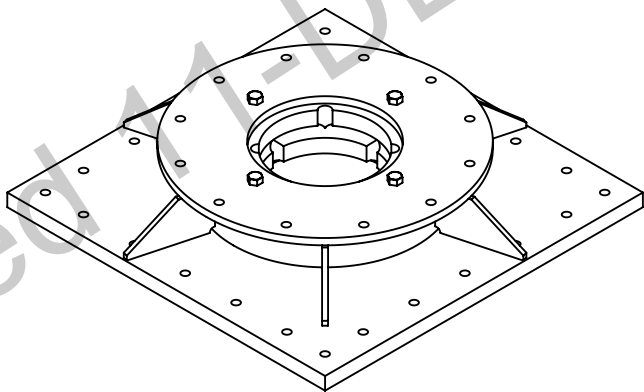
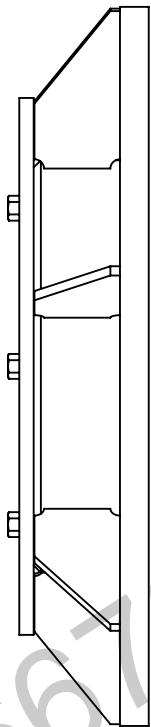
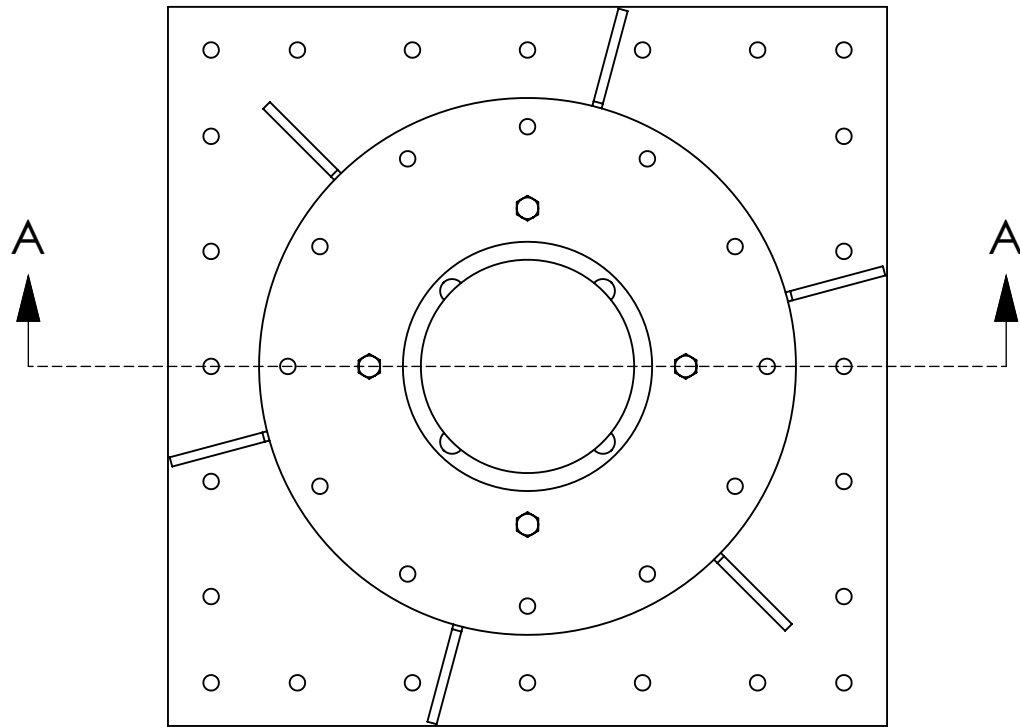


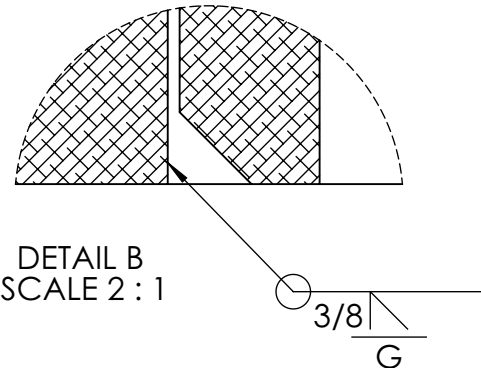
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF MBARI. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF MBARI IS PROHIBITED.

REVISIONS		
INITIAL RELEASE	X/XX/01	J.E.



ALL PENETRATIONS ARE TO BE WATERTIGHT TO THE SATISFACTION OF THE SURVEYOR.

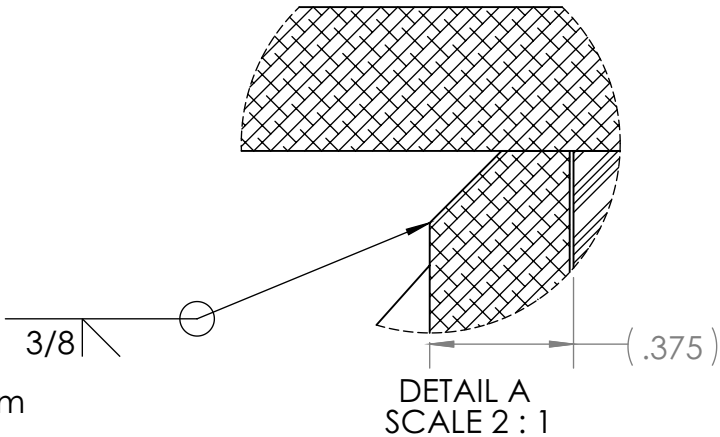
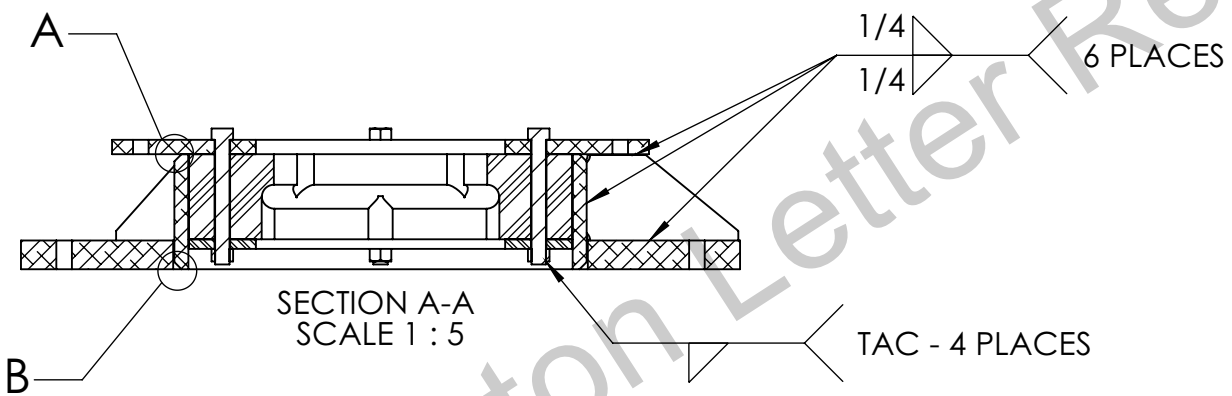
MATERIALS, FIT UP, AND WELDING ARE TO BE TO THE SATISFACTION OF THE SURVEYOR.



APPROVED

This approval covers only ABS requirements and does not include items not required by ABS. Details of this approval are set forth in the ABS letter.

**ABS**
FOUNDED 1862



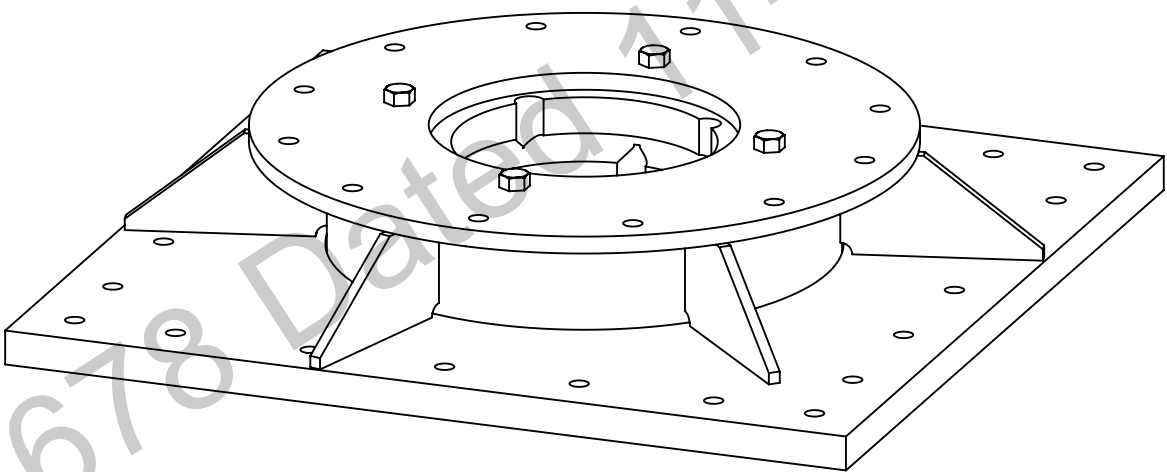
WESTERN FLYER
ABS ID: 9633788
SWATH OCEAN SYSTEMS, HULL NO: 4001
PROJECT 2899448, TASK 966678

7. PROJECT LIBRARY:\300058_DMO_Western-Flyer\
HydraphonePole\HydraphonePole_NEW\MidAssem

NOTES: (CONT. FROM TITLE BLOCK)

8	4		3/8-16 UNC-2B NUT		McMASTER-CARR	316 S.S.
7	4	3/8-16 UNC-2A x 3-1/4	HEX HD CAP SCREW		McMASTER-CARR	316 S.S.
6	6	P-201447-12	Mid Gusset Plate		MBARI	Aluminum 6061-T6
5	1	P-201448-12	Bushing Retaining Plate (#14)		MBARI	304 SS
4	1	P-201444-12	Bushing Guide NEW		MBARI	DELFIN
3	1	P-201446-12	Mid Assem Top Mount Flange		MBARI	Aluminum 6061-T6
2	1	P-201445-12	Mid Assem. - Mounting Flange		MBARI	Aluminum 6061-T6
1	1	P-201429-12	Mid Assem Guide Tube		MBARI	Aluminum 6061-T6
ITEM NO.	Higher assembly/QTY.	Part Number	DESCRIPTION	Revision	Vendor	MATERIAL

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 ±.5°	DRAWN	J. ERICKSON	10/16/12	MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700
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	J. ERICKSON	10/16/12	
Engineer							CHECKED			
NEXT ASSY Description	NEXT ASSY Number						PROJECT NO.	300058		
							PROJECT	DMO W.F.		PROJECT NAME Mid Bushing Assembly / Weldment
							WEIGHT	36.720 - none		
							DO NOT SCALE DRAWING			SIZE B DWG. NO. A-201449-12.DWG
							SCALE 1:8			REV.
							CAD FILE: MECH ENG ON TORNADO			SHEET 1 OF 2



8	4		3/8-16 UNC-2B NUT		McMASTER-CARR	316 S.S.
7	4	3/8-16 UNC-2A x 3-1/4	HEX HD CAP SCREW		McMASTER-CARR	316 S.S.
6	6	P-201447-12	Mid Gusset Plate		MBARI	Aluminum 6061-T6
5	1	P-201448-12	Bushing Retaining Plate (#14)		MBARI	304 SS
4	1	P-201444-12	Bushing Guide NEW		MBARI	DELRIN
3	1	P-201446-12	Mid Assem Top Mount Flange		MBARI	Aluminum 6061-T6
2	1	P-201445-12	Mid Assem. - Mounting Flange		MBARI	Aluminum 6061-T6
1	1	P-201429-12	Mid Assem Guide Tube		MBARI	Aluminum 6061-T6
ITEM NO.	Higher assembly/QTY.	Part Number	DESCRIPTION	Revision	Vendor	MATERIAL

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	J. ERICKSON		10/16/12				
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	J. ERICKSON		10/16/12				
Engineer						CHECKED							
NEXT ASSY Description	NEXT ASSY Number					PROJECT NO.	300058						
		PROJECT	DMO W.F.		WEIGHT		36.720 lb.		PROJECT NAME Mid Bushing Assembly / Weldment				
Application		DO NOT SCALE DRAWING				SCALE		1:8		CAD FILE: MECH ENG ON TORNADO		SHEET 2 OF 2	
						SIZE B		DWG. NO.		A-201449-12.DWG		REV.	

7. PROJECT LIBRARY:\300058_DMO_Western-Flyer\HydraphonePole\HydraphonePole_NEW\MidAssem

NOTES: (CONT. FROM TITLE BLOCK)