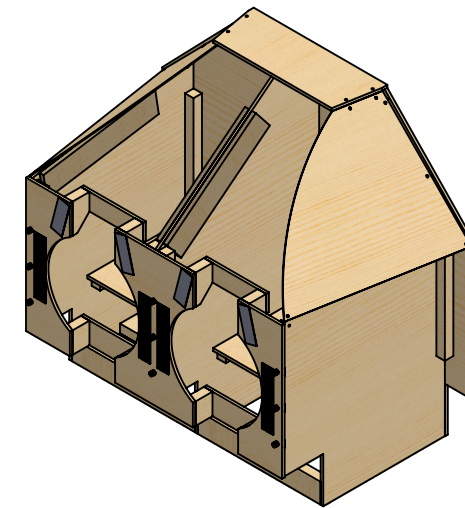


2

1



ITEM NO.	PART NUMBER	QTY.
1	TE-19111-01	1
2	TE-19111-02	2
3	TE-19111-03	1
4	TE-19111-04	1
5	TE-19111-05	2
6	TE-19111-06	2
7	TE-19111-07	1
8	TE-19111-08	2
9	TE-19111-09	12
10	TE-19111-10	10
11	TE-19111-11	4
12	TE-19111-12	4
13	TE-19111-13	2
14	TE-19111-14	4
15	TE-19111-15	4
16	TE-19111-16	2
17	TE-19111-17	4
18	TE-19111-20	4
19	TE-19111-21	2
20	Tee nut .375_16	9
21	hex nut_.375_16	9
22	hex_.375_16_.625	9



Material	QTY
15/32"(1/2") A/C or CDX Plywood	2 sheets
1/8" Hardboard	.5 sheet
2"x4"x8'	1
2"x 2"x 8'	3
2" hook	83.5"
1.25" wood screws	~100
2.5" wood screws	~40
2" Vison Tape	22"
23/32"(3/4") A/C or CDX Plywood	.25 sheet
TEE nut 3/8"-16	9
Hex nut 3/8"-16	9
Hex head bolt 3/8"-16 x.625(.75)	9

A

A

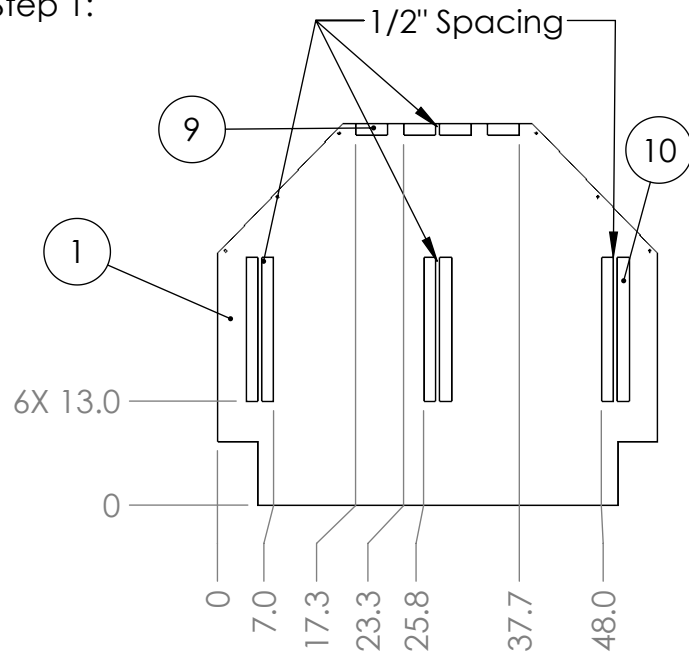
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			DIMENSIONS ARE IN INCHES	DRAWN				<b>TITLE:</b> <h1>Cargo Front</h1>
			TOLERANCES:	CHECKED				
			FRACTIONAL ±1/16	ENG APPR.				
			ANGULAR: MACH ±1° BEND ±1°	MFG APPR.				
		TWO PLACE DECIMAL ±.01	Q.A.					
		THREE PLACE DECIMAL ±.001	COMMENTS:					
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL						
		FINISH						
	NEXT ASSY	USED ON						
	APPLICATION		DO NOT SCALE DRAWING					

SIZE	DWG. NO.	REV
<b>A</b>	<b>TE-19111</b>	
SCALE: 1:24 WEIGHT:		SHEET 1 OF 13

2

1

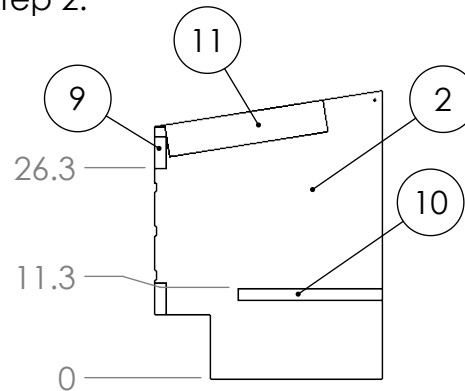
## Step 1:



## Note:

- Attach (9) flush to the top of (1) as shown using 1.25" screws.
- Attach (10) to (1) as shown using 1.25" screws.
- Leave enough room for 1/2" plywood where indicated.
- Pre-drill for all hardware.

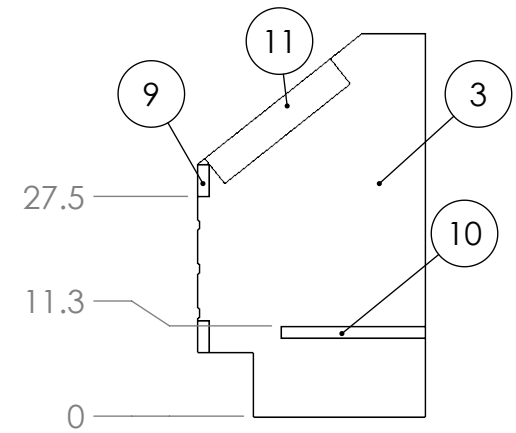
## Step 2:



## Note:

- Attach (9) flush to front of (2).
- Attach (11) flush to the top (2).
- Attach (10) to (2).
- Pre-drill all holes and use and 1.25" screws
- Create mirrored version of this assembly.

## Step 3:



## Note:

- Attach (9) flush to front of (3).
- Attach (11) flush to angle (3).
- Attach (10) to (3).
- Pre-drill and attach items using 1.25" and 2.5" screws
- Repeat on opposite side.

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APPLICATION

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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:



TITLE:

Cargo Front

SIZE

DWG. NO.

REV

A

TE-19111

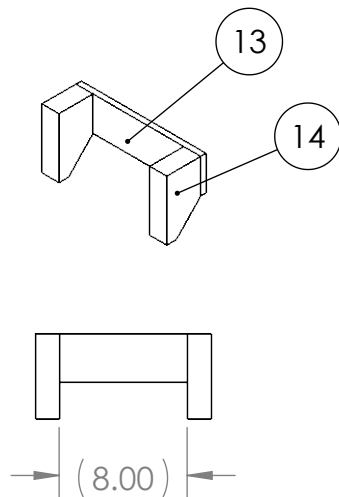
SCALE: 1:24 WEIGHT:

SHEET 2 OF 13

2

1

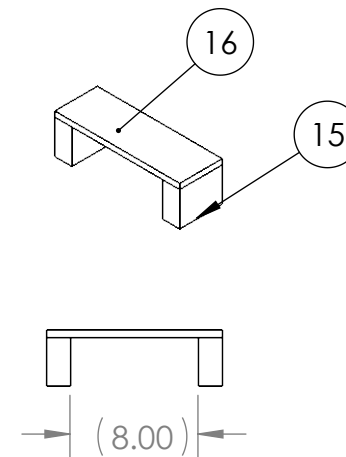
Step 4:  
QTY 2



Notes:

- Attach (13) to (14) as shown
- Pre-drill and use 1.25" screws.

Step 5:  
QTY 2



Notes:

- Attach (16) to (15) as shown.
- Pre-drill and use 1.25" screws.

B

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			



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**COMPETITION**

**SOLIDWORKS**  
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TITLE:

Cargo Front

SIZE	DWG. NO.	REV
<b>A</b>	<b>TE-19111</b>	

SCALE: 1:24 WEIGHT: SHEET 3 OF 13

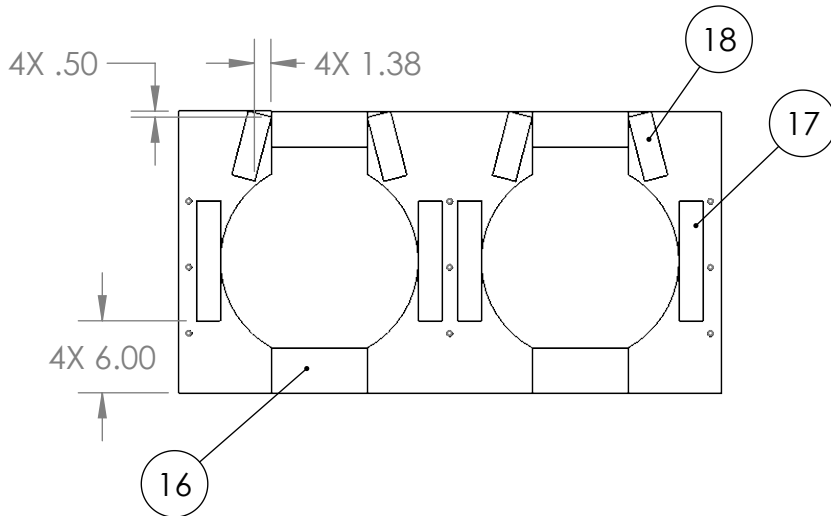
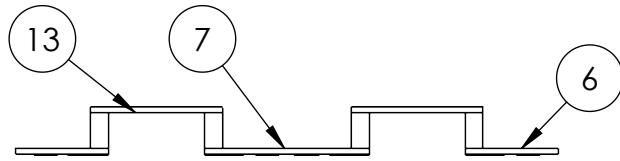
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2

1

## Step 6

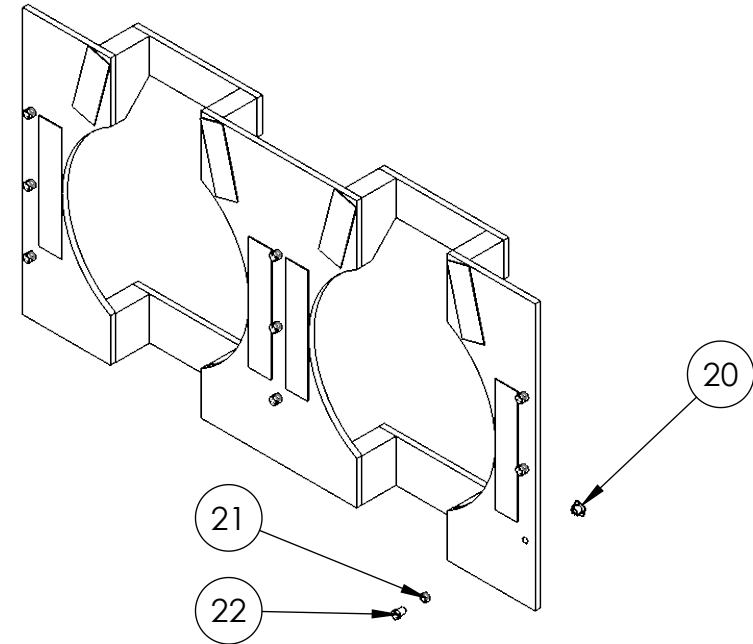


## Note:

- Attach assemblies from Step 4 and Step 5 to Items (6) and (7) as shown using 2.5" screws. Pre-drill as necessary.

- Attach (18) and (17) to (6) and (7)

## Step 7



## Note:

- Flip over and insert (20) to holes. Use a hammer to press them in.

- Flip and thread (22) and (21) in to (20).

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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:



TITLE:

Cargo Front

SIZE

A

DWG. NO.

TE-19111

REV

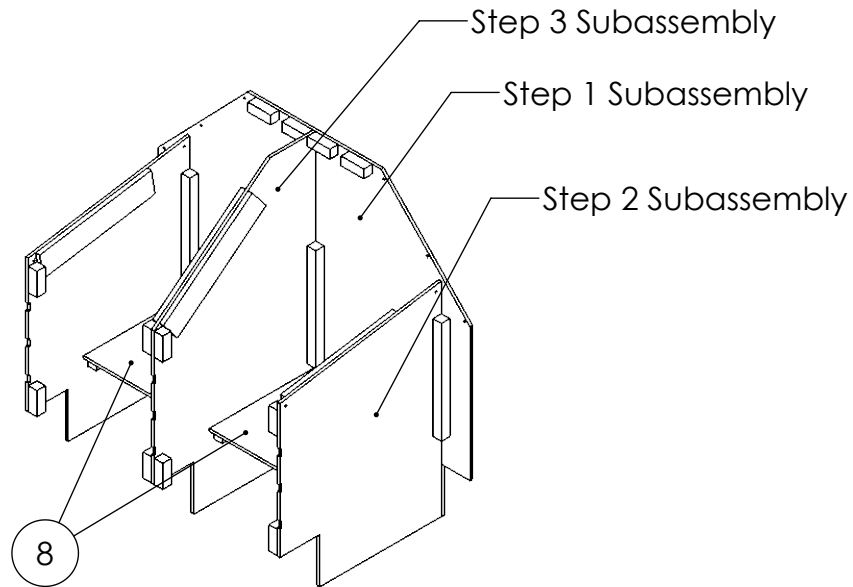
SCALE: 1:24 WEIGHT:

SHEET 4 OF 13

2

1

Step 8:



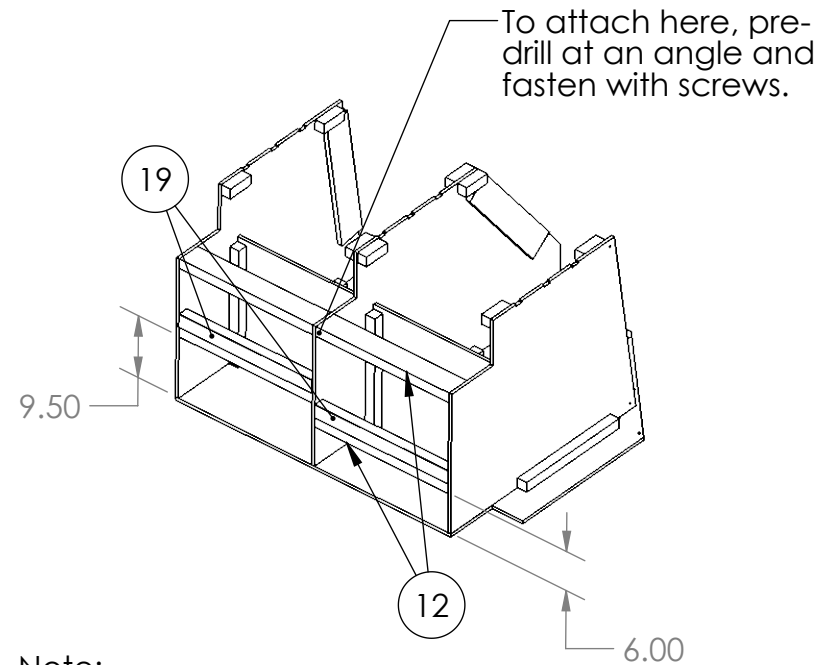
Note:

- Insert subassemblies from Steps 2 and 3 into subassembly from Step 1 as shown. Secure with 2.5" screws.

- Place Item (8) on to the supports. Secure with 1.25" screws.

- Pre-drill as necessary.

Step9:



Note:

- Attach Item (12) as shown, using 2.5" screws. 4 Places.

- Add Item (19) to bottom of Item (12) .

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		THREE PLACE DECIMAL $\pm .001$
		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

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



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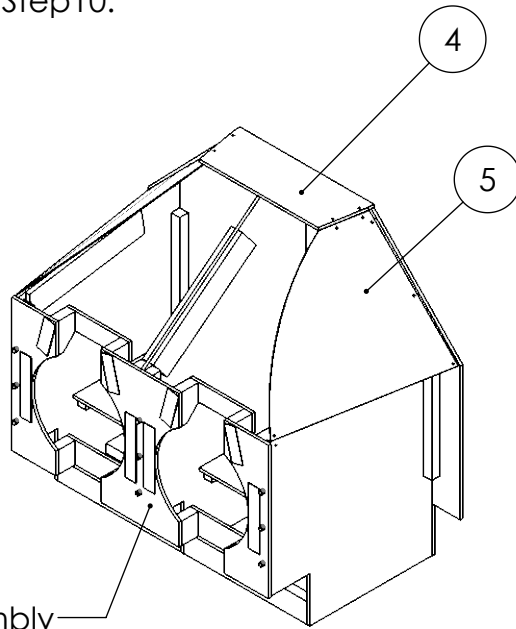


TITLE:

# Cargo Front

SIZE	DWG. NO.	REV
<b>A</b>	<b>TE-19111</b>	
SCALE: 1:24	WEIGHT:	SHEET 5 OF 13

Step10:



Note:

- Attach subassembly from Step 7 as shown using 1.25" screws.
- Attach Item (4) using 1.25" screws.
- Attach (5) with cable ties.

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		TOLERANCES:	CHECKED			
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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:			
		INTERPRET GEOMETRIC TOLERANCING PER:				
		MATERIAL				
NEXT ASSY	USED ON	FINISH				
APPLICATION		DO NOT SCALE DRAWING				



TITLE:		
Cargo Front		
SIZE	DWG. NO.	REV
A	TE-19111	
SCALE: 1:24 WEIGHT:		SHEET 6 OF 13

2

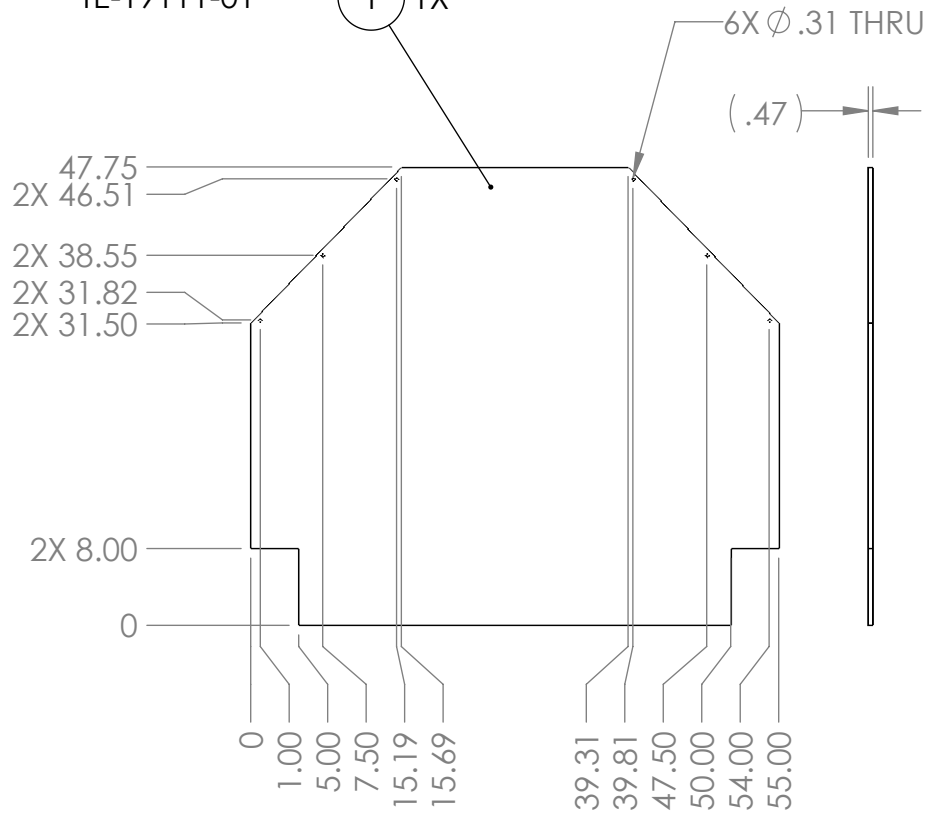
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TE-19111-01

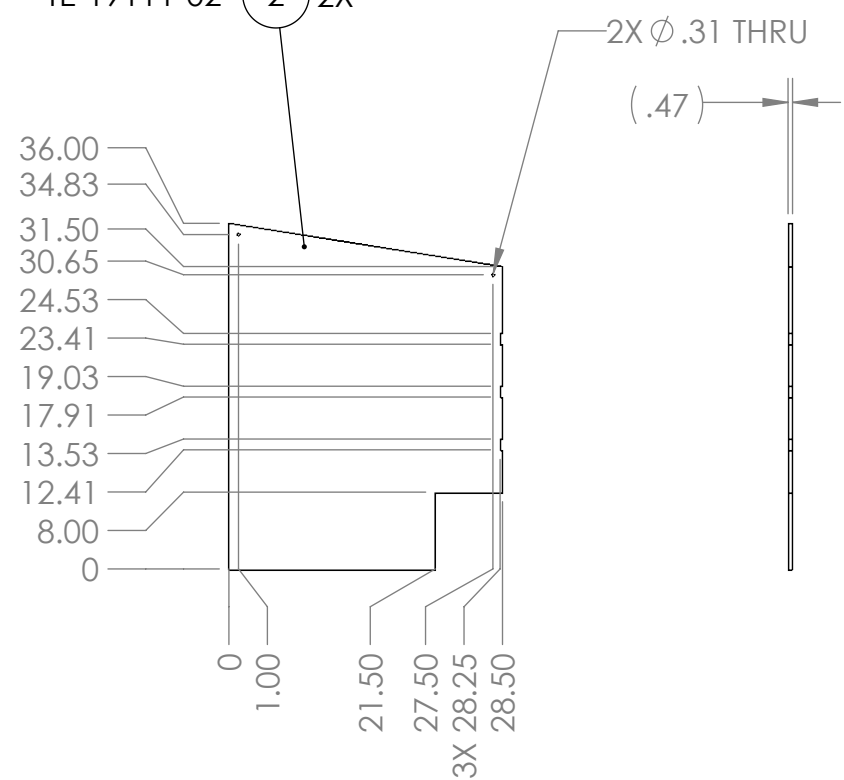
1 1X



Note:  
15/32" (1/2") A/C or CDX Plywood

TE-19111-02

2 2X



Note:  
15/32" (1/2") A/C or CDX Plywood

A

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		FRACTIONAL $\pm 1/16$
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$
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		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
NEXT ASSY	USED ON	FINISH
APPLICATION		DO NOT SCALE DRAWING

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



TITLE: <b>Cargo Front</b>		
SIZE <b>A</b>	DWG. NO. <b>TE-19111</b>	REV
SCALE: 1:24 WEIGHT:		SHEET 7 OF 13

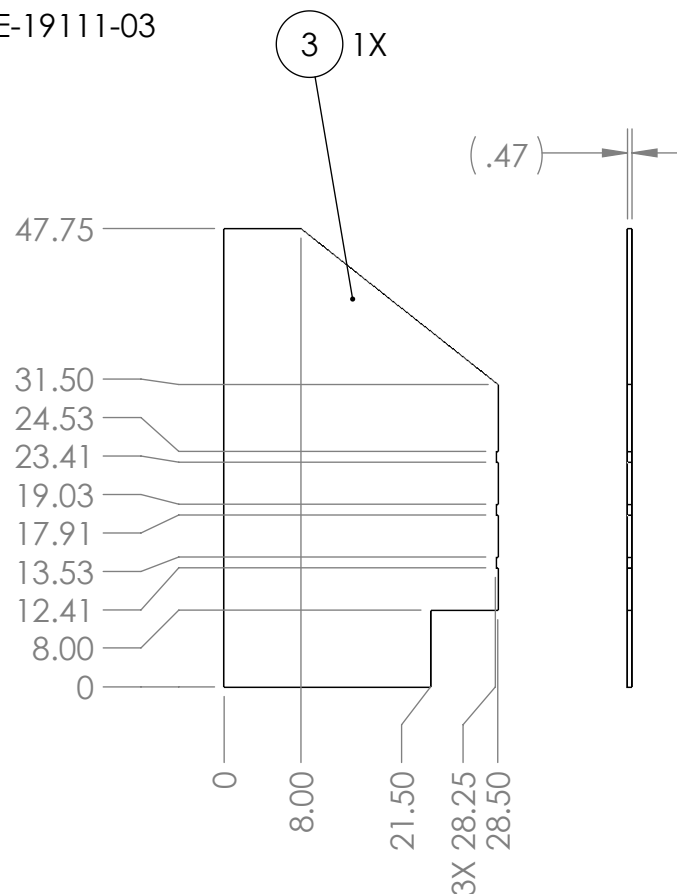
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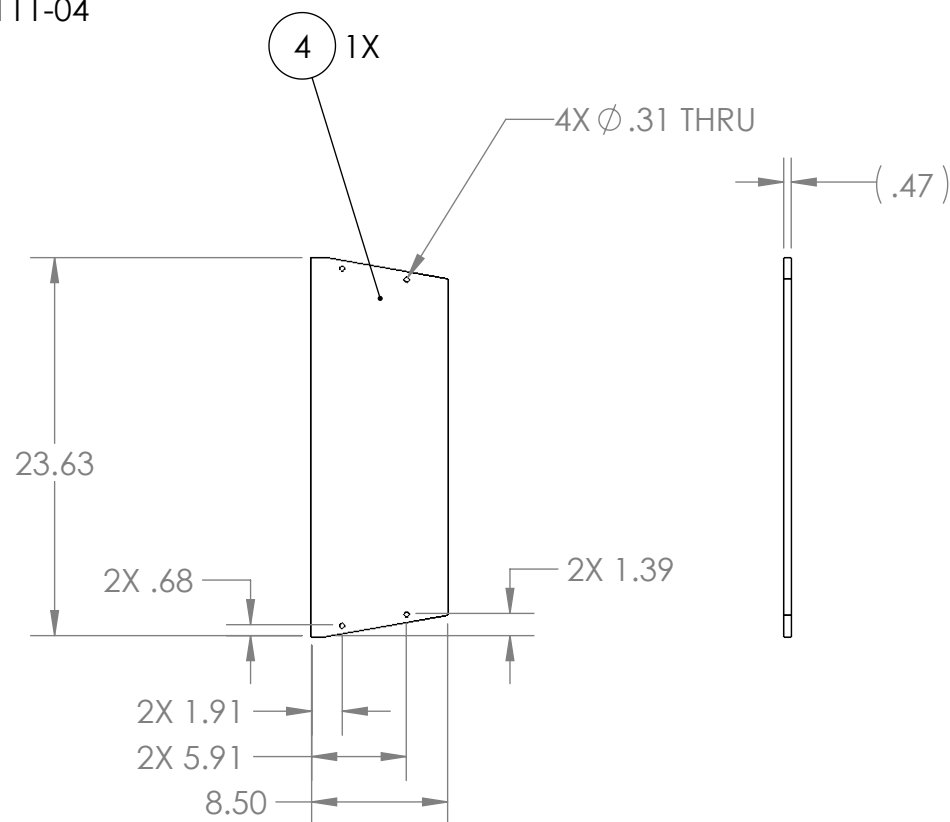
B

TE-19111-03



Note:  
15/32" (1/2") A/C or CDX Plywood

TE-19111-04



Note:  
15/32" (1/2") A/C or CDX Plywood

A

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		TWO PLACE DECIMAL $\pm .01$
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		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:		



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TITLE:

# Cargo Front

SIZE	DWG. NO.	REV
<b>A</b>	<b>TE-19111</b>	

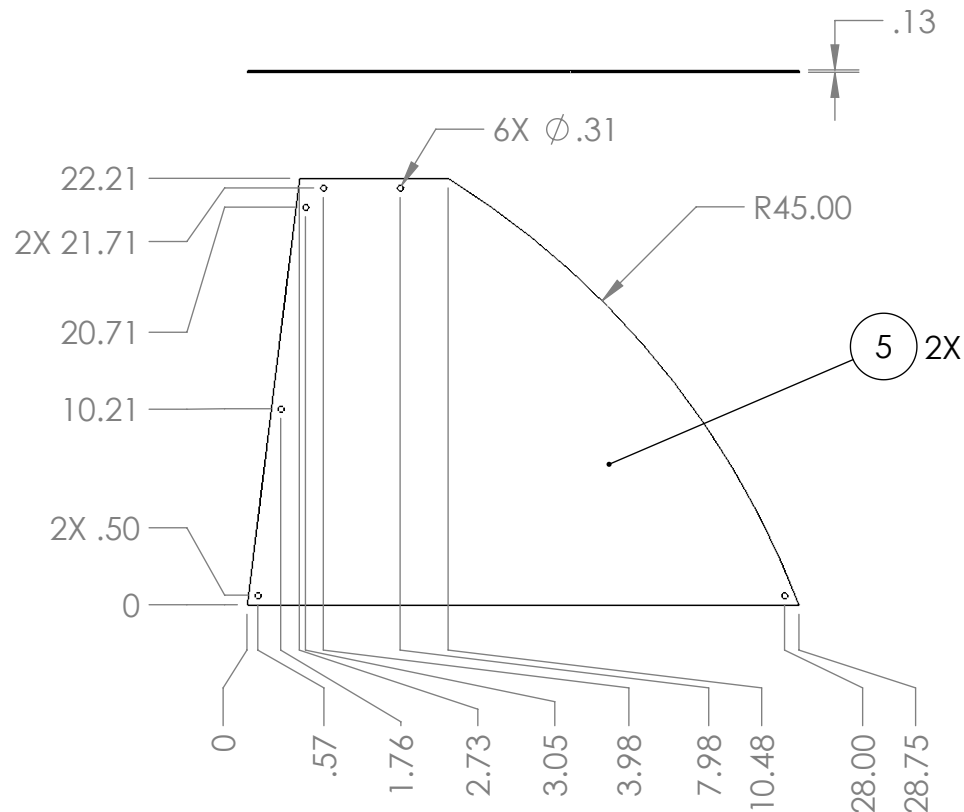
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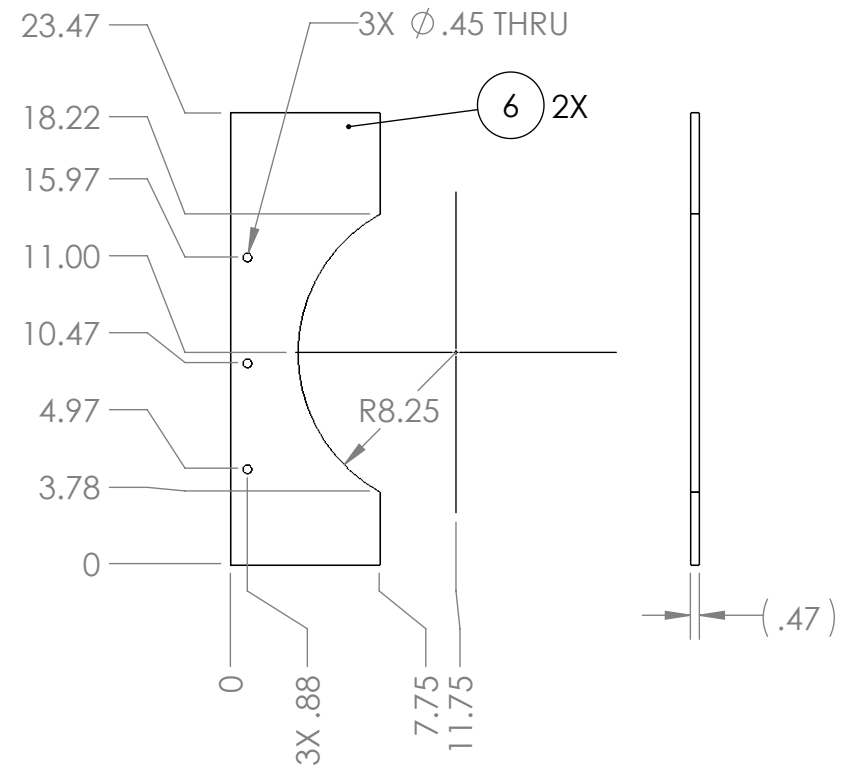


TE-19111-05



Note:  
15/32" (1/2") A/C or CDX Plywood

TE-19111-06



Note:  
15/32" (1/2") A/C or CDX  
Plywood

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		INTERPRET GEOMETRIC TOLERANCING PER:
		MATERIAL
		FINISH
NEXT ASSY	USED ON	
APPLICATION		DO NOT SCALE DRAWING

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



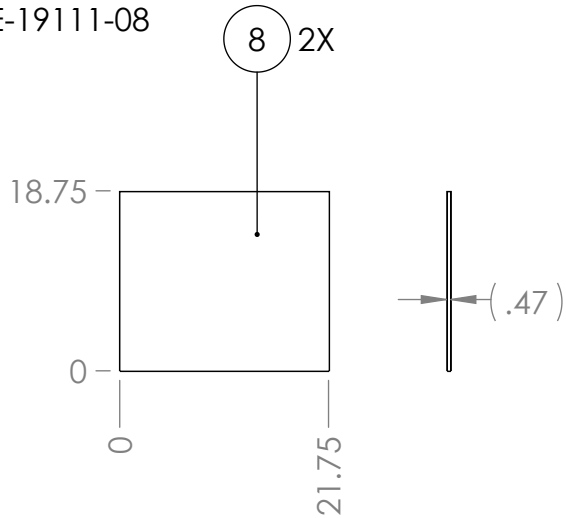
TITLE:

Cargo Front

SIZE	DWG. NO.	REV
<b>A</b>	TE-19111	
SCALE: 1:24	WEIGHT:	SHEET 9 OF 13

B

TE-19111-08



Note:  
15/32" (1/2") A/C or CDX  
Plywood

A

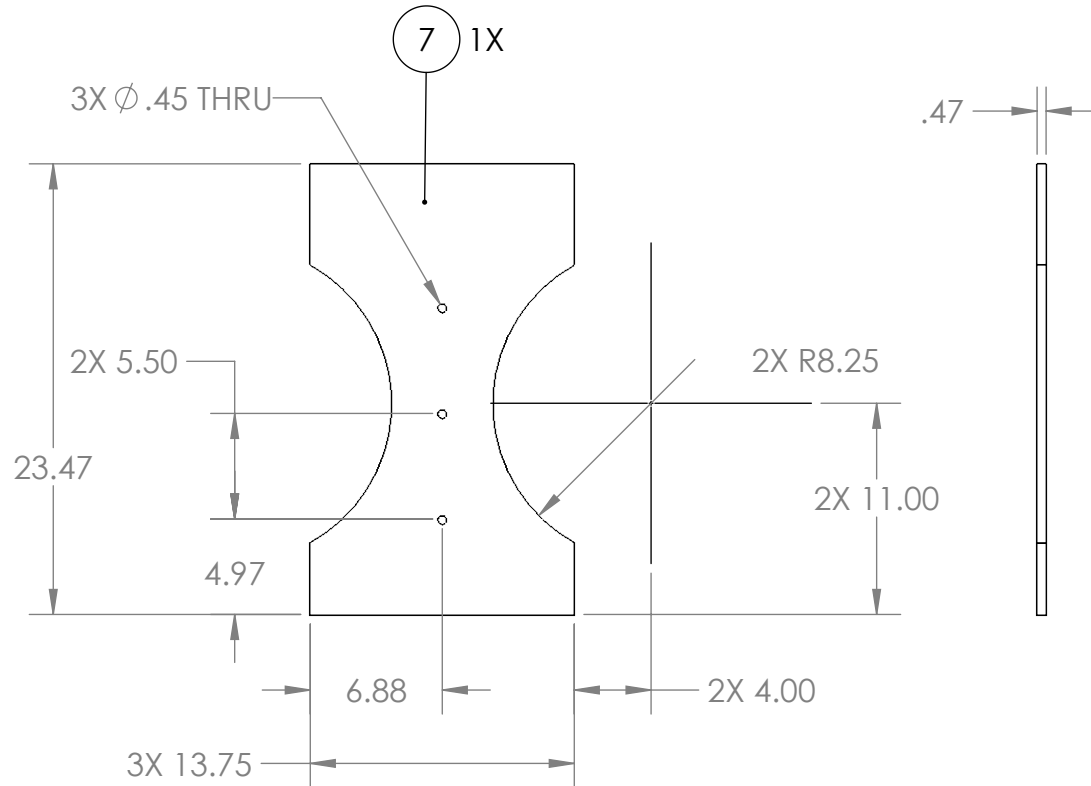
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NEXT ASSY

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APPLICATION

TE-19111-07



Note:  
15/32" (1/2") A/C or CDX  
Plywood

B

A

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:



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TITLE:

# Cargo Front

SIZE

**A**

DWG. NO.

**TE-19111**

REV

SCALE: 1:24 WEIGHT:

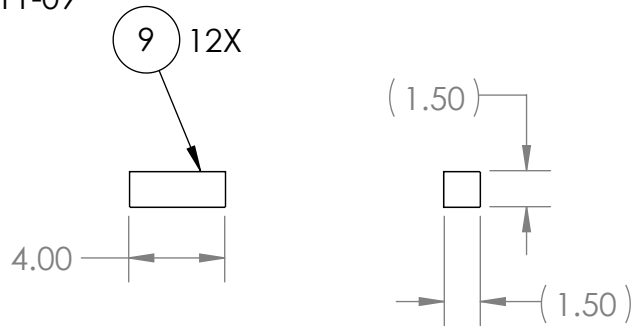
SHEET 10 OF 13

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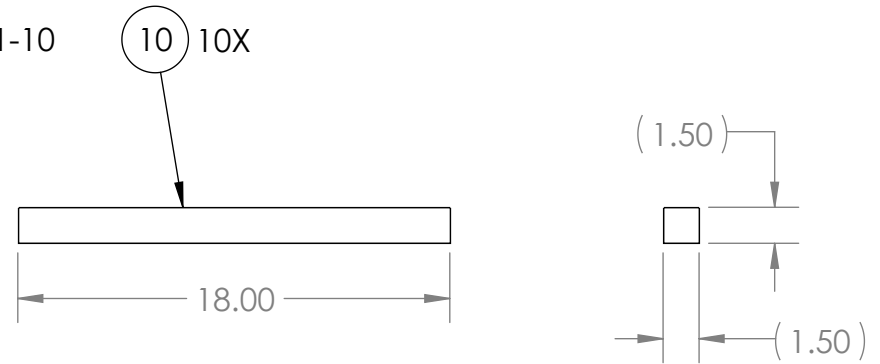
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TE-19111-09



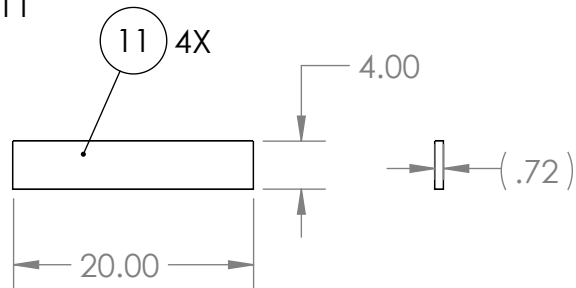
Note:  
2"X 2" Pine Lumber

TE-19111-10



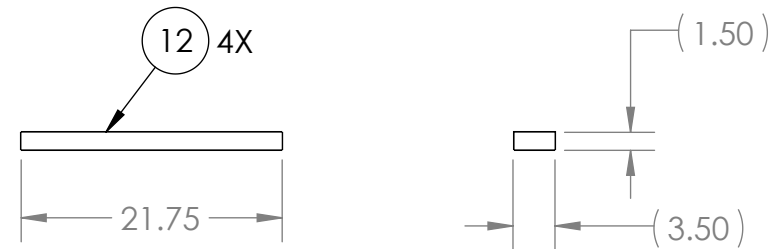
Note:  
2"X 2" Pine Lumber

TE-19111-11



Note:  
23/32" (3/4") A/C or CDX Plywood

TE-19111-12



Note:  
2"X 4" Pine Lumber

A

A

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		FRACTIONAL $\pm 1/16$	ENG APPR.		
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		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			



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**COMPETITION**

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TITLE:

Cargo Front

SIZE	DWG. NO.	REV
<b>A</b>	<b>TE-19111</b>	

SCALE: 1:24	WEIGHT:	SHEET 11 OF 13
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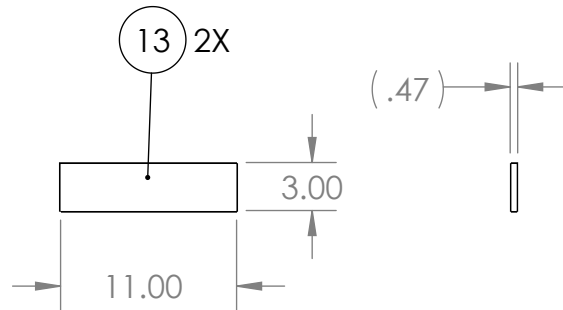
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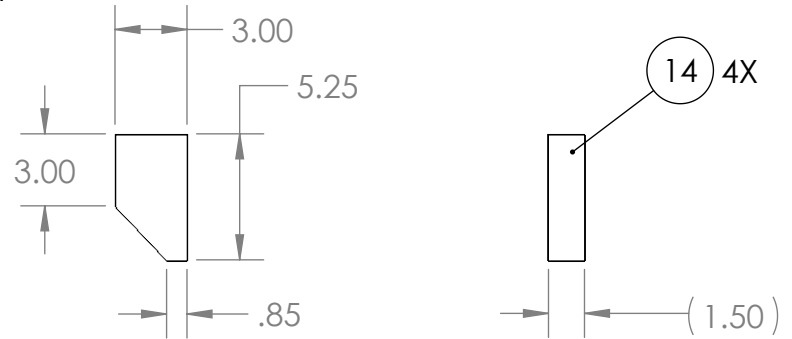
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TE-19111-13



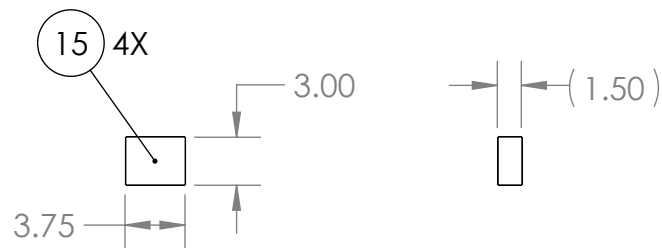
Note:  
15/32" (1/2") A/C or CDX Plywood

TE-19111-14



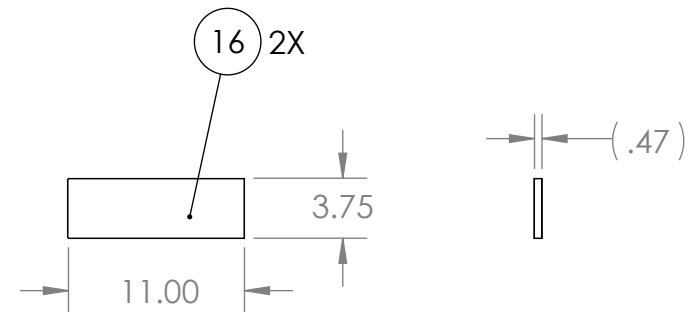
Note:  
2"X 4" Pine Lumber

TE-19111-15



Note:  
2"X 4" Pine Lumber

TE-19111-16



Note:  
15/32" (1/2") A/C or CDX Plywood

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NEXT ASSY

USED ON

APPLICATION

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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**  
**COMPETITION**

**SOLIDWORKS**  
Modeling Solutions Partner

TITLE:

# Cargo Front

SIZE

## A

DWG. NO.

## TE-19111

REV

SCALE: 1:24 WEIGHT:

SHEET 12 OF 13

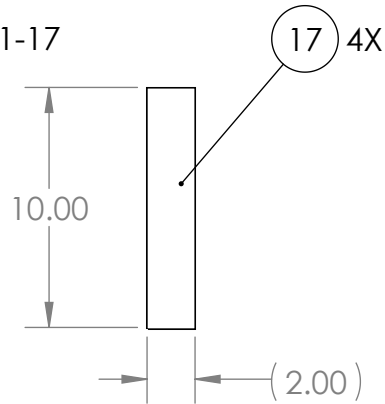
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1

B

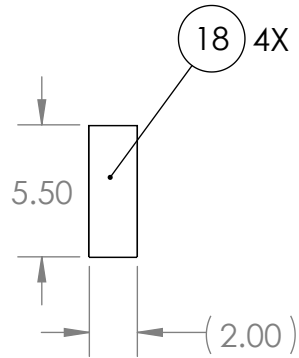
B

TE-19111-17



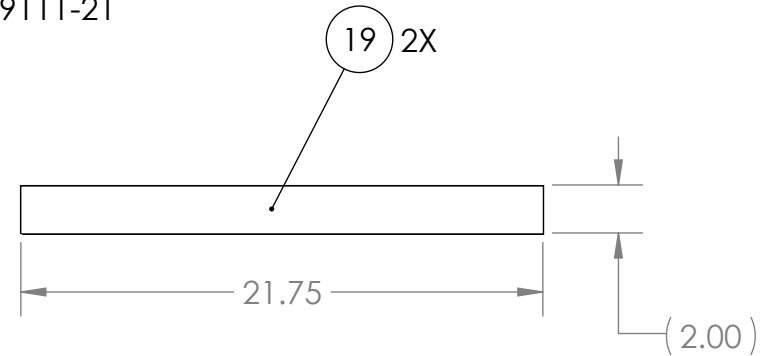
Note:  
2" Hook Fastener

TE-19111-20



Note:  
2" Vision Tape

TE-19111-21





Note:  
2" Hook Fastener

A

A

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	 	
		DIMENSIONS ARE IN INCHES	DRAWN			TITLE:  <h1>Cargo Front</h1>	
		TOLERANCES:	CHECKED				
		FRACTIONAL $\pm 1/16$	ENG APPR.				
		ANGULAR: MACH $\pm 1^\circ$ BEND $\pm 1^\circ$	MFG APPR.				
		TWO PLACE DECIMAL $\pm .01$					
		THREE PLACE DECIMAL $\pm .001$					
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.				
		MATERIAL	COMMENTS:			SIZE	DWG. NO.
						<b>A</b>	<b>TE-19111</b>
		FINISH				REV	
NEXT ASSY	USED ON						
APPLICATION		DO NOT SCALE DRAWING				SCALE: 1:24	WEIGHT:
						SHEET 13 OF 13	

2

1