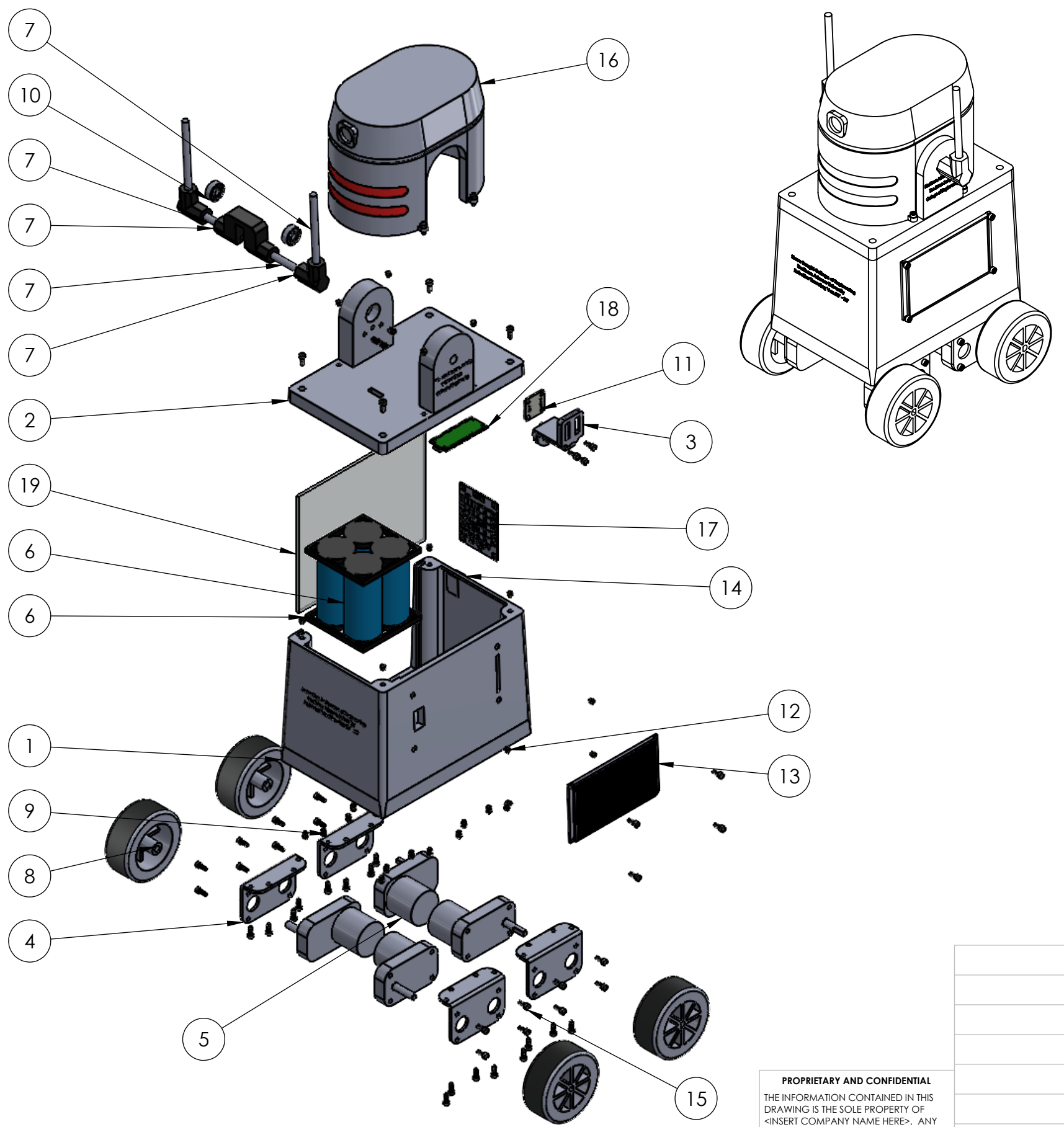


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ITEM NO.	Part Name	DESCRIPTION	QTY.
1	Frame Base	Mechanical	1
2	Frame Top	Mechanical	1
3	Magnetic Potentiometer Mount	Mechanical	1
4	Yahboom Motor Bracket	Mechanical	4
5	Yahboom L-Motor	Electical	4
6	LiFePO4 Battery Pack	Electical	1
7	Pendulum Arm Assembly	Mechanical	1
8	Yahboom Wheel	Mechanical	4
9	Ruthex M3 x 5.7 Insert	Mechanical	19
10	uxcell 606 2RS Deep Groove Bearing	Mechanical	2
11	AS5600 Magnetic Encoder	Electical	1
12	Ruthex M3 x 4.0 Insert	Mechanical	12
13	4-inch LCD Screen	Elecical	1
14	Rocker Switch	Electical	1
15	M3 x 0.5mm Steel Socket Head Screw	Mechanical	47
16	Pendulum Shell	Mechanical	1
17	BMS Board (14.8V)	Electical	1
18	RP2040/Pico Microcontoller	Electical	1
19	Acrylic Window	Mechanical	1

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DIMENSIONS ARE IN Millimeters TOLERANCES: ± 0.2 FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±		DRAWN	CBP 4/17/26
INTERPRET GEOMETRIC TOLERANCING PER:		CHECKED	
MATERIAL PLA, Aluminum		ENG APPR.	
FINISH		MFG APPR.	
NEXT ASSY	USED ON	Q.A.	
APPLICATION	DO NOT SCALE DRAWING	COMMENTS:	

TITLE:
Robotics Traveling Van Pendulum Robot

SIZE **B** DWG. NO. RTV_Robot_1_Final_CAD_Assembly REV

SCALE: 1:4 WEIGHT: SHEET 1 OF 1

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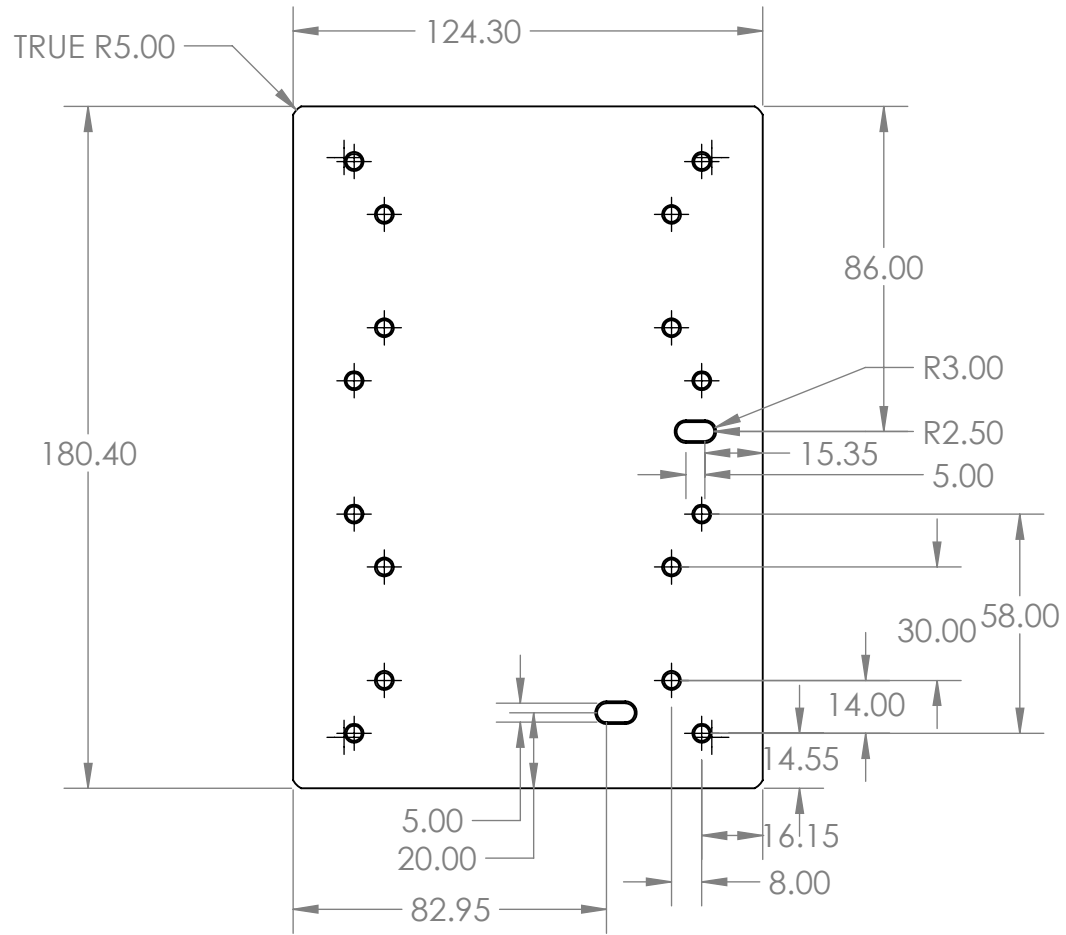
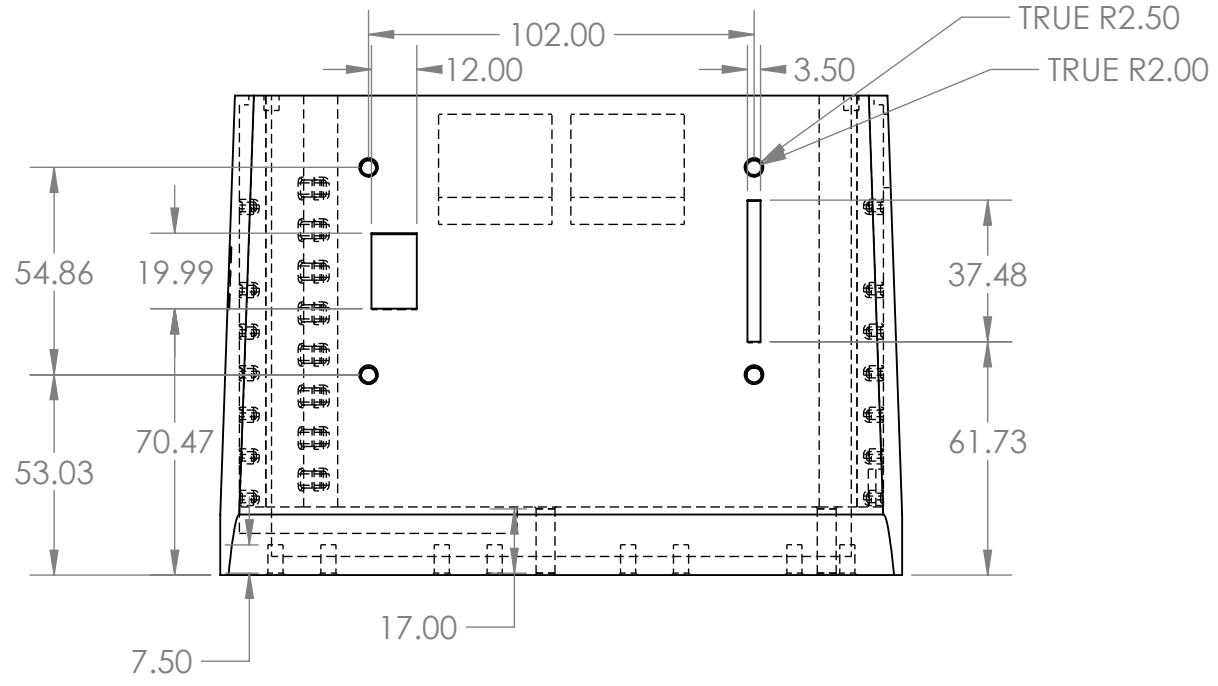
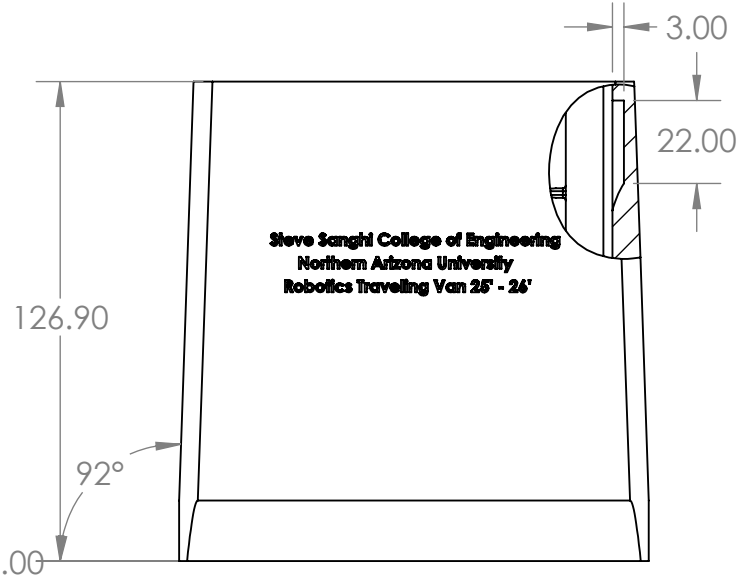
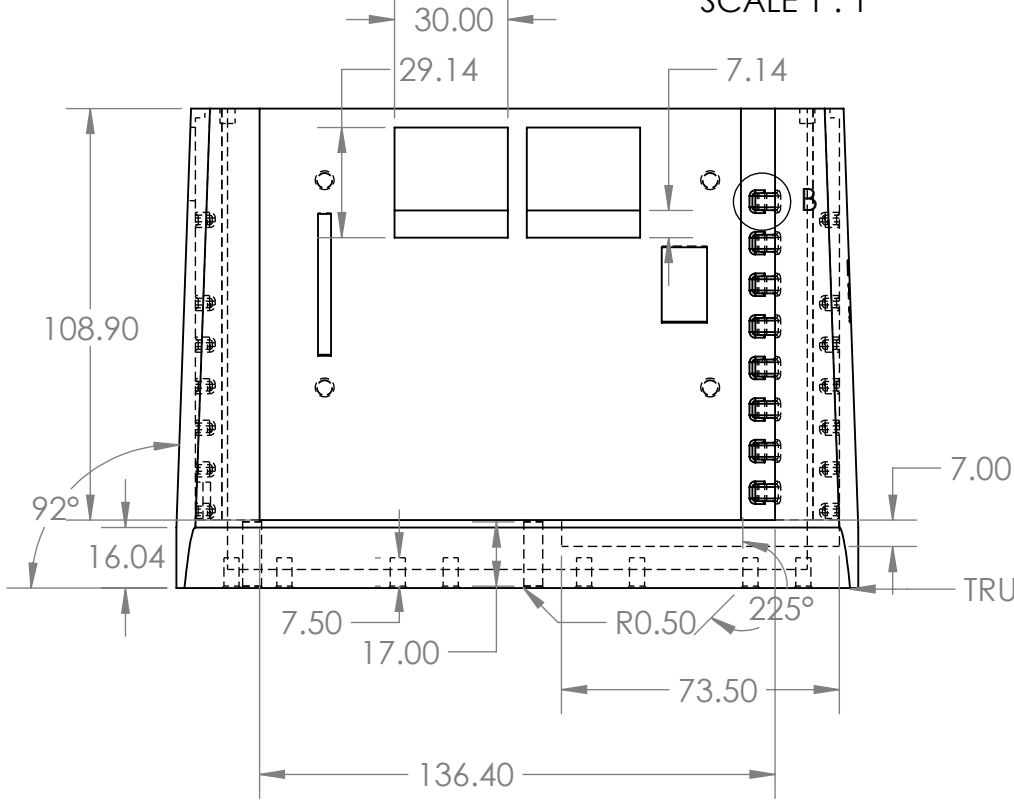
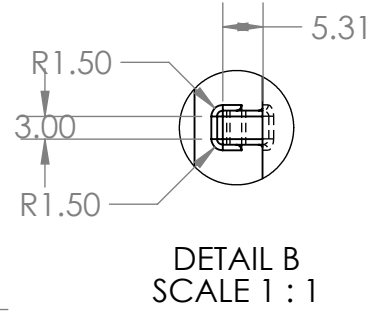
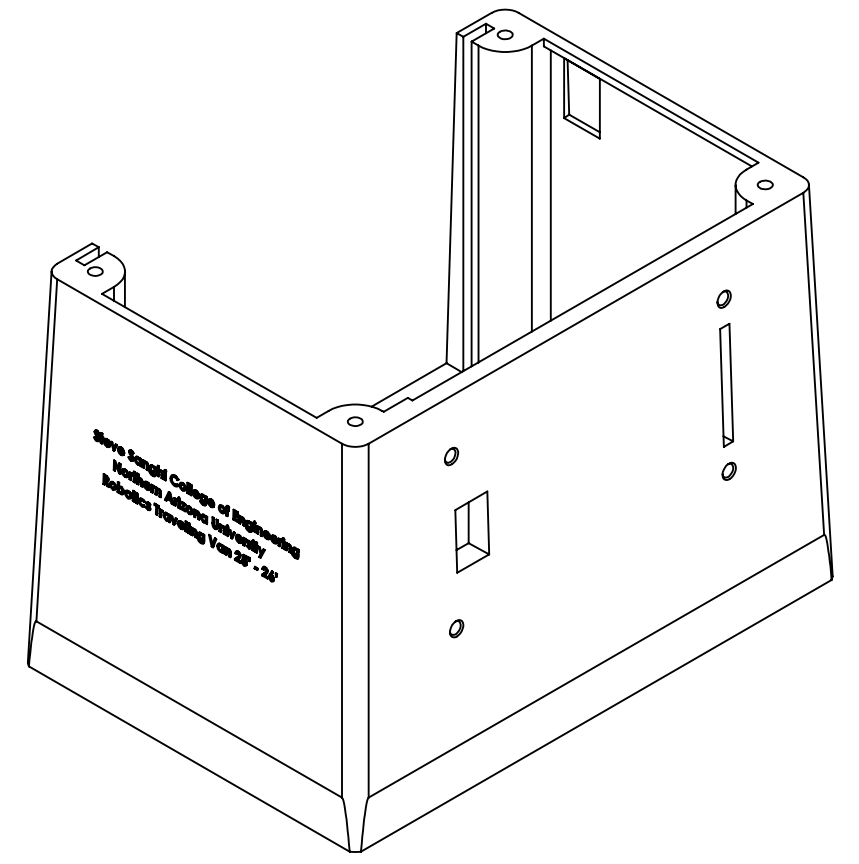
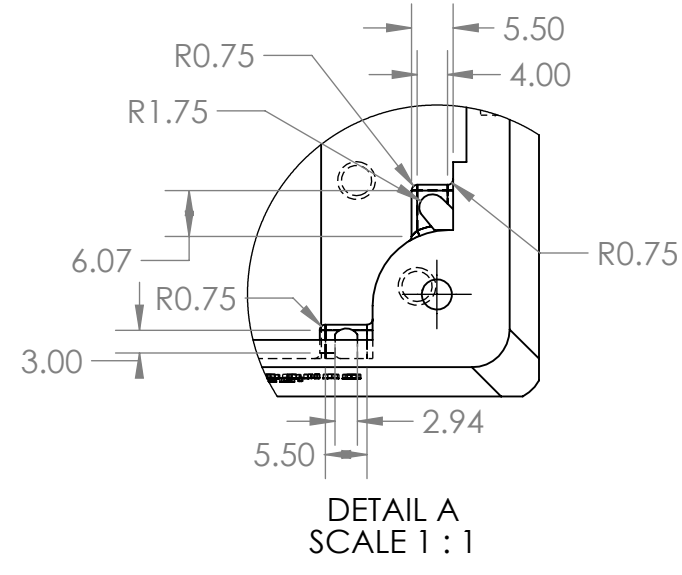
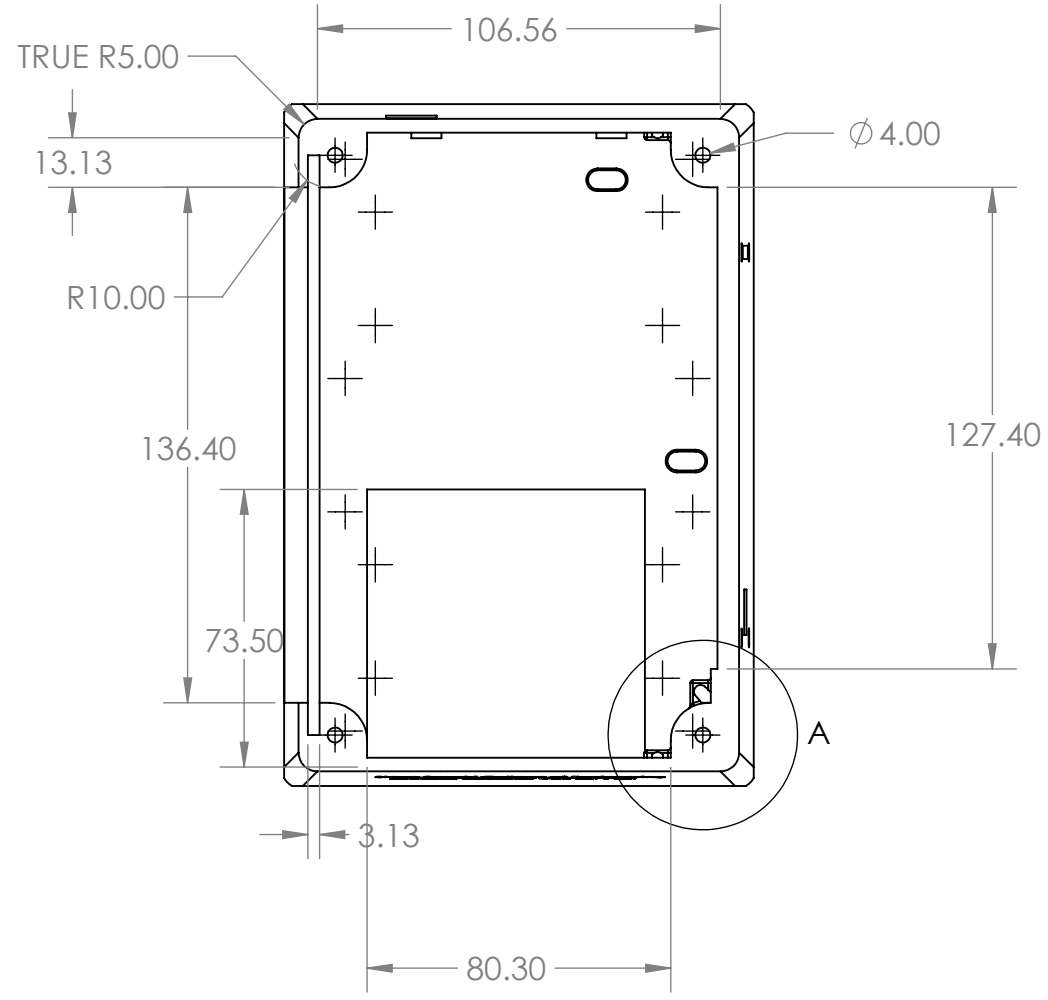
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TOLERANCES: ±0.2mm		CHECKED	
FRACTIONAL ±		ENG APPR.	
ANGULAR: MACH ± BEND ±		MFG APPR.	
TWO PLACE DECIMAL ±		Q.A.	
THREE PLACE DECIMAL ±		COMMENTS:	
INTERPRET GEOMETRIC TOLERANCING PER:			
MATERIAL			
PLA Plastic			
FINISH			
NEXT ASSY	USED ON		
APPLICATION			
DO NOT SCALE DRAWING			

TITLE:
Robot 1 BaseMechanical
 SIZE DWG. NO. REV
C RTV_base_4_7_2026
 SCALE: 1:2 WEIGHT: SHEET 1 OF 1

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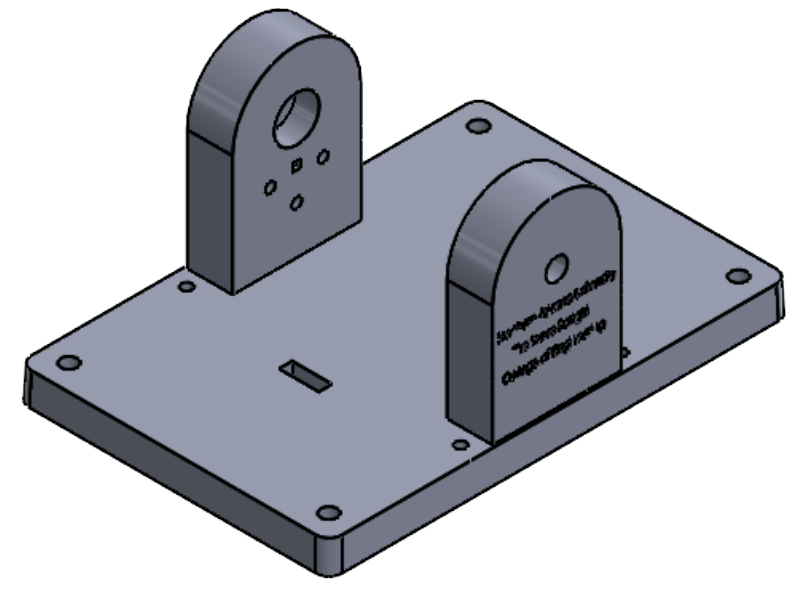
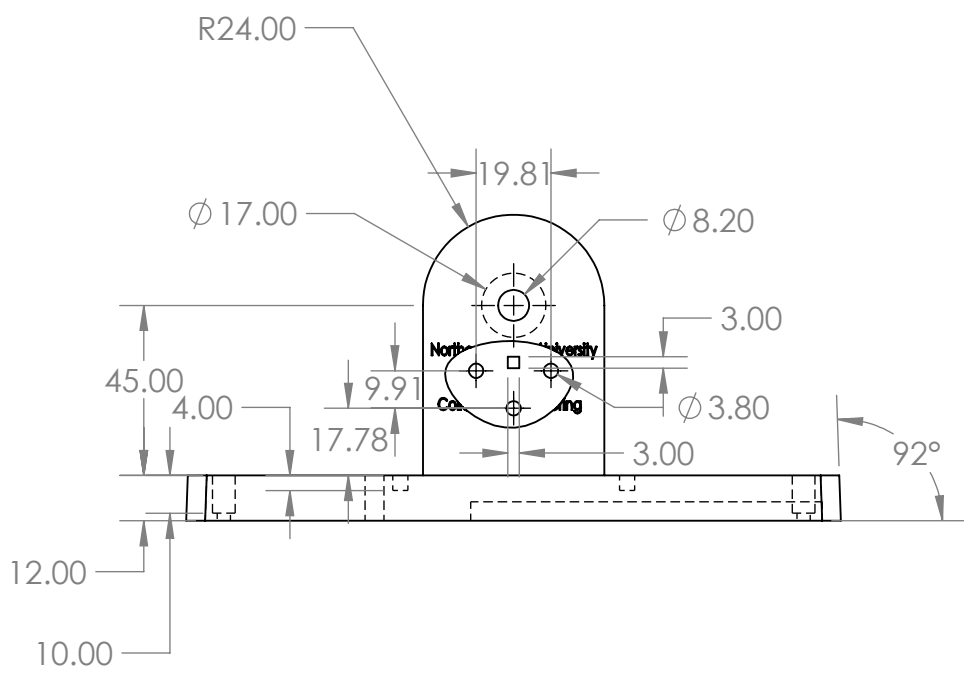
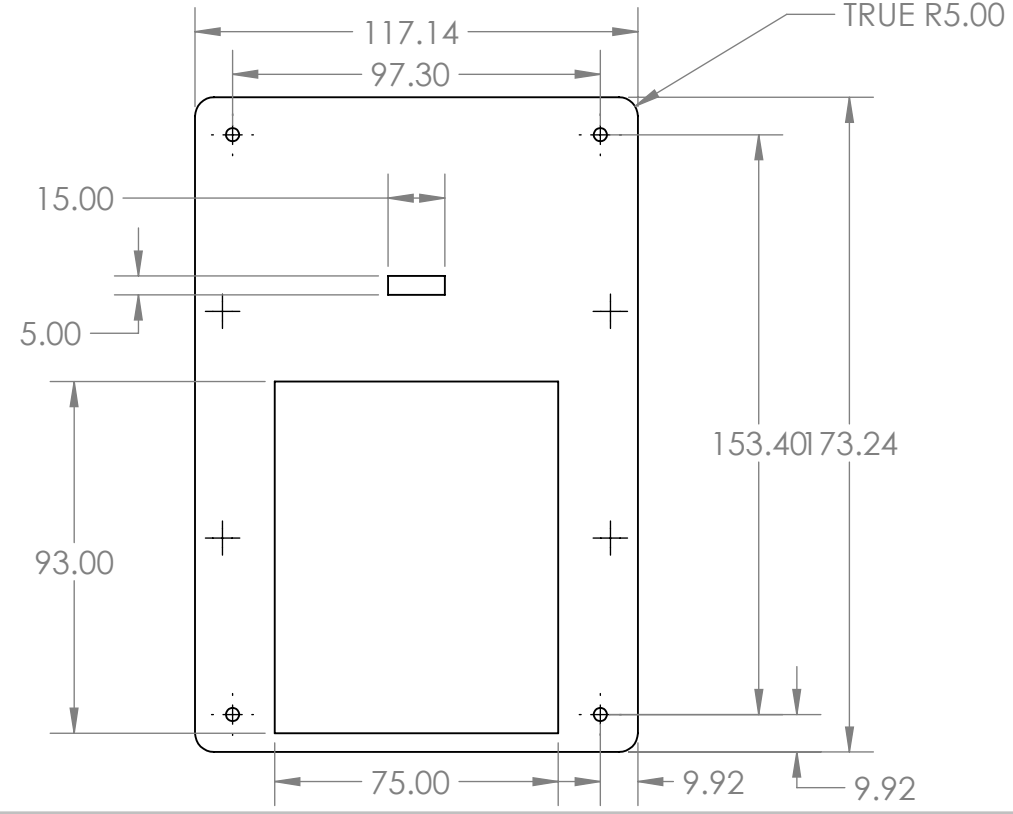
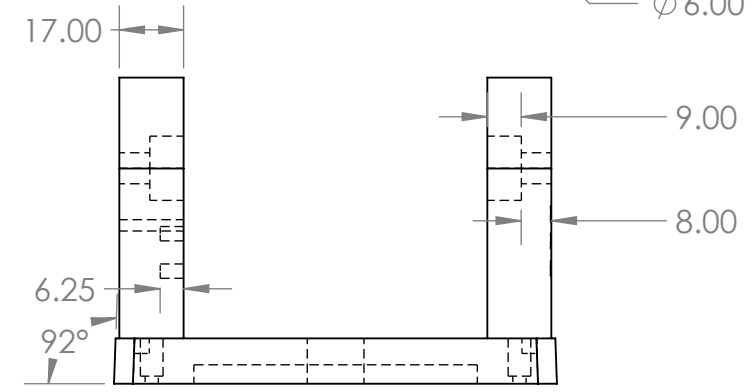
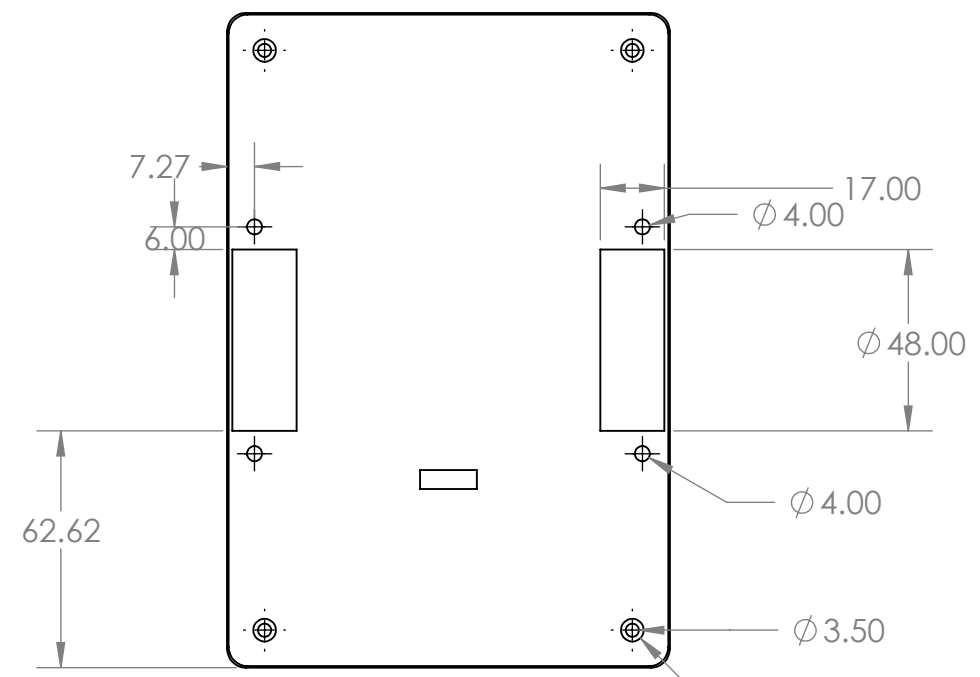
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		MATERIAL PLA Plastic		ENG APPR.	
		FINISH		MFG APPR.	
NEXT ASSY	USED ON			Q.A.	
APPLICATION		DO NOT SCALE DRAWING		COMMENTS:	
TITLE: Robot 1 TopMechanical					
SIZE B	DWG. NO. RTV_top_4_3_2026	REV			
SCALE: 1:2		WEIGHT:		SHEET 1 OF 1	

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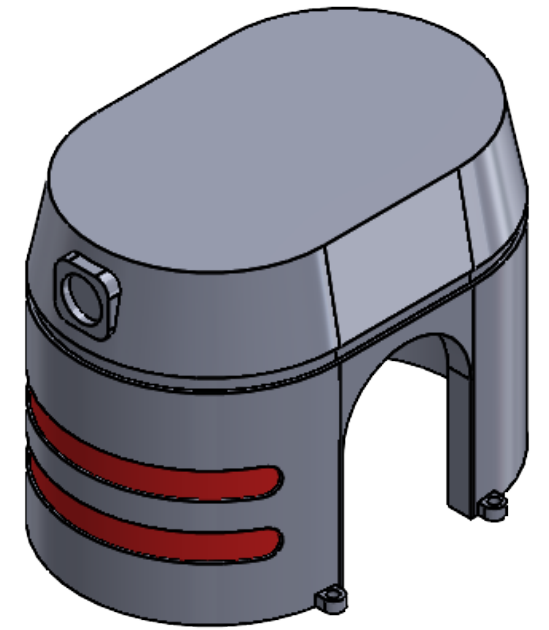
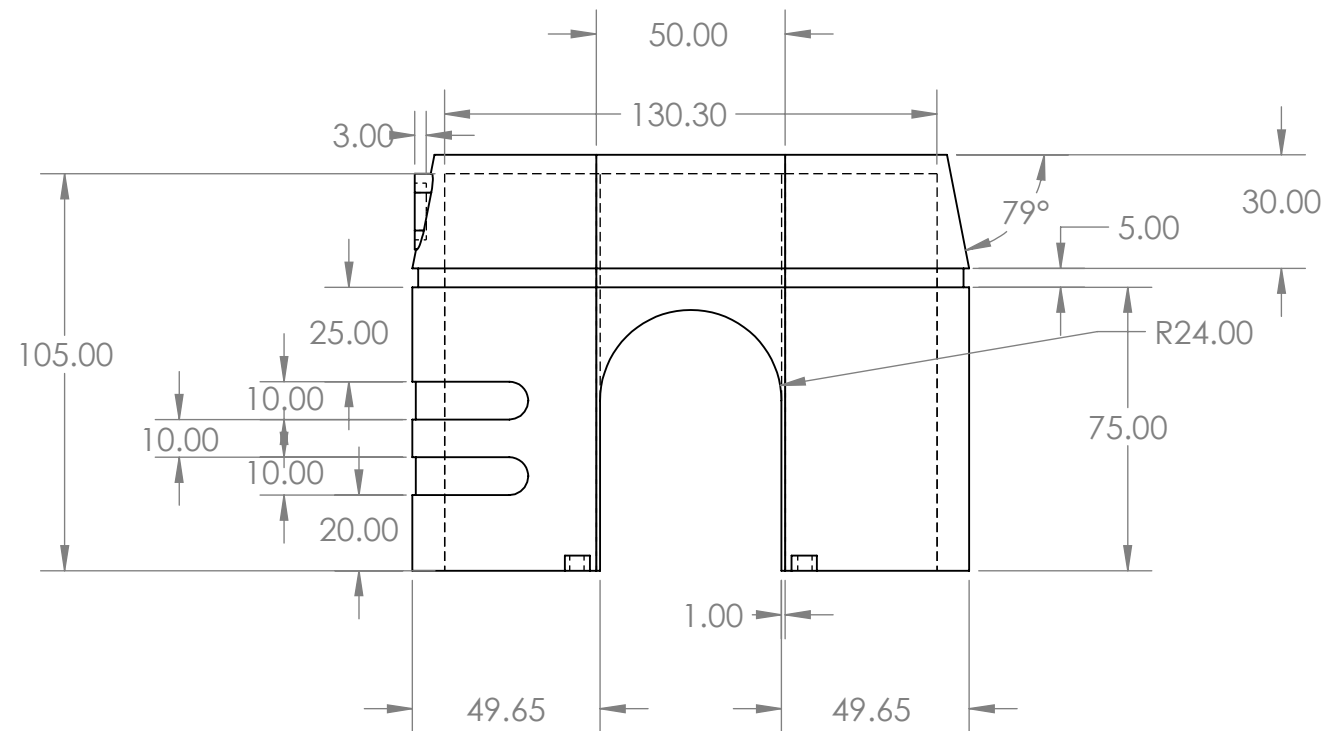
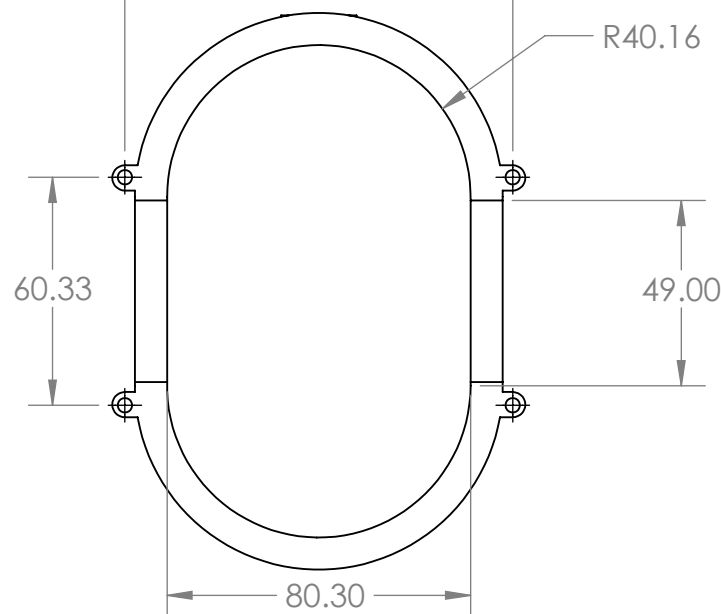
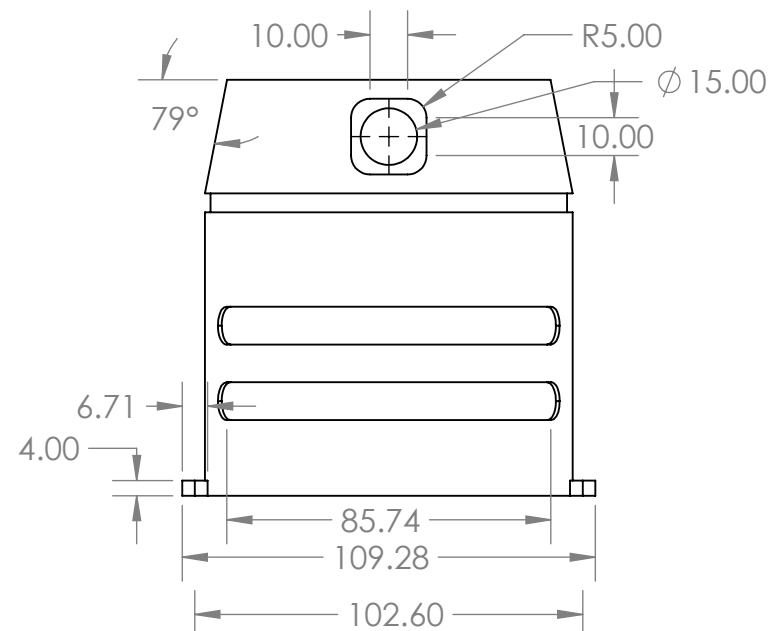
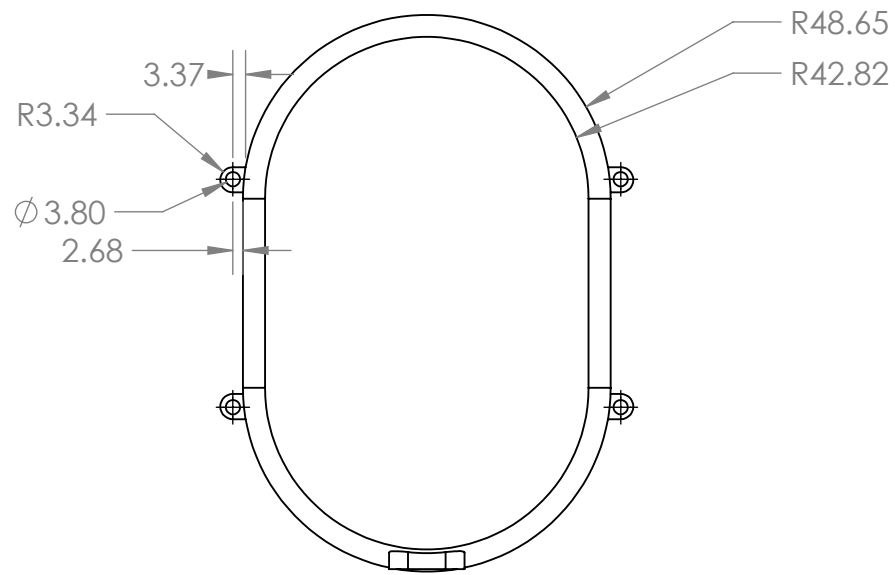
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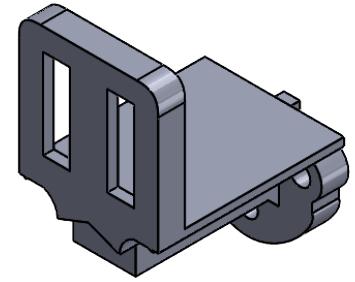
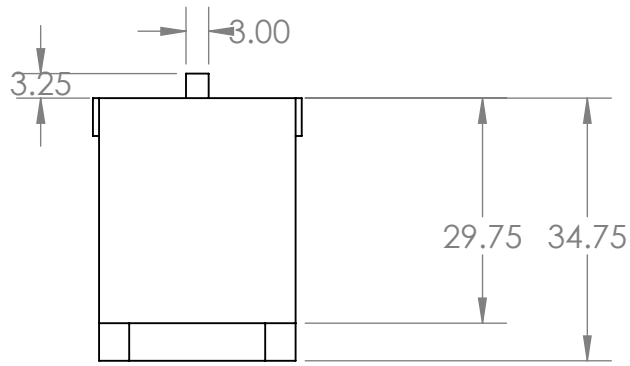
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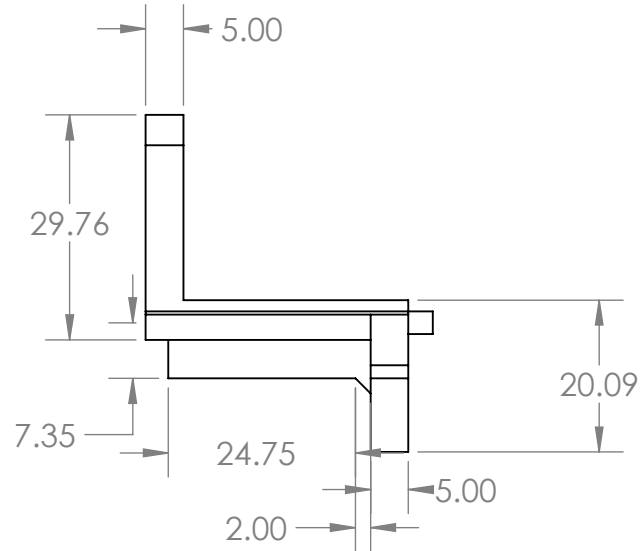
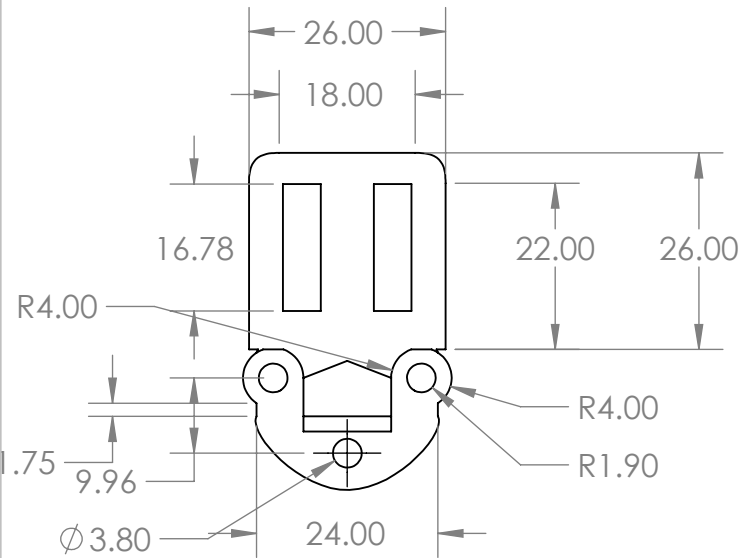
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		UNLESS OTHERWISE SPECIFIED:	NAME	DATE	TITLE: <h1>Robot 1 ShellMechanical</h1>	
		DIMENSIONS ARE IN Millimeters TOLERANCES: ± 0.2 FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±	DRAWN	CBP		4/17/26
		INTERPRET GEOMETRIC TOLERANCING PER:	CHECKED			
		MATERIAL TPU Plastic	ENG APPR.			
		FINISH	MFG APPR.			
NEXT ASSY	USED ON	DO NOT SCALE DRAWING	Q.A.		REV	
APPLICATION			COMMENTS:		SIZE DWG. NO. REV	
					B RTV_Robot_Shell_2_23_2026	
					SCALE: 1:2 WEIGHT: SHEET 1 OF 1	

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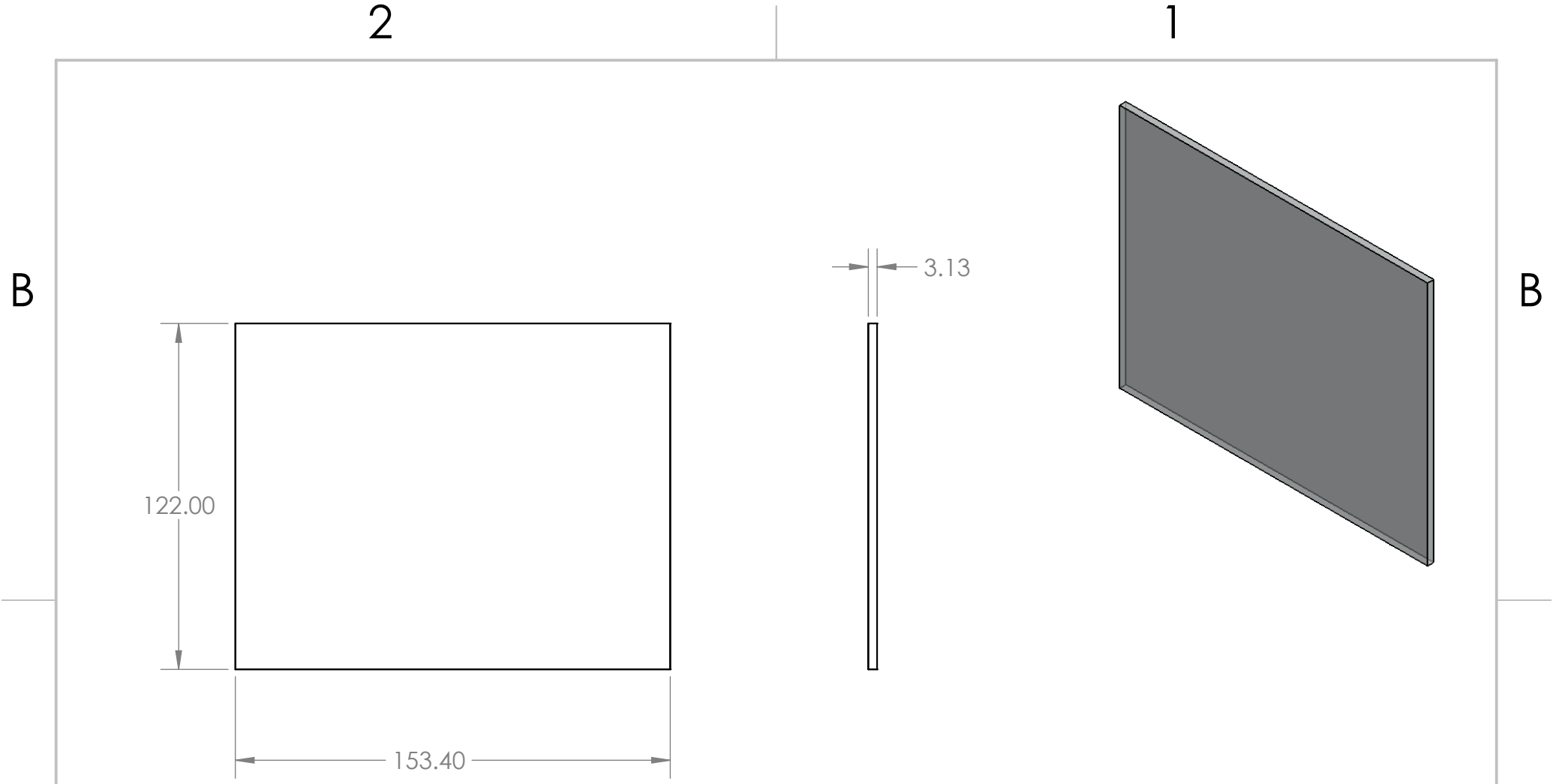
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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE: Robot 1 Magnetic Potentiometer Mount			
		DIMENSIONS ARE IN Millimeters	DRAWN	CBP	4/17/26				
		TOLERANCES: ± 0.2	CHECKED						
		FRACTIONAL ±	ENG APPR.						
		ANGULAR: MACH ± BEND ±	MFG APPR.						
		TWO PLACE DECIMAL ±	Q.A.						
		THREE PLACE DECIMAL ±	COMMENTS:						
		INTERPRET GEOMETRIC TOLERANCING PER:				SIZE	DWG. NO.	REV	
		MATERIAL				A	RTV_RTV_magnt_encdr_mount_4_3_2026		
		FINISH				SCALE: 1:1	WEIGHT:	SHEET 1 OF 1	
	NEXT ASSY	USED ON							
	APPLICATION		DO NOT SCALE DRAWING						

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		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	Acrylic		
NEXT ASSY	USED ON	FINISH			
APPLICATION		DO NOT SCALE DRAWING			

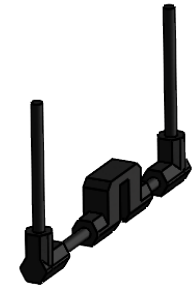
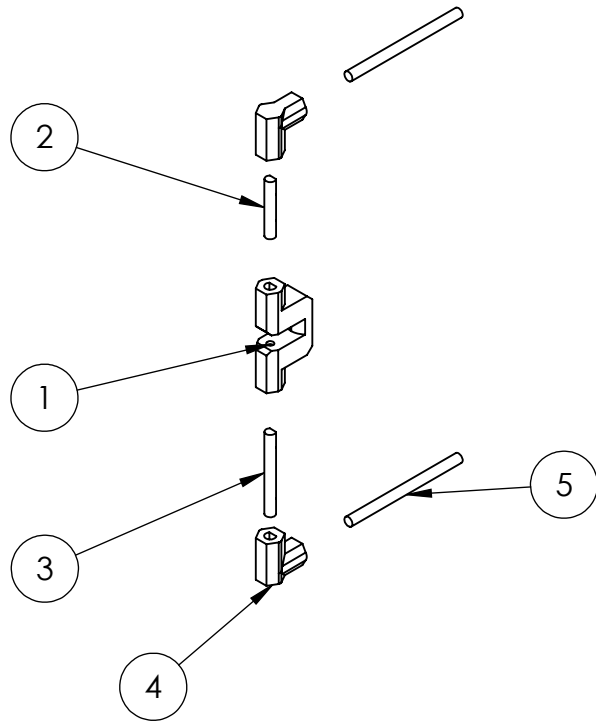
TITLE:
Robot 1 Acrylic Window

SIZE	DWG. NO.	REV
A	RTV_Acrylic_Window_Standin	
SCALE: 1:2	WEIGHT:	SHEET 1 OF 1

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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	interior_bracket_4_3_2_026	Mechanical	1
2	Pendulum_Arm_small_center_segment	Mechanical	1
3	Pendulum_Arm_large_center_segment	Mechanical	1
4	pendulum_elbow_4_3_2026	Mechanical	2
5	RTV_Pendulum_Arm_Si de_Beam	Mechanical	2

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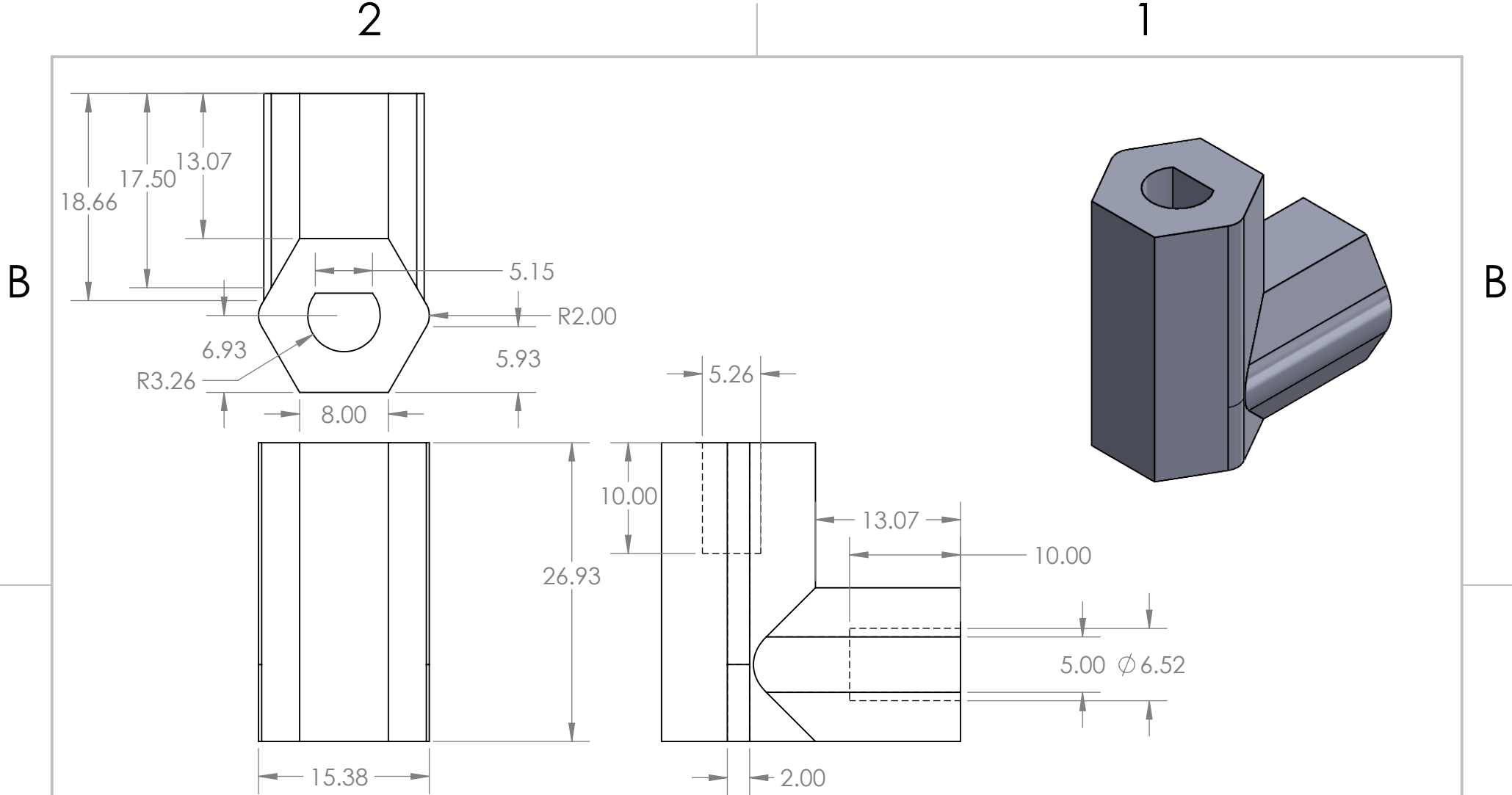
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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE	TITLE: Robot 1 Pendulum Assembly	
		DIMENSIONS ARE IN Millimeters	DRAWN	CBP	4/17/26		
		TOLERANCES: ± 0.2	CHECKED				
		FRACTIONAL \pm	ENG APPR.				
		ANGULAR: MACH \pm BEND \pm TWO PLACE DECIMAL \pm THREE PLACE DECIMAL \pm	MFG APPR.				
		INTERPRET GEOMETRIC TOLERANCING PER:	Q.A.			SIZE A	
		MATERIAL PLA Plastic, Aluminum	COMMENTS:				DWG. NO. RTV_Pendulum_Arm_Final_Sub_Assembly
		FINISH			REV		
	NEXT ASSY	USED ON				SCALE: 1:4	
	APPLICATION		DO NOT SCALE DRAWING			WEIGHT:	
						SHEET 1 OF 1	

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		TWO PLACE DECIMAL \pm	Q.A.		
		THREE PLACE DECIMAL \pm	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		PLA Plastic			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

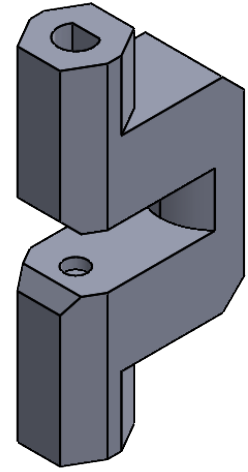
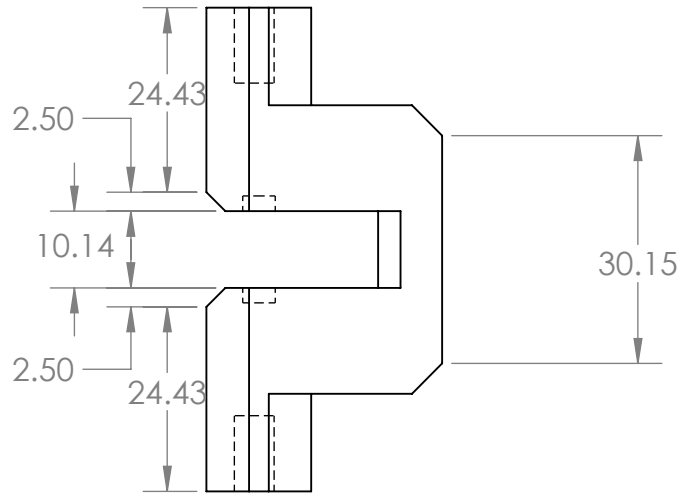
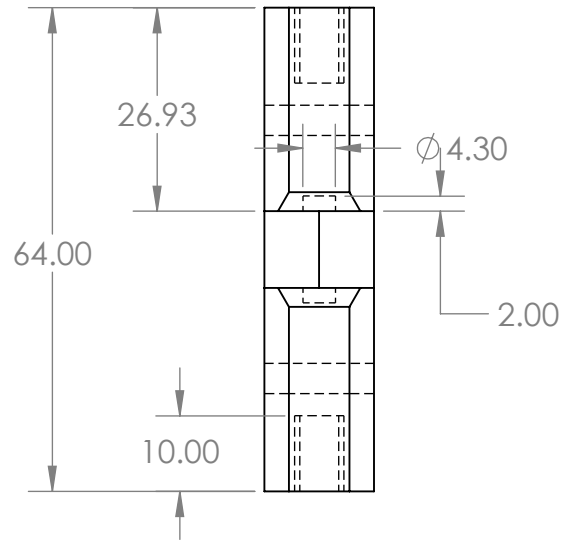
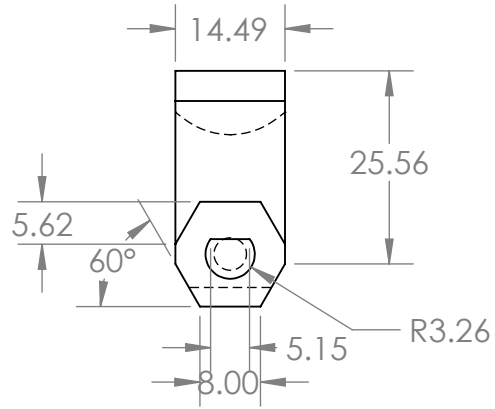
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 Robot 1 Pendulum Arm Shoulder Bracket

SIZE	DWG. NO.	REV
A	RTV_pendulum_elbow_4_3_2026	
SCALE: 2:1	WEIGHT:	SHEET 1 OF 1

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		UNLESS OTHERWISE SPECIFIED:		NAME	DATE
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		TWO PLACE DECIMAL \pm	Q.A.		
		THREE PLACE DECIMAL \pm	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		PLA Plastic			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:
Robot 1 Pendulum Interior Bracket

SIZE	DWG. NO.	REV
A	RTV_interior_bracket_4_3_2026	
SCALE: 1:1	WEIGHT:	SHEET 1 OF 1

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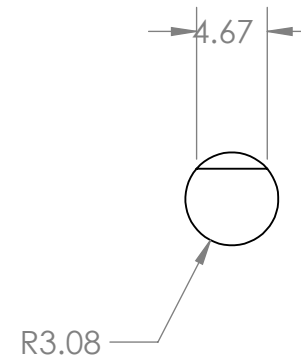
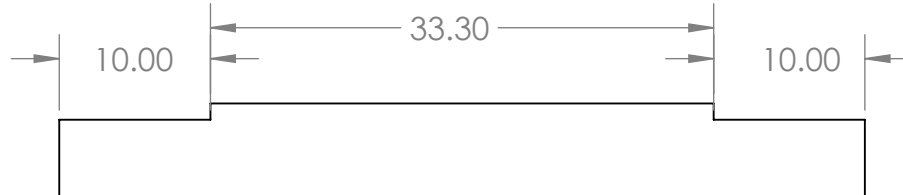
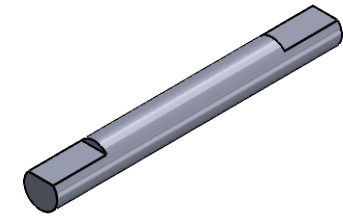
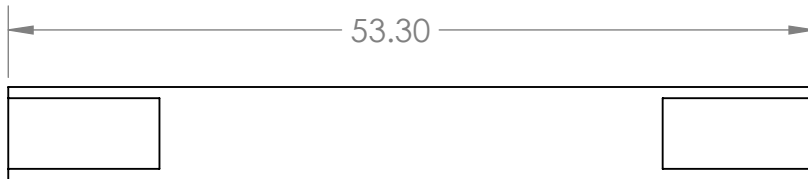
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		FRACTIONAL ±	ENG APPR.		
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		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		Aluminum			
		FINISH			
NEXT ASSY	USED ON				
	APPLICATION	DO NOT SCALE DRAWING			

TITLE:
Robot 1 Pendulum Long Interior Segment

SIZE	DWG. NO.	REV
A	RTV_Pendulum_Arm_large_center_seg ment	

SCALE: 1:1	WEIGHT:	SHEET 1 OF 1
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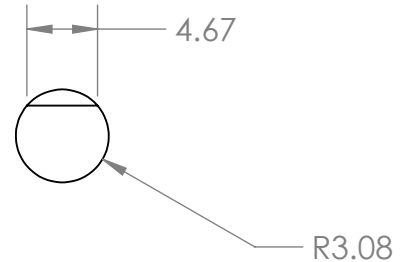
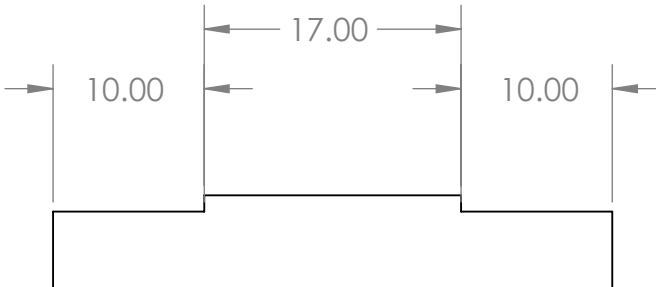
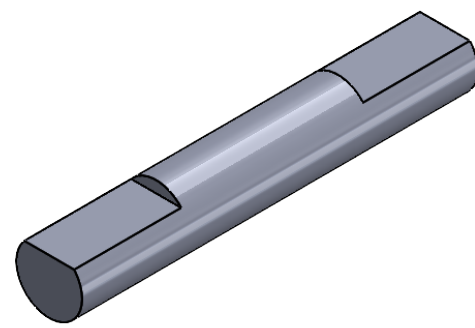
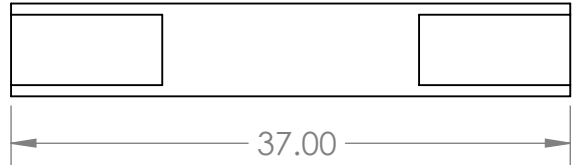
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		ANGULAR: MACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		Aluminum			
		FINISH			
NEXT ASSY	USED ON				
APPLICATION		DO NOT SCALE DRAWING			

TITLE:
Robot 1 Pendulum Small Inner Segment

SIZE	DWG. NO.	REV
A	Pendulum_Arm_small_center_segment	

SCALE: 2:1	WEIGHT:	SHEET 1 OF 1
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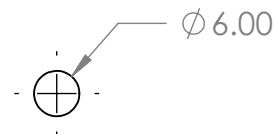
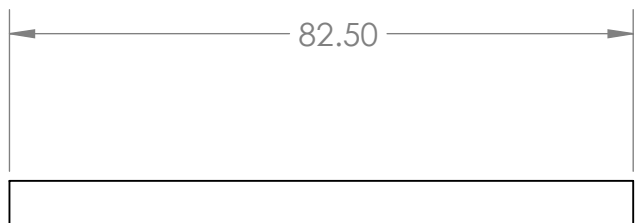
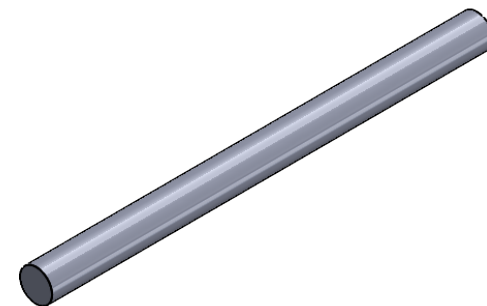
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		DIMENSIONS ARE IN Millimeters	DRAWN	CBP	4/17/26
		TOLERANCES: ±0.2	CHECKED		
		FRACTIONAL ±	ENG APPR.		
		ANGULAR: MACH ± BEND ±	MFG APPR.		
		TWO PLACE DECIMAL ±	Q.A.		
		THREE PLACE DECIMAL ±	COMMENTS:		
		INTERPRET GEOMETRIC TOLERANCING PER:			
		MATERIAL			
		Aluminum			
		FINISH			
NEXT ASSY	USED ON				
	APPLICATION	DO NOT SCALE DRAWING			

TITLE:
Robot 1 Pendulum Arm

SIZE	DWG. NO.	REV
A	RTV_Pendulum_Arm_Side_Beam	
SCALE: 1:1	WEIGHT:	SHEET 1 OF 1

2

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