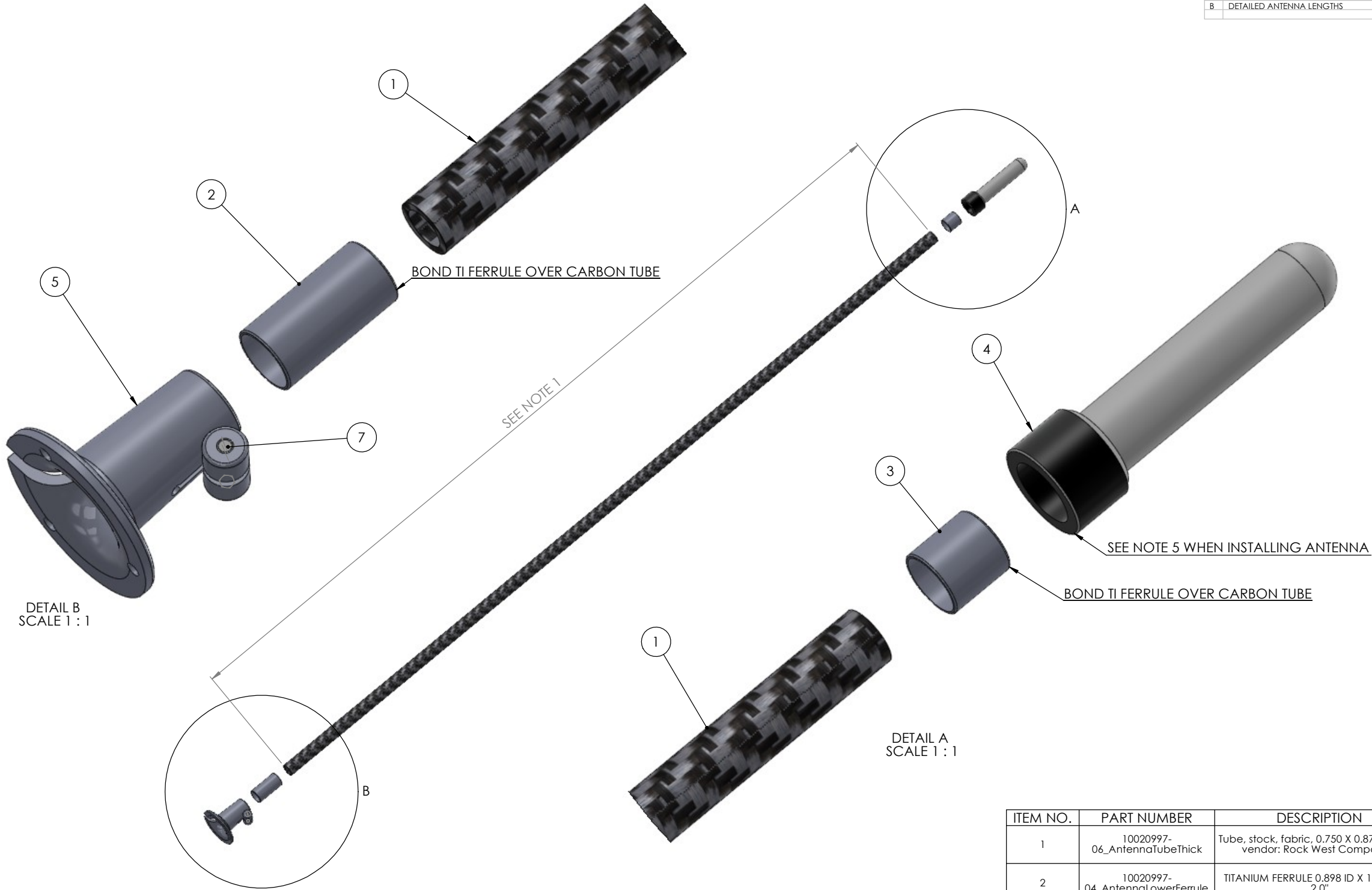


REV. I		DESCRIPTION	DATE	APPROVED
A		INITIAL RELEASE	2013	
B		DETAILED ANTENNA LENGTHS	04/25/17	



NOTES:

1. ANTENNA TUBES ARE THE FOLLOWING LENGTHS: Iridium 20", CELL MODEM 39", WIFI 59". CUT CARBON TUBE TO LENGTH BEFORE BONDING.
2. BOND TITANIUM FERRULES OVER CARBON TUBE USING MANUFACTURERS RECOMMENDED PROCEDURE.
3. BOND GAP SHOULD BE 0.010 - 0.020 INCHES.
4. USE LOCTITE HYSOL PN 9430 OR 3M DP 460 TWO PART EPOXY MIXED TO MANUFACTURERS SPECIFICATIONS.
5. RADIO ANTENNA FROM ANTCOM WILL BE PN 3D0.90-0.93-P-XPTB-2-U900 MHZ FOR FREEWAVE, PN 3D0.88-1.99-P-XPTB-2-U FOR VERIZON EVDO CELLULAR MODEM, OR PN 3D2.41-2.46-P-XPTB-2-U FOR 802.11 WIFI MODEM.
6. AFTER MATING ANTENNA CONNECTORS, BACKFILL ANTENNA BASE WITH RE-ENTERABLE POTTING COMPOUND SUCH AS 2123 3M™ SCOTCHCAST TO SEAL CONNECTOR WHEN INSTALLING ANTENNA & CABLE ON TUBE.

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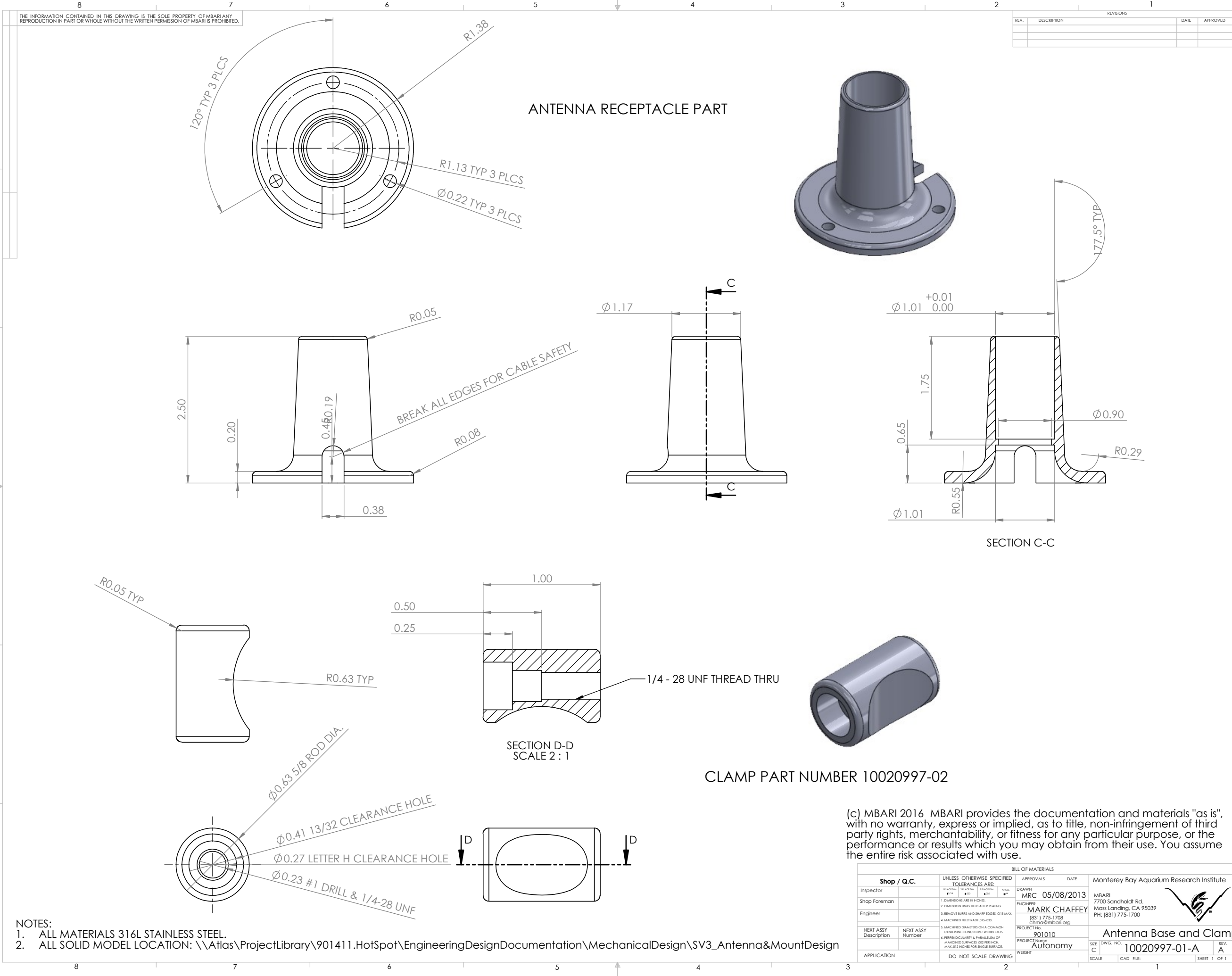
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ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	10020997-06_AntennaTubeThick	Tube, stock, fabric, 0.750 X 0.878 X 72 in., vendor: Rock West Composites	1
2	10020997-04_AntennaLowerFerrule	TITANIUM FERRULE 0.898 ID X 1.00 OD X 2.0"	1
3	10020997-05_AntennaUpperFerrule	TITANIUM FERRULE 0.898 ID X 1.00 OD X 1.0"	1
4	10020997-08_Antcom3DX-X-P-XPTB-2-UAntenna	ANTCOM ANTENNA IN CUSTOM WATER EMERSION TOLERANT CONFIGURATION.	1
5	10020997-01_AntennaBase	316L SST ANTENNA BASE ASSEMBLY.	1
6	10020997-02_AntennaBase_Clamp	PART OF ANTENNA BASE ASSEMBLY	1
7	92185A561	1/4 - 28 X 3/4 ALLEN HEAD CAP SCREW 316 SST	1

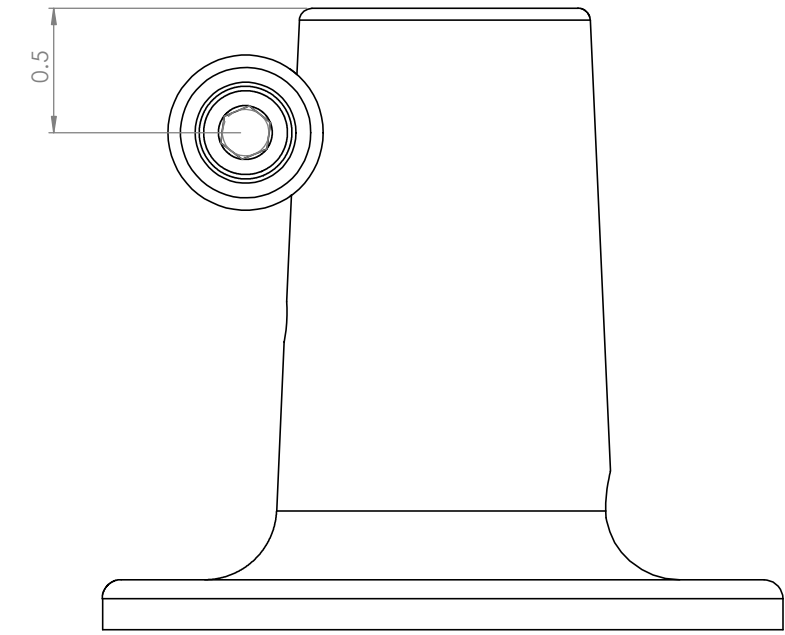
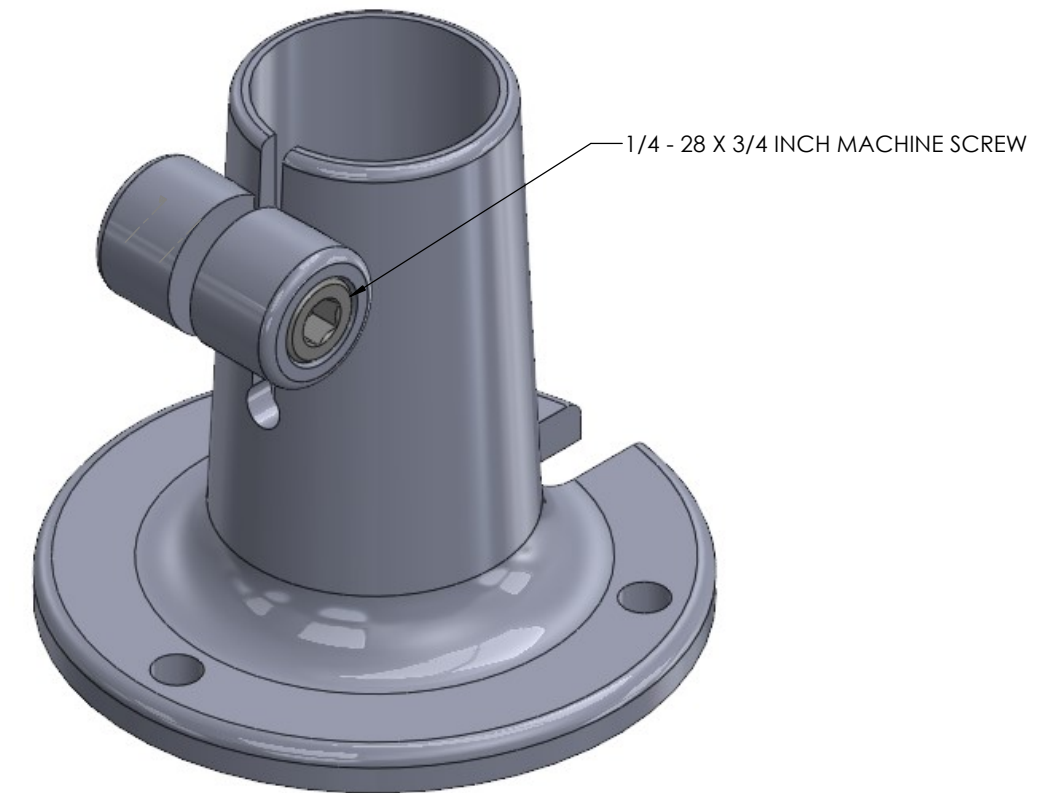
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS		DATE		Monterey Bay Aquarium Research Institute	
Inspector		FRACTIONS	DECIMALS	DRAWN	MRC	05/11/2013		MBARI	
Shop Foreman		ANGLES		ENGINEER	MARK CHAFFEY			7700 Sandholdt Rd.	
Engineer		1. DIMENSIONS ARE IN INCHES.						Mass Landing, CA 95039	
		2. DIMENSION LINES HELD AFTER PLATING.						Ph: (831) 775-1708	
		3. REMOVE BURRS AND SHARP EDGES 0.15 MAX.						CHINA@HYDQIL.ORG	
		4. MACHINED FILLER RADI 0.15-0.30.							
		5. MACHINED DIAMETERS ON A COMMON CENTERLINE COINCIDING WITH AXIS OF PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES 0.01 PER INCH. MAX 0.15 INCHES FOR SINGLE SURFACE.							
NEXT ASSY Description	NEXT ASSY Number	PROJECT NO. 901010		PROJECT NAME Autonomy		SIZE DWG. NO. C 10020997-ASM-B		REV. B	
APPLICATION		DO NOT SCALE DRAWING		WEIGHT		SCALE		CAD. FILE:	



NOTES:
1. ALL MATERIALS 316L STAINLESS STEEL.
2. ALL SOLID MODEL LOCATION: \\Atlas\ProjectLibrary\901411.HotSpot\EngineeringDesignDocumentation\MechanicalDesign\SV3_Antenna&MountDesign

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Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS		DATE		Monterey Bay Aquarium Research Institute	
Inspector		FRACTION	DECIMAL	DRAWN	MRC	05/08/2013		MBARI	
Shop Foreman		1/16	.005	ENGINEER	MARK CHAFFEY			7700 Sandholdt Rd.	
Engineer		1/32	.010					Mass Landing, CA 95039	
		1/64	.002					Ph: (831) 775-1700	
		1/128	.001					CHM@MBARI.org	
NEXT ASSY Description	NEXT ASSY Number	5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCENTRIC WITHIN .005		PROJECT NO.		901010		Antenna Base and Clamp	
		6. PERPENDICULARITY & PARALLELISM OF MACHINED SURFACES .005 PER INCH. MAX .015 INCHES FOR SINGLE SURFACE.		PROJECT NAME		Autonomy		SIZE	DWG. NO.
				WEIGHT				C	10020997-01-A
APPLICATION		DO NOT SCALE DRAWING						SCALE	CAD. FILE:
									SHEET 1 OF 1



Shop / Q.C. Inspector Shop Foreman Engineer		BILL OF MATERIALS APPROVALS DATE MRC 05/08/2013				Monterey Bay Aquarium Research Institute MBARI 7600 Sandhold Rd. Moss Landing, CA 95039 PH: (831) 775-1700				
		TOLERANCES ARE: UNLESS OTHERWISE SPECIFIED FINISH DIMS. DIMS. DIMS. DIMS. #14 #50 #50 #14				DRAWN ENGINEER MARK CHAFFEY (831) 775-1708 chm@mbair.org				
NEXT ASY Description NEXT ASY Number		1. DIMENSIONS ARE IN INCHES. 2. DIMENSIONS DASH HED AFTER PLACED. 3. REMOVE BURS AND SHARP EDGES. 0.05 MAX. 4. MACHINED RILET RACE (215) 310 5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCERNING WITHIN .001 6. PERFINISHED CLARITY & PARALLELISM MACHINED SURFACES .005 PER INCH MAX. 0.12 INCHES FOR BRASS SURFACE				PROJECT NO. 901010 PROJECT Name Autonomy WEIGHT		SIZE DWG. NO. 10020997-03-A SCALE CAD FILE:		REV. A SHEET 1 OF 1
APPLICATION		DO NOT SCALE DRAWING								



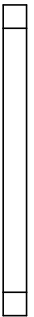
Technical drawing of a rectangular block. The height is dimensioned as 2.00. The top edge is dimensioned with a radius of R0.03.

NOTES:

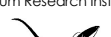
1. RAW MATERIAL 3AI-2.5V TITANIUM TUBE 1.000 OD 0.898 ID 0.051 WALL SEAMLESS. VENDOR: www.titaniumjoe.com.
2. LOWER FERRULE LENGTH 2.0 INCHES.
3. UPPER FERRULE LENGTH 1.0 INCHES.
4. BREAK OUTSIDE EDGES TO R 0.025.
5. PREPARE INTERIOR FOR BONDING BY ROUGHING WITH 200 GRIT EMORY CLOTH AND CLEANING WITH ACETONE. NO COMPRESSED AIR DRYING.

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BILL OF MATERIALS			
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:	
Inspector	FINISHES: ☐ POLISH ☐ BRUSH ☐ SMOOTH ☐ GRIND	DRAWN	DATE
Shop Foreman	1. DIMENSIONS ARE IN INCHES.	MRC	05/11/2013
Engineer	2. DIMENSIONS DASHED LINES AFTER PAGING.	ENGINEER	
	3. REMOVE BURRS AND SHARP EDGES. 0.15 MAX.	MARK CHAFFEY	
	4. MACHINED FLUET RAKE 0.15-0.30.	(831) 775-1708	
	5. MACHINED DIMETERS ON A COMMON CENTERLINE CONCERNING WITHIN 0.005.	chm@mbat.org	
	6. FERTURIZED SURFACES A PARALLELISM OF MATCHED SURFACES 0.005 PER INCH.		
	7. DO NOT INCHES FOR SINGLE SURFACE.		
NEXT ASSY Description	NEXT ASSY Number	PROJECT NO.	
		901010	
		PROJECT NAME	
		Autonomy	
APPLICATION	DO NOT SCALE DRAWING	WEIGHT	
		SIZE C	DWG. NO.
		SCALE	10020997-04-A
		CAD FILE:	REV. A
			SHEET 1 OF 4



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BILL OF MATERIALS									
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS DATE		Monterey Bay Aquarium Research Institute	
Inspector		1 PLATE DIM. $\pm$ 1/16"	2 RIVET $\pm$ 1/16"	3 JOINT DIM. $\pm$ 1/16"	APPROV. $\pm$ 1/16"	DRAWN MRC 01/05/2017	MBARI 7700 Sandholzt Rd. Moss Landing, CA 95039 PH: (831) 775-1700		
Shop Foreman		1. DIMENSIONS ARE IN INCHES.				ENGINEER MARK CHAFFEY (831) 775-1708 chmair@mbari.org			
Engineer		2. DIMENSION LINES SHED AFTER PLATING.							
Next Assy Description	NEXT ASSY NUMBER	3. REMOVE BURRS AND SHARP EDGES D15 MAX.				PROJECT NO. 901411 HotSpot	SV3 Turtle Deck for Ant.		
		4. MACHINED FLAT BORE DIA. DIA.							
		5. MACHINED DIAMETERS ON A COMMON CENTERLINE CONCERNING WITH DIOS				PROJECT INVOICE SCALE	SIZE DWG. NO. C 10020997-13-B-DWG		
		6. PERFORM QUALITY ASSURANCE OF MACHINED SURFACES 600 PER INCH. MAX .012 INCHES FOR SINGLE SURFACE.							
APPLICATION		DO NOT SCALE DRAWING				WEIGHT	SHEET 1 OF 6		