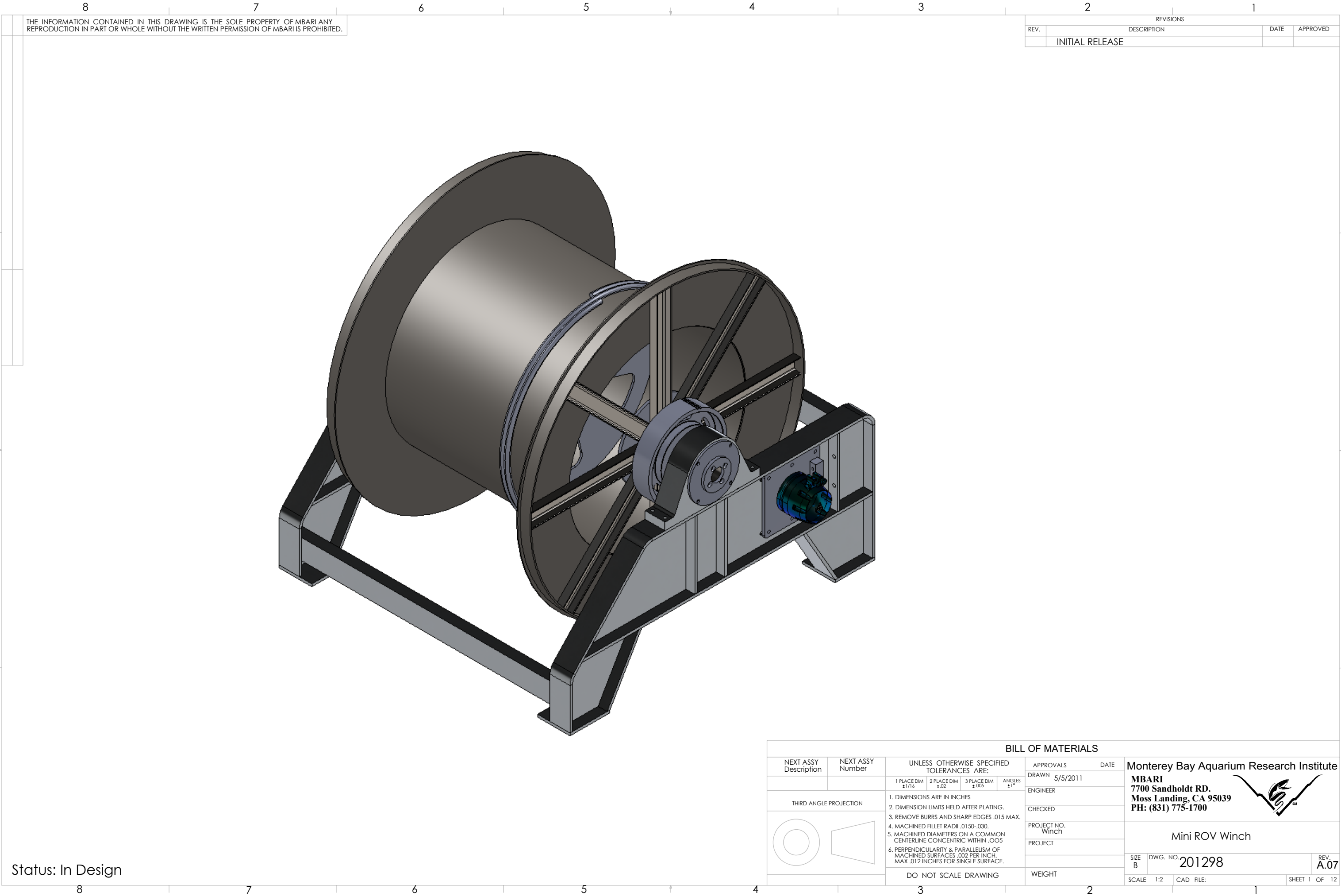
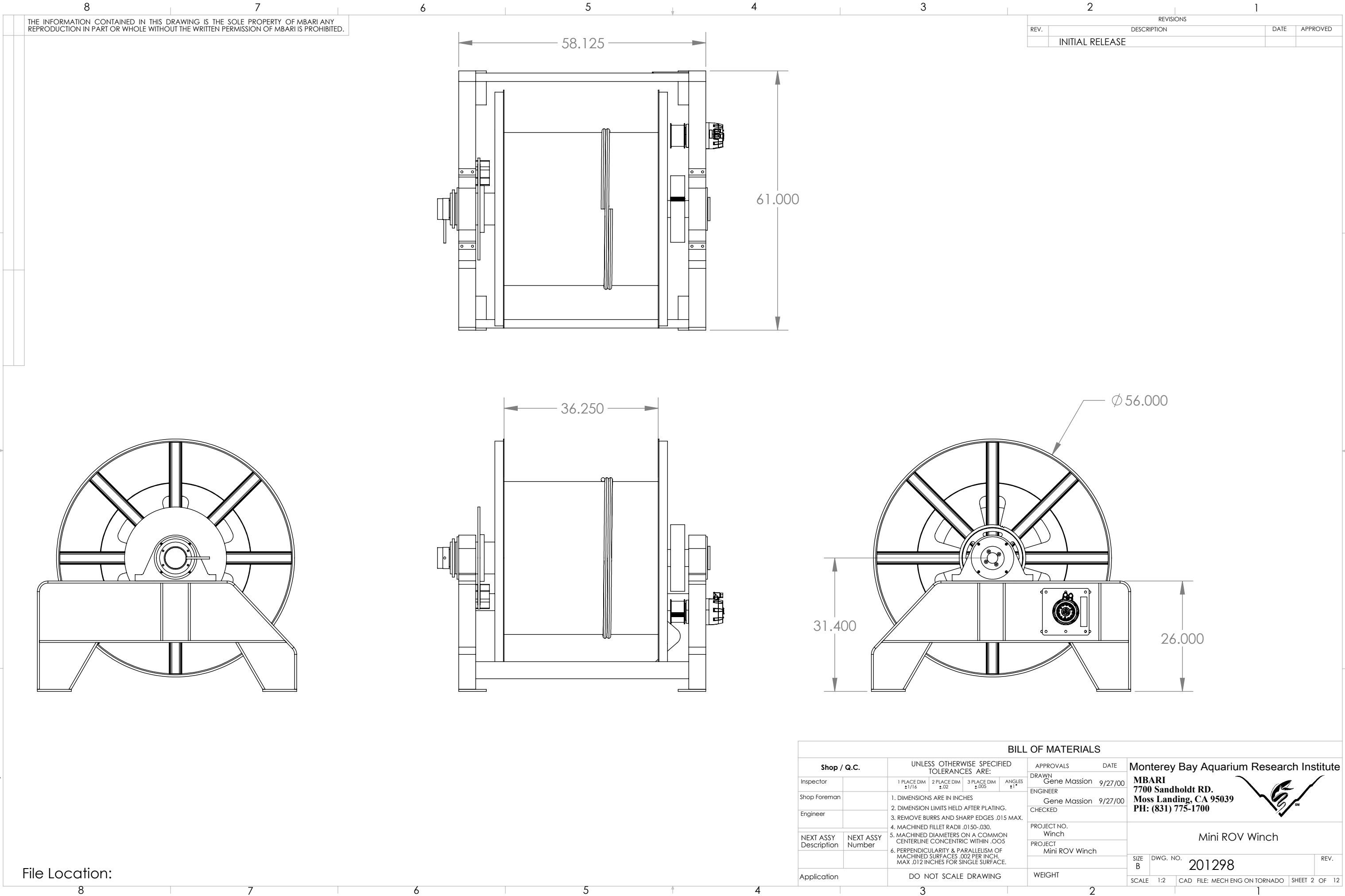
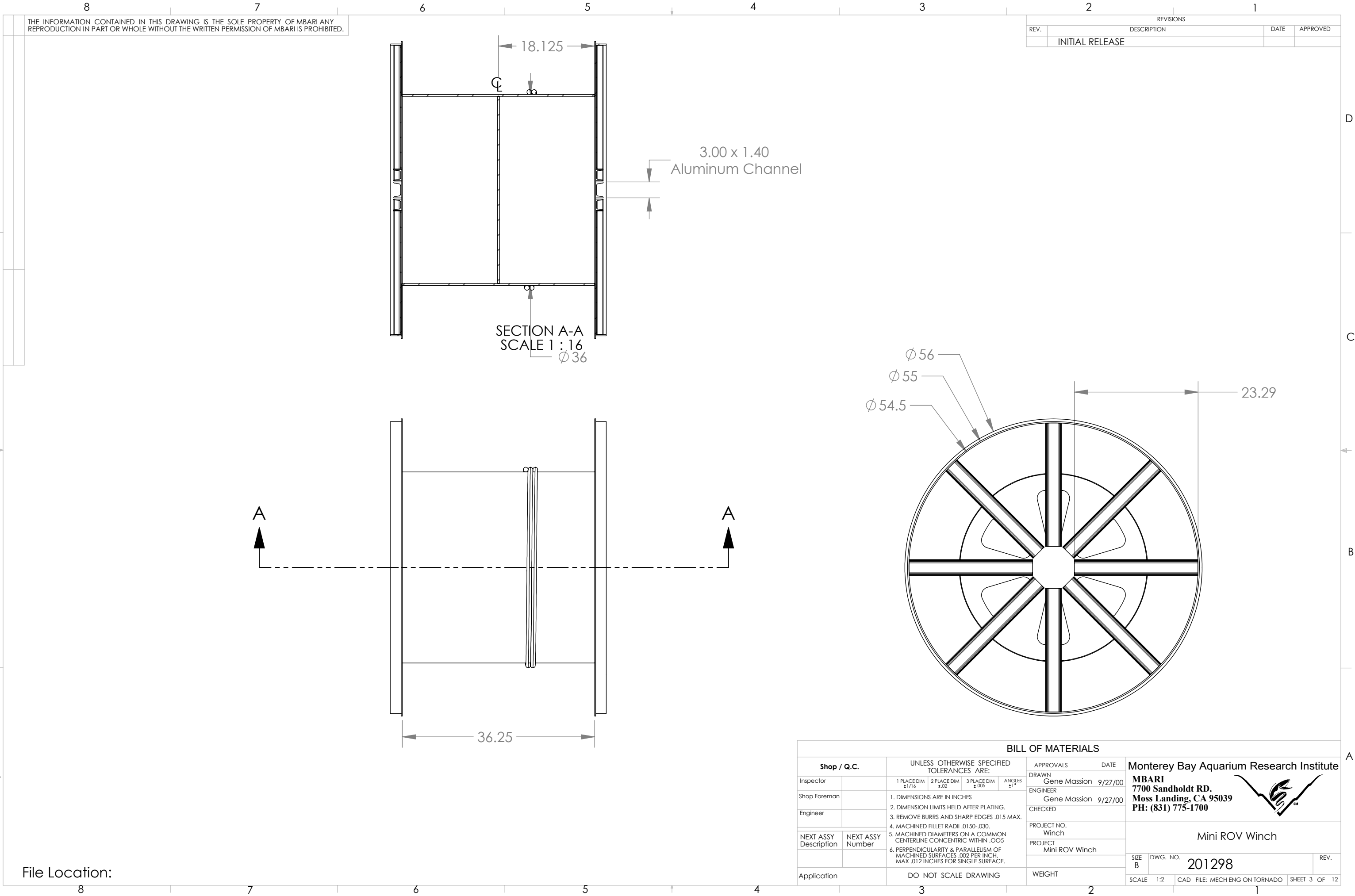


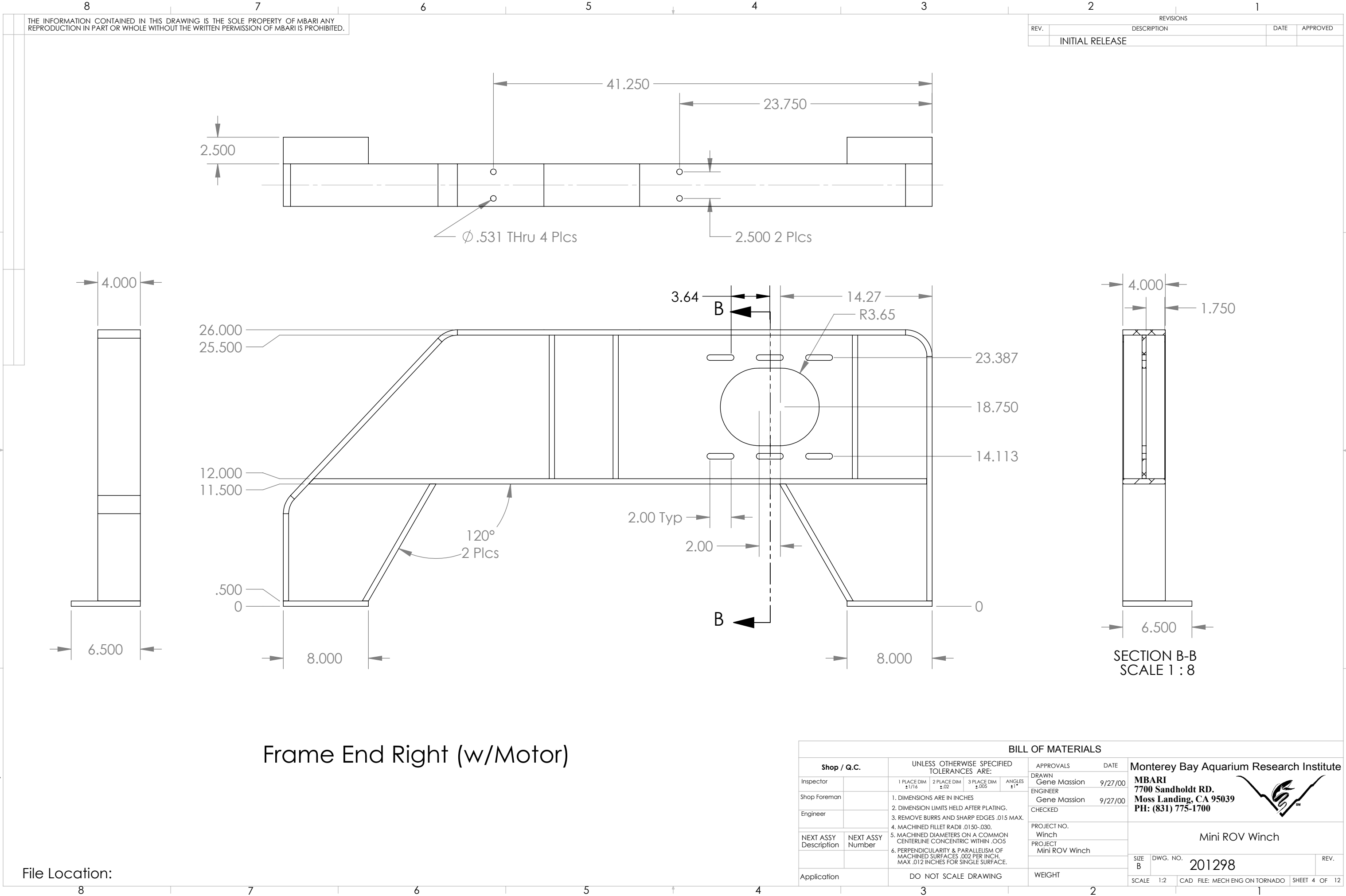


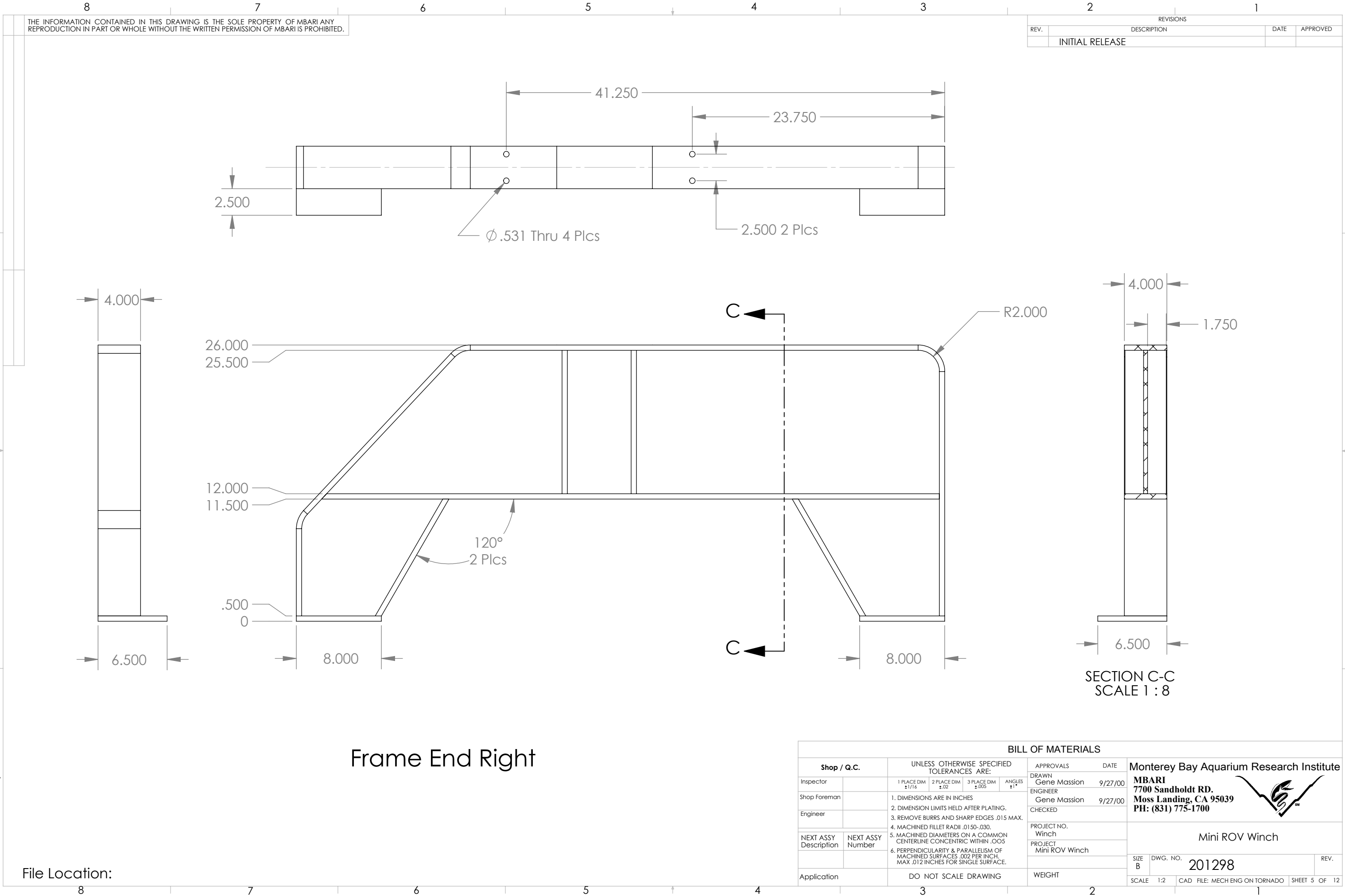


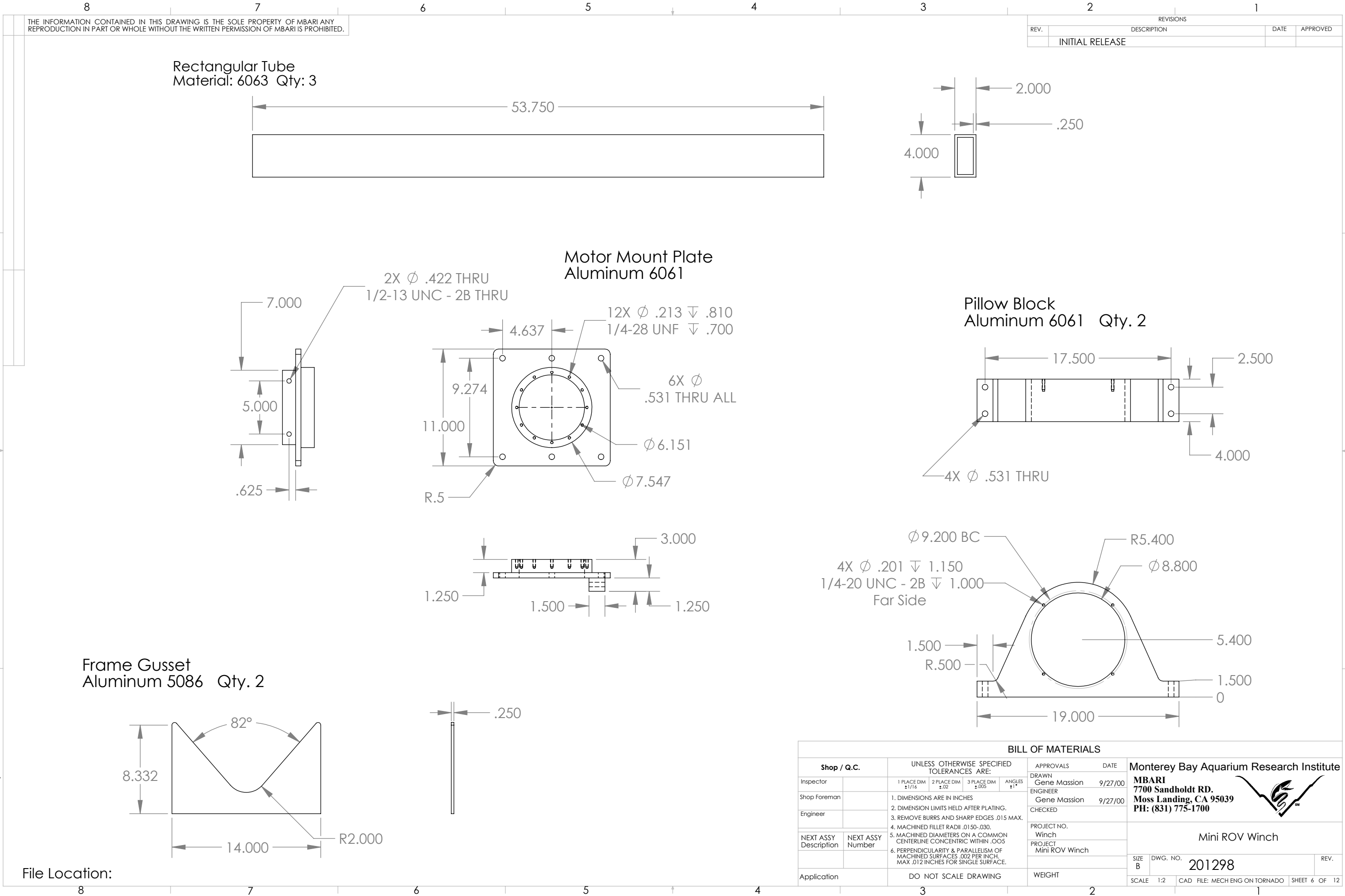
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File Location:

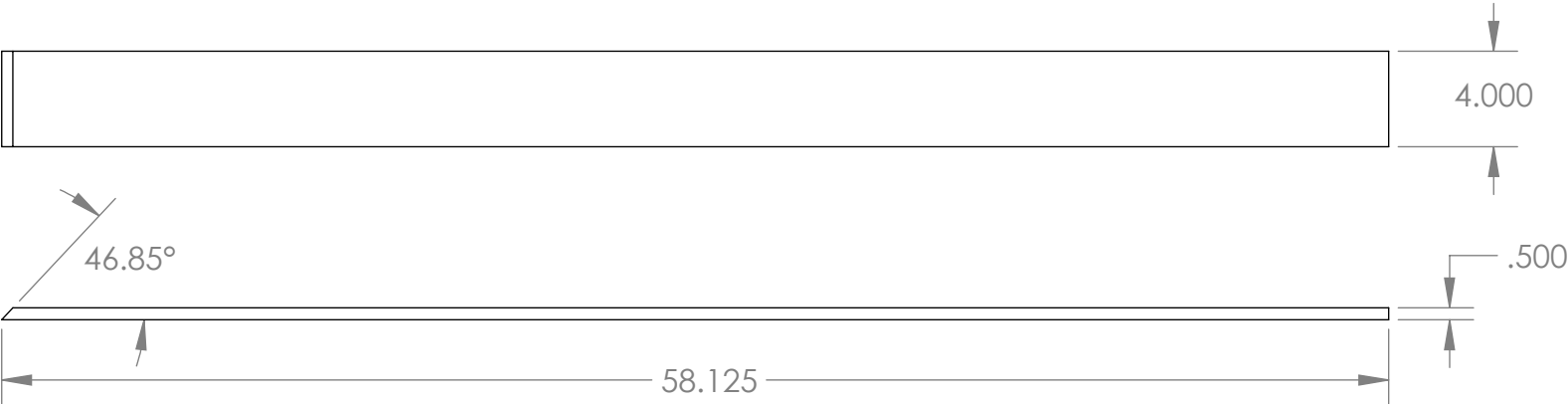
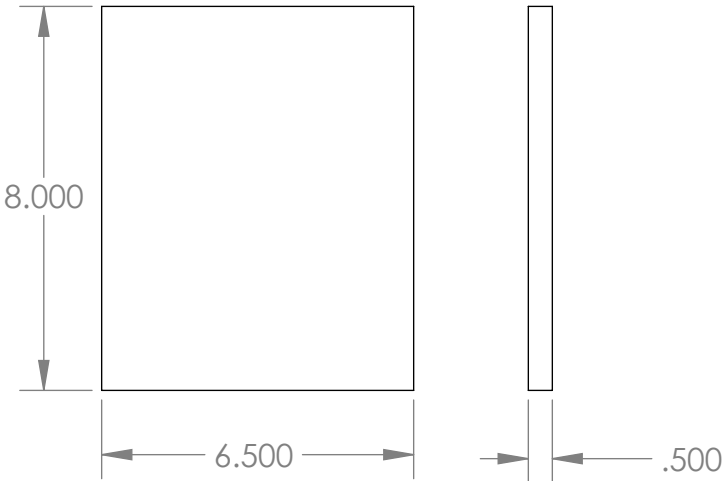




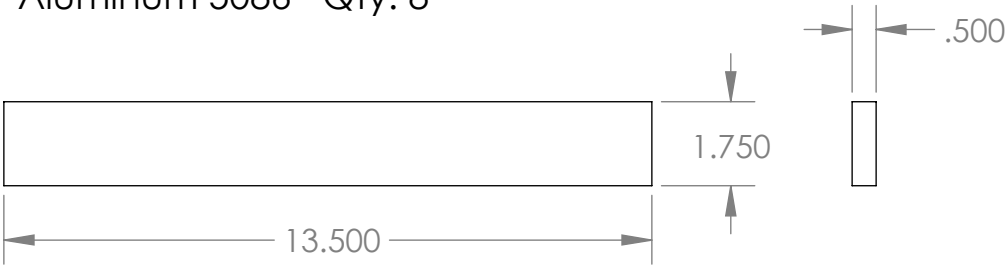
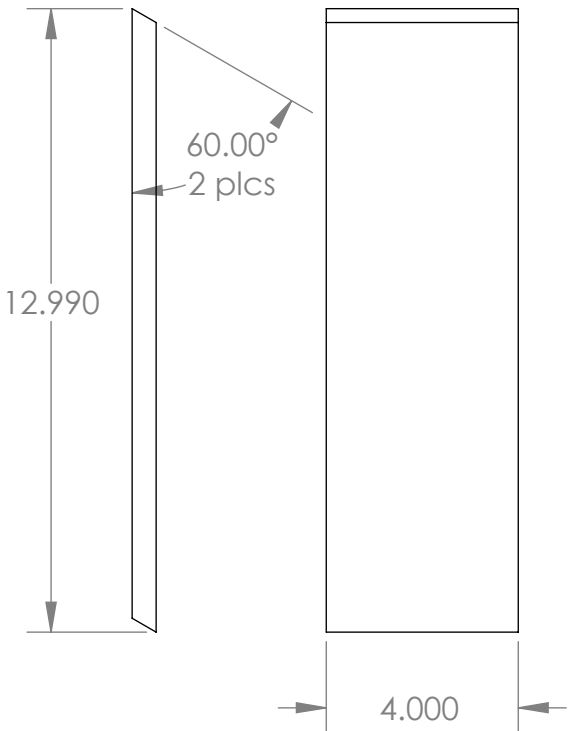


REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		

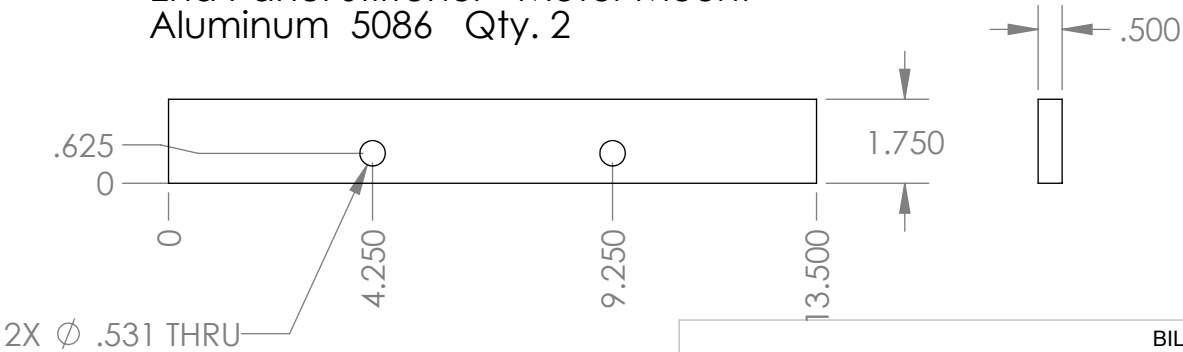
End Panel Bottom Flange
Aluminum 5086 Qty. 2



End Panel Stiffener
Aluminum 5086 Qty. 8

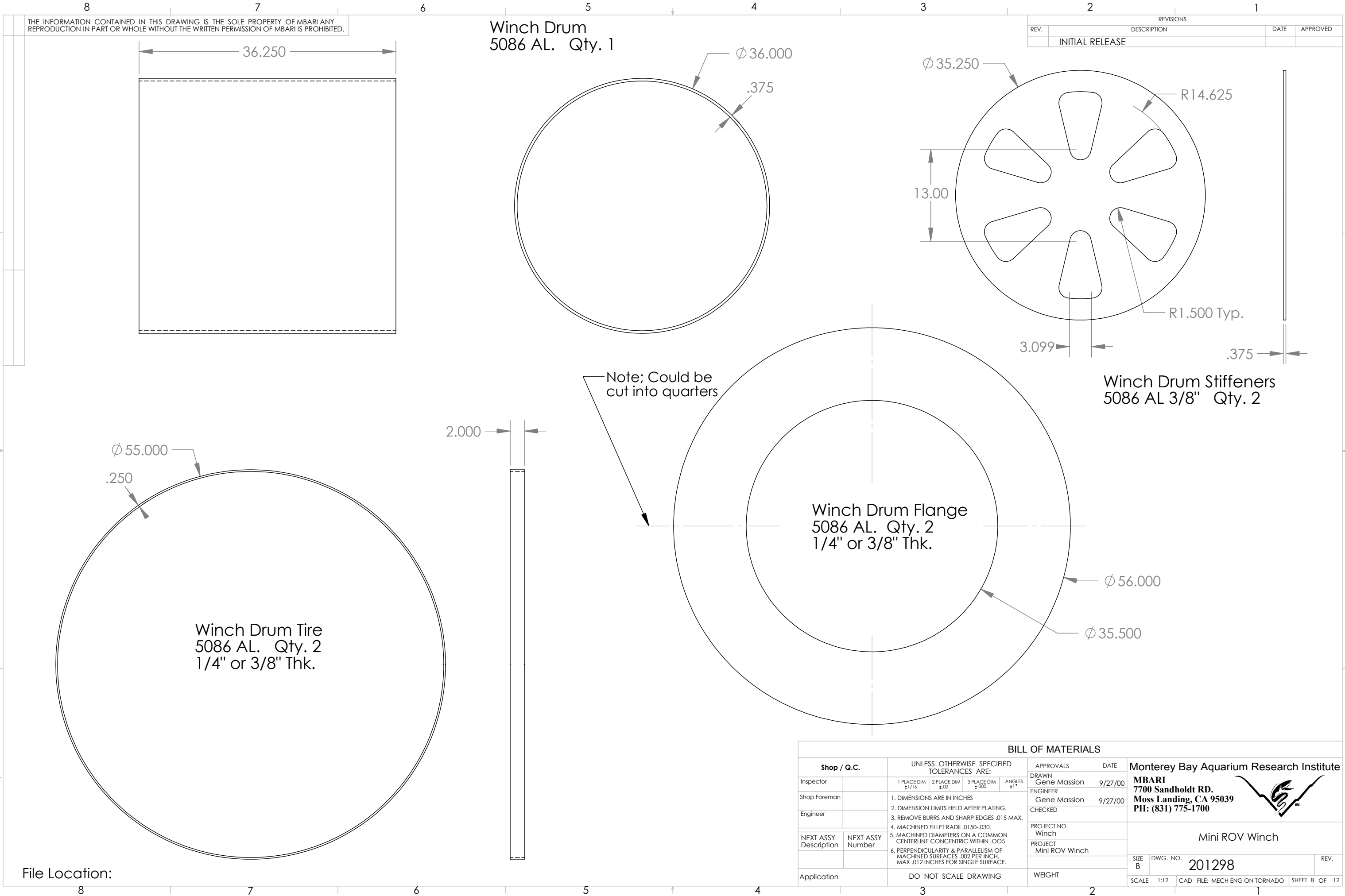


End Panel Stiffener - Motor Mount
Aluminum 5086 Qty. 2



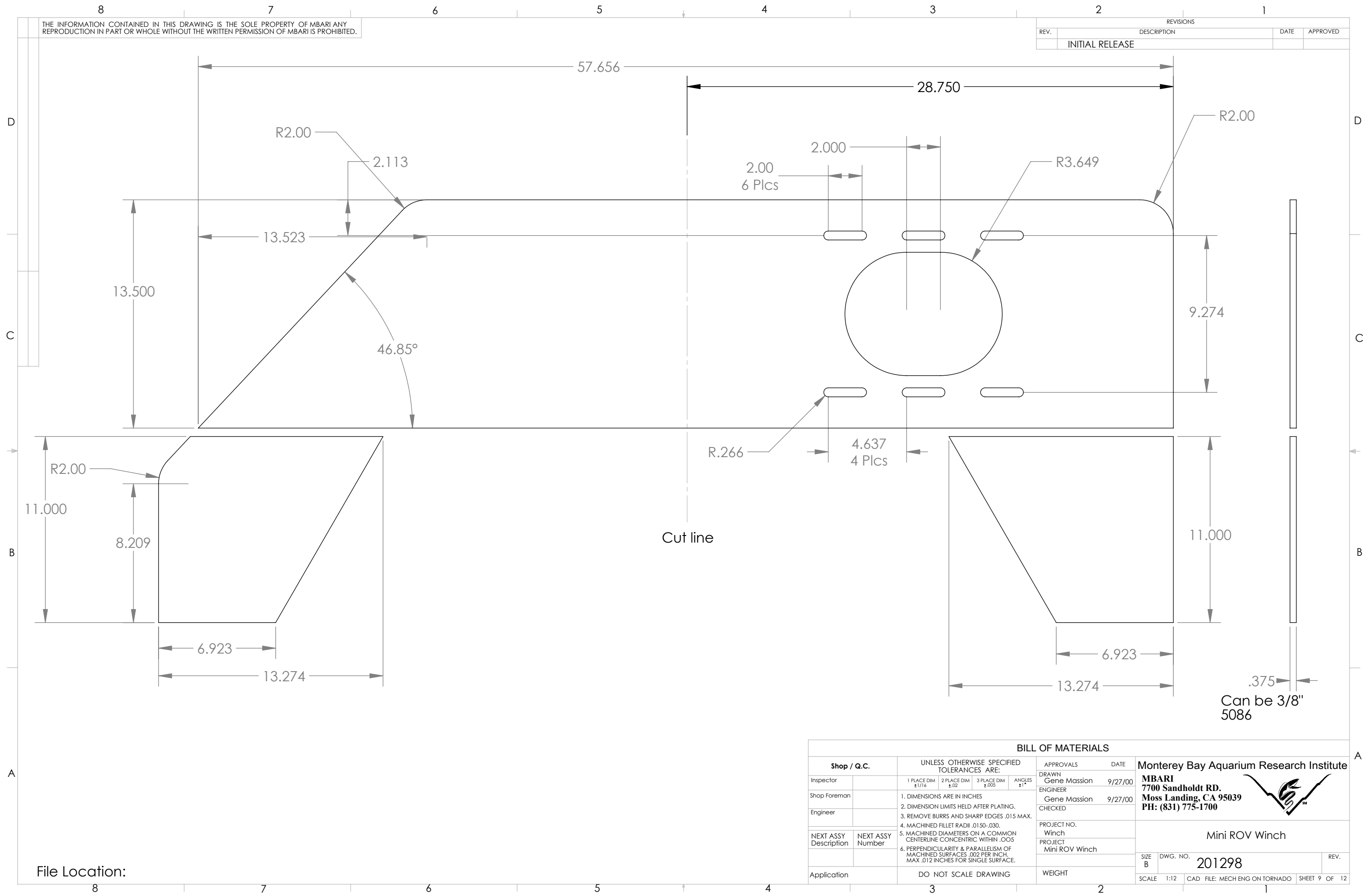
BILL OF MATERIALS											
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS		DATE		Monterey Bay Aquarium Research Institute MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700 	
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN Gene Massion	9/27/00				
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.				ENGINEER Gene Massion	9/27/00				
Engineer						CHECKED					
NEXT ASSY Description	NEXT ASSY Number					PROJECT NO. Winch		Mini ROV Winch		SIZE B DWG. NO. 201298 REV.	
						PROJECT Mini ROV Winch					
Application		DO NOT SCALE DRAWING				WEIGHT		SCALE 1:2 CAD FILE: MECH ENG ON TORNADO SHEET 7 OF 12			

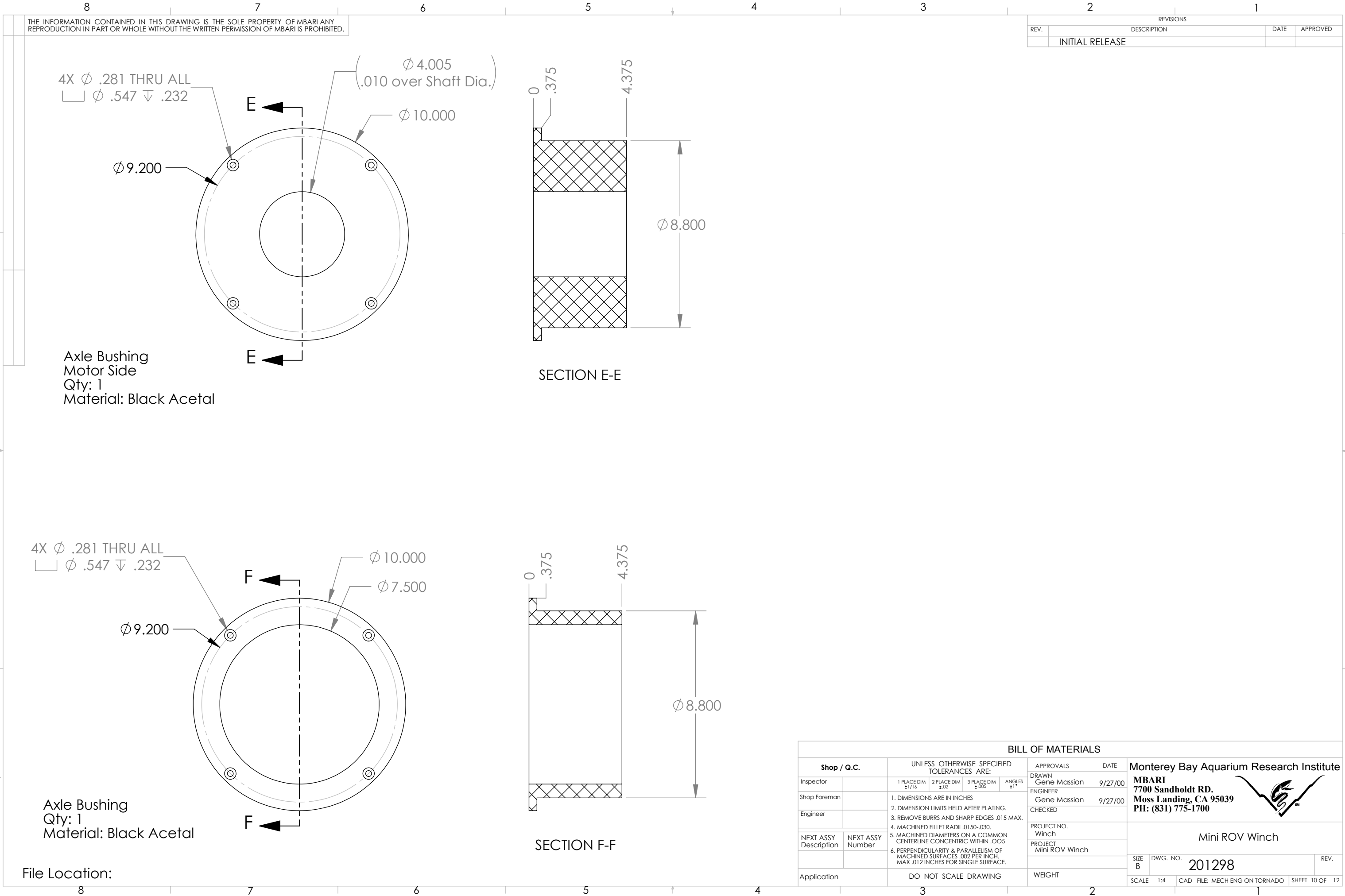
File Location:



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REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		





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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		

Axle Bushing
Motor Side
Qty: 1
Material: Black Acetal

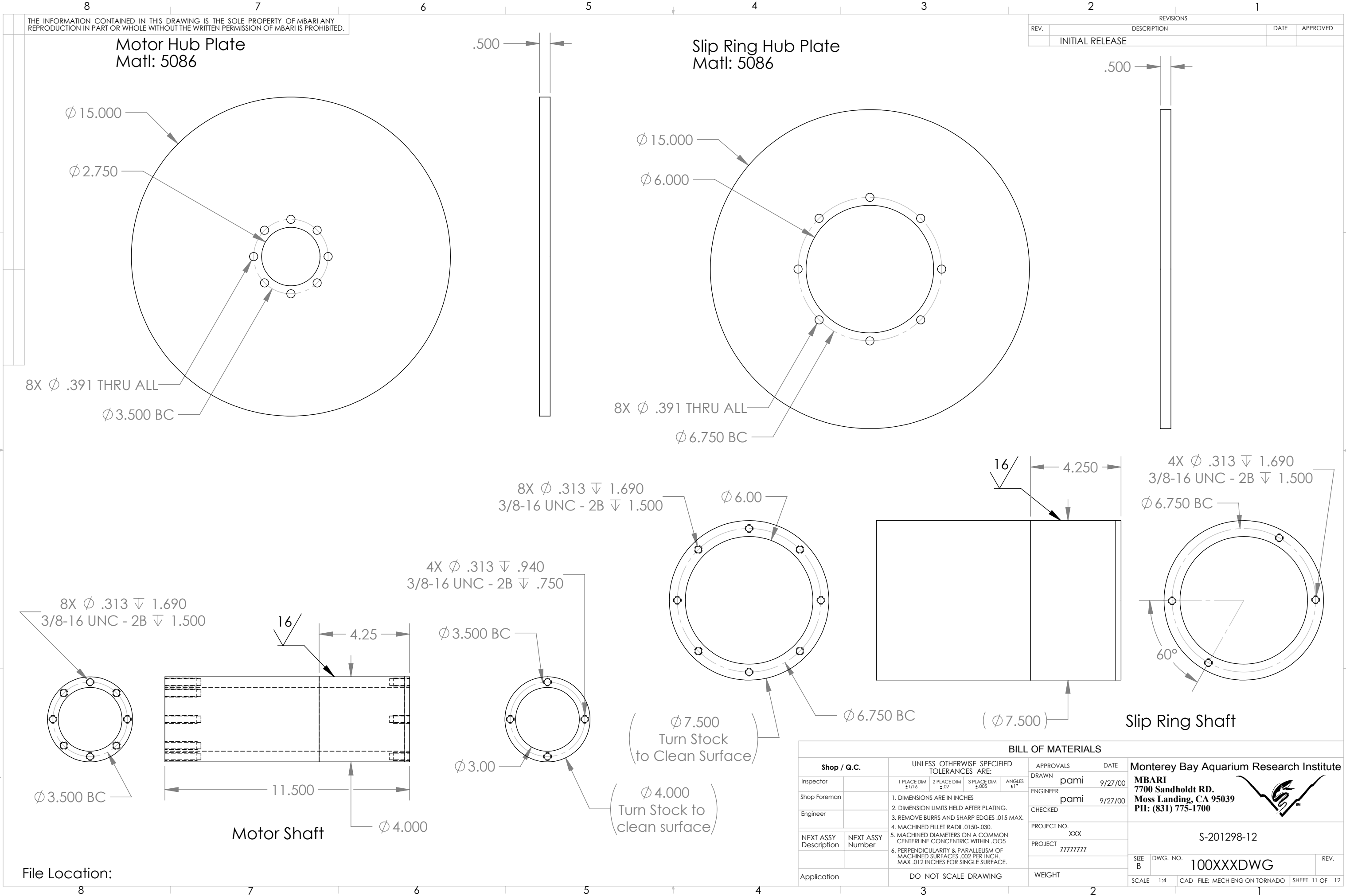
SECTION E-E

Axle Bushing
Qty: 1
Material: Black Acetal

SECTION F-F

File Location:

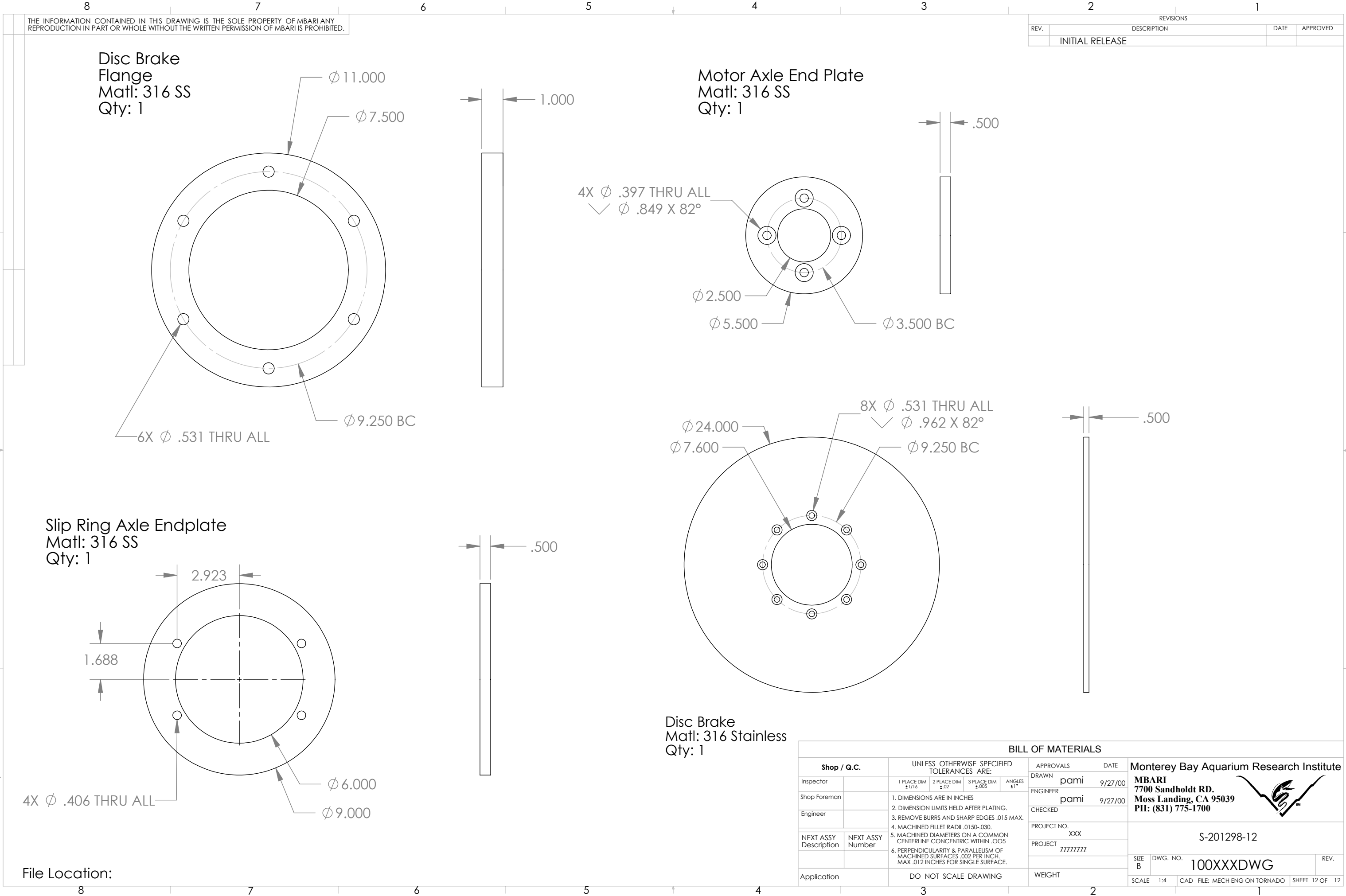
BILL OF MATERIALS									
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS	DATE	Monterey Bay Aquarium Research Institute MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700  Mini ROV Winch	
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN Gene Massion	9/27/00		
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH, MAX .012 INCHES FOR SINGLE SURFACE.				ENGINEER Gene Massion	9/27/00		
Engineer						CHECKED			
NEXT ASSY Description	NEXT ASSY Number					PROJECT NO. Winch		SIZE B	DWG. NO. 201298
						PROJECT Mini ROV Winch			REV.
Application		DO NOT SCALE DRAWING				WEIGHT		SCALE 1:4	CAD FILE: MECH ENG ON TORNADO
								SHEET 10 OF 12	



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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		

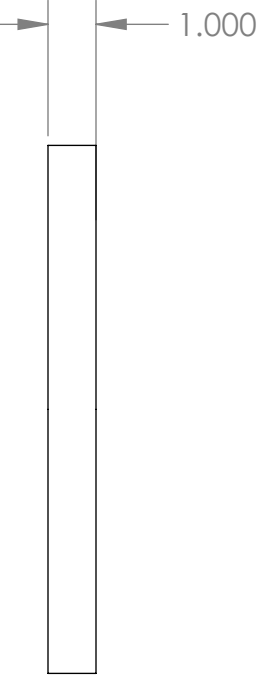
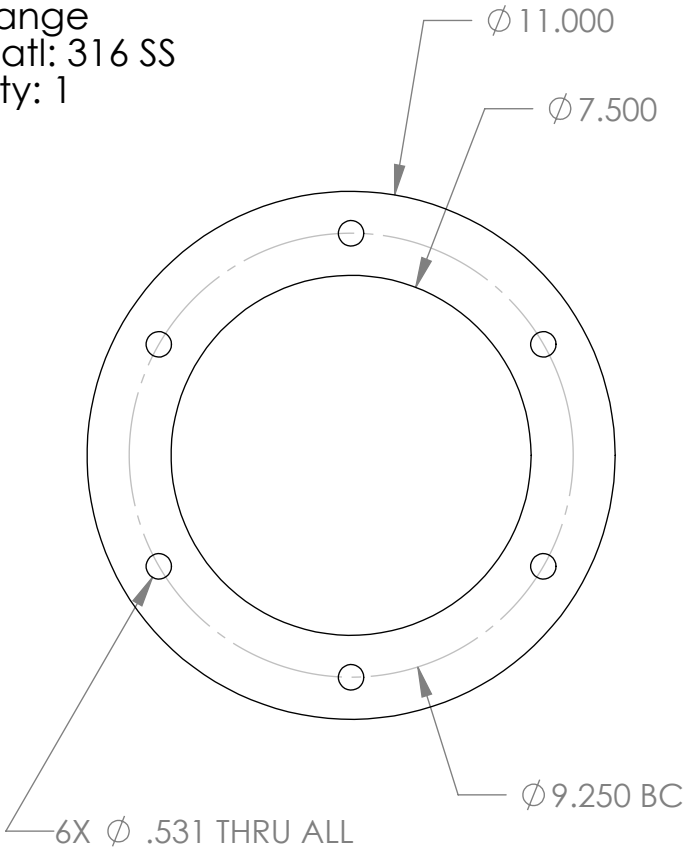
BILL OF MATERIALS												
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS		DATE		Monterey Bay Aquarium Research Institute		
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN	pami	9/27/00				
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX. .012 INCHES FOR SINGLE SURFACE.				ENGINEER	pami	9/27/00	MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700			
Engineer						PROJECT NO.	XXX					
NEXT ASSY Description	NEXT ASSY Number					PROJECT	ZZZZZZZZ			S-201298-12		
Application		DO NOT SCALE DRAWING				WEIGHT		SIZE B	DWG. NO.	100XXXDWG		REV.
								SCALE	1:4	CAD FILE: MECH ENG ON TORNADO	SHEET 11 OF 12	



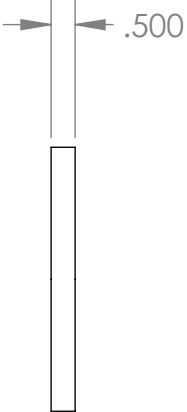
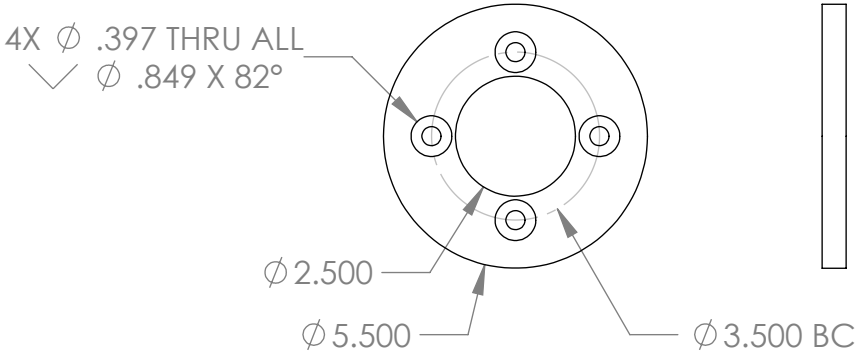
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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE		

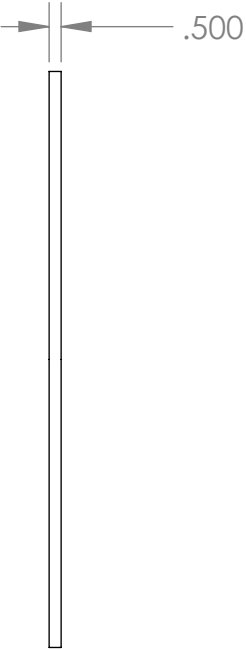
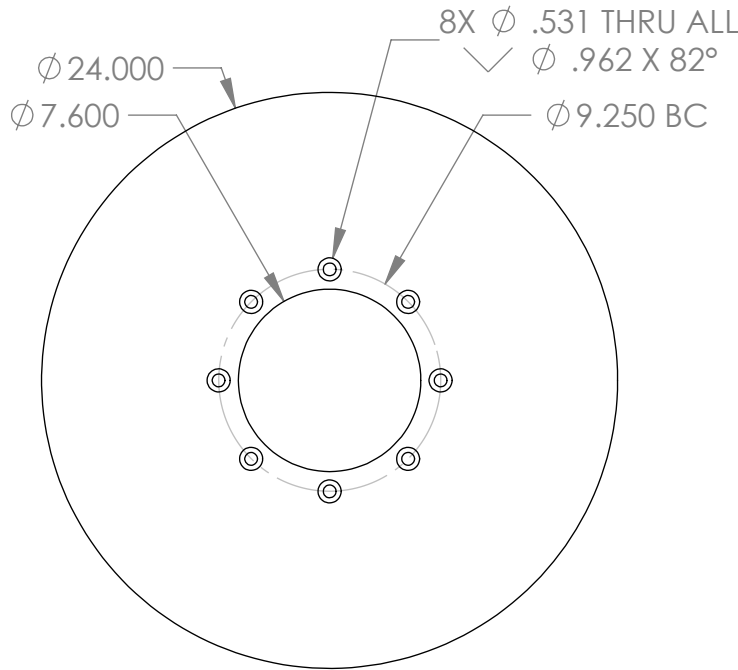
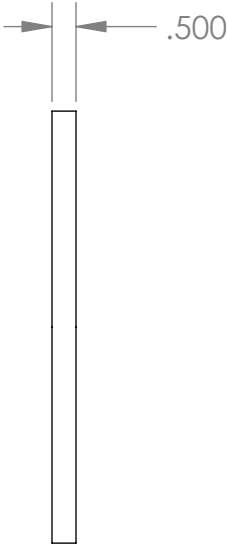
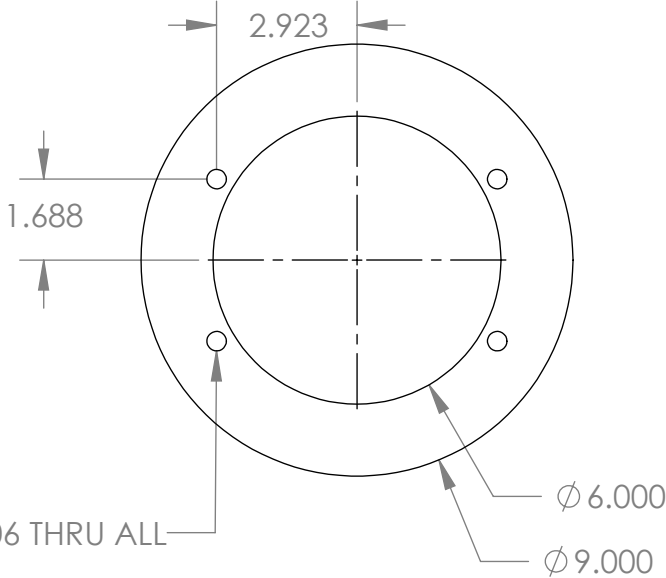
Disc Brake
Flange
Matl: 316 SS
Qty: 1



Motor Axle End Plate
Matl: 316 SS
Qty: 1



Slip Ring Axle Endplate
Matl: 316 SS
Qty: 1



Disc Brake
Matl: 316 Stainless
Qty: 1

BILL OF MATERIALS									
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS	DATE	Monterey Bay Aquarium Research Institute MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700	
Inspector		1 PLACE DIM $\pm 1/16$	2 PLACE DIM $\pm .02$	3 PLACE DIM $\pm .005$	ANGLES $\pm 1^\circ$	DRAWN	pami 9/27/00		
Shop Foreman		1. DIMENSIONS ARE IN INCHES 2. DIMENSION LIMITS HELD AFTER PLATING. 3. REMOVE BURRS AND SHARP EDGES .015 MAX. 4. MACHINED FILLET RADII .0150-.030. 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005 6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .002 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.				ENGINEER	pami 9/27/00		
Engineer						CHECKED			
NEXT ASSY Description	NEXT ASSY Number					PROJECT NO.	XXX	S-201298-12	
						PROJECT	ZZZZZZZZ		
Application		DO NOT SCALE DRAWING				WEIGHT		SIZE B	DWG. NO. 100XXXDWG
								SCALE 1:4	CAD FILE: MECH ENG ON TORNADO
								SHEET 12 OF 12	