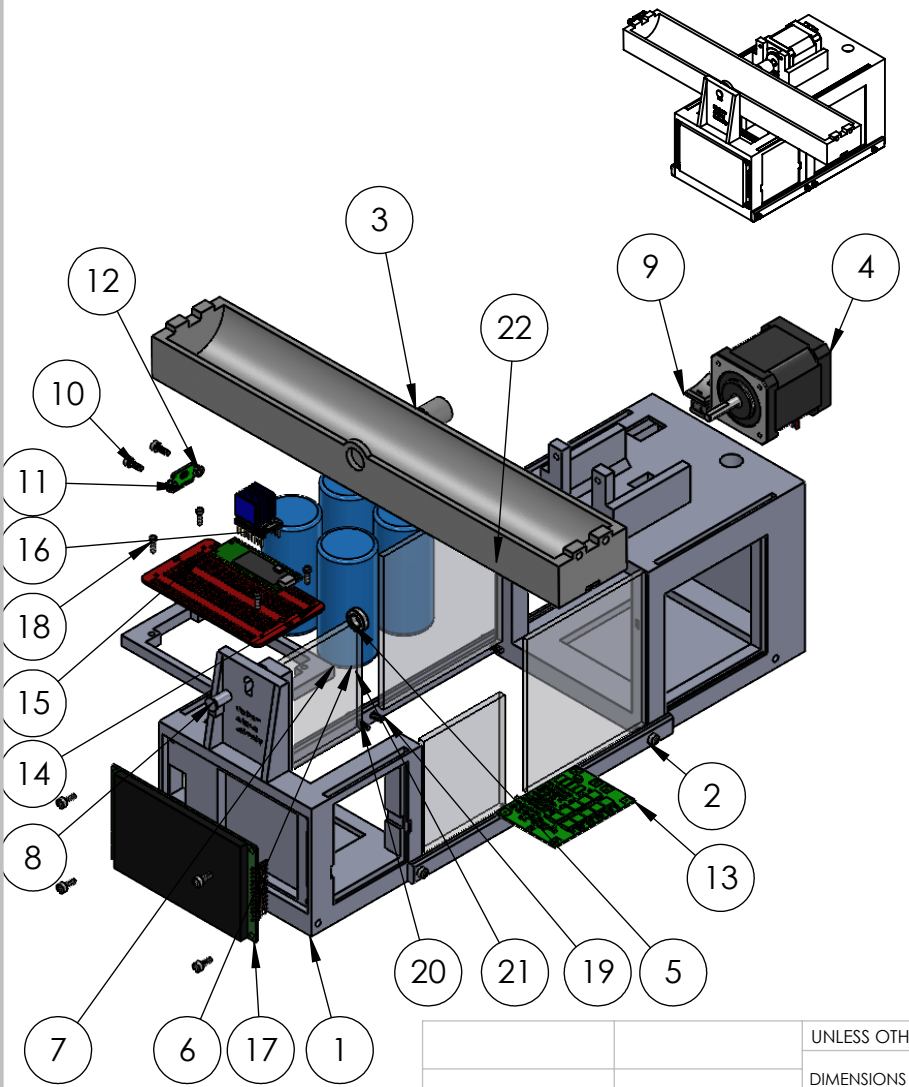


B

B



A

A

ITEM NO.	Part Name	DESCRIPTION	QTY.
1	Center Hub	Mechanical	1
2	Motor Holder	Mechanical	1
3	Beam		1
4	Stepper Motor	Electrical	1
5	686 Bearing	Mechanical	1
6	Batteries	Electrical	4
7	Shelf	Mechanical	1
8	Shaft Plug	Mechanical	1
9	Rocker Switch	Electrical	1
10	M3 8mm Screws	Mechanical	6
11	Time of Flight Sensor	Sensing	1
12	M3 Zinc Nut	Mechanical	2
13	Battery Management System	Electrical	1
14	Protoboard	Electrical	1
15	Raspberry Pi Pico	Electrical	1
16	Motor Driver	Electrical	1
17	Touchscreen	Electrical	1
18	M2 8mm Screw	Mechanical	4
19	Railroad	Mechanical	2
20	M3 12mm Screw	Mechanical	8
21	Center Hub Acrylic	Mechanical	2
22	Motor Hub Acrylic	Mechanical	2

**PROPRIETARY AND CONFIDENTIAL**  
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

UNLESS OTHERWISE SPECIFIED:		NAME	DATE
DIMENSIONS ARE IN MILLIMETERS TOLERANCES: ±0.2 mm FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±		DRAWN Freddy R.	4/16/2026
INTERPRET GEOMETRIC TOLERANCING PER:		CHECKED	
MATERIAL PLA & Acrylic		ENG APPR.	
FINISH Matte & Transparent		MFG APPR.	
NEXT ASSY	USED ON	Q.A.	
APPLICATION	DO NOT SCALE DRAWING	COMMENTS:	

TITLE:  
**Robot 2 (Ball-on-Beam)**

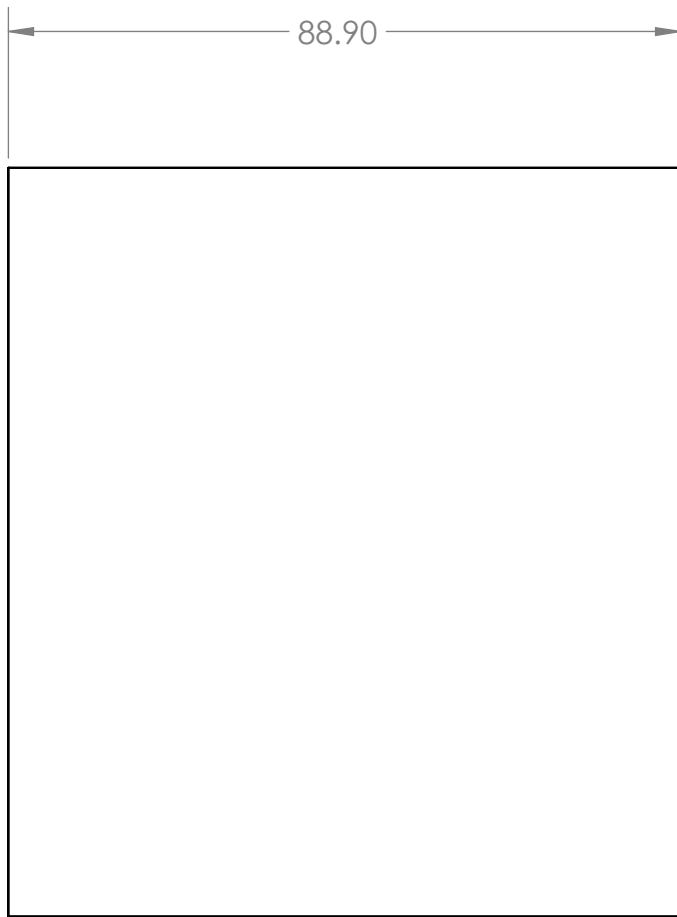
SIZE <b>A</b>	DWG. NO. Assembly_Robot2_V6	REV
SCALE: 1:8	WEIGHT:	SHEET 1 OF 1

2

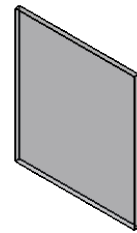
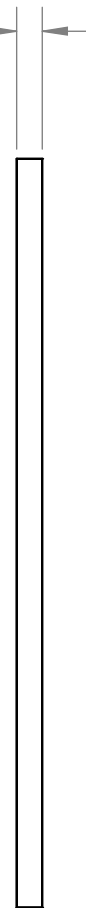
1

B

B



3.40



A

A

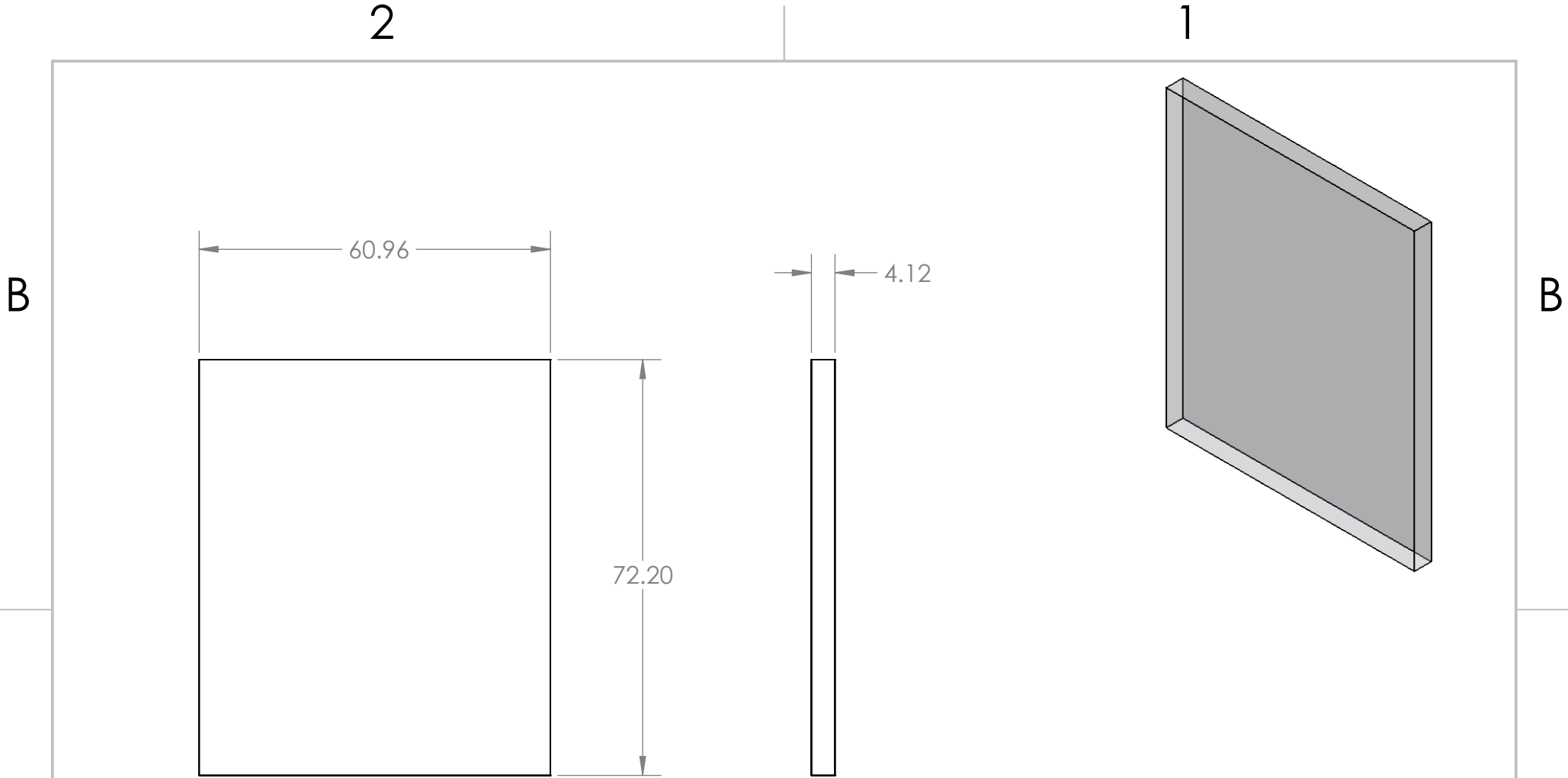
**PROPRIETARY AND CONFIDENTIAL**  
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES TOLERANCES: ±0.2mm FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±	DRAWN	Freddy R.	4/17/26
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED		
		MATERIAL	ENG APPR.		
		FINISH	MFG APPR.		
NEXT ASSY	USED ON		Q.A.		
APPLICATION		DO NOT SCALE DRAWING	COMMENTS:		

TITLE: <b>Robot 2 Motor Holder Acrylic</b>		
SIZE	DWG. NO.	REV
<b>A</b>		
SCALE: 1:1	WEIGHT:	SHEET 1 OF 1

2

1



**PROPRIETARY AND CONFIDENTIAL**  
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN INCHES	DRAWN	Freddy R.	4/17/26
		TOLERANCES: ±0.2mm	CHECKED		
		FRACTIONAL ±	ENG APPR.		
		ANGULAR: MACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

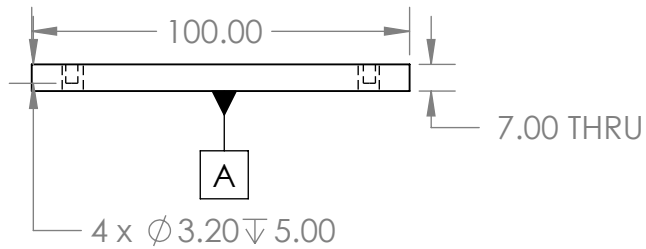
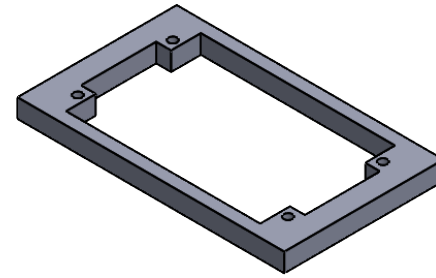
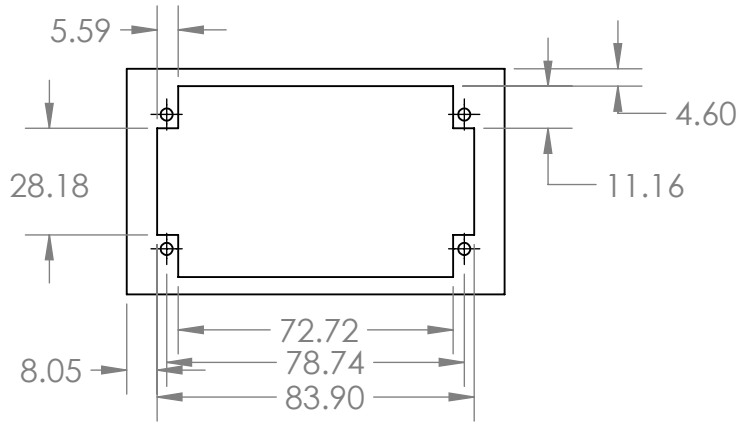
TITLE:		
Robot 2 Center Hub Acrylic		
SIZE	DWG. NO.	REV
<b>A</b>		
SCALE: 1:1	WEIGHT:	SHEET 1 OF 1

2

1

B

B



A

A

**PROPRIETARY AND CONFIDENTIAL**  
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

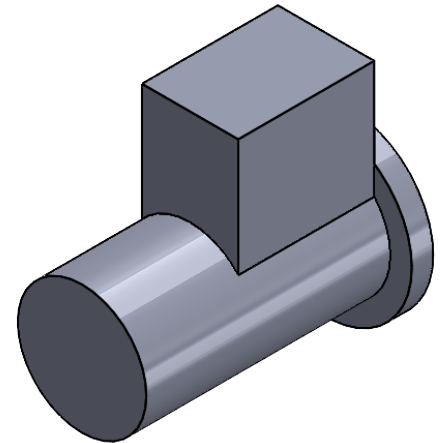
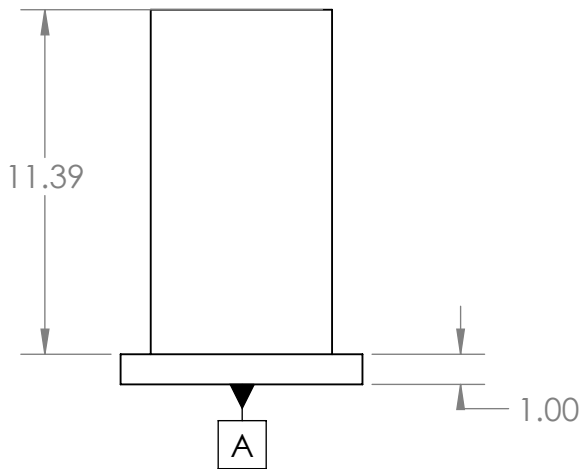
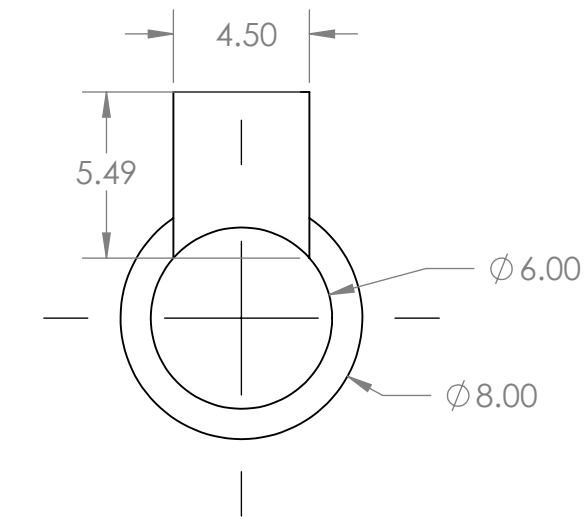
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Florence F.	4/15/2026
		TOLERANCES: ±0.2 mm	CHECKED		
		FRACTIONAL ±	ENG APPR.		
		ANGULAR: MACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		PLA			
		FINISH			
		Matte			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:		
Robot 2 Protoboard Shelf		
SIZE	DWG. NO.	REV
<b>A</b>	Protoboard Shelf	
SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

2

1

B



B

A

A

**PROPRIETARY AND CONFIDENTIAL**  
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Florence F.	4/15/2026
		TOLERANCES: ±0.2	CHECKED		
		FRACTIONAL ±	ENG APPR.		
		ANGULAR: MACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		PLA			
		FINISH			
		Matte			
NEXT ASSY	USED ON				
	APPLICATION	DO NOT SCALE DRAWING			

TITLE:

# Robot 2 Shaft Plug Key

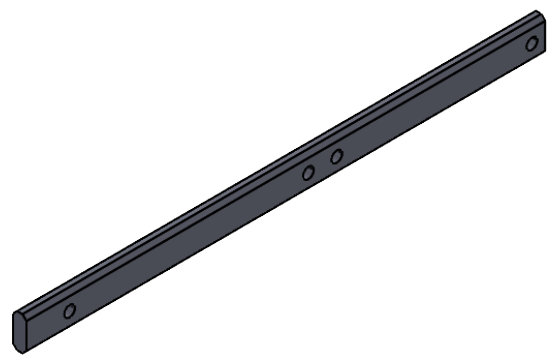
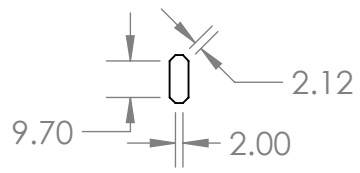
SIZE	DWG. NO.	REV
<b>A</b>	Shaft Plug Key	
SCALE: 4:1	WEIGHT:	SHEET 1 OF 1

2

1

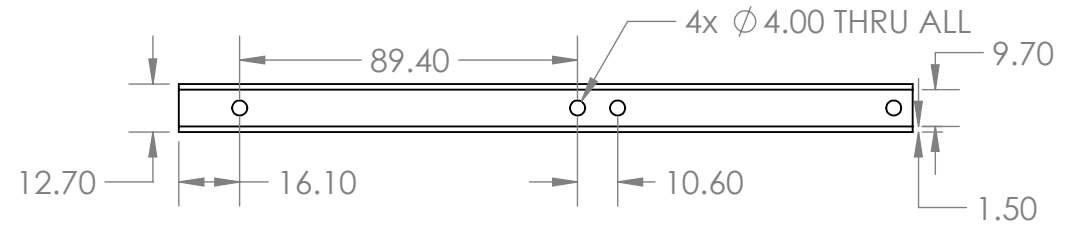
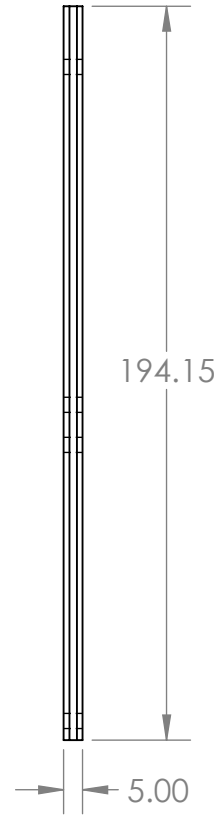
B

B



A

A



**PROPRIETARY AND CONFIDENTIAL**  
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

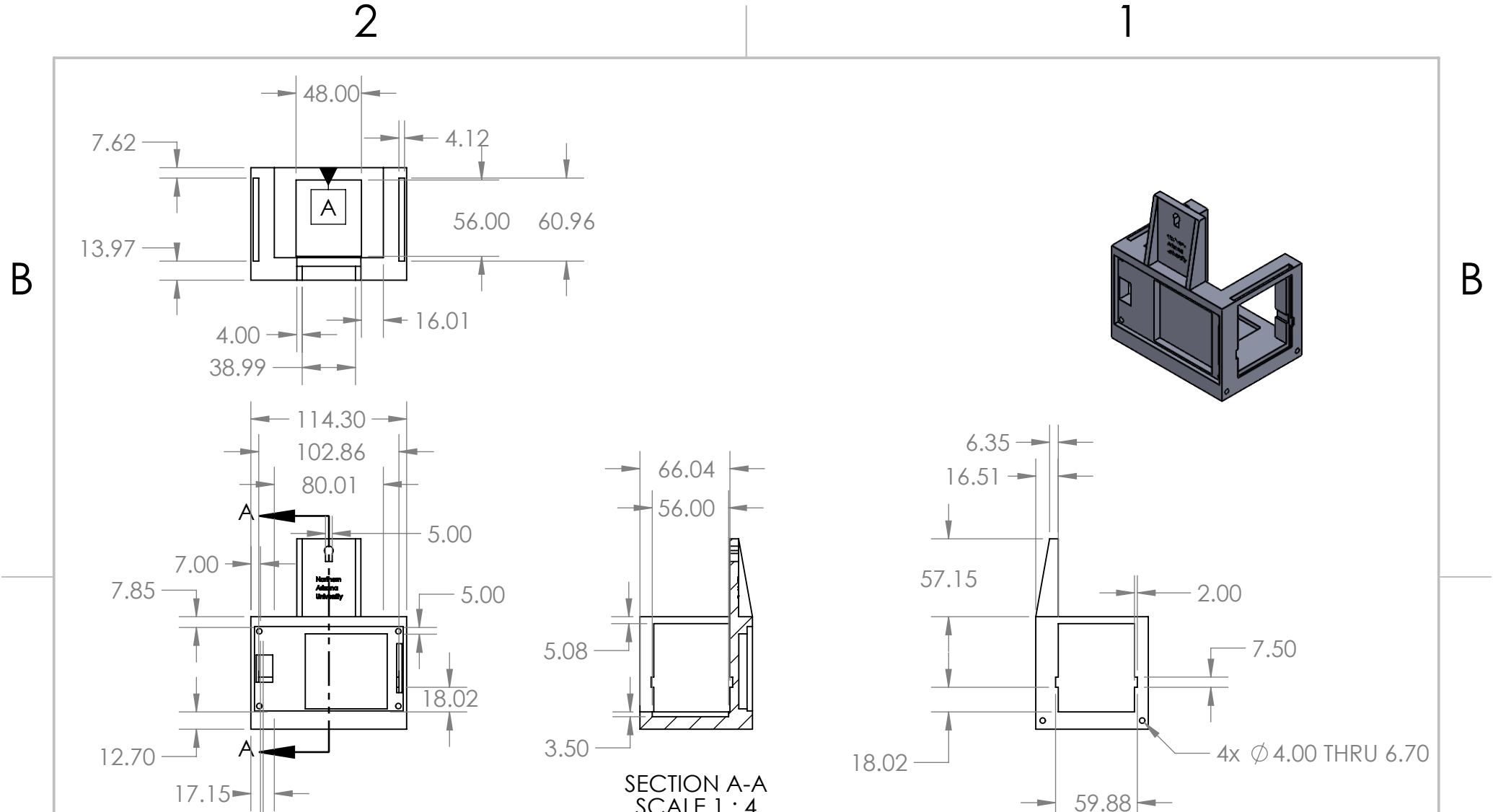
		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Florence F.	2/19/2026
		TOLERANCES: ±0.2 mm	CHECKED		
		FRACTIONAL ±	ENG APPR.		
		ANGULAR: MACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		PLA			
		FINISH			
		Matte			
NEXT ASSY	USED ON				
	APPLICATION	DO NOT SCALE DRAWING			

TITLE:  
**Robot 2 Railroad**

SIZE	DWG. NO.	REV
<b>A</b>	Bracket	
SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

2

1



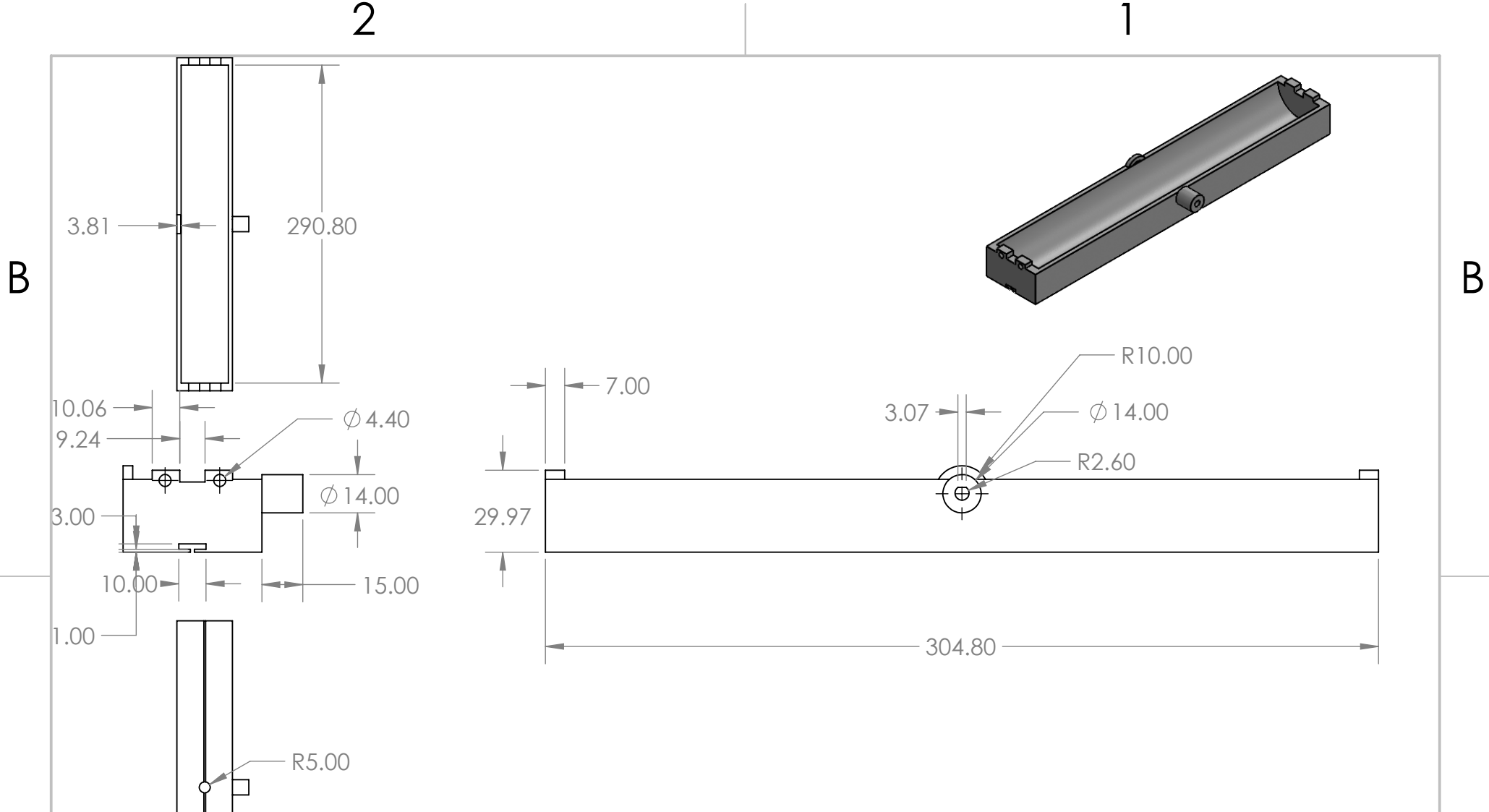
SECTION A-A  
SCALE 1 : 4

**PROPRIETARY AND CONFIDENTIAL**  
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

		UNLESS OTHERWISE SPECIFIED:	NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	Florence F.	4/15/2026
		TOLERANCES: ±0.2		
		FRACTIONAL ±		
		ANGULAR: MACH ± BEND ±		
		TWO PLACE DECIMAL ±		
		THREE PLACE DECIMAL ±		
		INTERPRET GEOMETRIC TOLERANCING PER:		
		MATERIAL		
		PLA		
		FINISH		
		Matte		
NEXT ASSY	USED ON			
APPLICATION		DO NOT SCALE DRAWING		

TITLE:  
**Robot 2 Center Hub**

SIZE	DWG. NO.	REV
<b>A</b>	center_HubV6	
SCALE: 1:2	WEIGHT:	SHEET 1 OF 1



		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	<b>TITLE:</b> <h1>Robot 2 Beam</h1>		
		DIMENSIONS ARE IN MILLIMETERS		DRAWN	Freddy R.			4/15/2026
		TOLERANCES: $\pm 0.2$ mm		CHECKED				
		FRACTIONAL $\pm$		ENG APPR.				
		ANGULAR: MACH $\pm$ BEND $\pm$		MFG APPR.				
		TWO PLACE DECIMAL $\pm$		Q.A.				
		THREE PLACE DECIMAL $\pm$		COMMENTS:				
		INTERPRET GEOMETRIC TOLERANCING PER:						
		MATERIAL		PLA		SIZE	DWG. NO.	REV
		FINISH		Matte		<b>A</b>	Protoboard Shelf	
NEXT ASSY	USED ON					SCALE: 1:2	WEIGHT:	SHEET 1 OF 1
APPLICATION		DO NOT SCALE DRAWING						

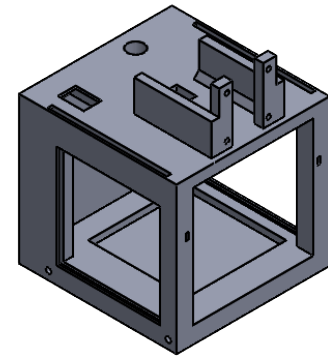
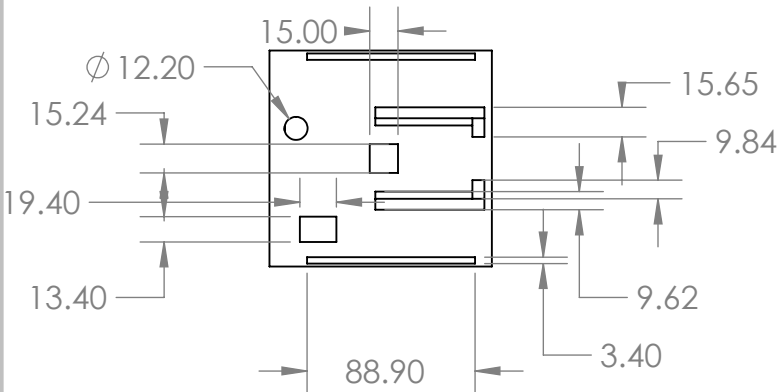
**PROPRIETARY AND CONFIDENTIAL**  
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

2

1

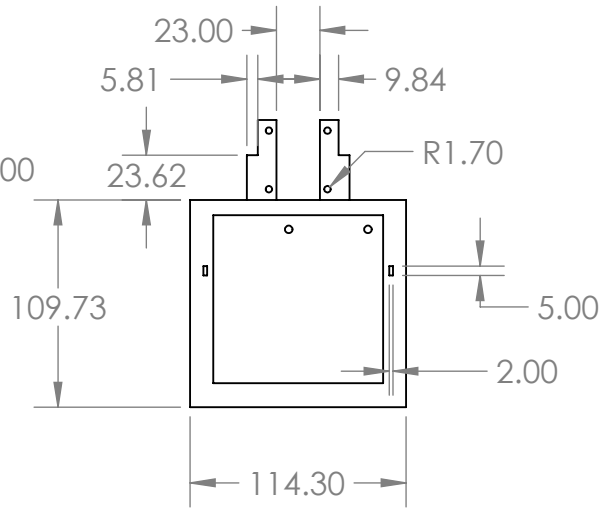
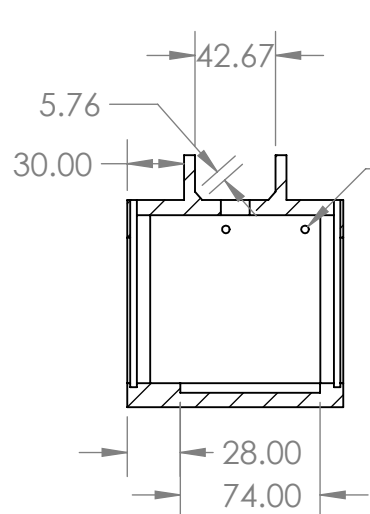
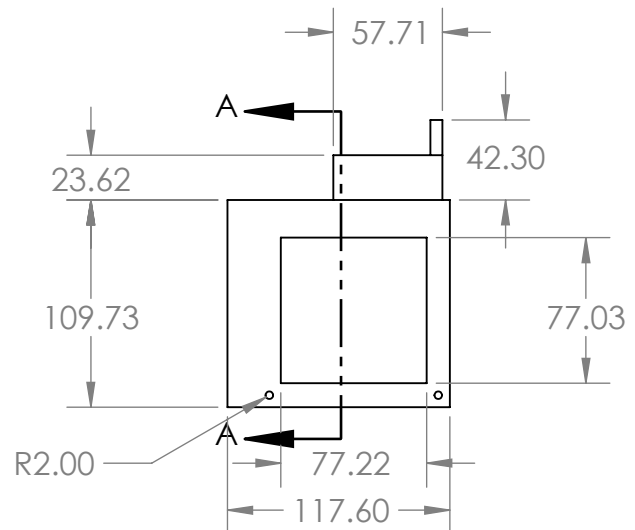
B

B



A

A



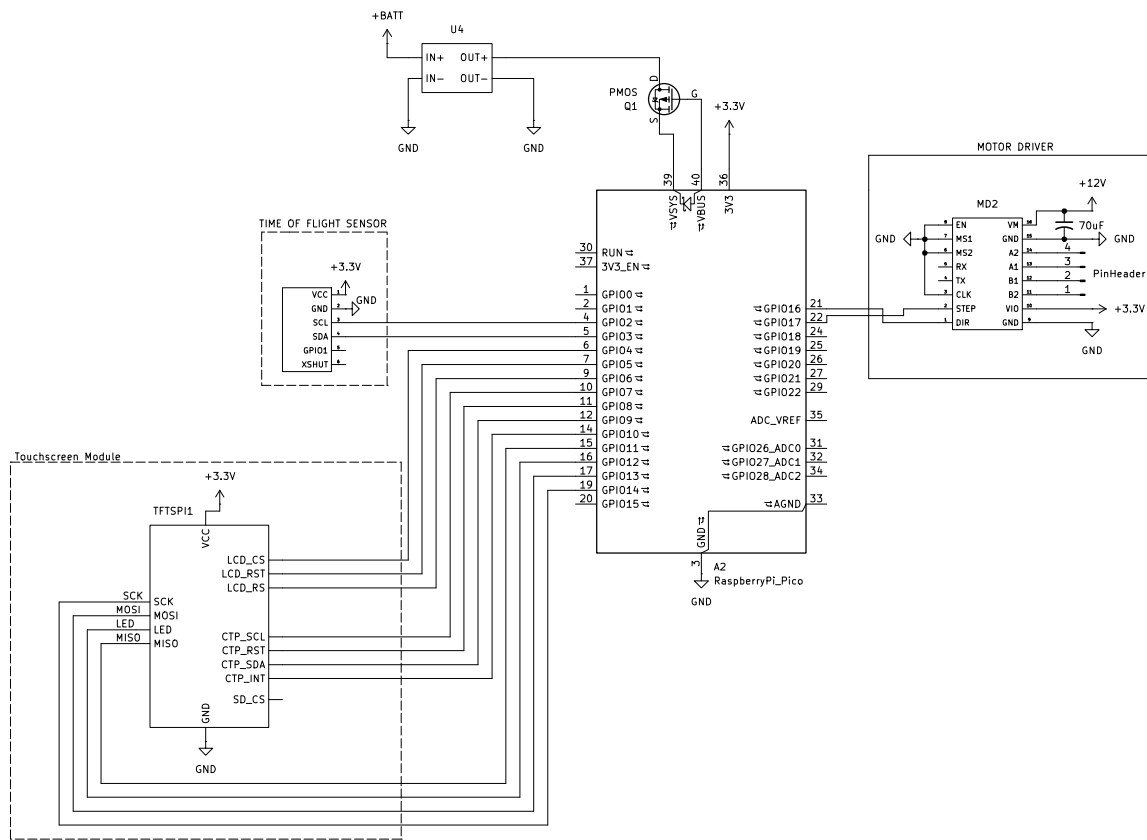
**PROPRIETARY AND CONFIDENTIAL**  
 THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF <INSERT COMPANY NAME HERE>. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF <INSERT COMPANY NAME HERE> IS PROHIBITED.

		UNLESS OTHERWISE SPECIFIED:	NAME	DATE
		DIMENSIONS ARE IN MILLIMETERS	DRAWN	Freddy R.
		TOLERANCES: ±0.2	CHECKED	4/15/2026
		FRACTIONAL: ±	ENG APPR.	
		ANGULAR: MACH ± BEND ±	MFG APPR.	
		TWO PLACE DECIMAL ±	Q.A.	
		THREE PLACE DECIMAL ±	COMMENTS:	
		INTERPRET GEOMETRIC TOLERANCING PER:		
		MATERIAL		
		PLA		
		FINISH		
		Matte		
NEXT ASSY	USED ON			
APPLICATION		DO NOT SCALE DRAWING		

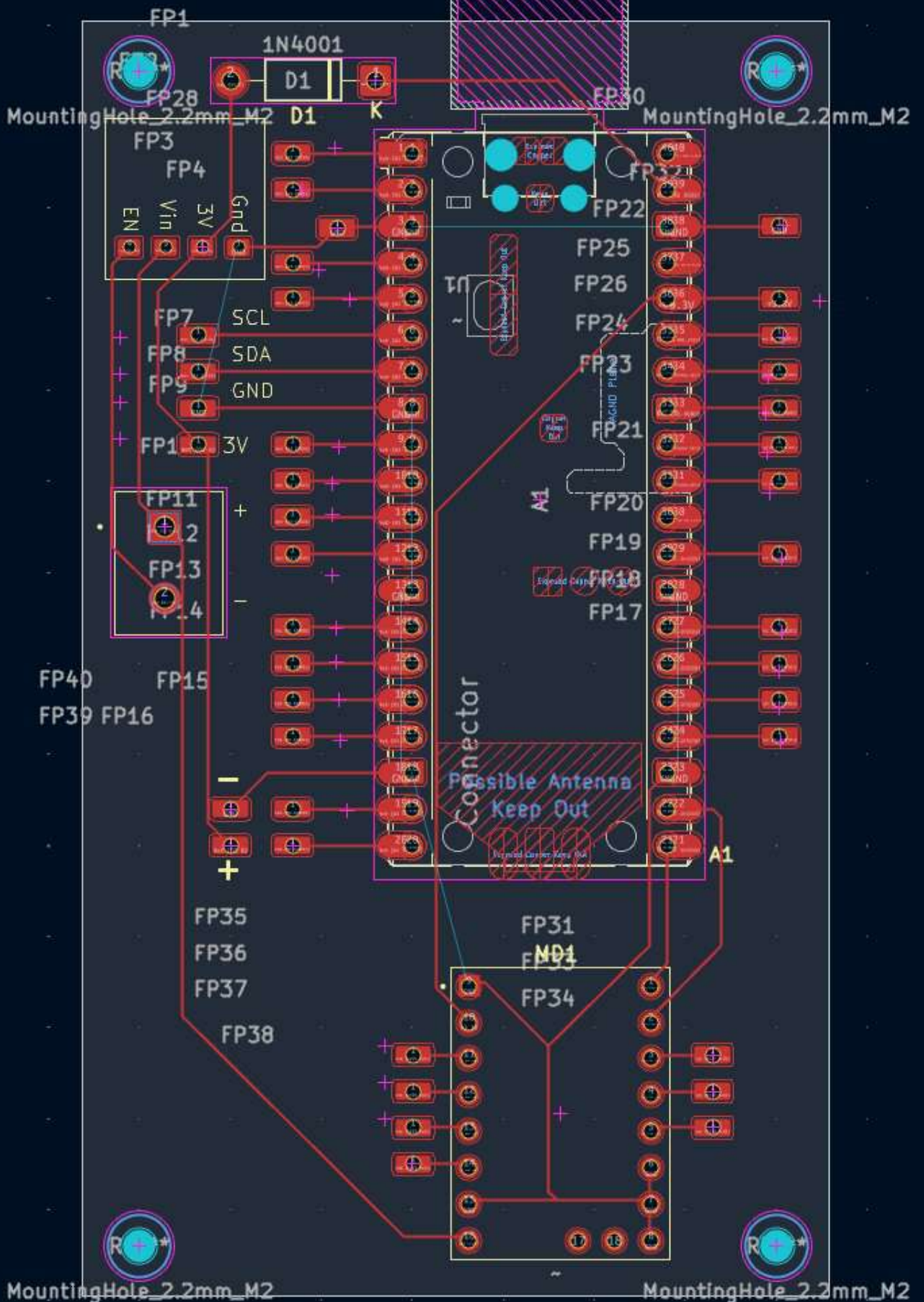
TITLE:		
<b>Robot 2 Motor Holder</b>		
SIZE	DWG. NO.	REV
<b>A</b>	motor_holderV7	
SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

2

1



USB Cable  
Keep Out



FP5  
FP6  
FP27  
FP29

MountingHole\_2.2mm\_M2

MountingHole\_2.2mm\_M2

