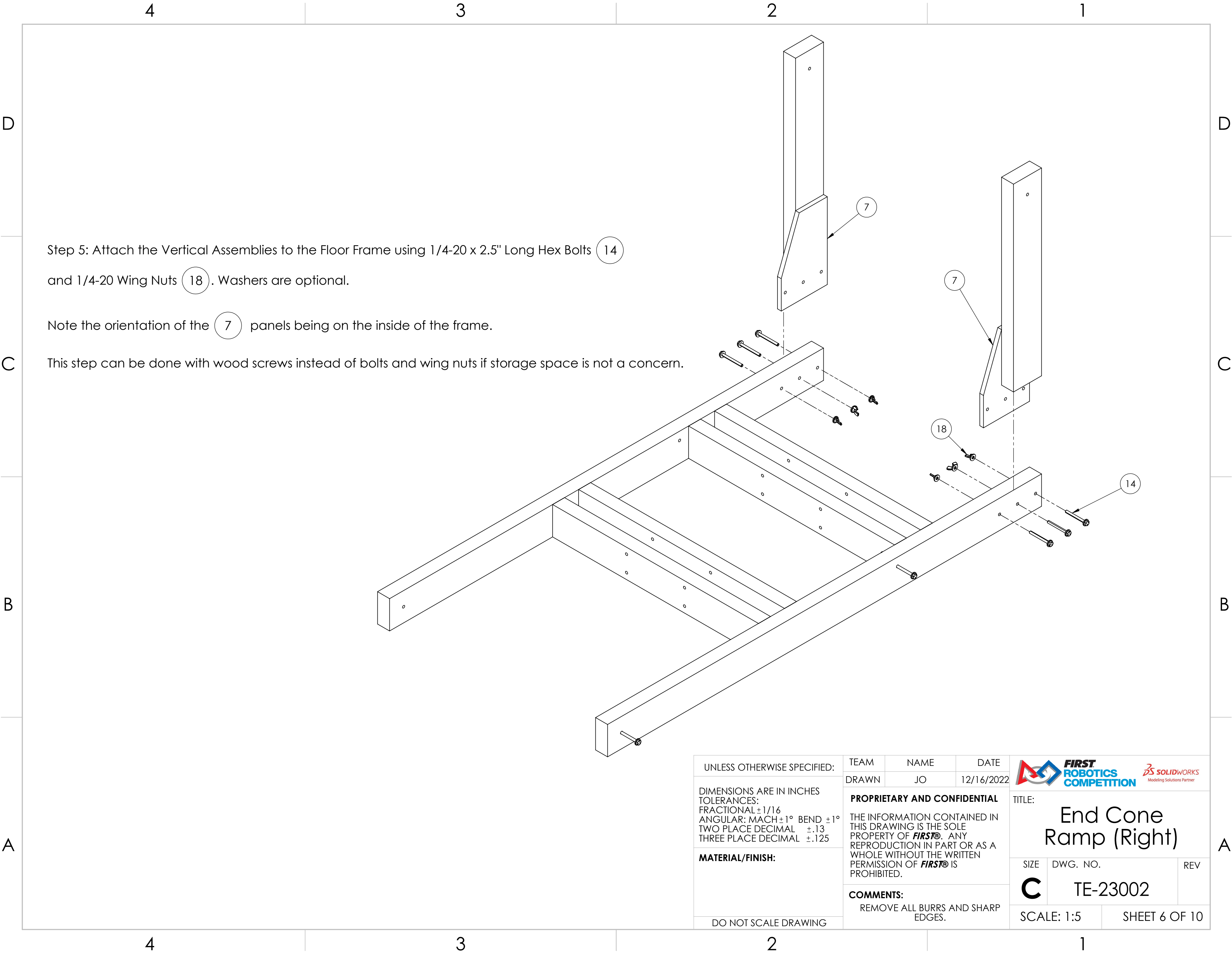


Step 4: If making the poles yourself, install the (12) caps to the end of the pipe with no holes with an arbor press or mallet.
There is a CAD file of a similar but not exact version of the cap in the shared CAD files for this assembly that can be 3D Printed.

Apply 2 pieces of (13) vision tape per pole as shown.

These poles with caps installed can be purchased from AndyMark.
These do not include the drilled holes or applied vision tape.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE		
	DRAWN	JO	12/16/2022		
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.				TITLE: End Cone Ramp (Right)
SIZE		DWG. NO.		REV	
C		TE-23002			
SCALE: 1:4			SHEET 5 OF 10		

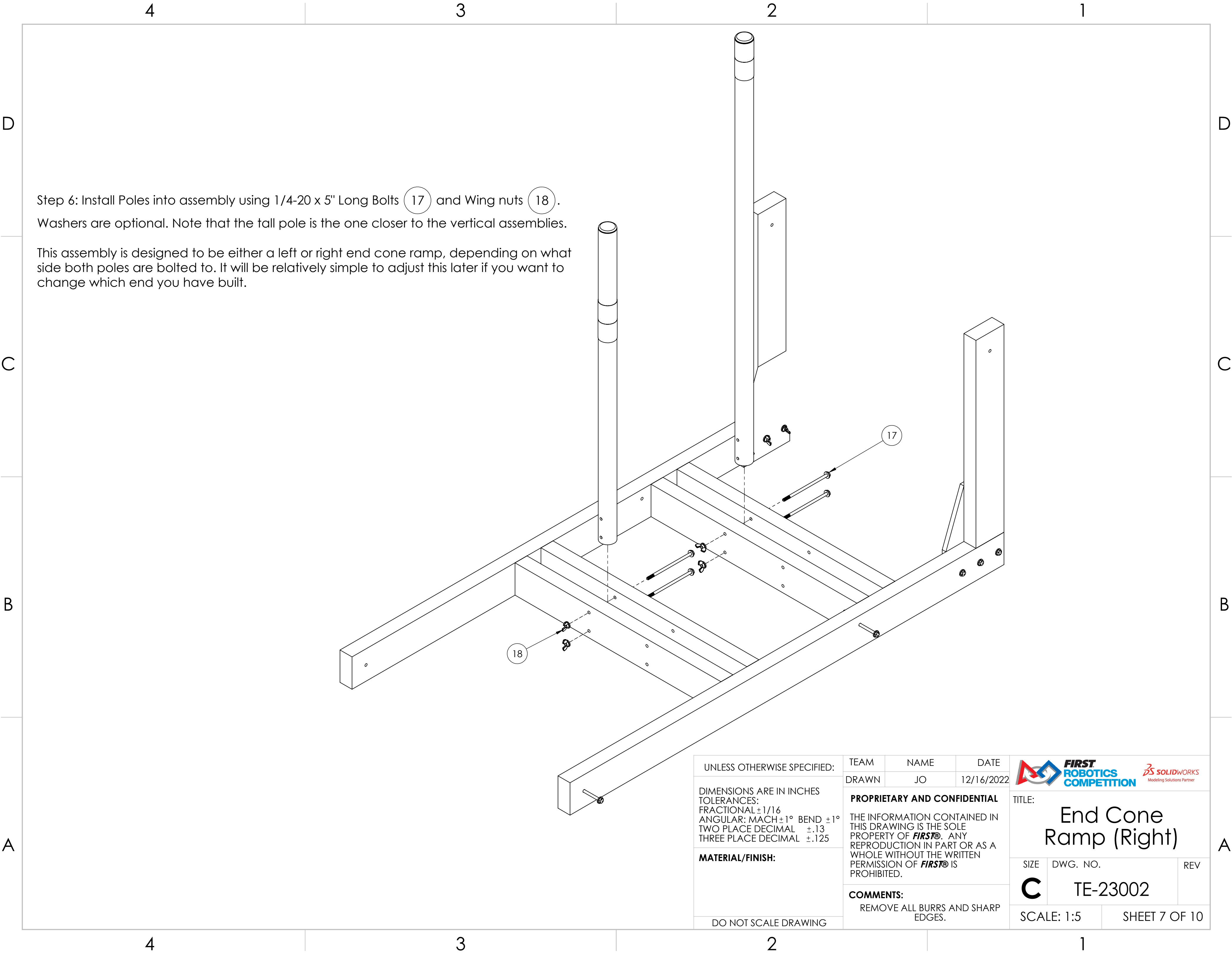


Step 5: Attach the Vertical Assemblies to the Floor Frame using 1/4-20 x 2.5" Long Hex Bolts (14) and 1/4-20 Wing Nuts (18). Washers are optional.

Note the orientation of the (7) panels being on the inside of the frame.

This step can be done with wood screws instead of bolts and wing nuts if storage space is not a concern.

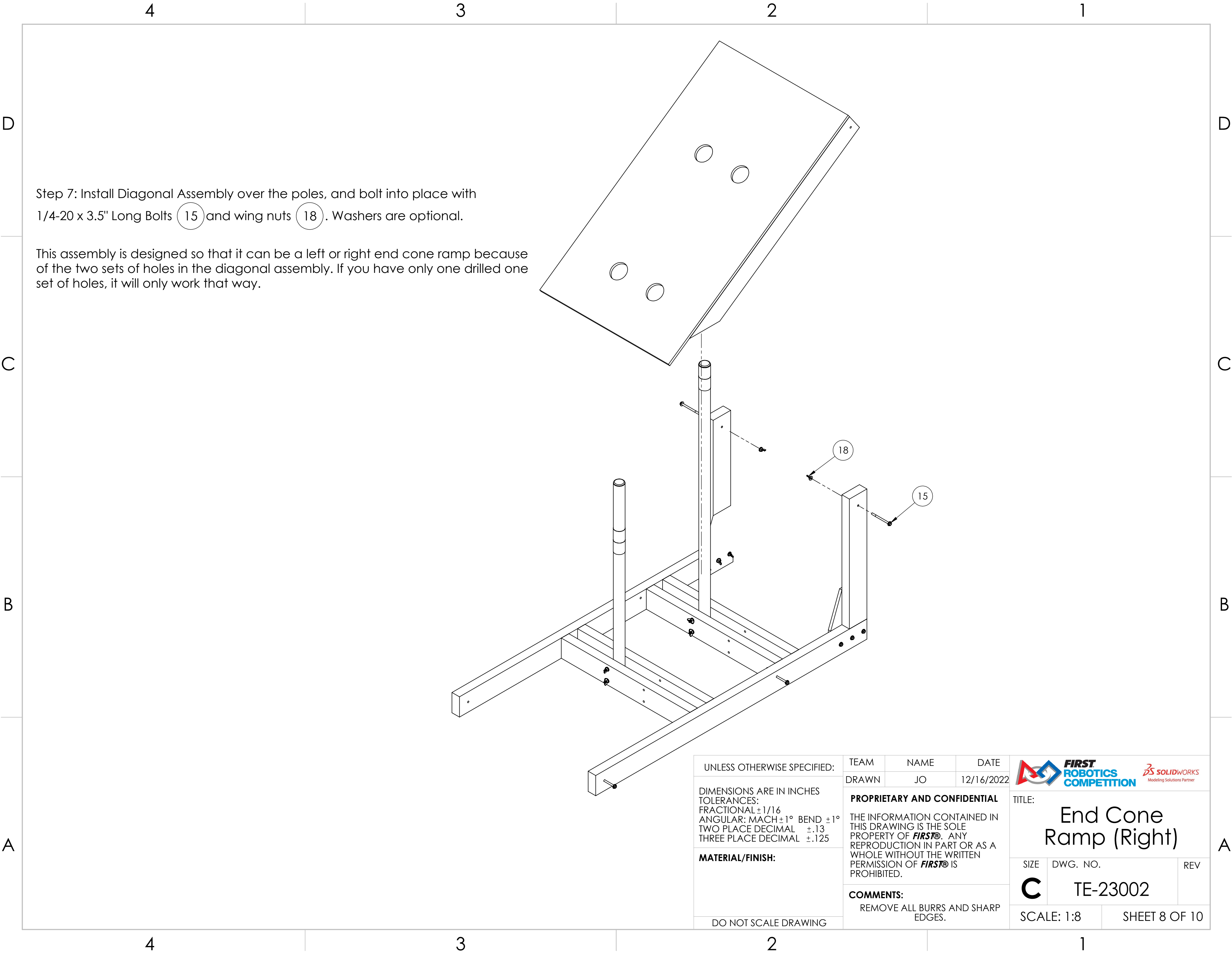
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	DRAWN	JO	12/16/2022		
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			TITLE: End Cone Ramp (Right)	
	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			SIZE C	DWG. NO. TE-23002
			SCALE: 1:5		SHEET 6 OF 10



Step 6: Install Poles into assembly using 1/4-20 x 5" Long Bolts (17) and Wing nuts (18). Washers are optional. Note that the tall pole is the one closer to the vertical assemblies.

This assembly is designed to be either a left or right end cone ramp, depending on what side both poles are bolted to. It will be relatively simple to adjust this later if you want to change which end you have built.

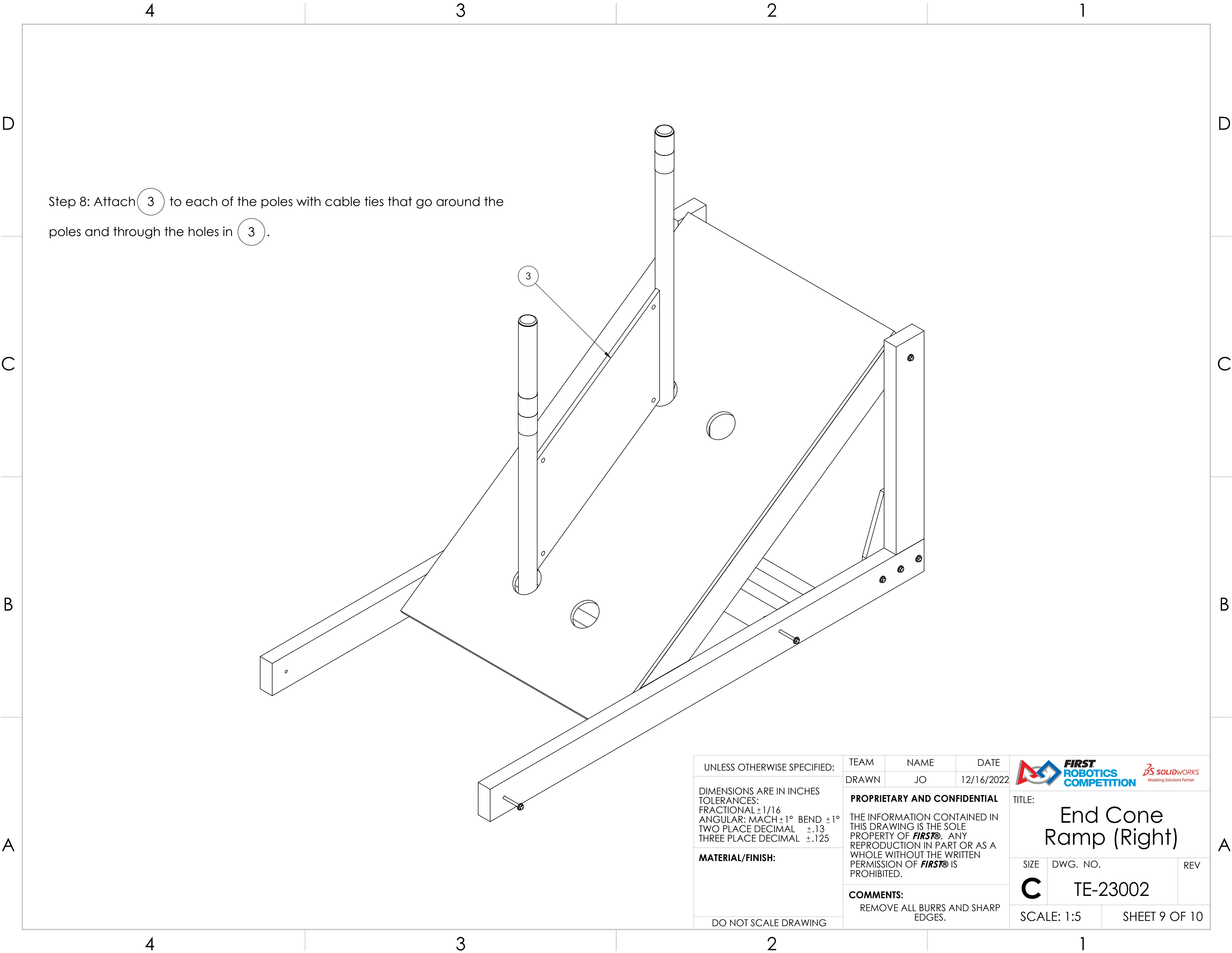
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MATERIAL/FINISH:		PROPRIETARY AND CONFIDENTIAL		
		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST IS PROHIBITED.		
DO NOT SCALE DRAWING		COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.		
		TITLE: End Cone Ramp (Right)		
		SIZE C	DWG. NO. TE-23002	REV
		SCALE: 1:5 SHEET 7 OF 10		



Step 7: Install Diagonal Assembly over the poles, and bolt into place with 1/4-20 x 3.5" Long Bolts (15) and wing nuts (18). Washers are optional.

This assembly is designed so that it can be a left or right end cone ramp because of the two sets of holes in the diagonal assembly. If you have only one drilled one set of holes, it will only work that way.

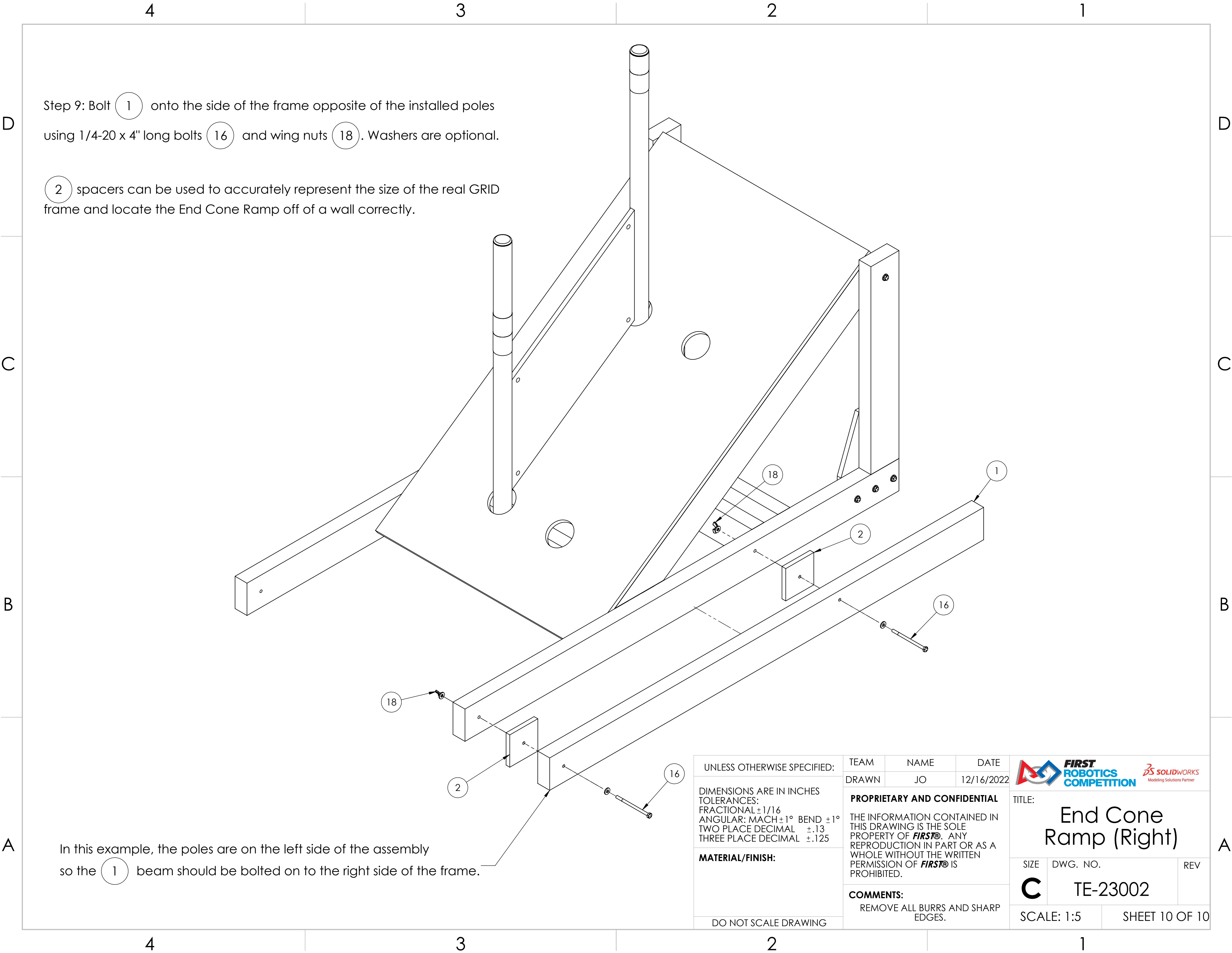
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MATERIAL/FINISH:		COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.		
DO NOT SCALE DRAWING				
		TITLE: End Cone Ramp (Right)		
		SIZE C	DWG. NO. TE-23002	REV
		SCALE: 1:8 SHEET 8 OF 10		



Step 8: Attach 3 to each of the poles with cable ties that go around the poles and through the holes in 3.

UNLESS OTHERWISE SPECIFIED:		TEAM	NAME	DATE
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL±1/16 ANGULAR: MACH±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125		DRAWN	JO	12/16/2022
		PROPRIETARY AND CONFIDENTIAL		
		THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.		
		COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.		
MATERIAL/FINISH:				
DO NOT SCALE DRAWING				

			
TITLE: End Cone Ramp (Right)			
SIZE C	DWG. NO. TE-23002		REV
SCALE: 1:5		SHEET 9 OF 10	

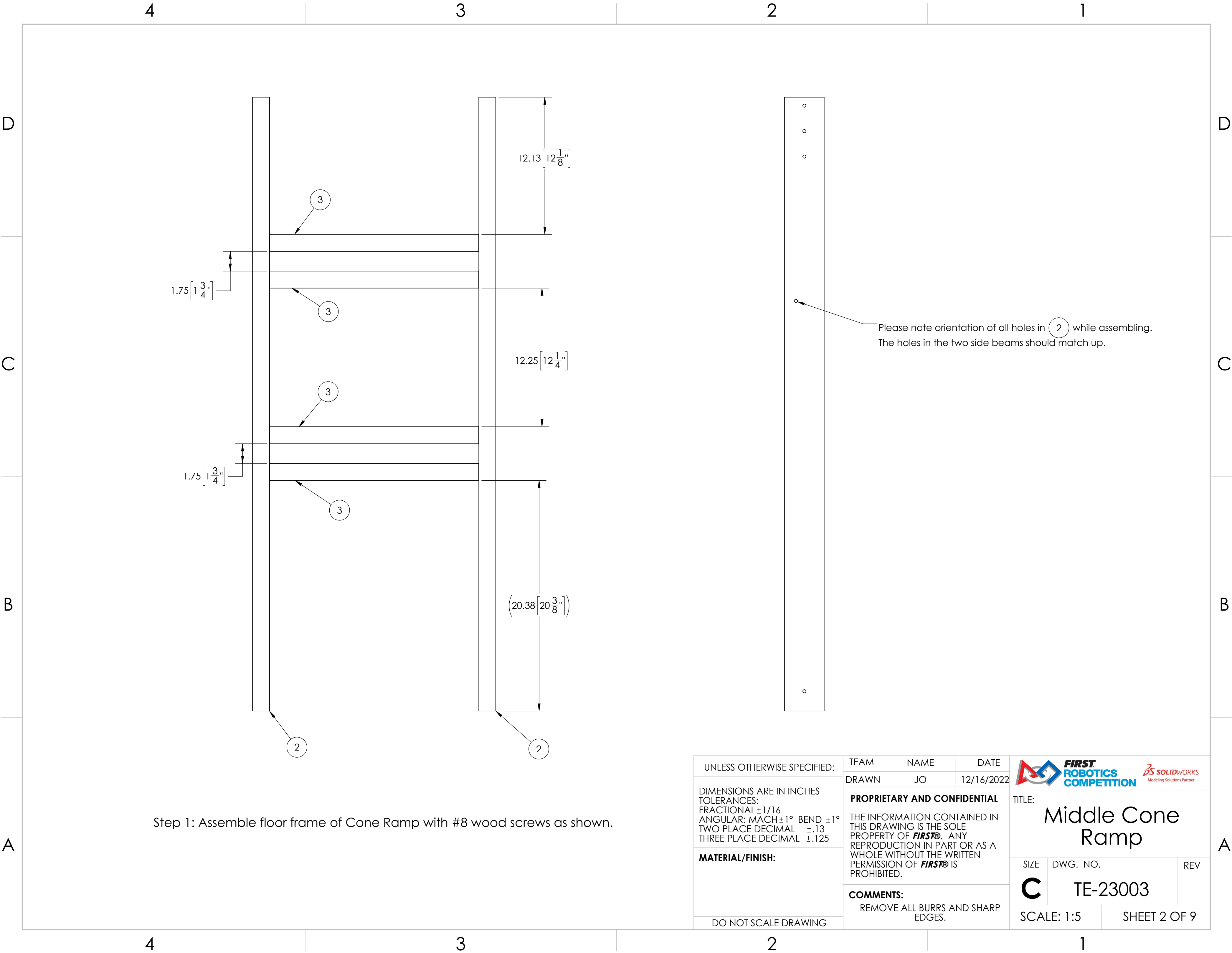


Step 9: Bolt (1) onto the side of the frame opposite of the installed poles using 1/4-20 x 4" long bolts (16) and wing nuts (18). Washers are optional.

(2) spacers can be used to accurately represent the size of the real GRID frame and locate the End Cone Ramp off of a wall correctly.

In this example, the poles are on the left side of the assembly so the (1) beam should be bolted on to the right side of the frame.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$ MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE	  TITLE: End Cone Ramp (Right)	
	DRAWN	JO	12/16/2022	SIZE	DWG. NO.
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			C	TE-23002
SCALE: 1:5		SHEET 10 OF 10			



Step 1: Assemble floor frame of Cone Ramp with #8 wood screws as shown.

Please note orientation of all holes in (2) while assembling.
The holes in the two side beams should match up.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$ MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE	 TITLE: Middle Cone Ramp		
	DRAWN	JO	12/16/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			SIZE	DWG. NO.	REV
	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			C	TE-23003	
		SCALE: 1:5		SHEET 2 OF 9		

D

C

B

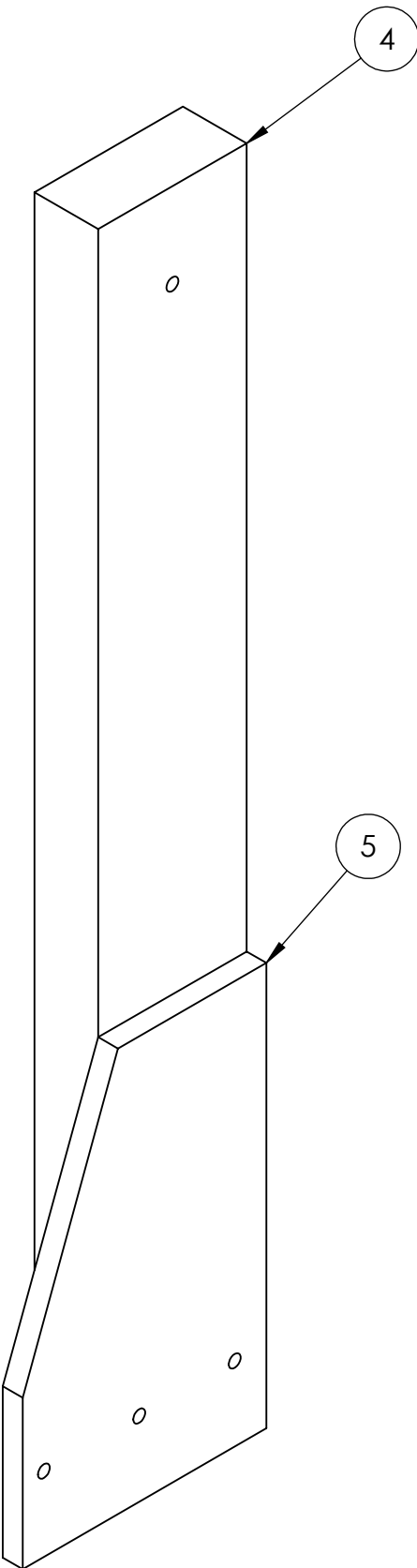
A

D

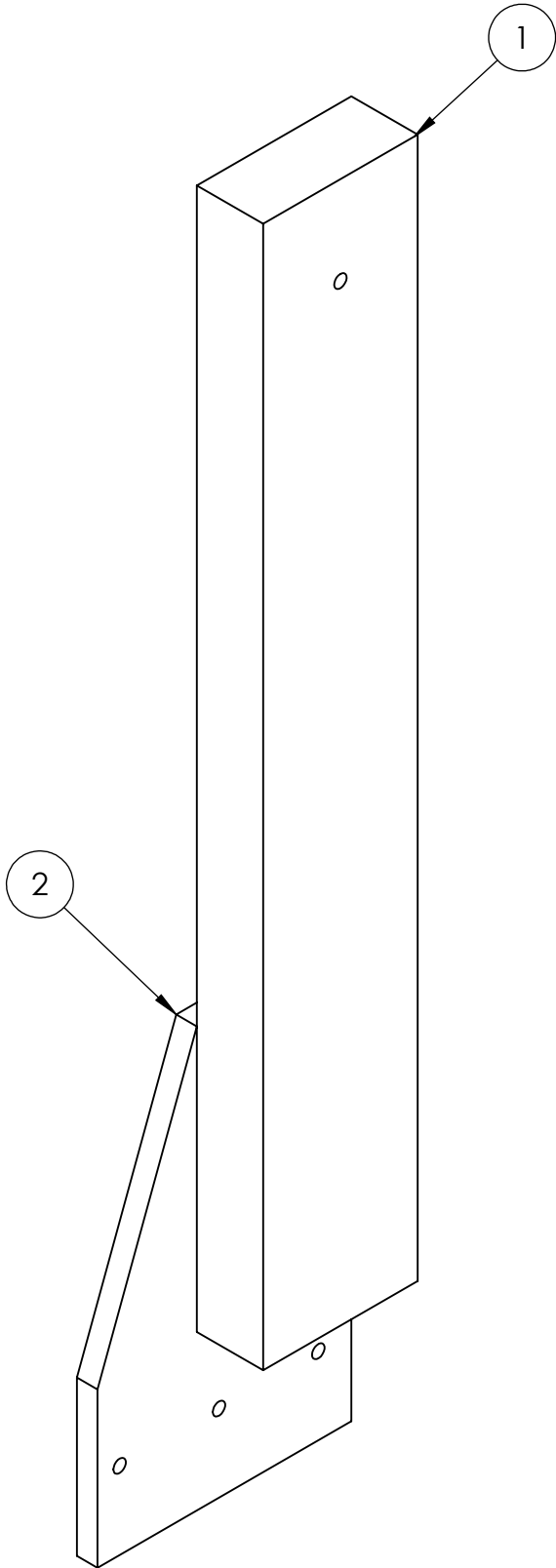
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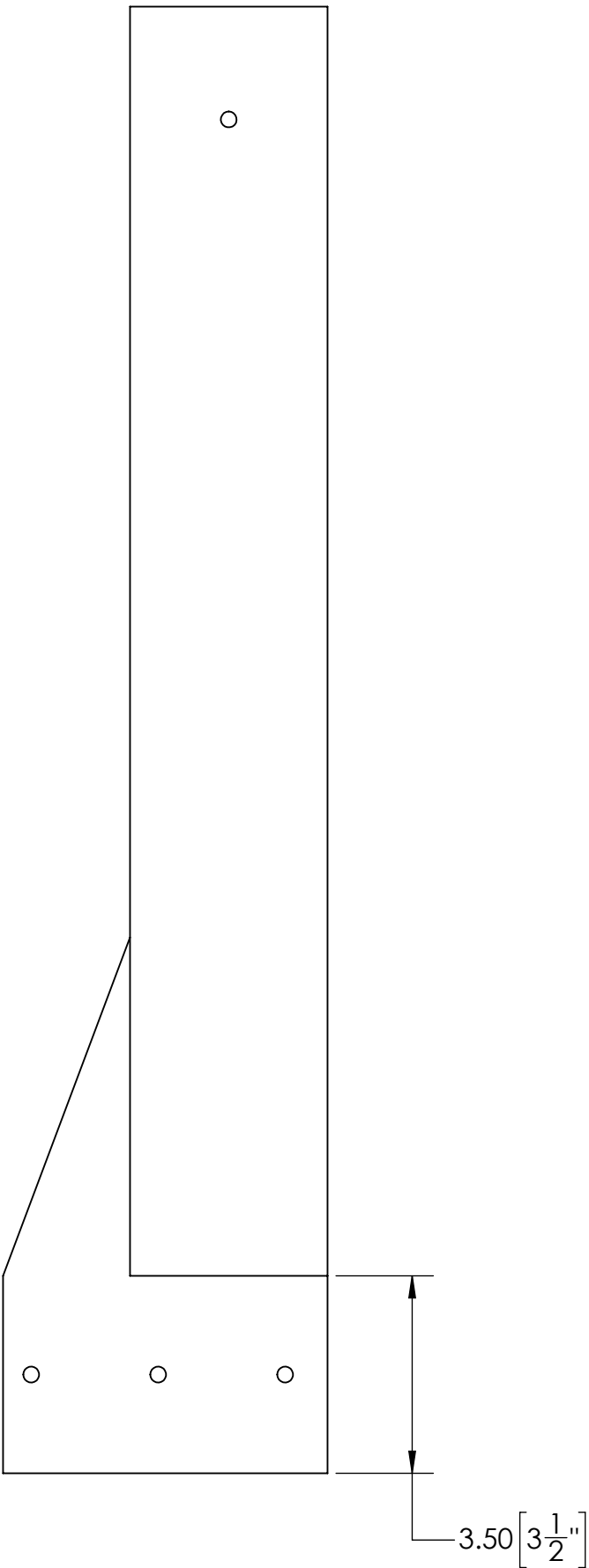
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Left hand

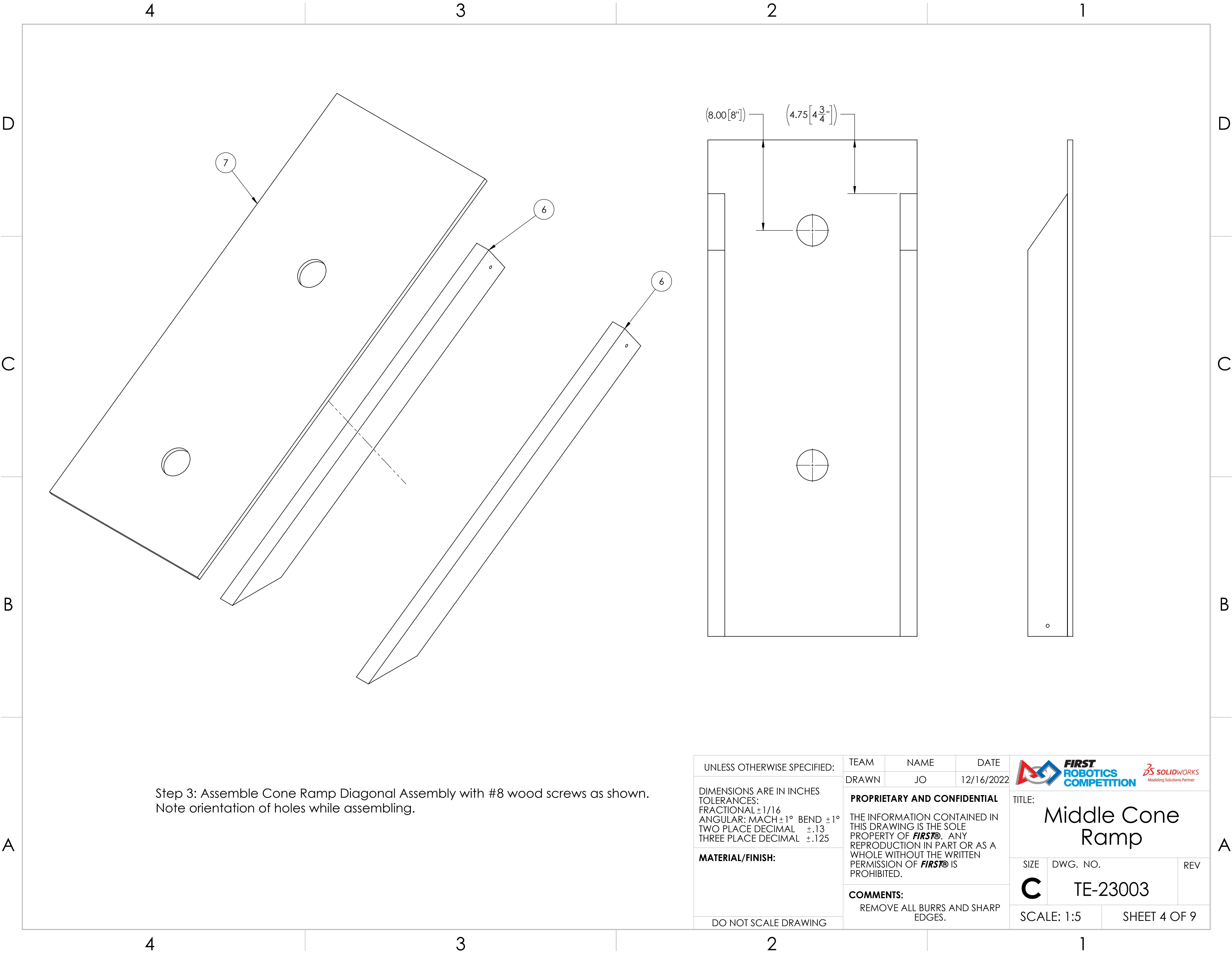


Right hand



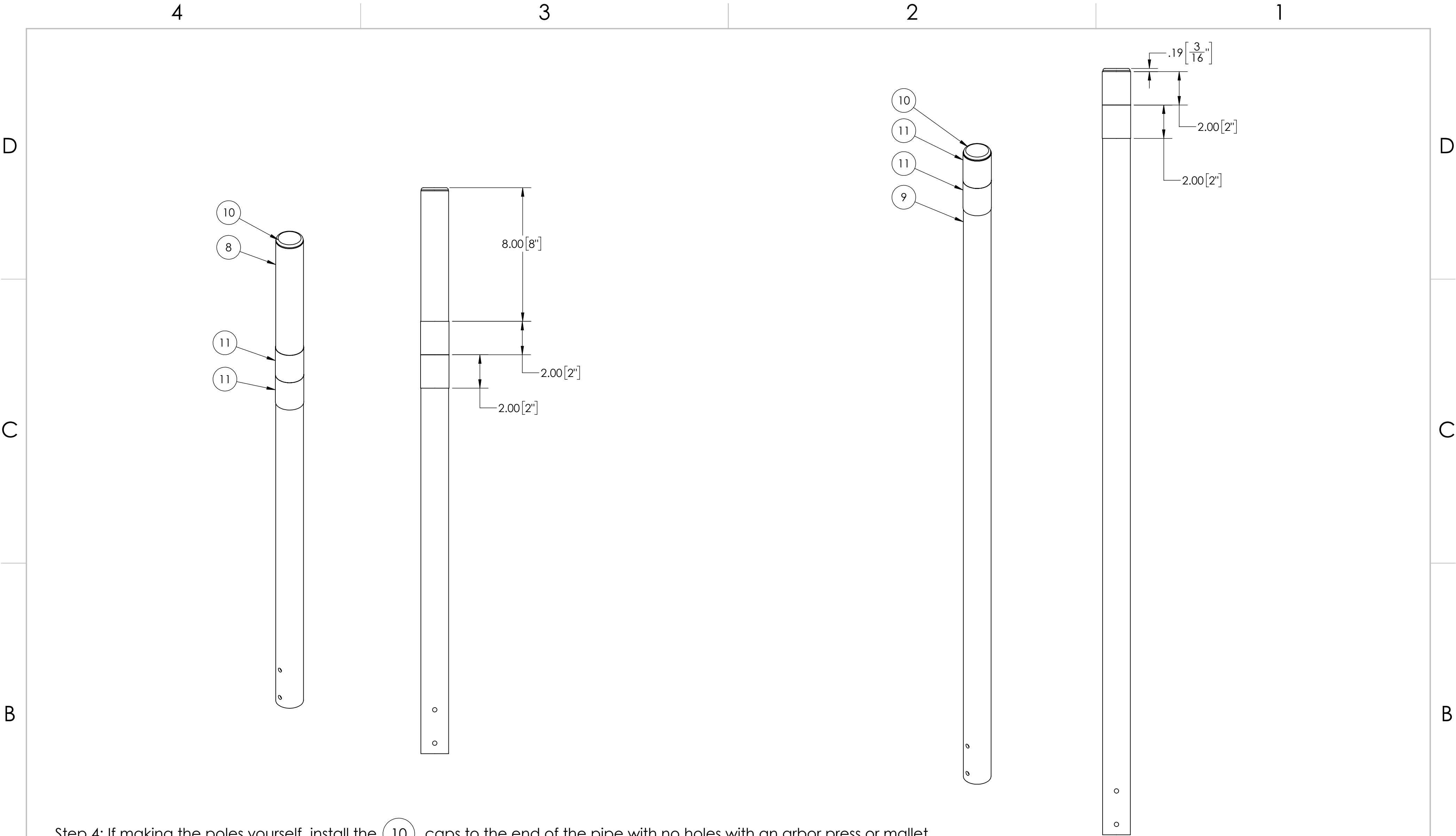
Step 2: Assemble 2x Cone Ramp Vertical assemblies using #8 wood screws as shown. Make a "left hand" and "right hand" version as shown.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE	 	
	DRAWN	JO	12/16/2022		
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			TITLE: Middle Cone Ramp	
SIZE C		DWG. NO. TE-23003		REV	
SCALE: 1:3		SHEET 3 OF 9			



Step 3: Assemble Cone Ramp Diagonal Assembly with #8 wood screws as shown.
Note orientation of holes while assembling.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$ MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE	 	
	DRAWN	JO	12/16/2022		
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.				TITLE: Middle Cone Ramp
	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.				SIZE C DWG. NO. TE-23003 REV
SCALE: 1:5		SHEET 4 OF 9			

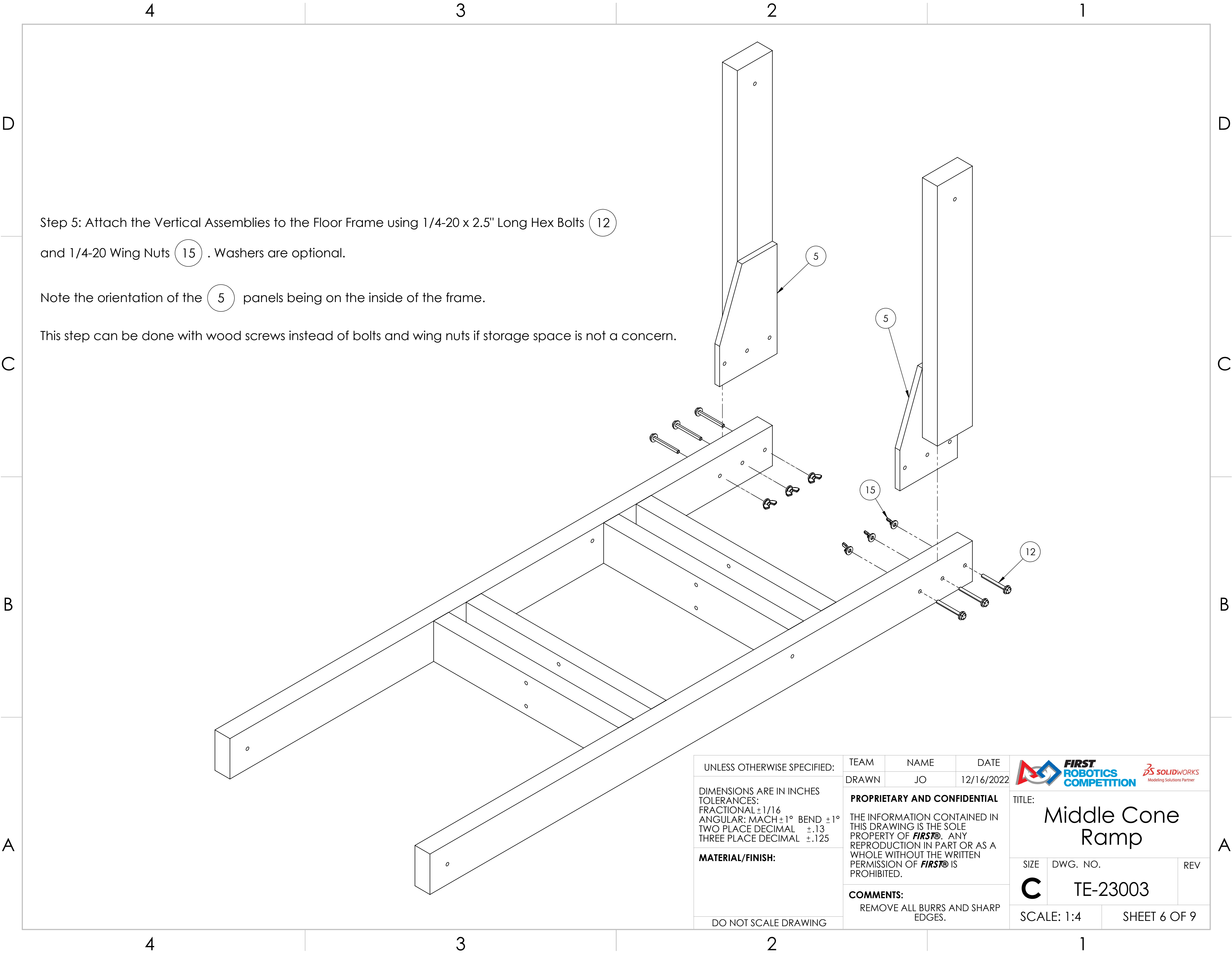


Step 4: If making the poles yourself, install the (10) caps to the end of the pipe with no holes with an arbor press or mallet.
There is a CAD file of a similar but not exact version of the cap in the shared CAD files for this assembly that can be 3D Printed.

Apply 2 pieces of (11) vision tape per pole as shown.

These poles with caps installed can be purchased from AndyMark.
These do not include the drilled holes or applied vision tape.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$ MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE	 	
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COMMENTS:		SIZE	DWG. NO.	REV	
REMOVE ALL BURRS AND SHARP EDGES.		C	TE-23003		
		SCALE: 1:4		SHEET 5 OF 9	

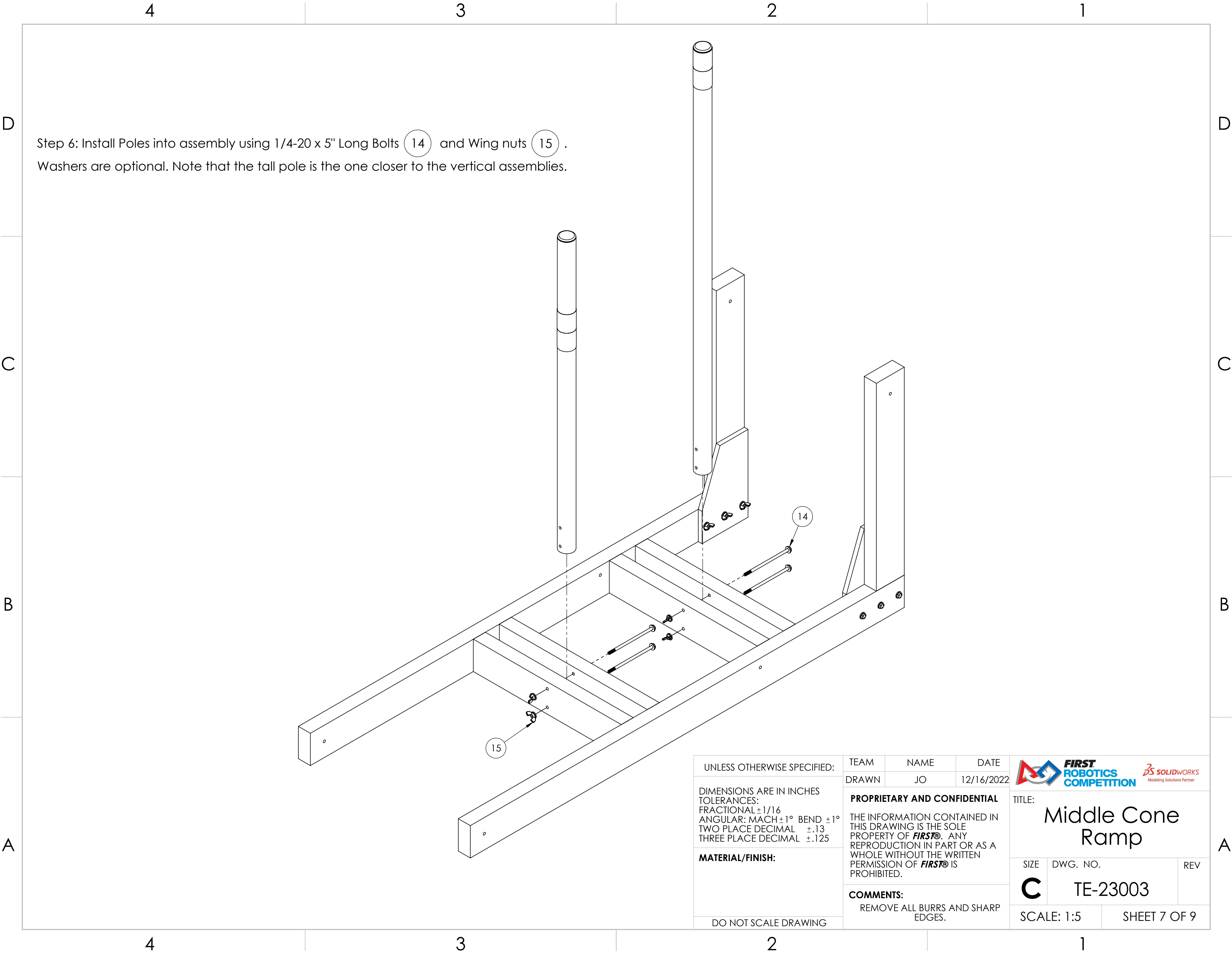


Step 5: Attach the Vertical Assemblies to the Floor Frame using 1/4-20 x 2.5" Long Hex Bolts (12) and 1/4-20 Wing Nuts (15) . Washers are optional.

Note the orientation of the (5) panels being on the inside of the frame.

This step can be done with wood screws instead of bolts and wing nuts if storage space is not a concern.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE	 		
	DRAWN	JO	12/16/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.				TITLE: Middle Cone Ramp	
				SIZE	DWG. NO.	REV
				C	TE-23003	
				SCALE: 1:4		SHEET 6 OF 9



Step 6: Install Poles into assembly using 1/4-20 x 5" Long Bolts (14) and Wing nuts (15). Washers are optional. Note that the tall pole is the one closer to the vertical assemblies.

UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .13$
THREE PLACE DECIMAL $\pm .125$

MATERIAL/FINISH:

DO NOT SCALE DRAWING

TEAM	NAME	DATE
DRAWN	JO	12/16/2022

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF **FIRST**. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF **FIRST** IS PROHIBITED.

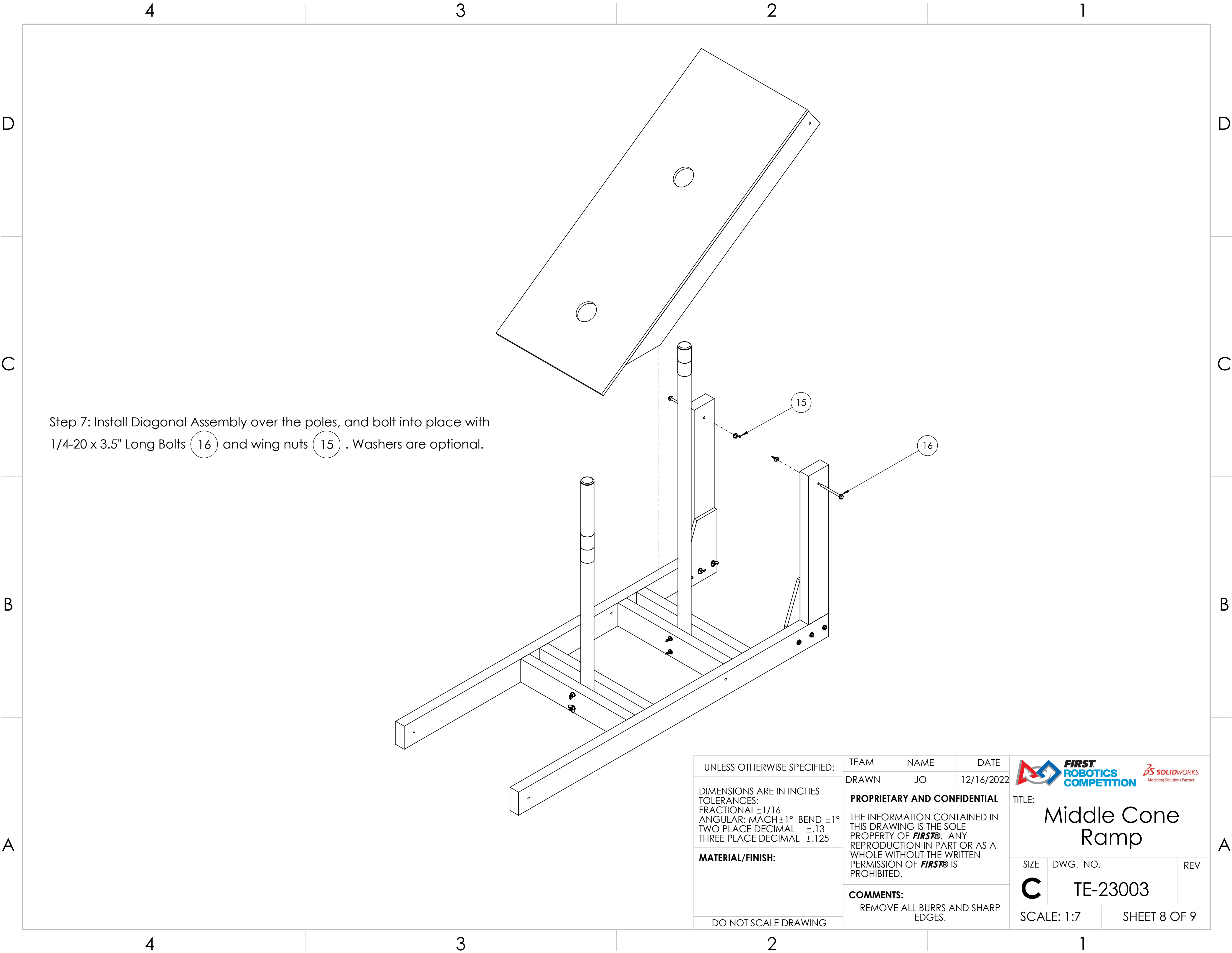
COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.



TITLE:
Middle Cone Ramp

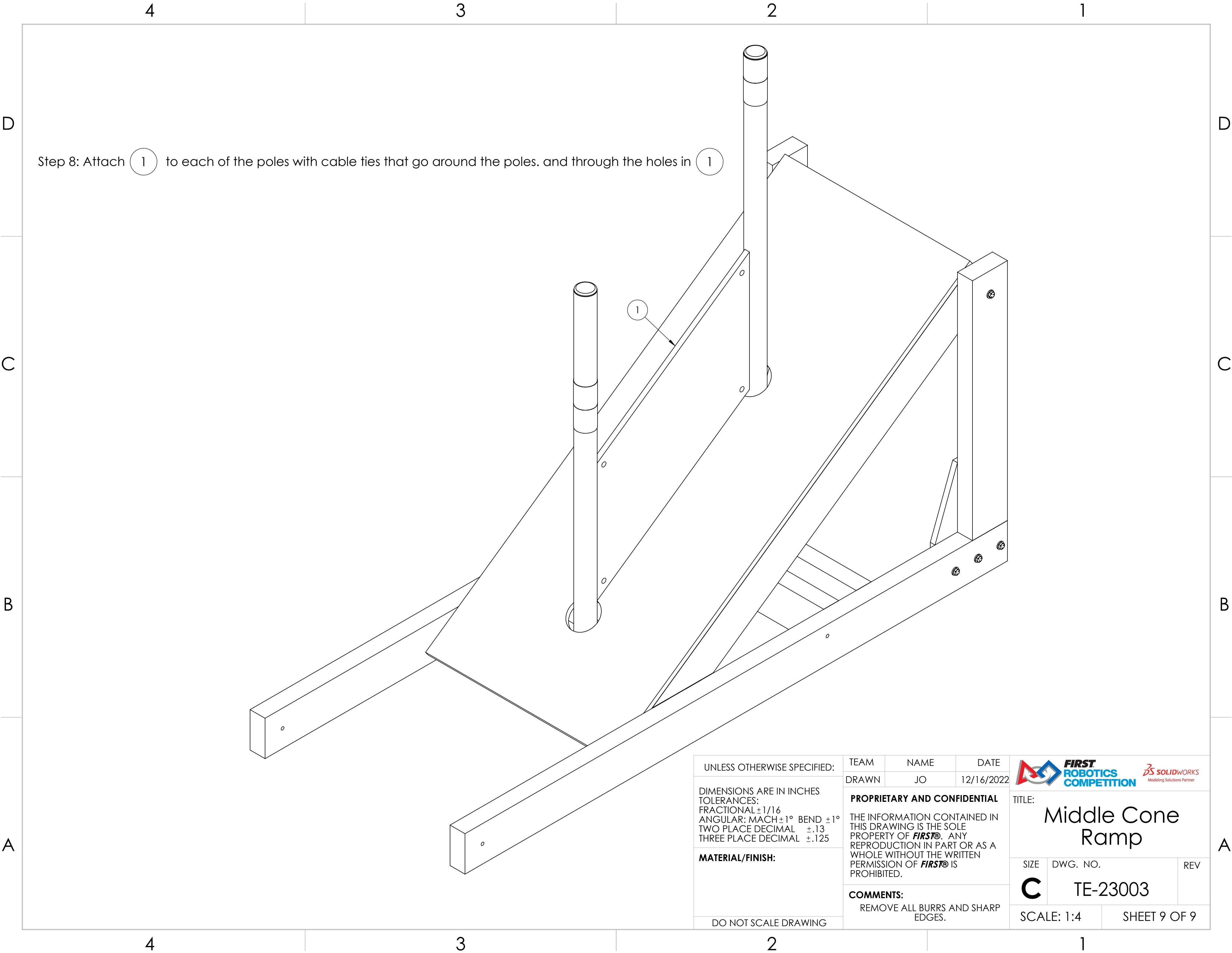
SIZE	DWG. NO.	REV
C	TE-23003	

SCALE: 1:5 SHEET 7 OF 9



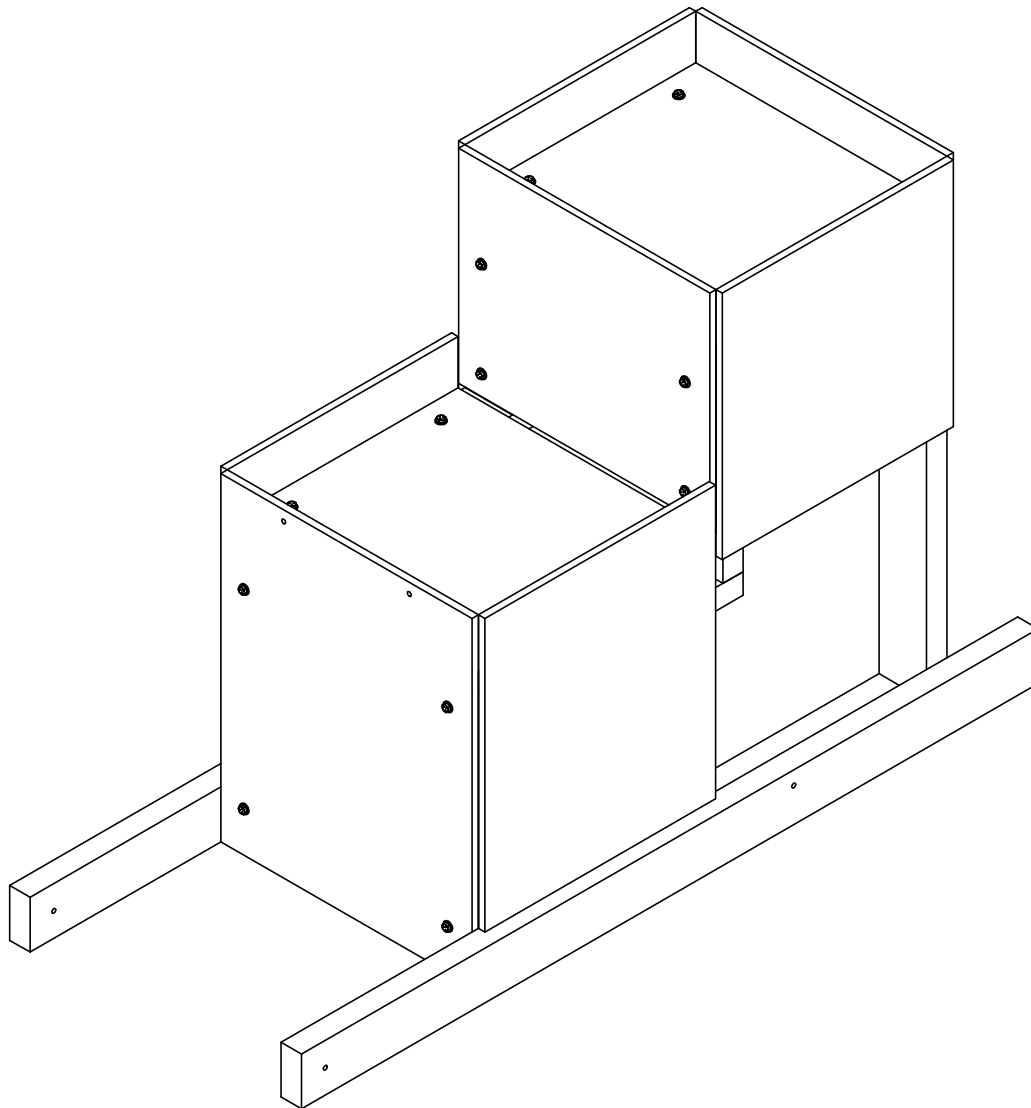
Step 7: Install Diagonal Assembly over the poles, and bolt into place with 1/4-20 x 3.5" Long Bolts (16) and wing nuts (15) . Washers are optional.

UNLESS OTHERWISE SPECIFIED:		TEAM	NAME	DATE
		DRAWN	JO	12/16/2022
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.		
MATERIAL/FINISH:		COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.		
DO NOT SCALE DRAWING				
		 TITLE: Middle Cone Ramp		
		SIZE	DWG. NO.	REV
		C	TE-23003	
		SCALE: 1:7		SHEET 8 OF 9



Step 8: Attach 1 to each of the poles with cable ties that go around the poles. and through the holes in 1

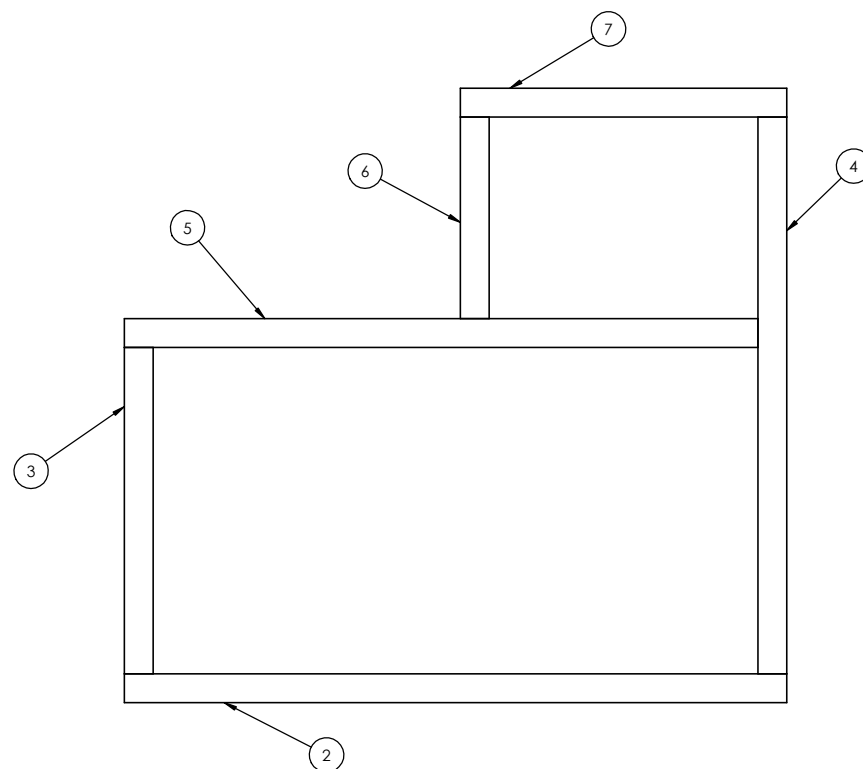
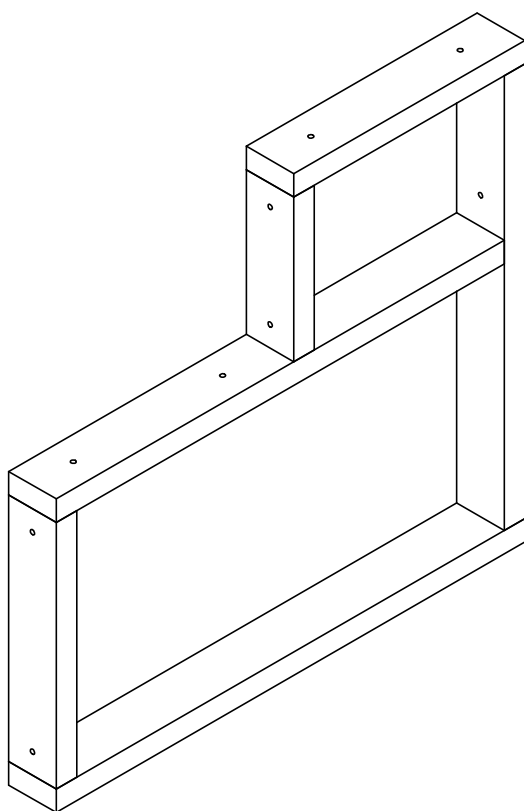
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$ MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE	 	
	DRAWN	JO	12/16/2022		
	PROPRIETARY AND CONFIDENTIAL			TITLE:	
	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			Middle Cone Ramp	
COMMENTS:		REMOVE ALL BURRS AND SHARP EDGES.		SIZE	DWG. NO.
				C	TE-23003
				REV	
				SCALE: 1:4	
				SHEET 9 OF 9	



NOTE: All holes shown are for bolt/t-nut connections that are included to make it easier to store this assembly. If storage of this assembly is not a concern, wood screws could be used instead of bolts and t-nuts and all drilled holes can be skipped.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TE-23005	Cube Shelf Divider Beam	2
2	TE-23018	Cube Shelf Bottom Horizontal	2
3	TE-23019	Cube Shelf Front Vertical	2
4	TE-23020	Cube Shelf Rear Vertical	2
5	TE-23021	Cube Shelf Middle Horizontal	2
6	TE-23022	Cube Shelf Front Short Vertical	2
7	TE-23023	Cube Shelf Top Horizontal	2
8	TE-23024	Cube Shelf Lower Side Panel	2
9	TE-23025	Cube Shelf Upper Side Panel	2
10	TE-23026	Cube Shelf Front Panel	1
11	TE-23027	Cube Shelf Scoring Platform	2
12	TE-23028	Cube Shelf Upper Panel	2
13	hex_.25_20_2	Steel Hex Head Bolt 1/4"-20 x 2" long, fully threaded	20
14	TeeNut_.25_20	Soft wood fiber tee nut	20
15	washer_flat_.25	Flat Washer for 1/4" Screw	20

UNLESS OTHERWISE SPECIFIED:	TEAM	NAME	DATE	 
	DRAWN	JO	12/16/2022	
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$	PROPRIETARY AND CONFIDENTIAL			TITLE: Cube Shelf
	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			
MATERIAL/FINISH:	COMMENTS:			SIZE
	REMOVE ALL BURRS AND SHARP EDGES.			
DO NOT SCALE DRAWING	C			DWG. NO.
	TE-23004			REV
SCALE: 1:5		SHEET 1 OF 5		



Step 1: Assemble 2x Cube Shelf Side Frames using #8 wood screws. Match orientation of t-nut holes as shown above if you are using them.

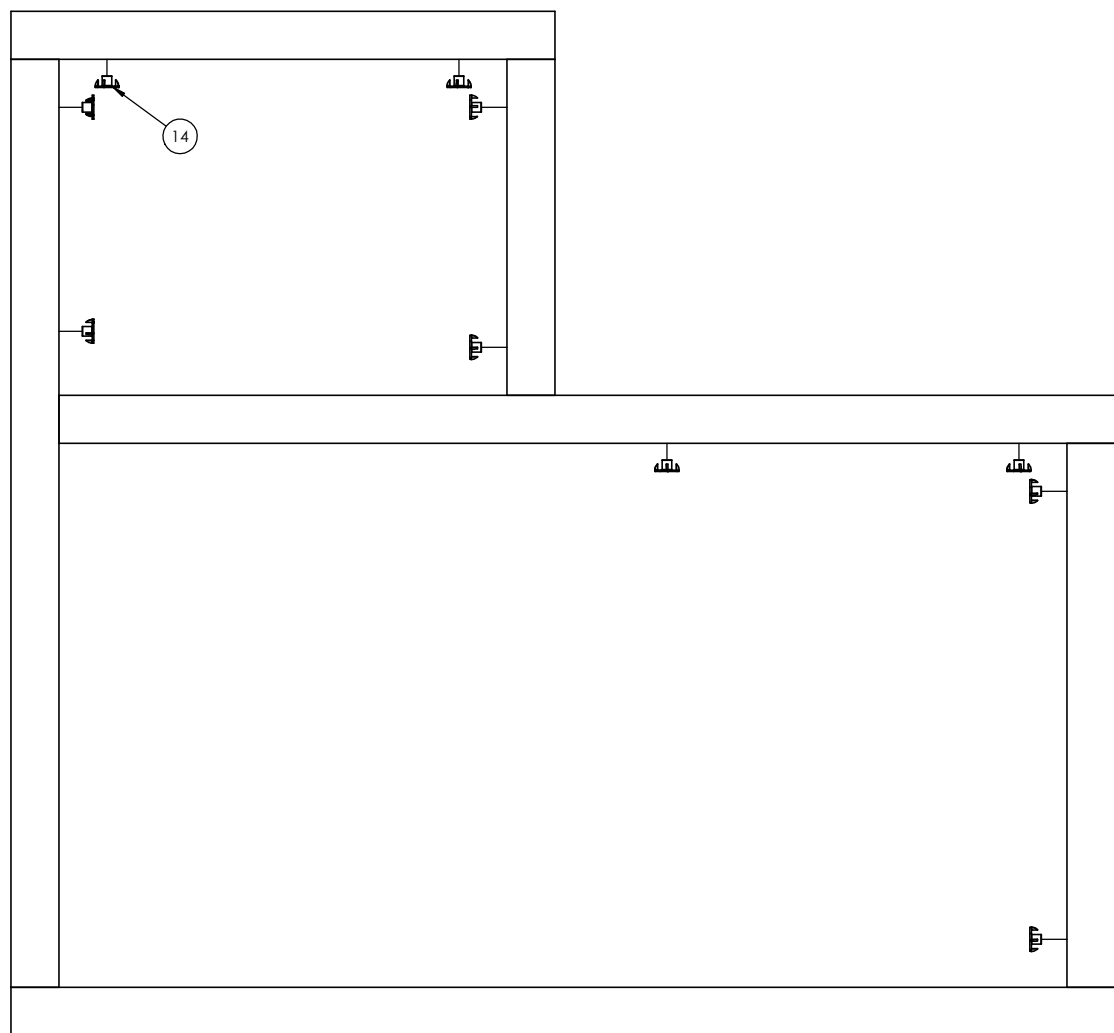
UNLESS OTHERWISE SPECIFIED:	TEAM	NAME	DATE	 		
	DRAWN	JO	12/16/2022			
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$	PROPRIETARY AND CONFIDENTIAL			TITLE: Cube Shelf		
	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.					
	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.					
MATERIAL/FINISH:				SIZE	DWG. NO.	REV
				C	TE-23004	
DO NOT SCALE DRAWING				SCALE: 1:5		SHEET 2 OF 5

4

3

2

1



Step 2: Install (14) t-nuts as shown if you are using them for storage.

UNLESS OTHERWISE SPECIFIED:	TEAM	NAME	DATE	 FIRST ROBOTICS COMPETITION 		
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL±1/16 ANGULAR: MACH±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125	DRAWN	JO	12/16/2022	TITLE: Cube Shelf		
MATERIAL/FINISH:	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			SIZE	DWG. NO.	REV
DO NOT SCALE DRAWING	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			C	TE-23004	
				SCALE: 1:3		SHEET 3 OF 5

4

3

2

1

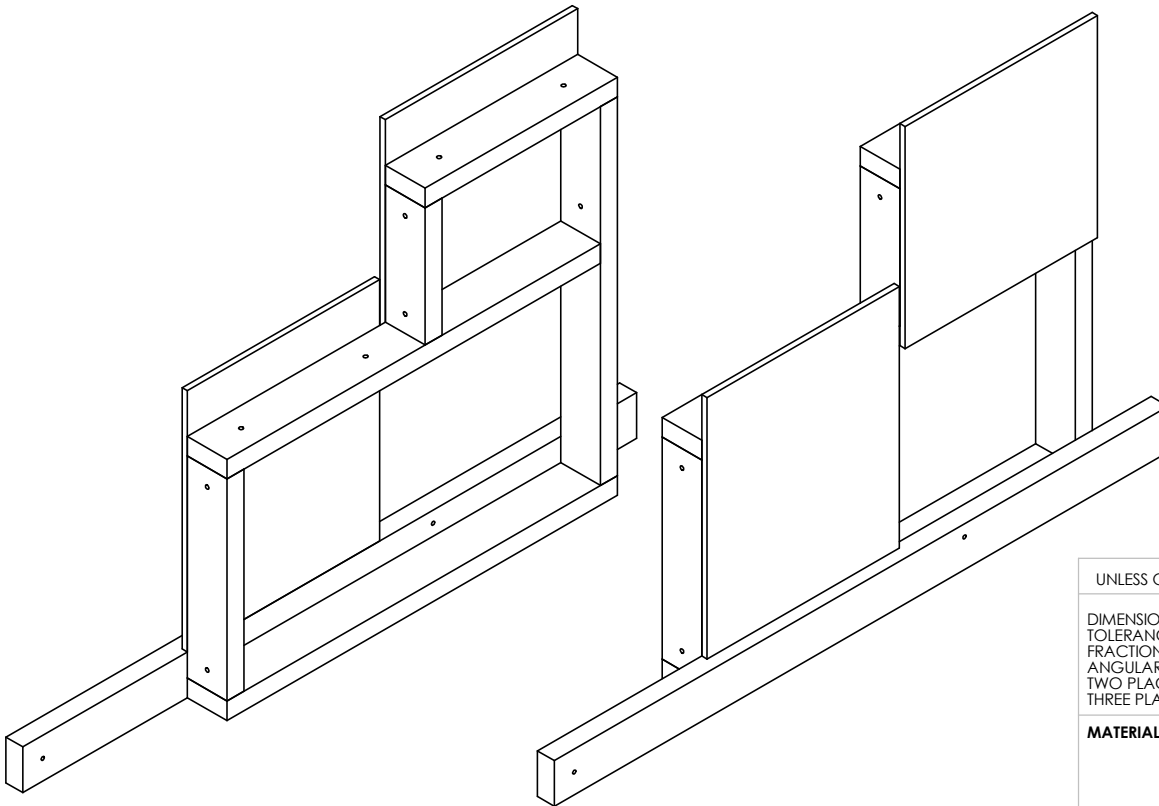
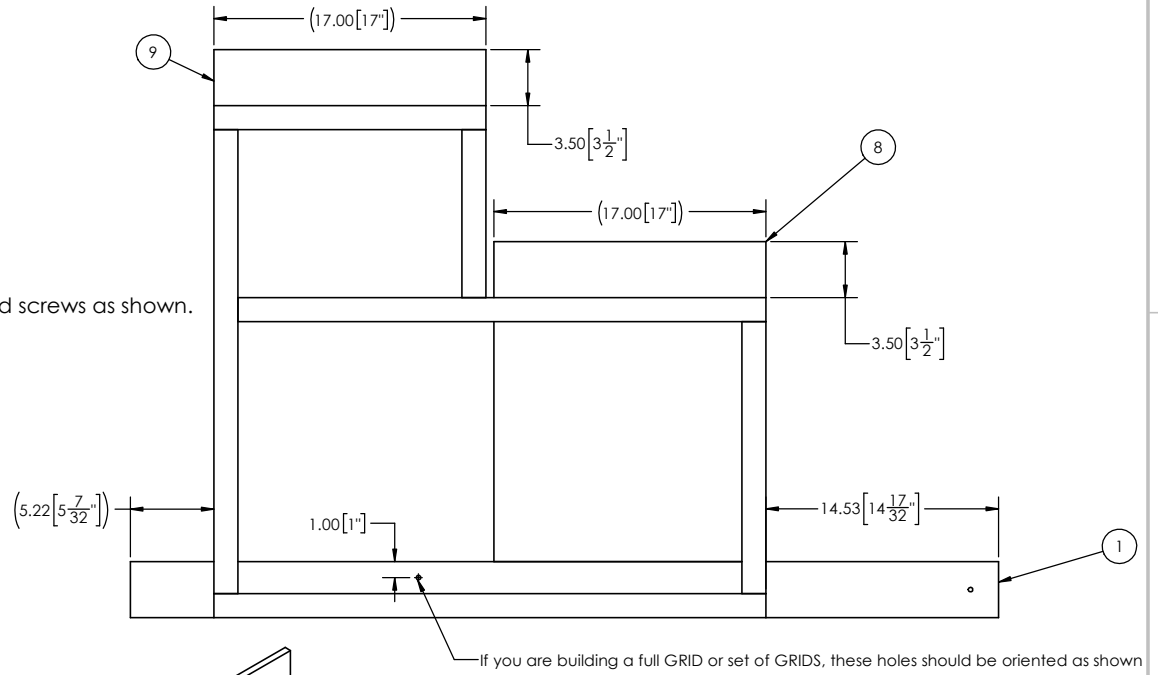
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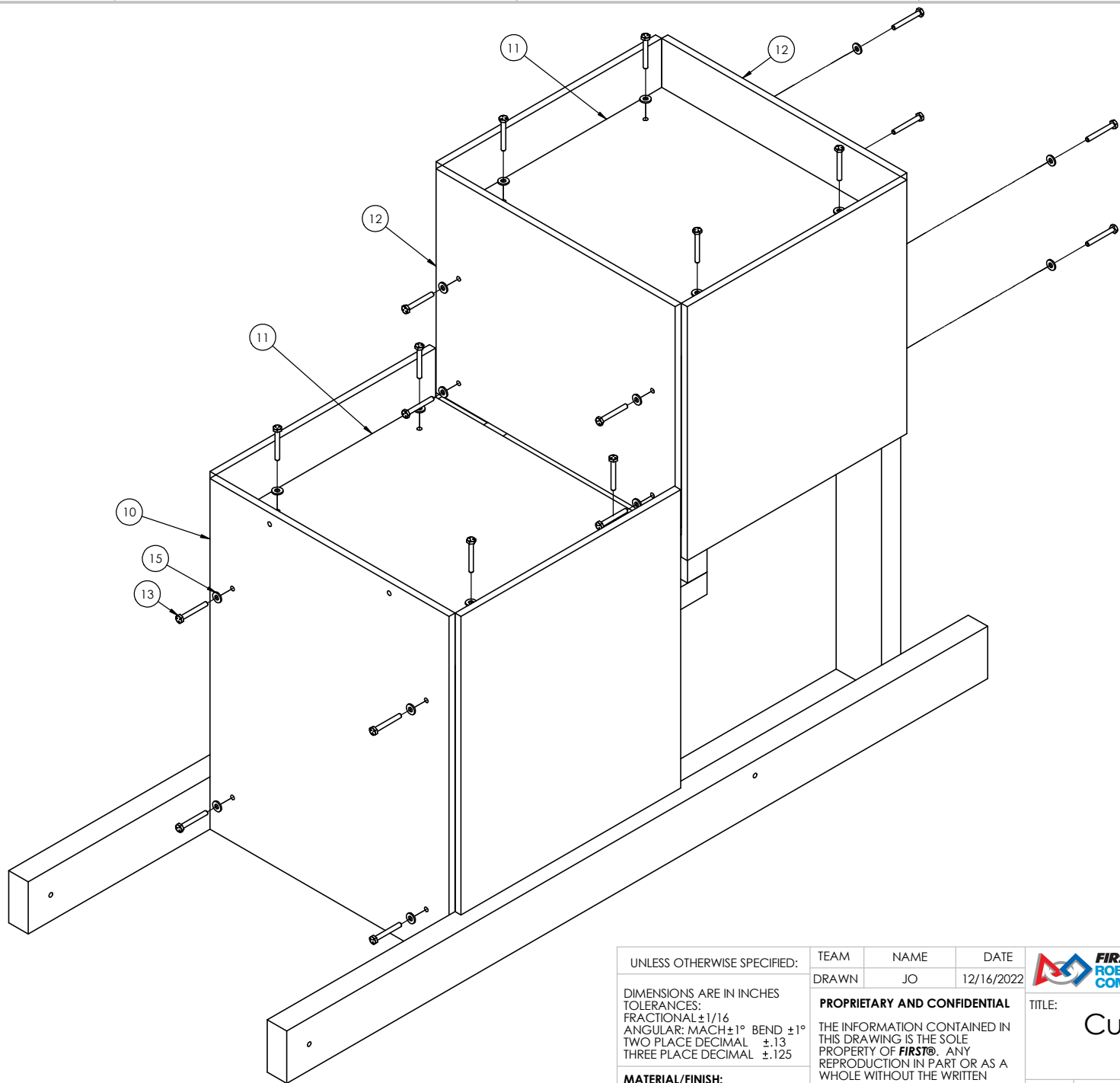
B

A

Step 3: Attach ①, ⑧ and ⑨ to the Cube Shelf Side Frames with #8 wood screws as shown.
Create a left and right version, as shown below.



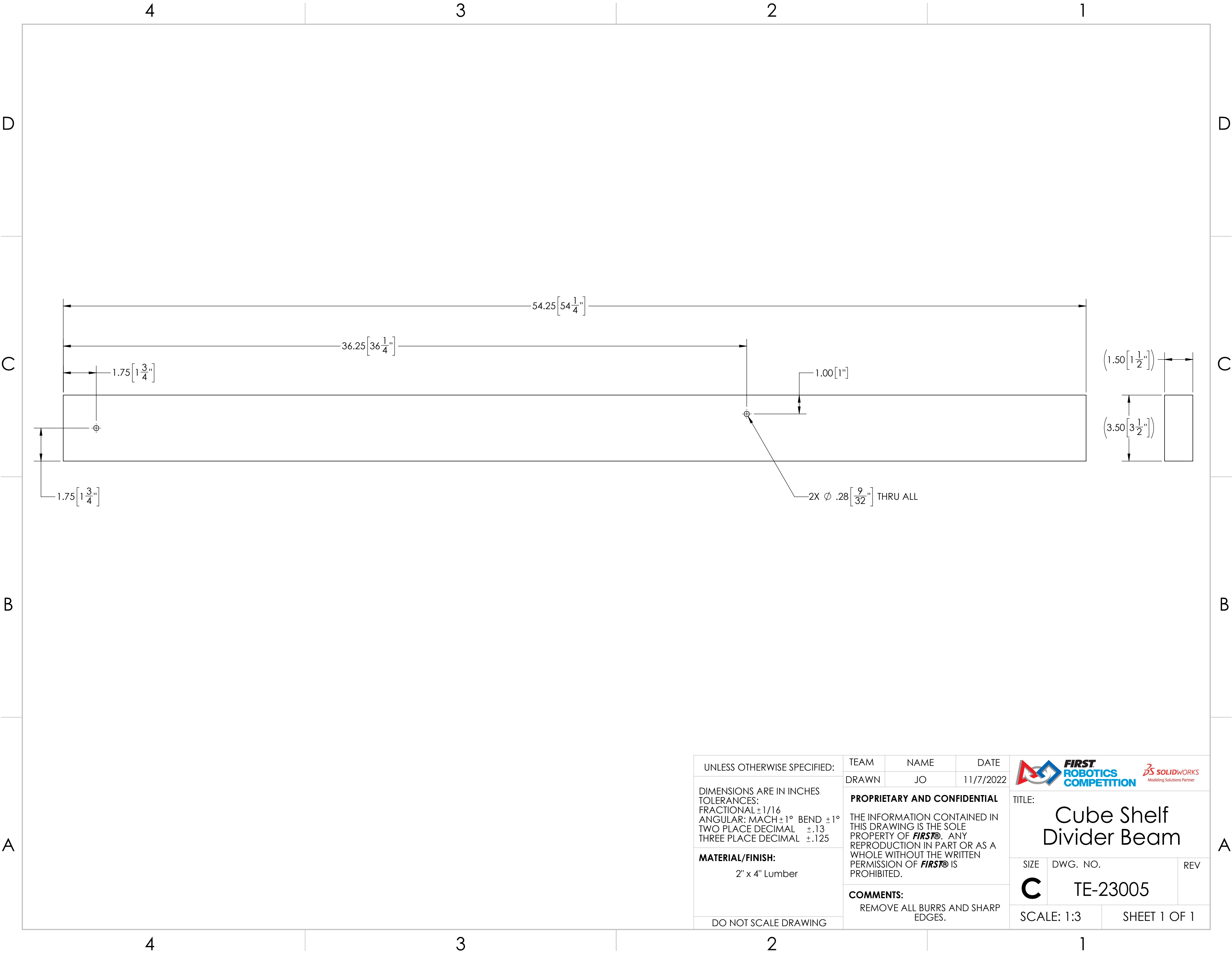
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	DRAWN	JO	12/16/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.				TITLE: Cube Shelf	
				SIZE	DWG. NO.	REV
				C	TE-23004	
				SCALE: 1:6		SHEET 4 OF 5



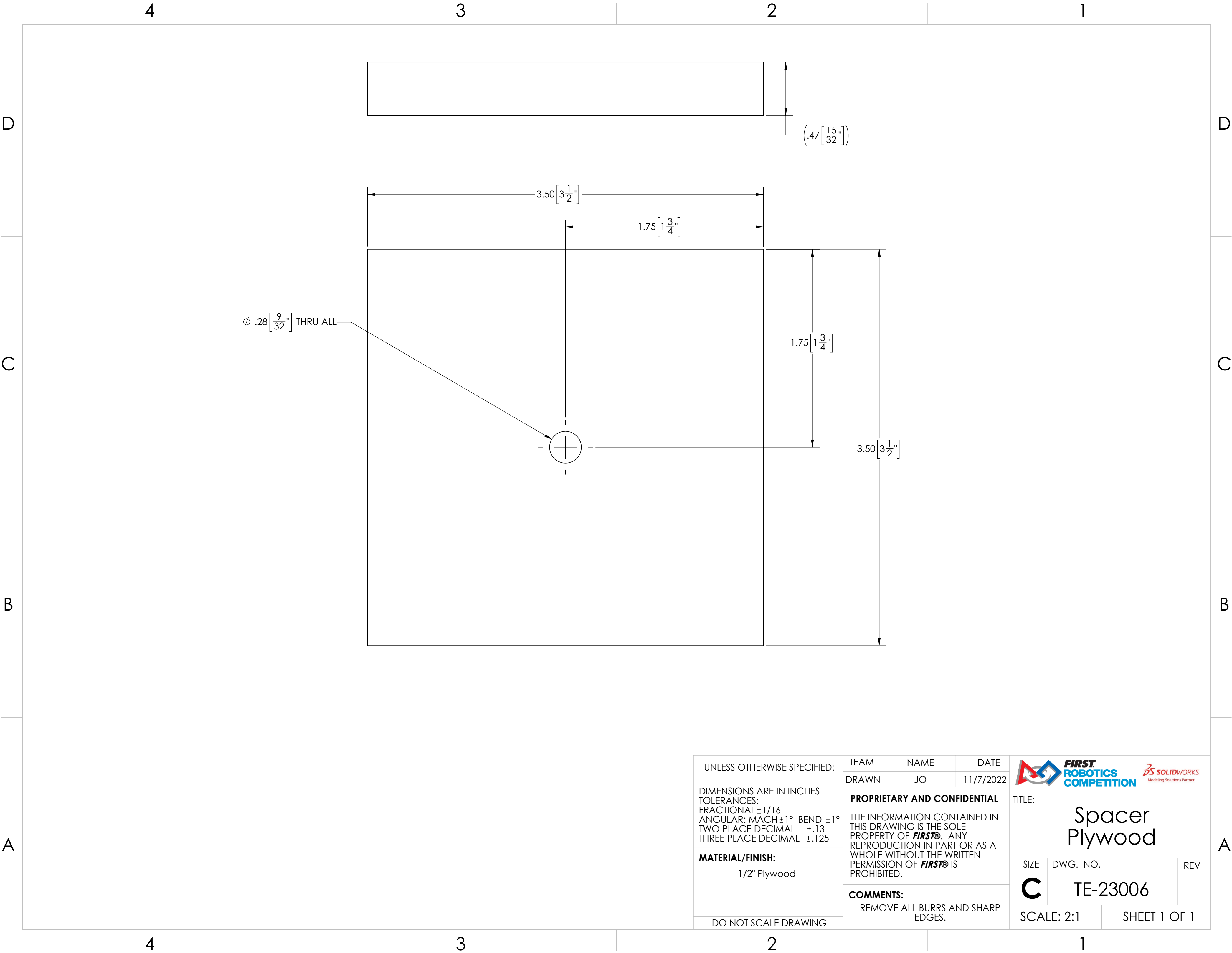
Step 4: Attach (10), (11) and (12) panels to the frames with 1/4-20 x 2" Long Hex Head Bolts (13) into t-nuts as shown (or #8 wood screws), washers (15) are optional. Panels should end up flush with each other at the top edges.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125	TEAM	NAME	DATE	 
	DRAWN	JO	12/16/2022	
	PROPRIETARY AND CONFIDENTIAL			
MATERIAL/FINISH: DO NOT SCALE DRAWING	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			Cube Shelf
	COMMENTS:			
	REMOVE ALL BURRS AND SHARP EDGES.			
	SIZE	DWG. NO.		REV
	C	TE-23004		
	SCALE: 1:4		SHEET 5 OF 5	

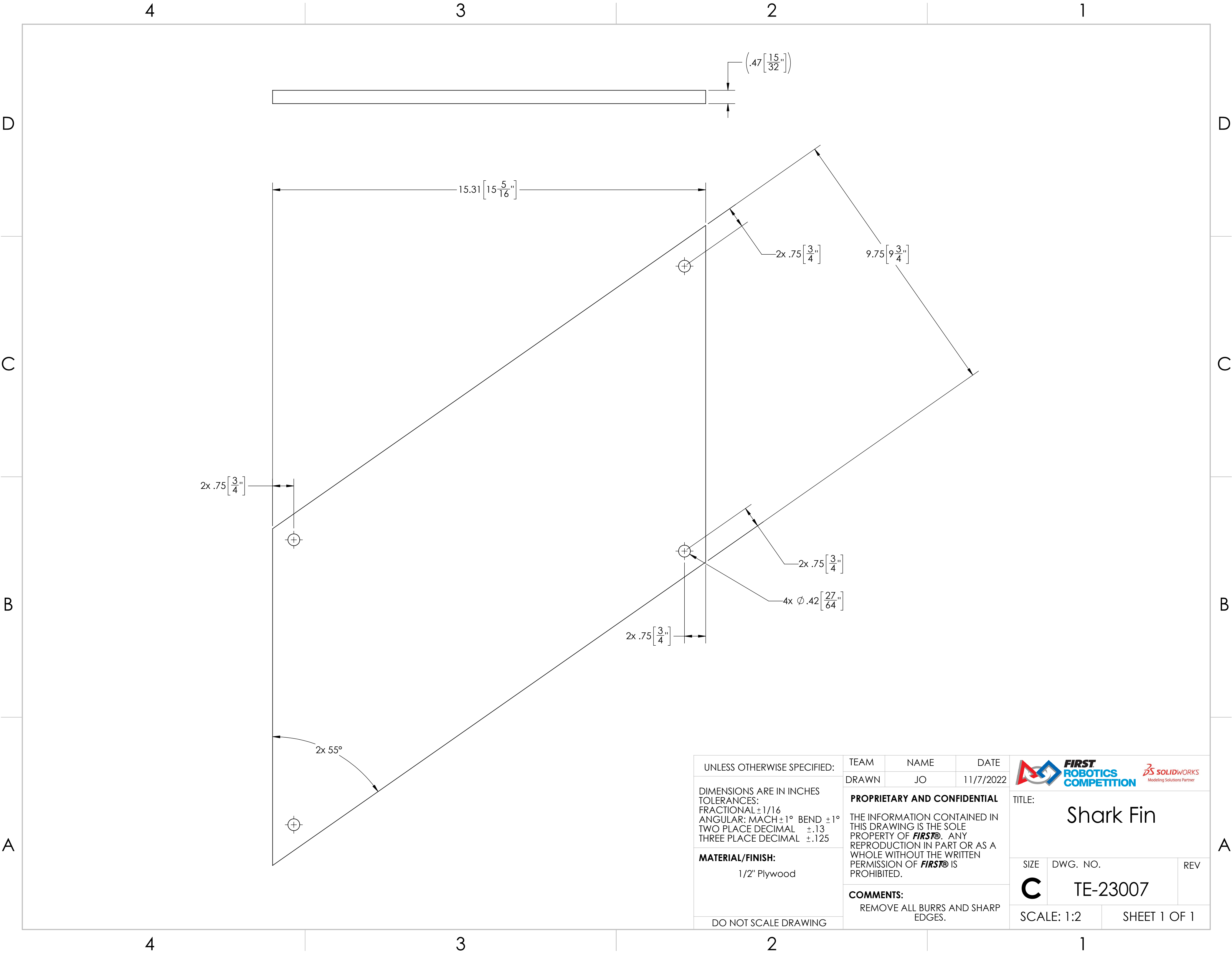




UNLESS OTHERWISE SPECIFIED:	TEAM	NAME	DATE			
	DRAWN	JO	11/7/2022			
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125	PROPRIETARY AND CONFIDENTIAL			TITLE:		
	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			Cube Shelf Divider Beam		
MATERIAL/FINISH: 2" x 4" Lumber	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			SIZE	DWG. NO.	REV
				C	TE-23005	
DO NOT SCALE DRAWING				SCALE: 1:3		SHEET 1 OF 1



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: 1/2" Plywood DO NOT SCALE DRAWING	TEAM	NAME	DATE	 TITLE: Spacer Plywood		
	DRAWN	JO	11/7/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.					
	SCALE: 2:1					



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: 1/2" Plywood DO NOT SCALE DRAWING	TEAM	NAME	DATE			
	DRAWN	JO	11/7/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.				TITLE: Shark Fin	
				SIZE	DWG. NO.	REV
				C	TE-23007	
				SCALE: 1:2		SHEET 1 OF 1

4

3

2

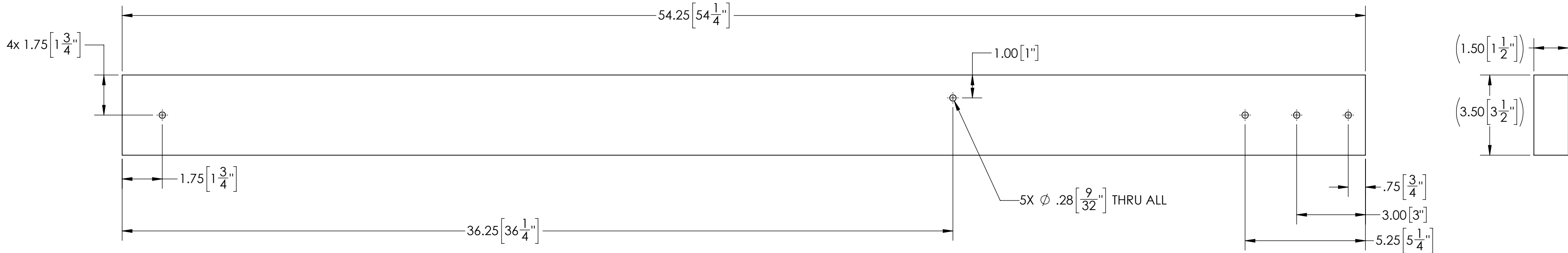
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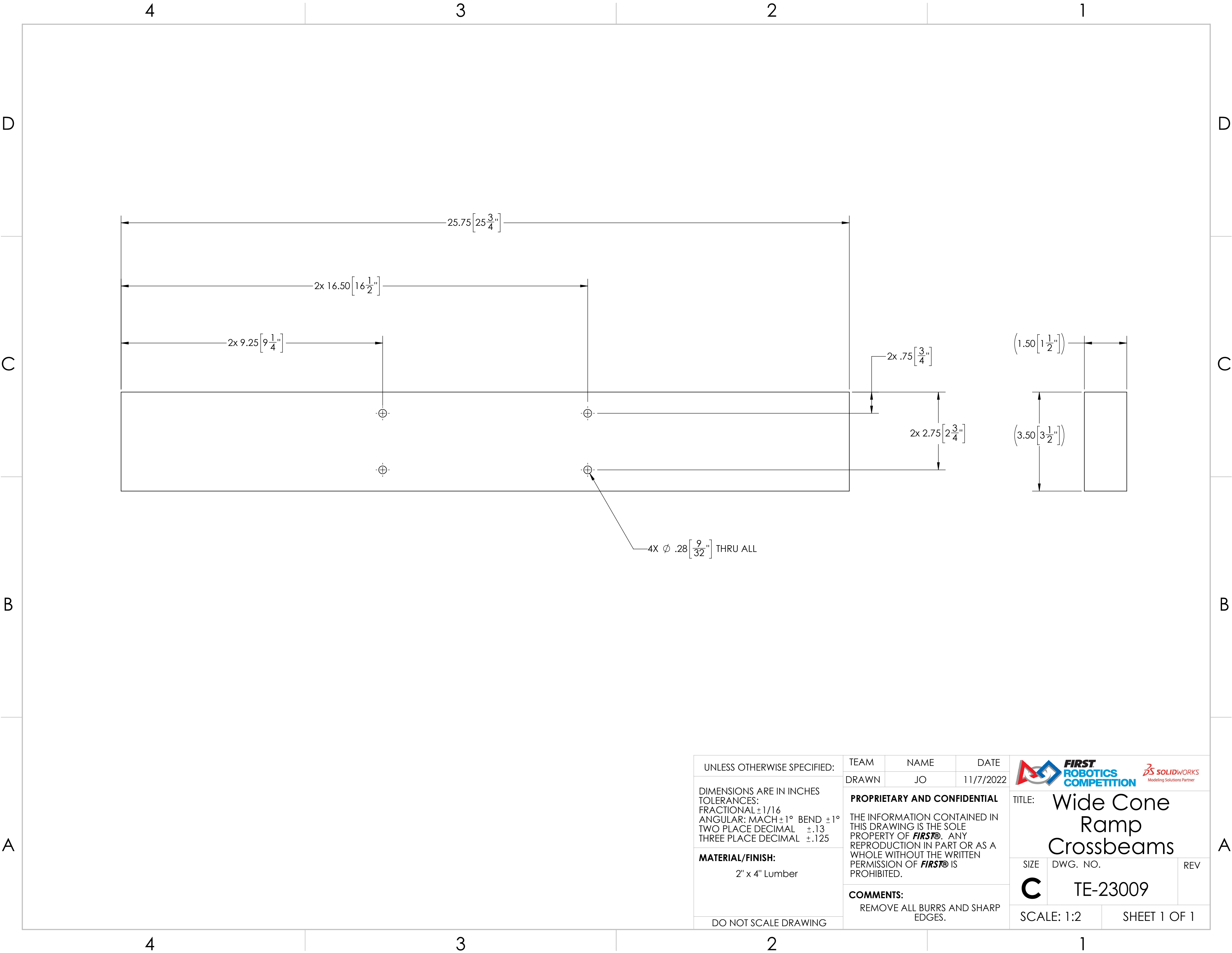
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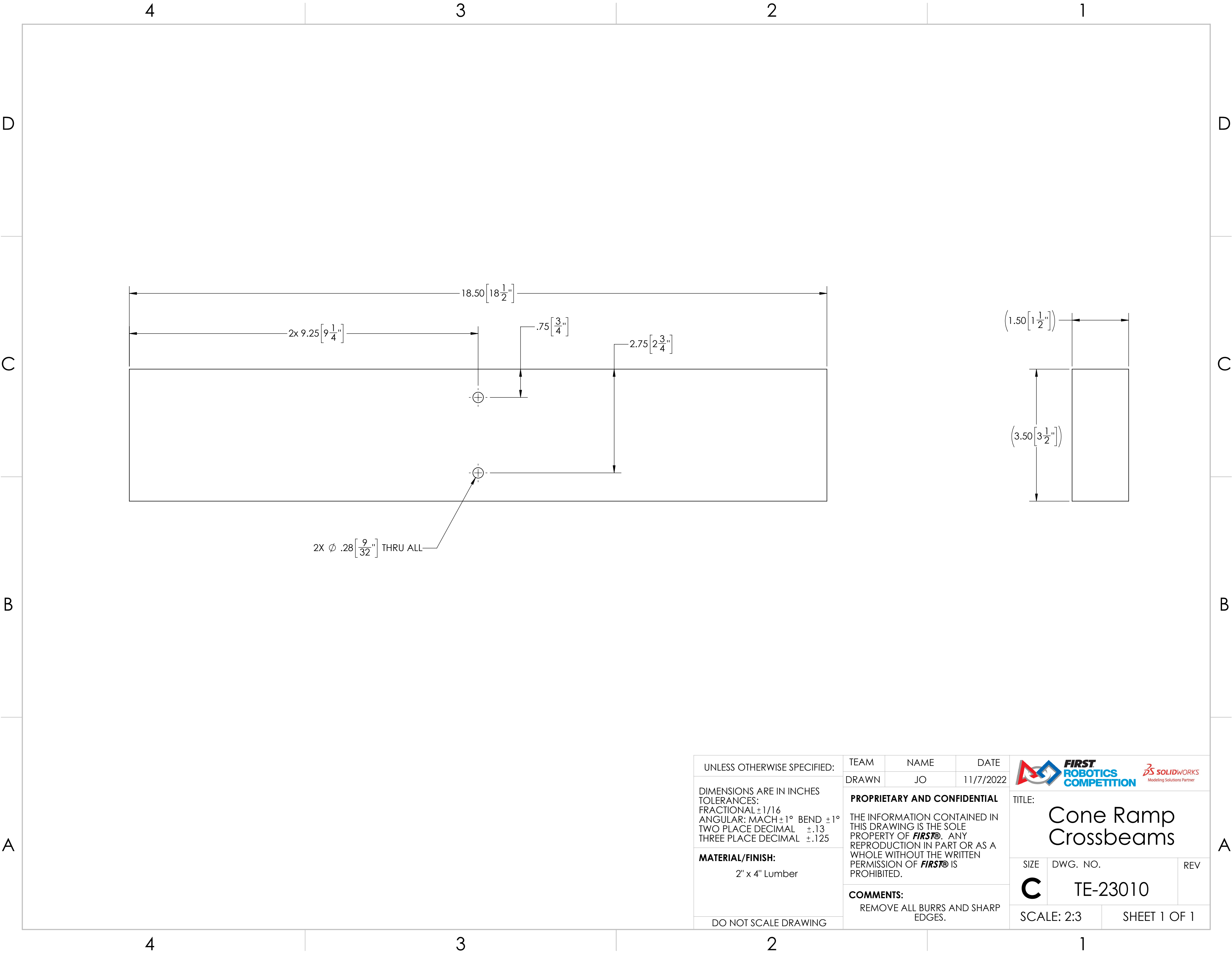
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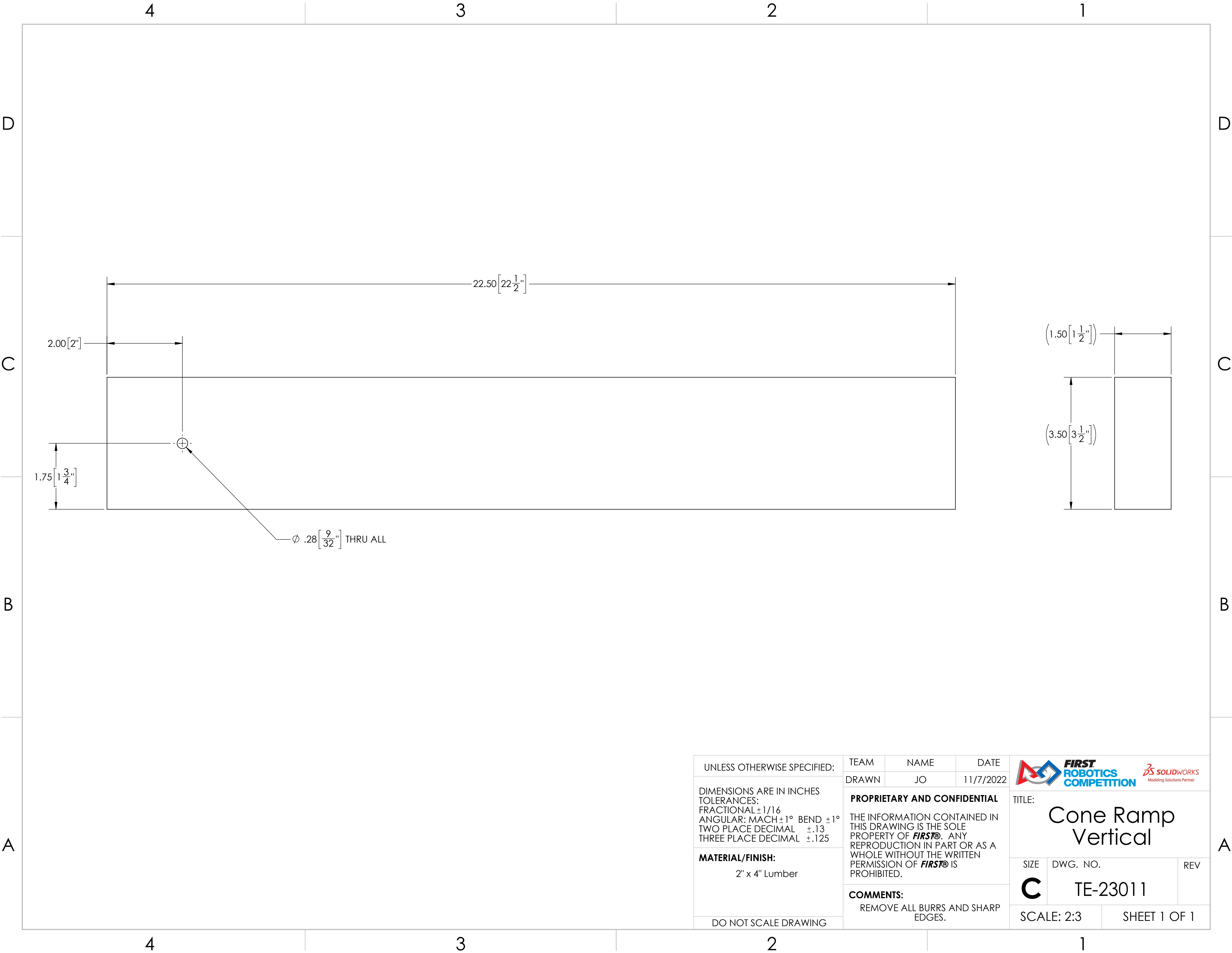
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		DRAWN	JO	11/7/2022	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST®. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.					
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125										
MATERIAL/FINISH: 2" x 4" Lumber										
DO NOT SCALE DRAWING					TITLE:		Cone Ramp Horizontal			
		SIZE	DWG. NO.			REV	C TE-23008			
		SCALE: 3:10			SHEET 1 OF 1					



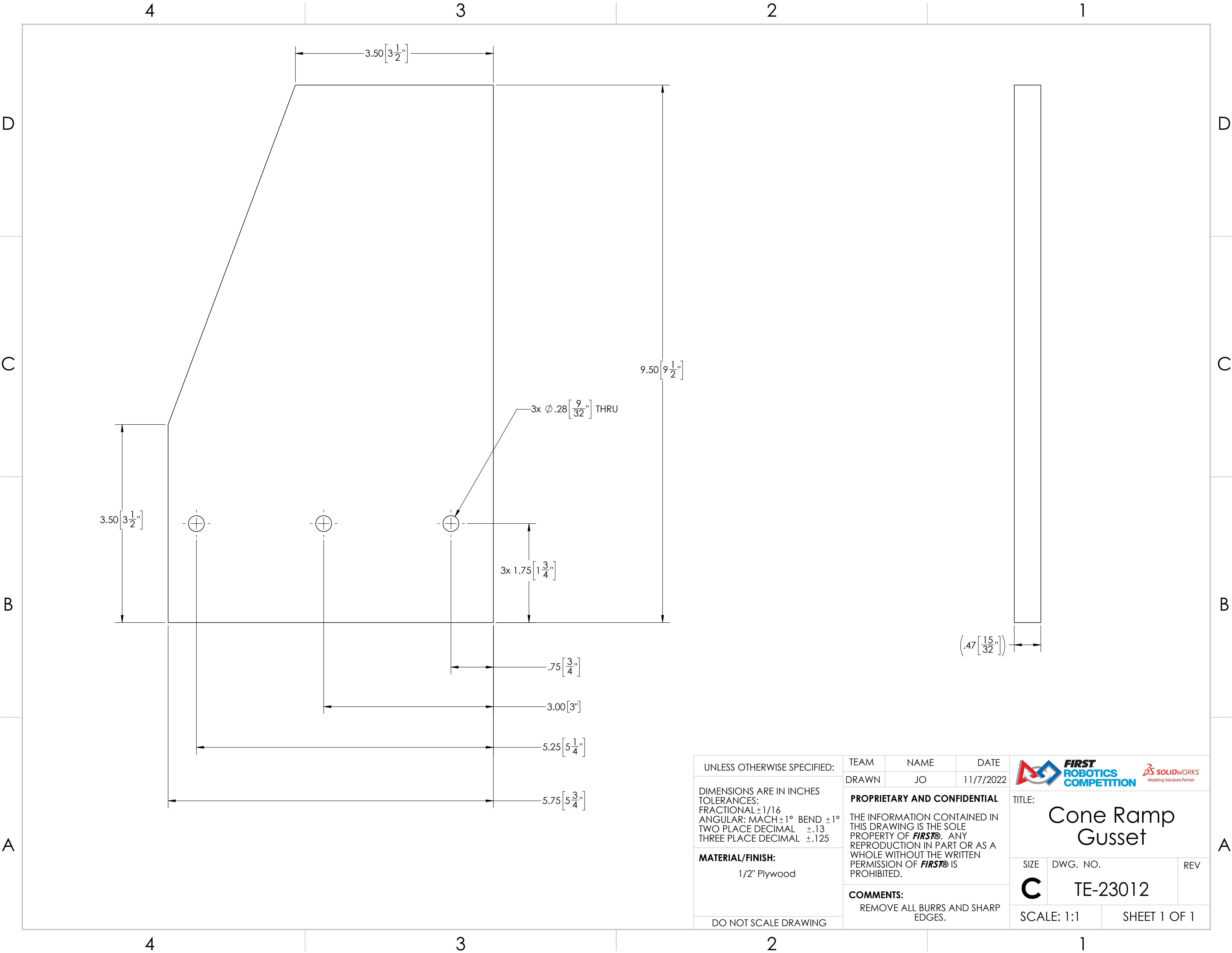
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	DRAWN	JO	11/7/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.				TITLE: Wide Cone Ramp Crossbeams	
				SIZE	DWG. NO.	REV
				C	TE-23009	
				SCALE: 1:2		SHEET 1 OF 1



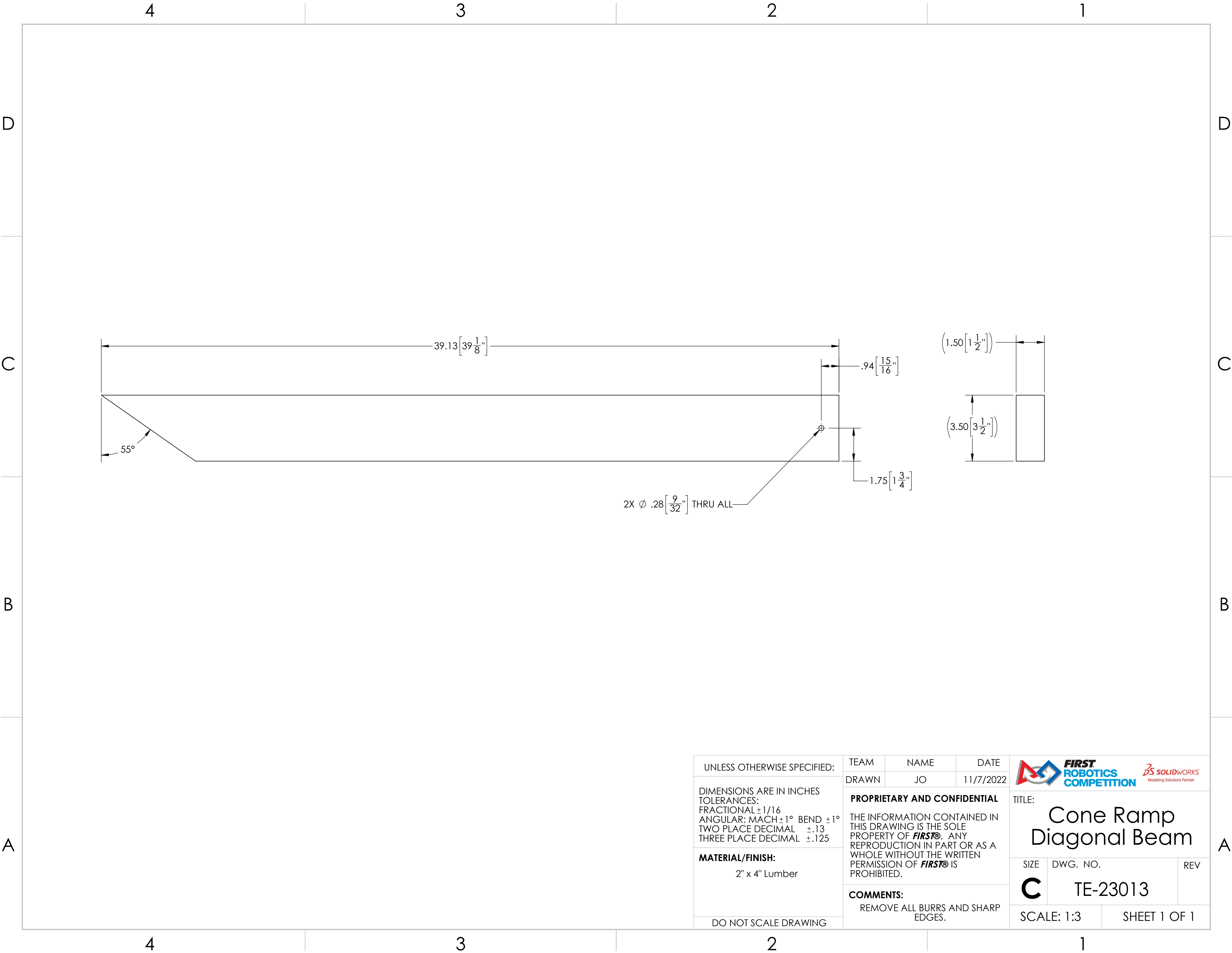
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	DRAWN	JO	11/7/2022		
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			SIZE	DWG. NO.
			C	TE-23010	
			SCALE: 2:3		SHEET 1 OF 1



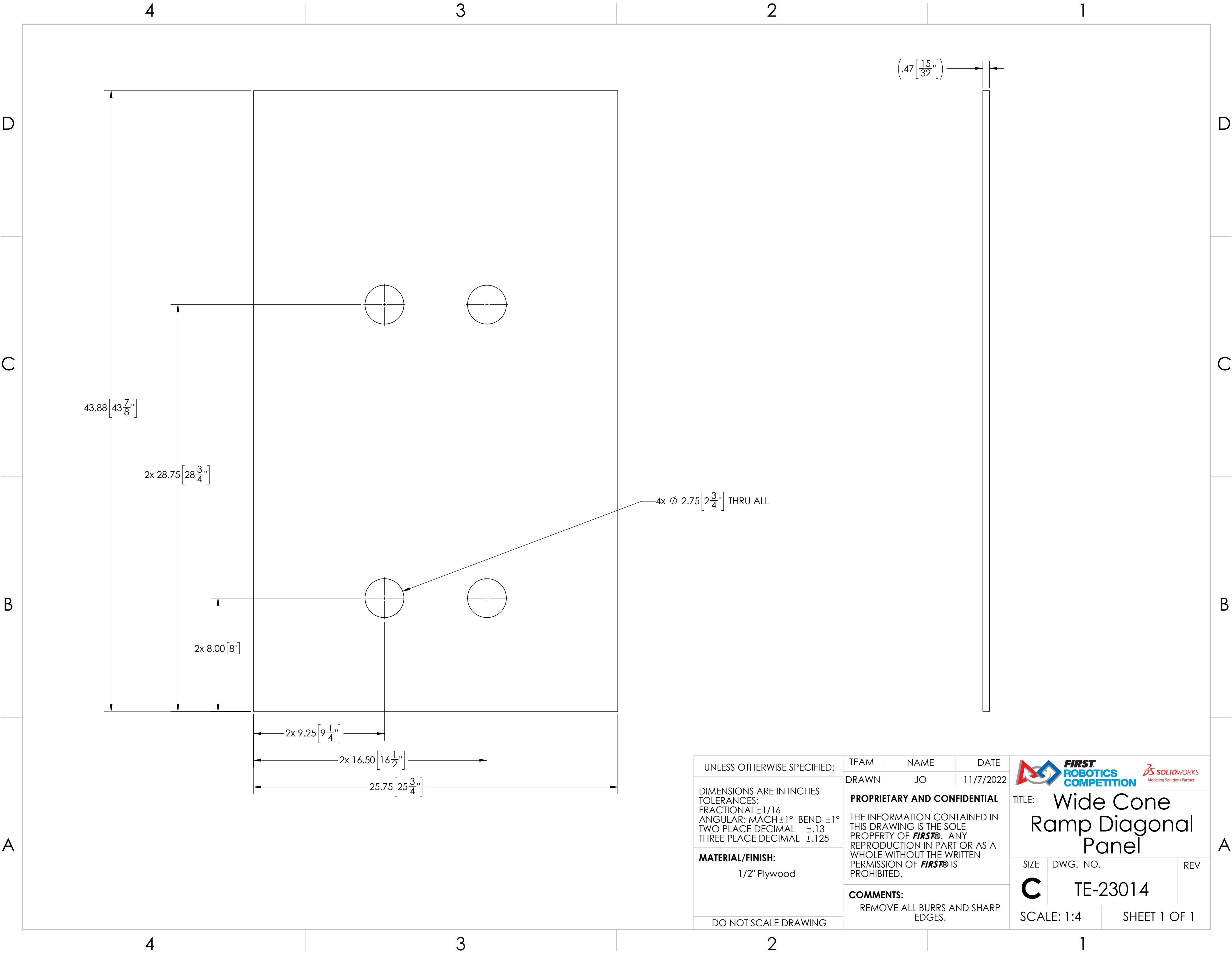
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	DRAWN	JO	11/7/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			SIZE	DWG. NO.	REV
SCALE: 2:3		SHEET 1 OF 1				



UNLESS OTHERWISE SPECIFIED:	TEAM	NAME	DATE			
	DRAWN	JO	11/7/2022			
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125	PROPRIETARY AND CONFIDENTIAL			TITLE: Cone Ramp Gusset		
	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.					
	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.					
MATERIAL/FINISH: 1/2" Plywood				SIZE	DWG. NO.	REV
				C	TE-23012	
DO NOT SCALE DRAWING				SCALE: 1:1		SHEET 1 OF 1



UNLESS OTHERWISE SPECIFIED:	TEAM	NAME	DATE			
	DRAWN	JO	11/7/2022			
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125	PROPRIETARY AND CONFIDENTIAL			TITLE: Cone Ramp Diagonal Beam		
	THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.					
	COMMENTS:			SIZE		DWG. NO.
MATERIAL/FINISH:	REMOVE ALL BURRS AND SHARP EDGES.			C	TE-23013	
2" x 4" Lumber						
DO NOT SCALE DRAWING				SCALE: 1:3		SHEET 1 OF 1



UNLESS OTHERWISE SPECIFIED:

DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .13$
THREE PLACE DECIMAL $\pm .125$

MATERIAL/FINISH:
1/2" Plywood

DO NOT SCALE DRAWING

TEAM	NAME	DATE
DRAWN	JO	11/7/2022

PROPRIETARY AND CONFIDENTIAL

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF **FIRST®**. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF **FIRST®** IS PROHIBITED.

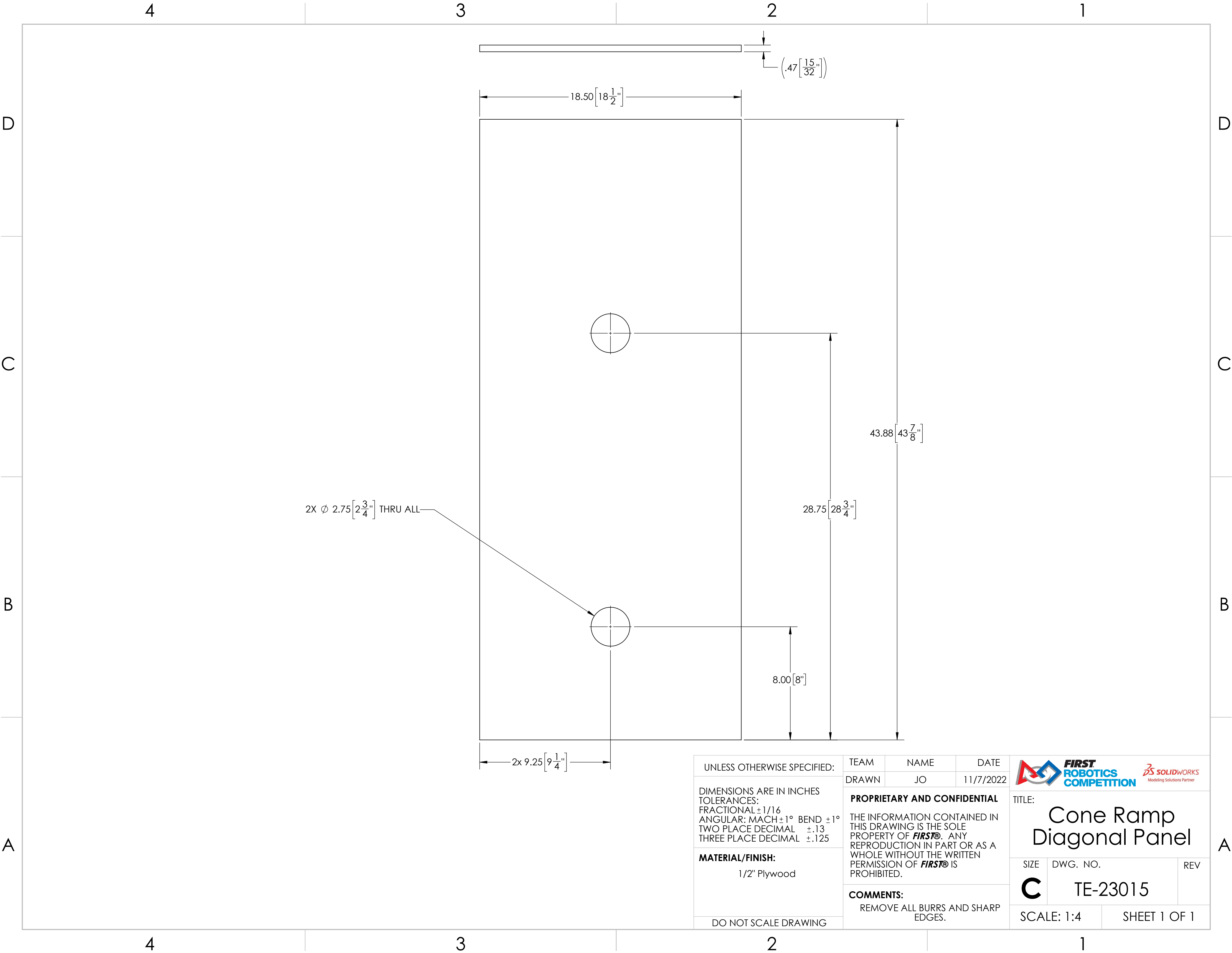
COMMENTS:
REMOVE ALL BURRS AND SHARP EDGES.



TITLE: **Wide Cone Ramp Diagonal Panel**

SIZE	DWG. NO.	REV
C	TE-23014	

SCALE: 1:4	SHEET 1 OF 1
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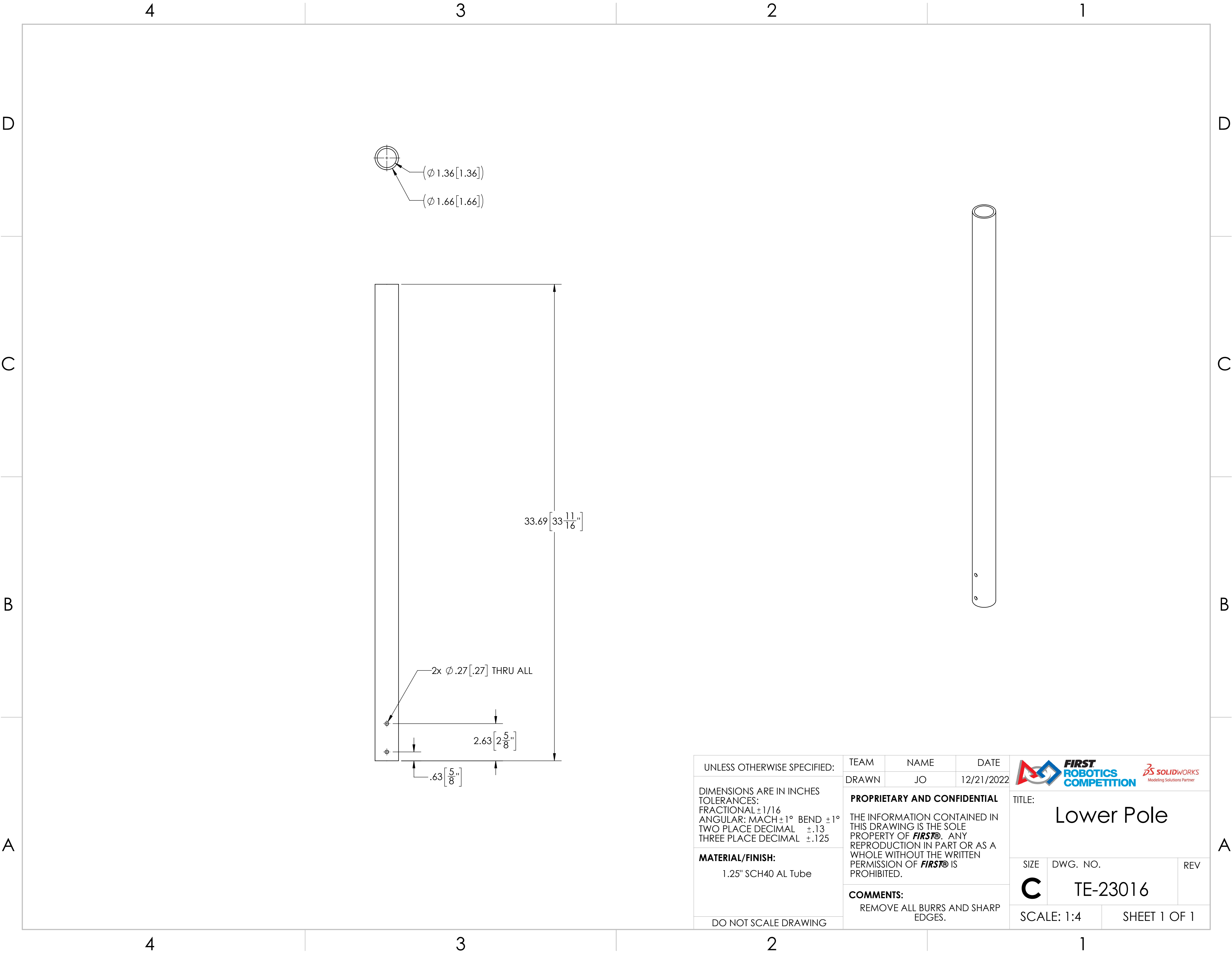
UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL $\pm 1/16$
ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
TWO PLACE DECIMAL $\pm .13$
THREE PLACE DECIMAL $\pm .125$

MATERIAL/FINISH:
1/2" Plywood

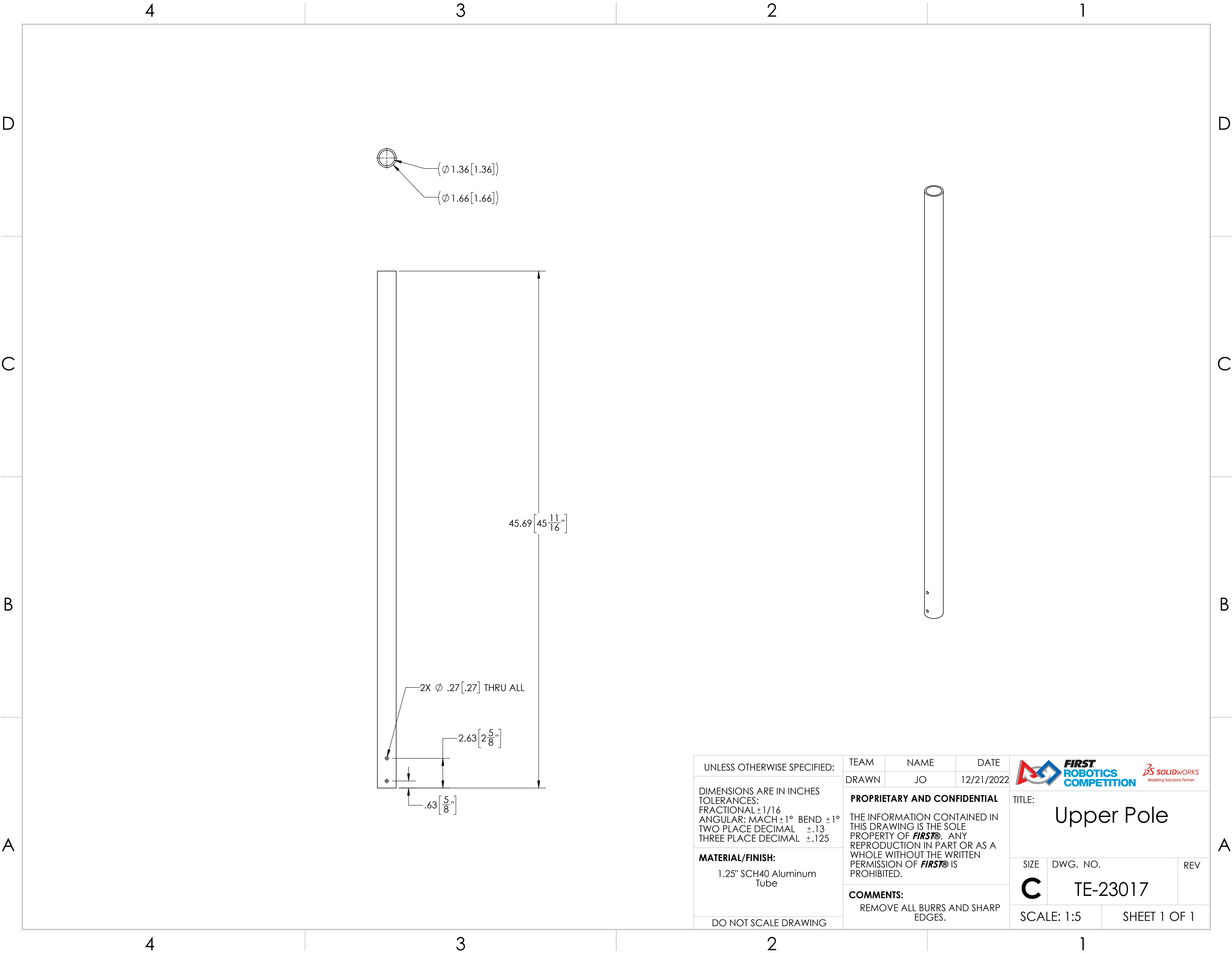
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TEAM	NAME	DATE
DRAWN	JO	11/7/2022
PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.		
COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.		

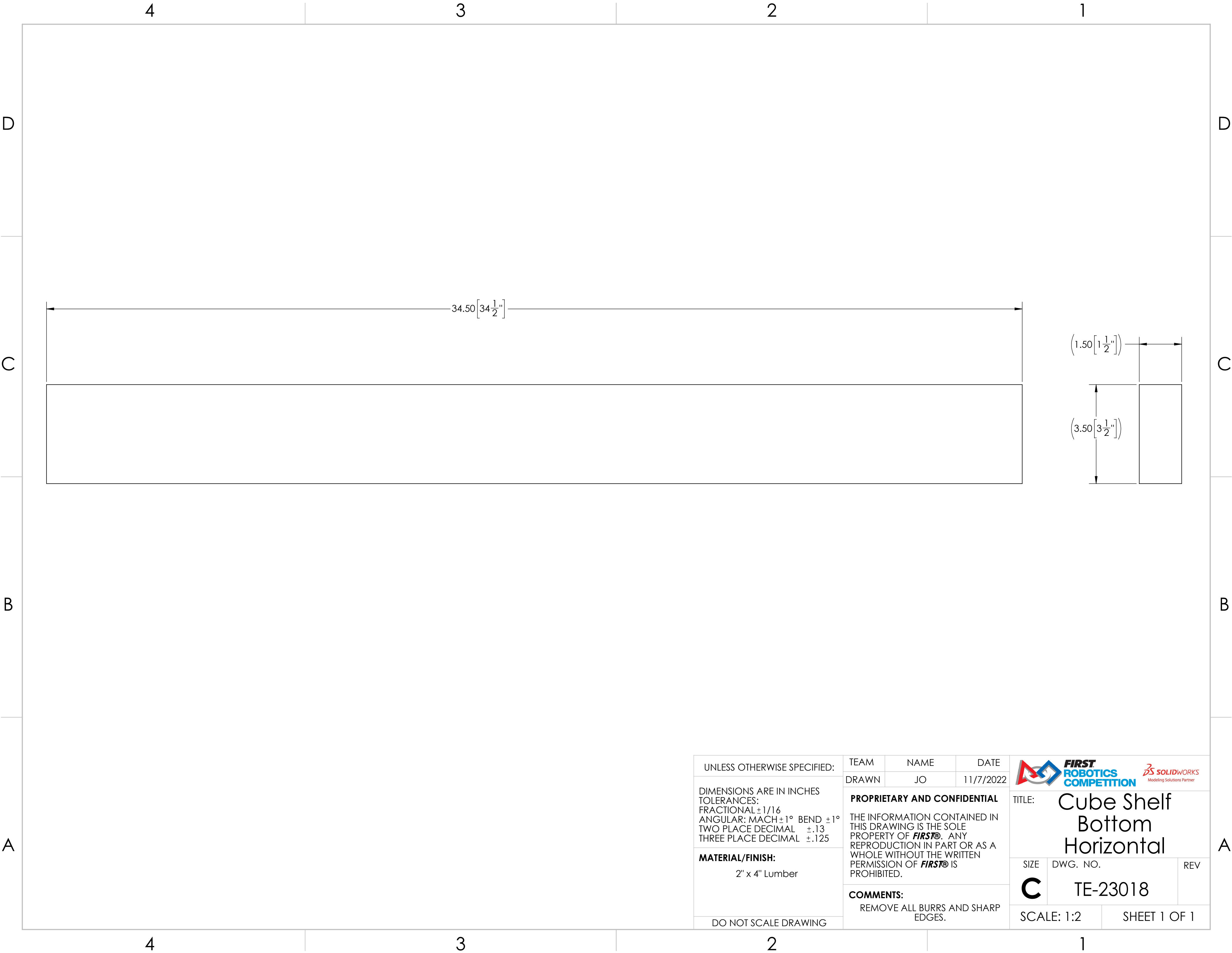
 		
TITLE: Cone Ramp Diagonal Panel		
SIZE C	DWG. NO. TE-23015	REV
SCALE: 1:4		SHEET 1 OF 1



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: 1.25" SCH40 AL Tube DO NOT SCALE DRAWING	TEAM	NAME	DATE	 TITLE: Lower Pole		
	DRAWN	JO	12/21/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			SIZE	DWG. NO.	REV
C				TE-23016		
SCALE: 1:4				SHEET 1 OF 1		



UNLESS OTHERWISE SPECIFIED:	TEAM	NAME	DATE	 TITLE: Upper Pole		
	DRAWN	JO	12/21/2022			
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			SIZE	DWG. NO.	REV
				C	TE-23017	
	MATERIAL/FINISH: 1.25" SCH40 Aluminum Tube	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			SCALE: 1:5	
DO NOT SCALE DRAWING						



UNLESS OTHERWISE SPECIFIED:		TEAM	NAME	DATE
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$		DRAWN	JO	11/7/2022
		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.		
		COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.		
MATERIAL/FINISH: 2" x 4" Lumber		TITLE: Cube Shelf Bottom Horizontal		
DO NOT SCALE DRAWING		SIZE C	DWG. NO. TE-23018	REV
		SCALE: 1:2		SHEET 1 OF 1



D

C

B

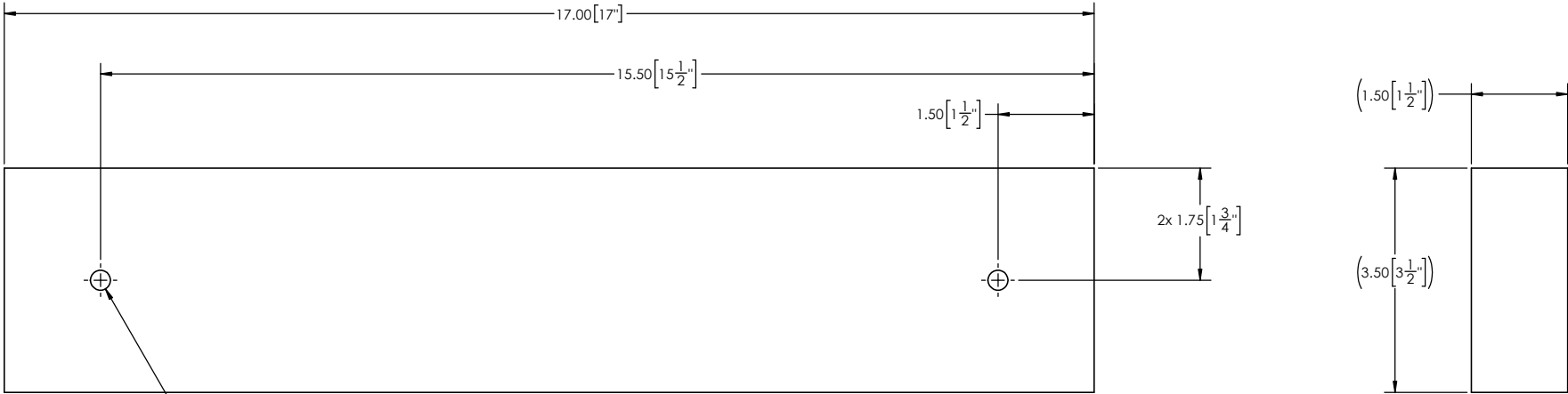
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D

C

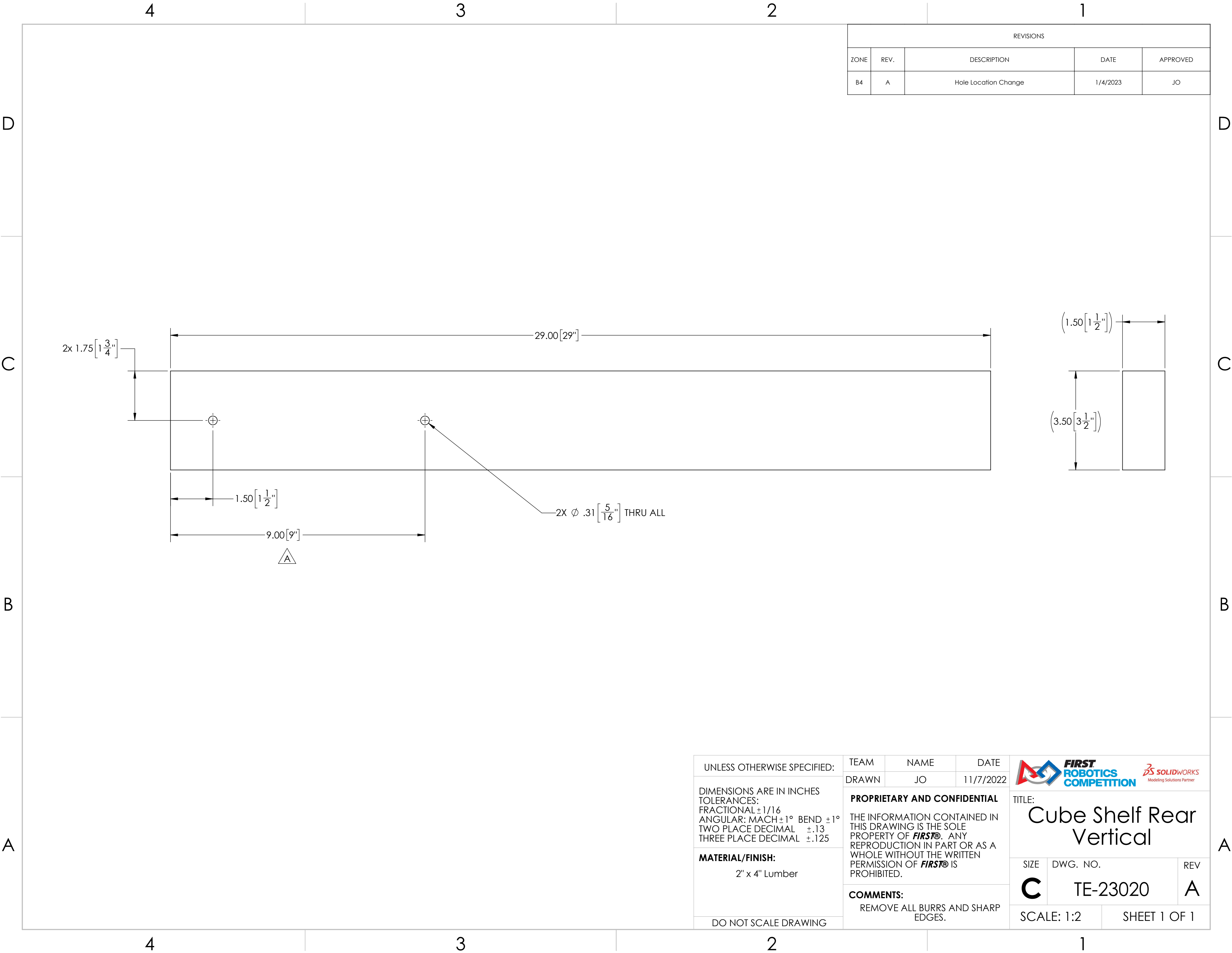
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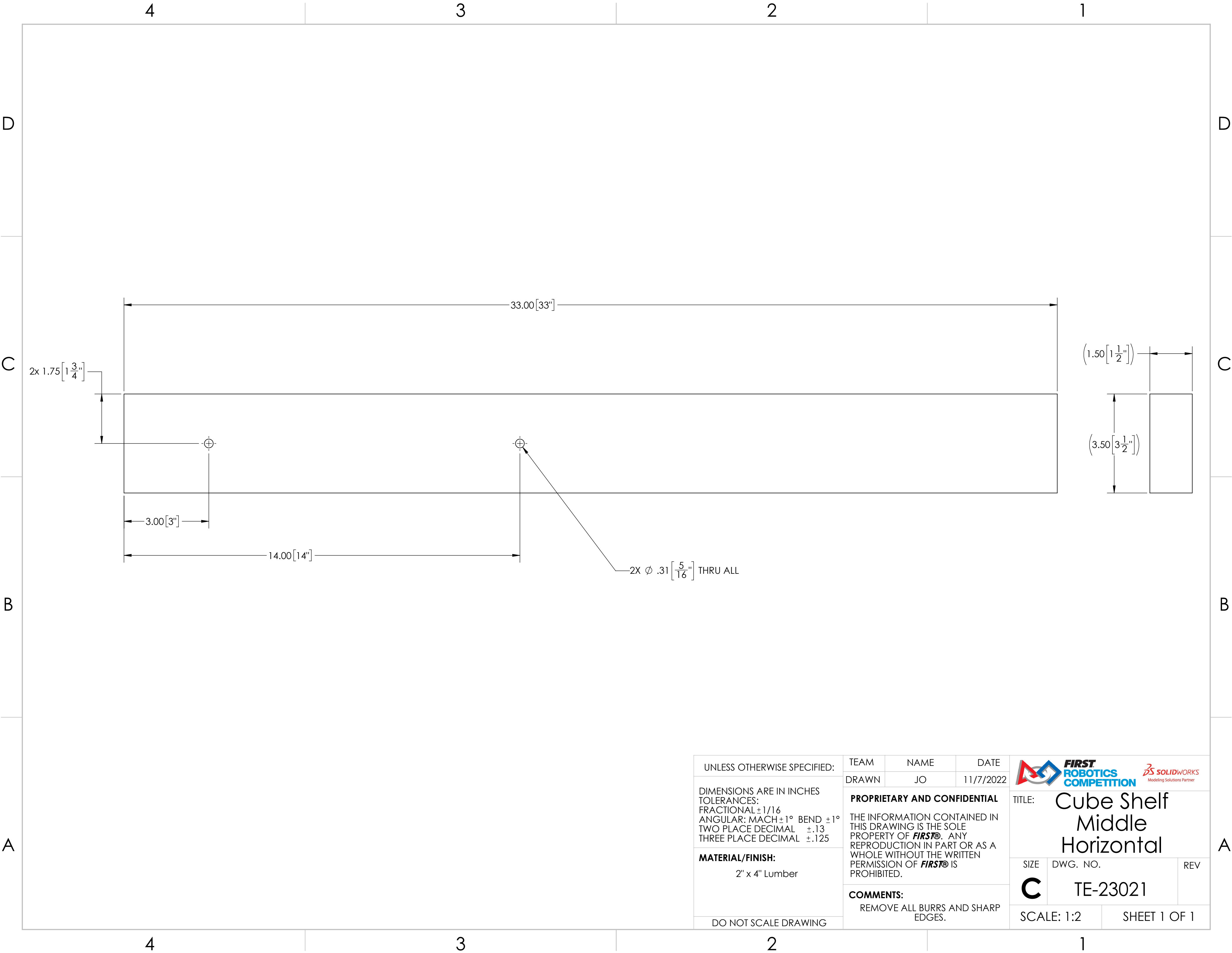
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UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: 2" x 4" Lumber DO NOT SCALE DRAWING	TEAM	NAME	DATE
	DRAWN	JO	11/7/2022
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.		
 			
TITLE: Cube Shelf Front Vertical			
SIZE		DWG. NO.	REV
C		TE-23019	
SCALE: 3:4		SHEET 1 OF 1	







UNLESS OTHERWISE SPECIFIED:		TEAM	NAME	DATE
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$		DRAWN	JO	11/7/2022
MATERIAL/FINISH: 2" x 4" Lumber		PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.		
DO NOT SCALE DRAWING		COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.		
		TITLE: Cube Shelf Middle Horizontal		
		SIZE	DWG. NO.	REV
		C	TE-23021	
		SCALE: 1:2		SHEET 1 OF 1



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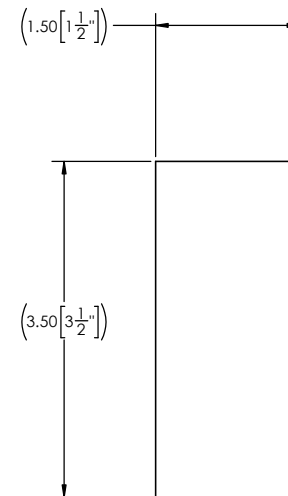
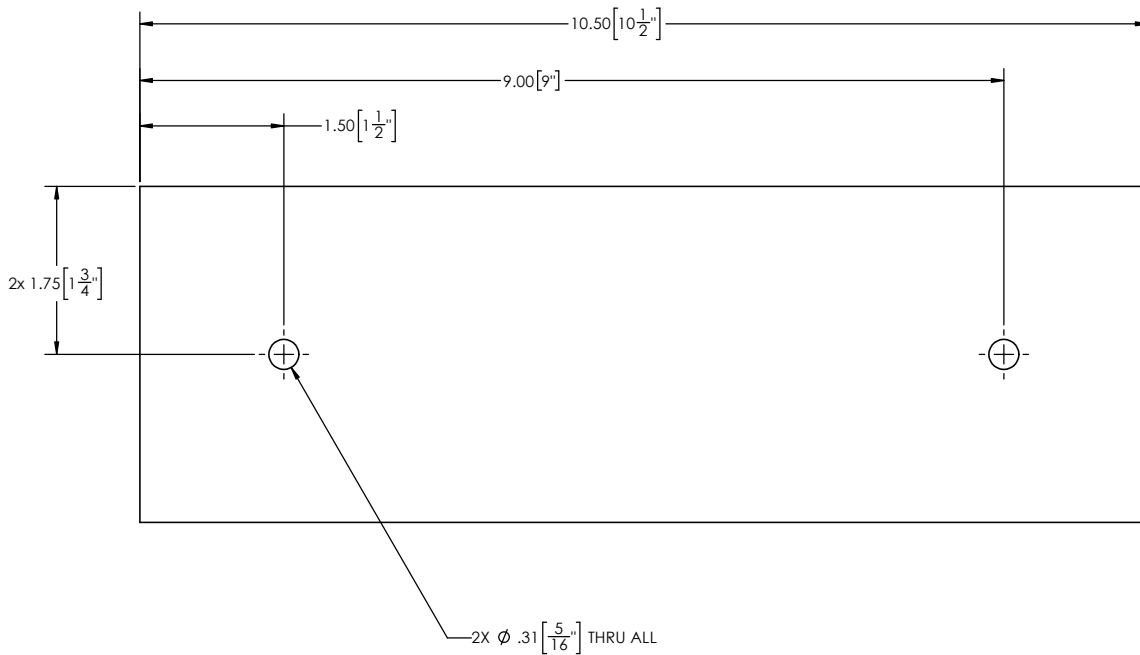
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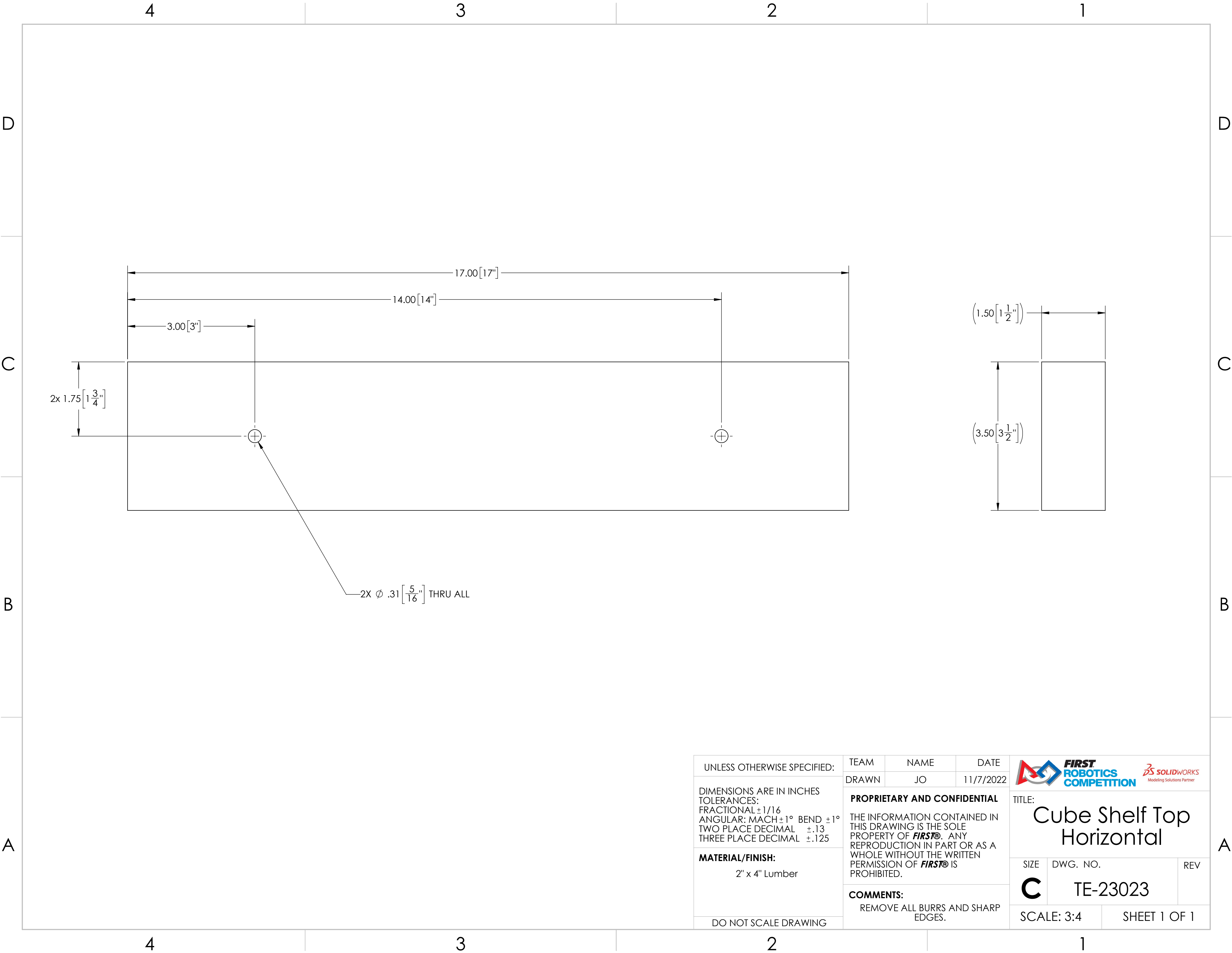
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UNLESS OTHERWISE SPECIFIED:	TEAM	NAME	DATE	 FIRST ROBOTICS COMPETITION  SOLIDWORKS Modeling Solutions Partner		
	DRAWN	JO	11/7/2022			
DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			TITLE: Cube Shelf Front Short Vertical		
MATERIAL/FINISH: 2" x 4" Lumber	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			SIZE	DWG. NO.	REV
				C	TE-23022	
DO NOT SCALE DRAWING	SCALE: 1:1				SHEET 1 OF 1	



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: 2" x 4" Lumber DO NOT SCALE DRAWING	TEAM	NAME	DATE	 TITLE: Cube Shelf Top Horizontal	
	DRAWN	JO	11/7/2022		
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.				
SIZE		DWG. NO.		REV	
C		TE-23023			
SCALE: 3:4			SHEET 1 OF 1		

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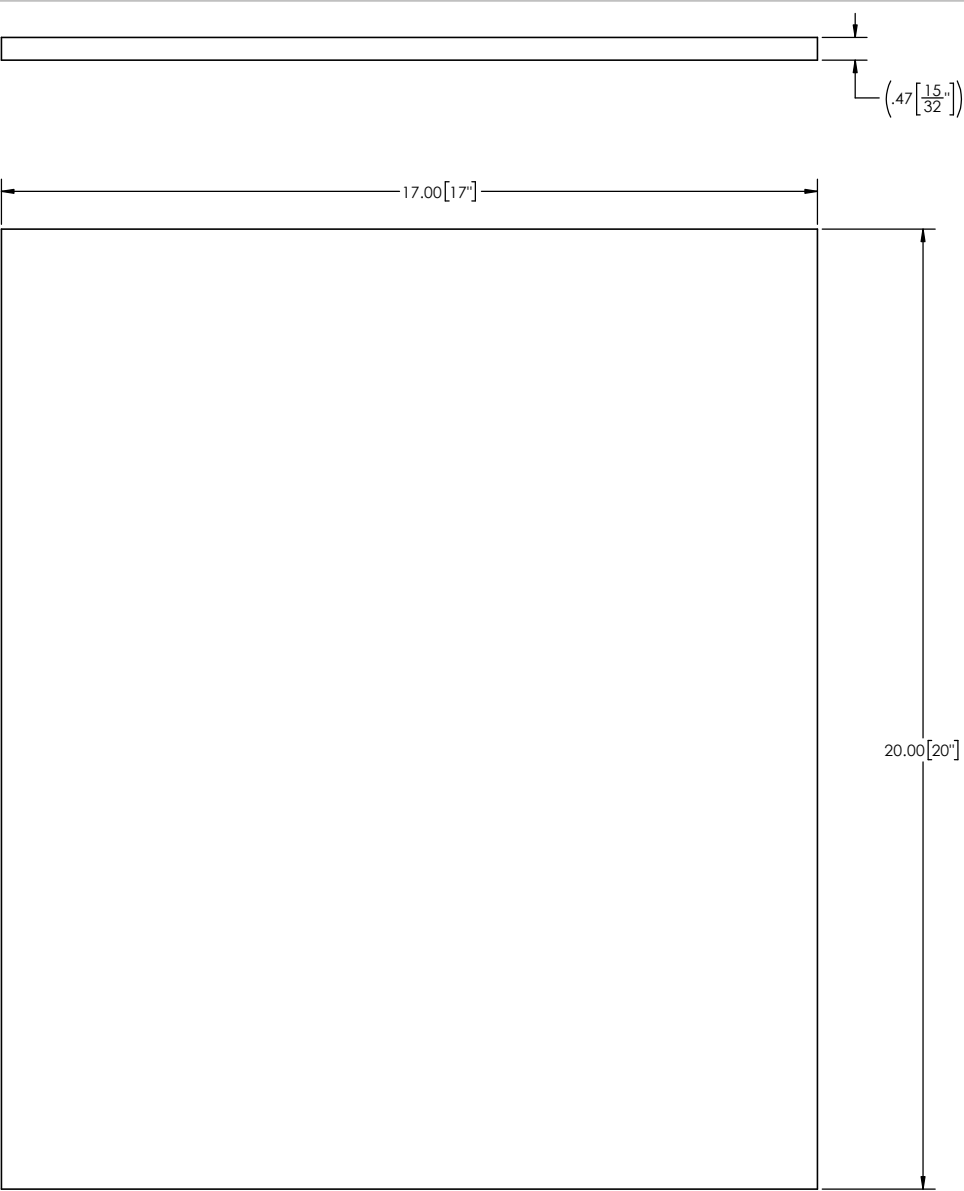
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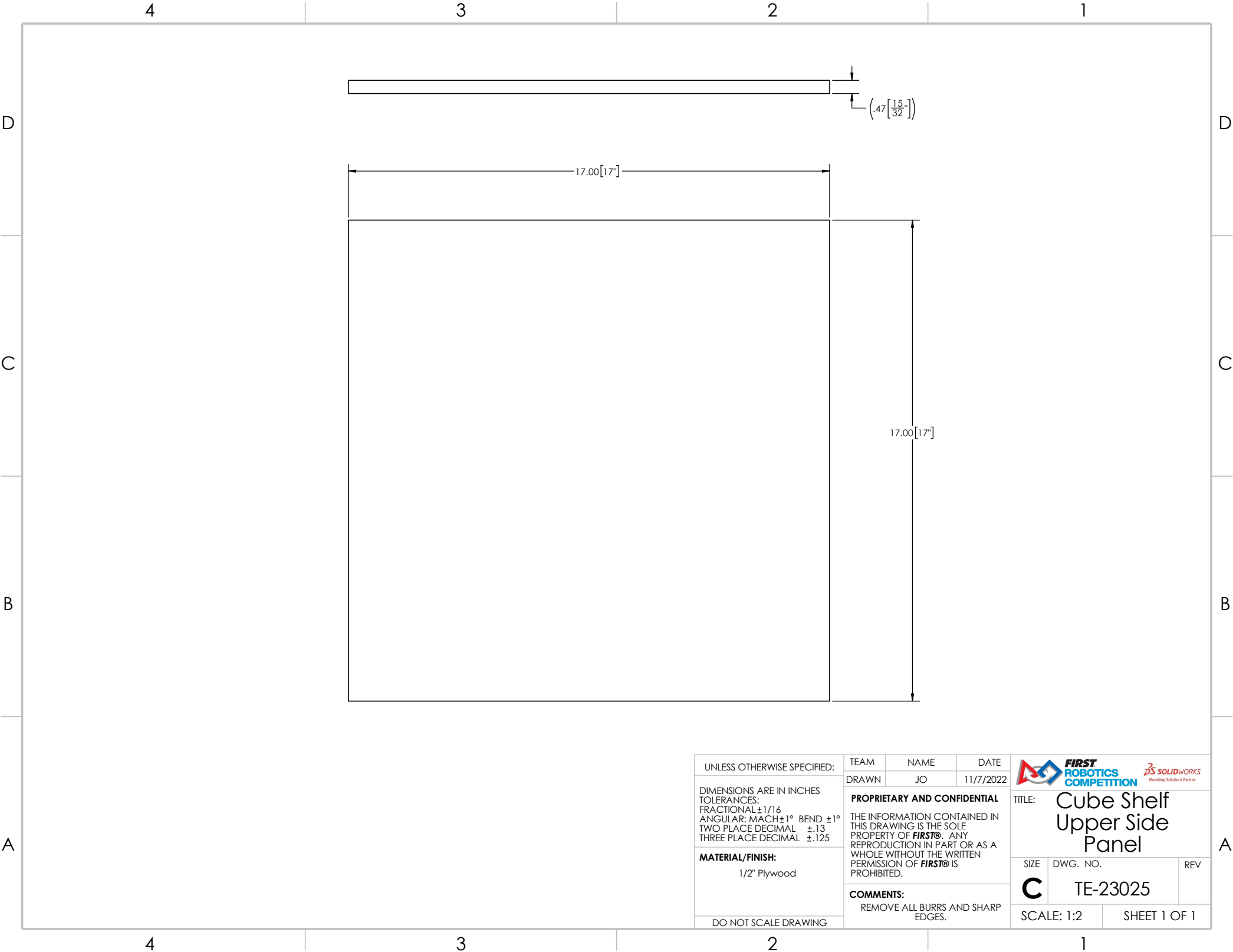
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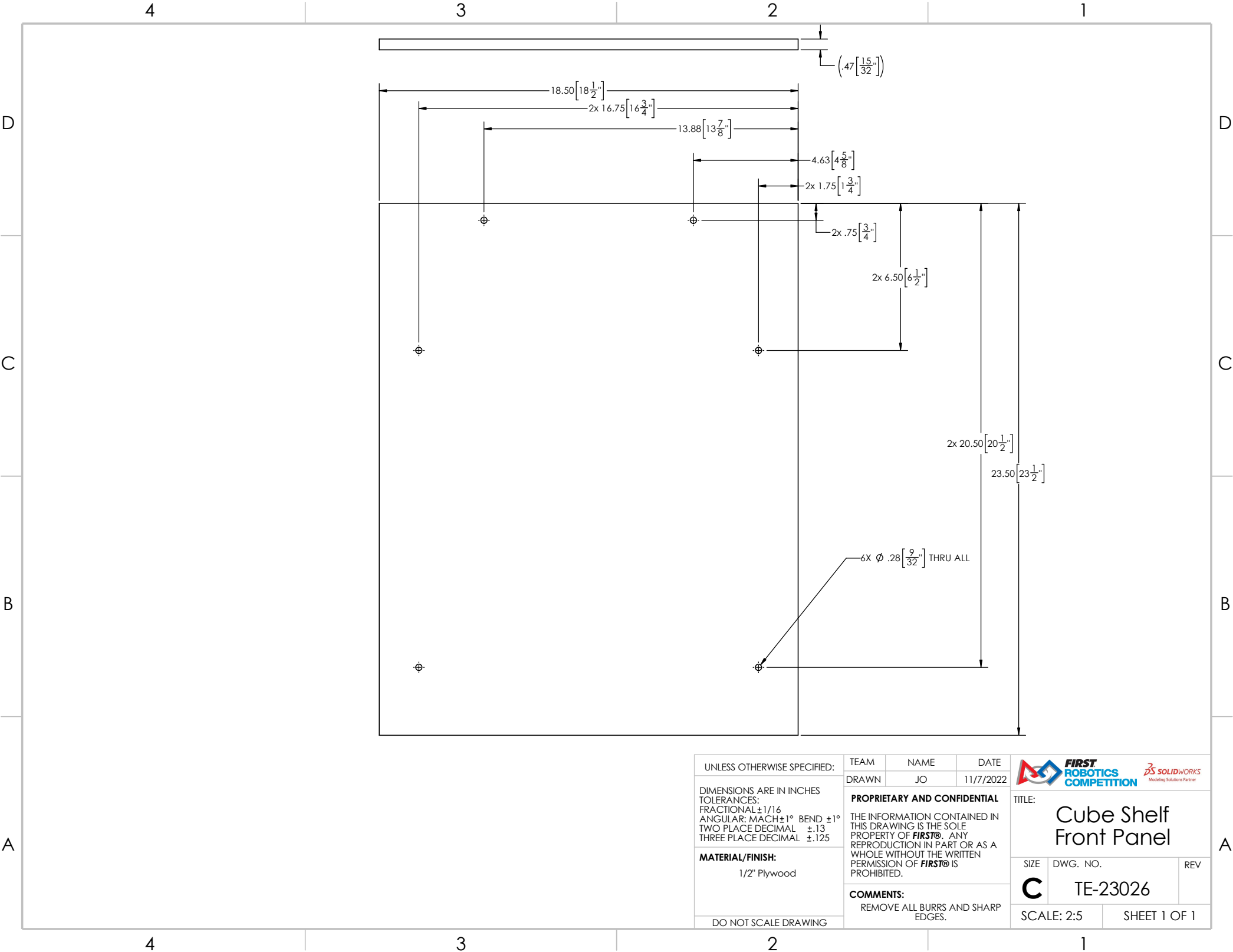
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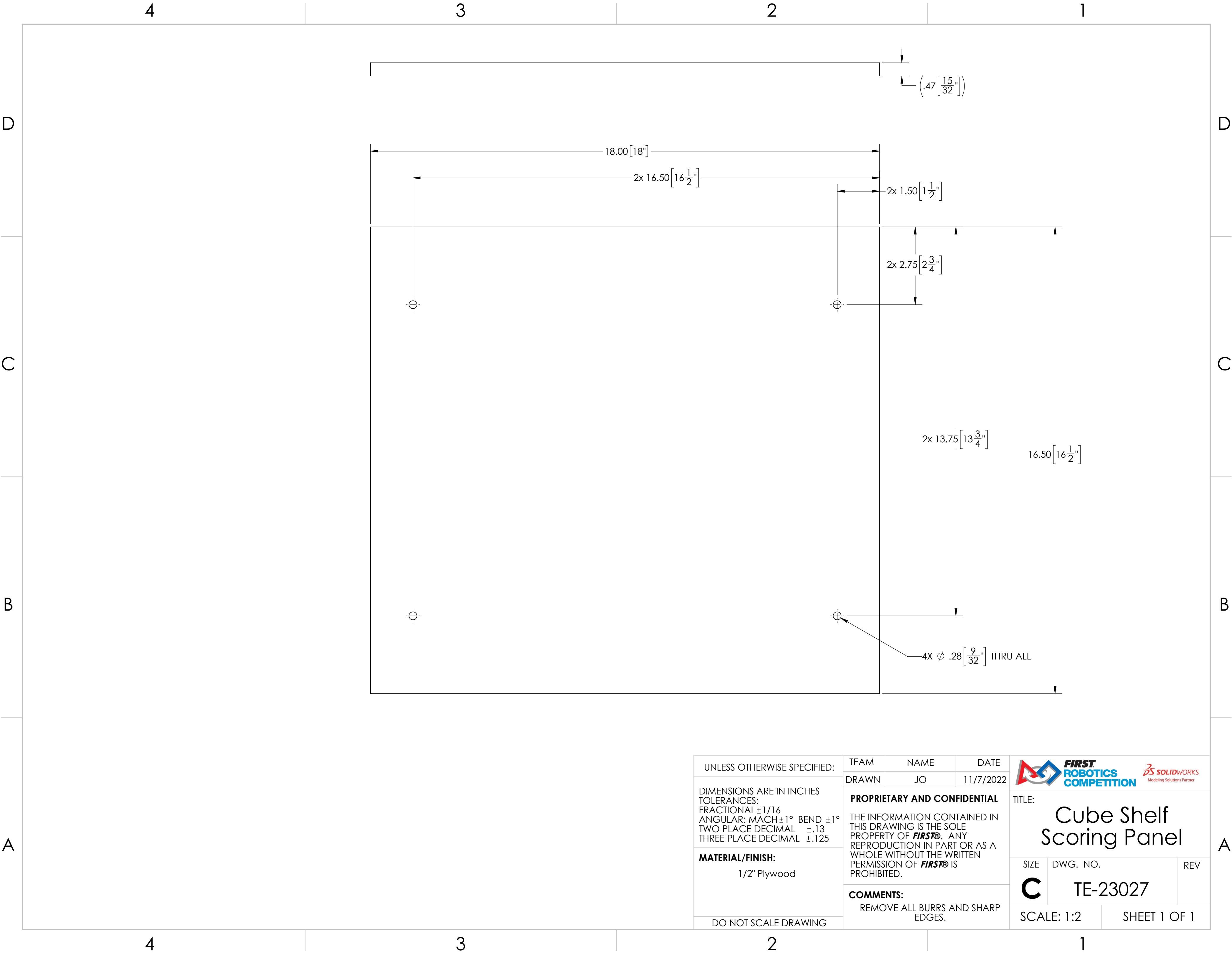
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ±1/16 ANGULAR: MACH±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: 1/2" Plywood COMMENTS: REMOVE ALL BURRS AND SHARP EDGES. DO NOT SCALE DRAWING	TEAM	NAME	DATE	 	
	DRAWN	JO	11/7/2022		
	PROPRIETARY AND CONFIDENTIAL			TITLE: Cube Shelf Lower Side Panel	
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED.			SIZE	DWG. NO.	REV
			C	TE-23024	
			SCALE: 1:2		SHEET 1 OF 1



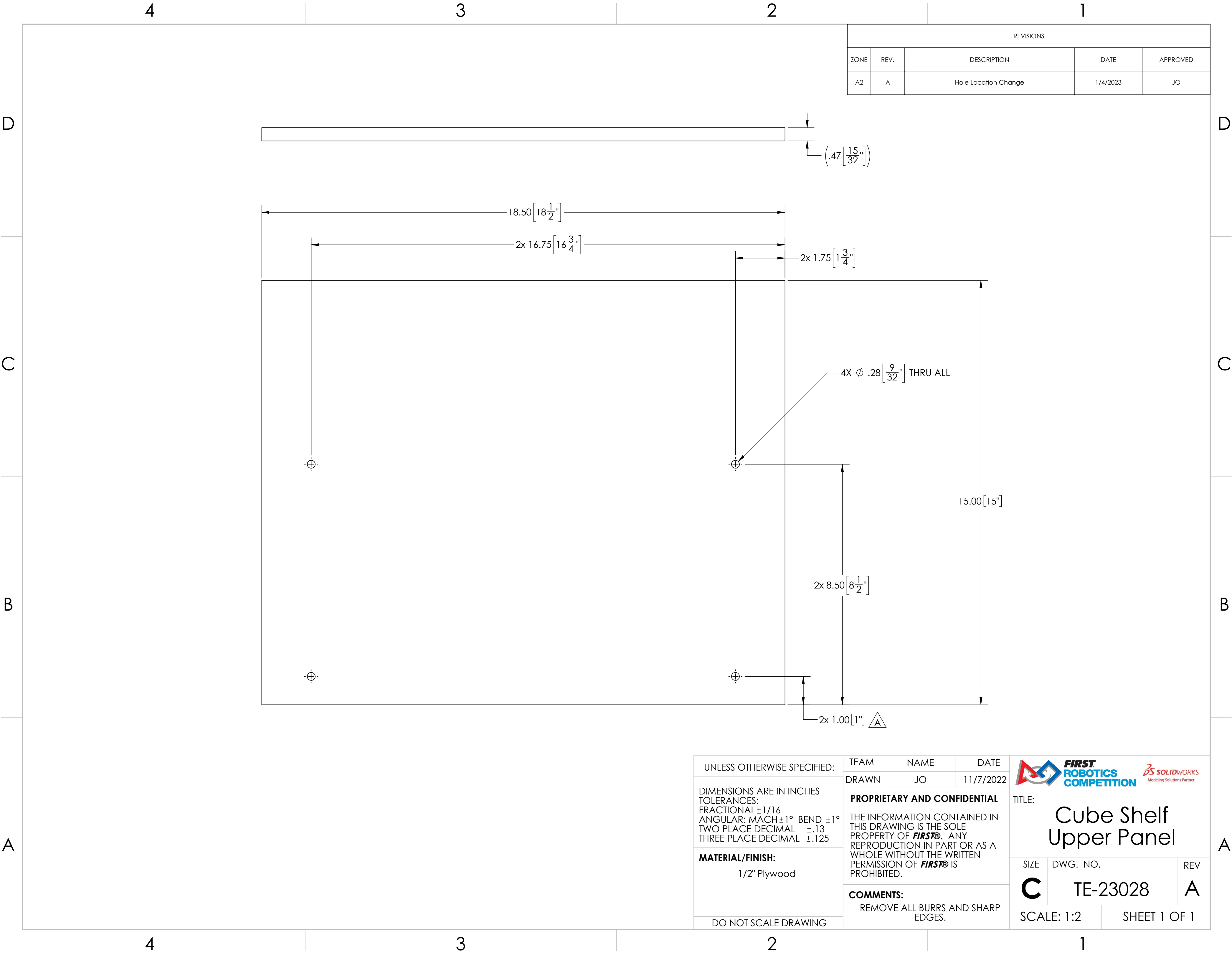
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: 1/2" Plywood DO NOT SCALE DRAWING	TEAM	NAME	DATE	 
	DRAWN	JO	11/7/2022	
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			
TITLE: Cube Shelf Upper Side Panel				
SIZE		DWG. NO.		REV
C		TE-23025		
SCALE: 1:2			SHEET 1 OF 1	

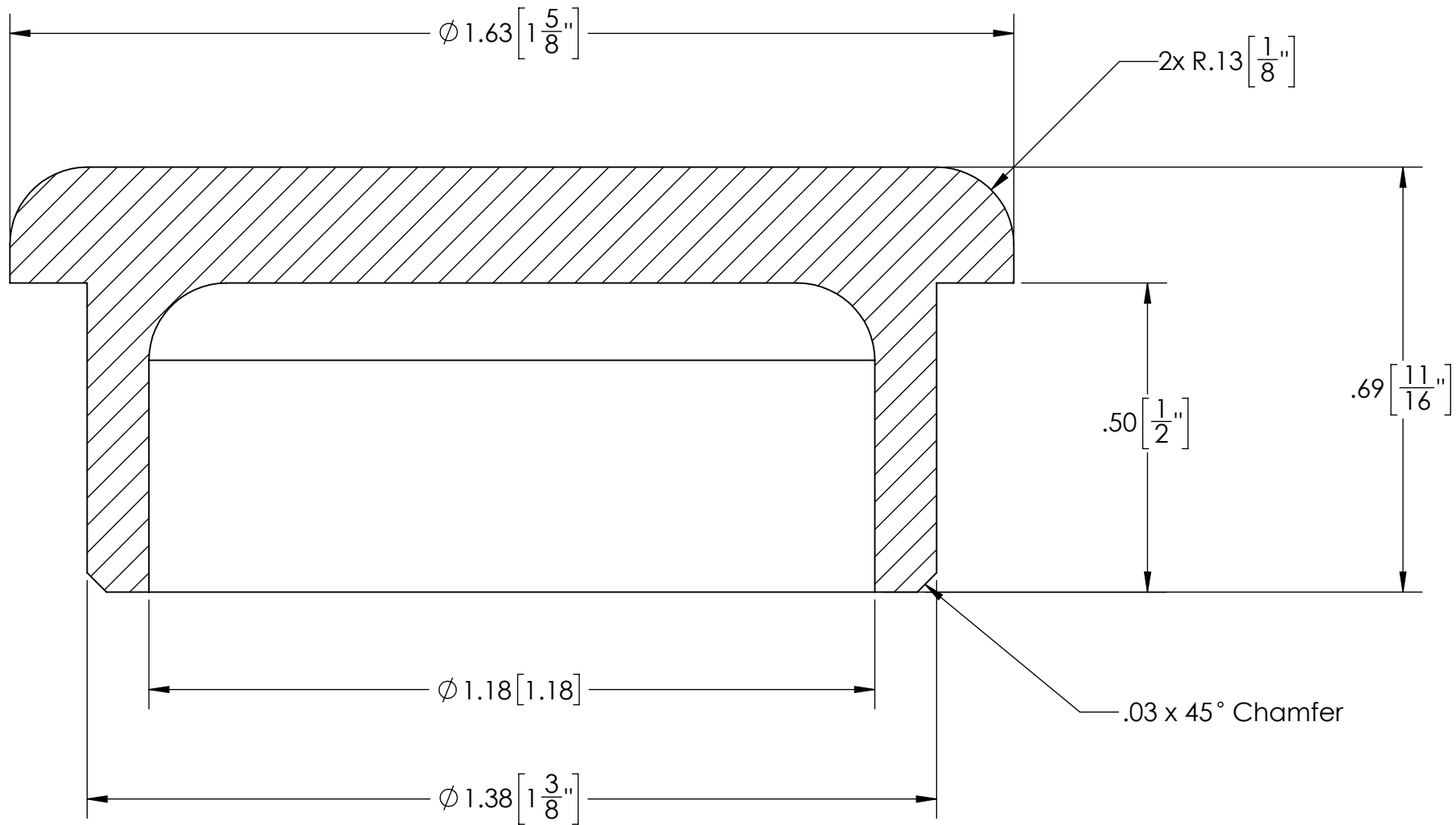
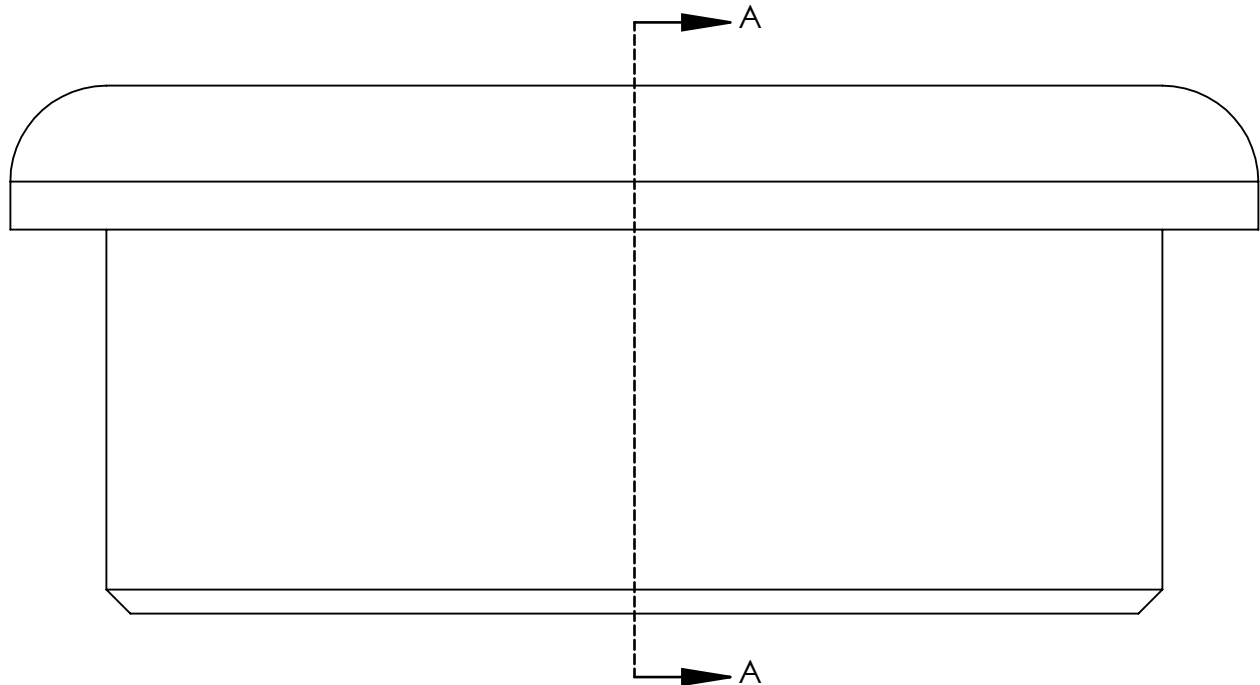


UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: 1/2" Plywood DO NOT SCALE DRAWING	TEAM	NAME	DATE	  TITLE: Cube Shelf Front Panel SIZE C SCALE: 2:5	DWG. NO. TE-23026 SHEET 1 OF 1	REV
	DRAWN	JO	11/7/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.					



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL $\pm 1/16$ ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$ TWO PLACE DECIMAL $\pm .13$ THREE PLACE DECIMAL $\pm .125$ MATERIAL/FINISH: 1/2" Plywood DO NOT SCALE DRAWING	TEAM	NAME	DATE	 TITLE: Cube Shelf Scoring Panel		
	DRAWN	JO	11/7/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST IS PROHIBITED.			SIZE	DWG. NO.	REV
	COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.			C	TE-23027	
SCALE: 1:2		SHEET 1 OF 1				





UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ±1/16 ANGULAR: MACH ±1° BEND ±1° TWO PLACE DECIMAL ±.13 THREE PLACE DECIMAL ±.125 MATERIAL/FINISH: DO NOT SCALE DRAWING	TEAM	NAME	DATE	 TITLE: Alternate Pole Cap		
	DRAWN	JO	12/21/2022			
	PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF FIRST® . ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF FIRST® IS PROHIBITED. COMMENTS: REMOVE ALL BURRS AND SHARP EDGES.				SIZE	DWG. NO.
				C	TE-23029	
				SCALE: 4:1		SHEET 1 OF 1