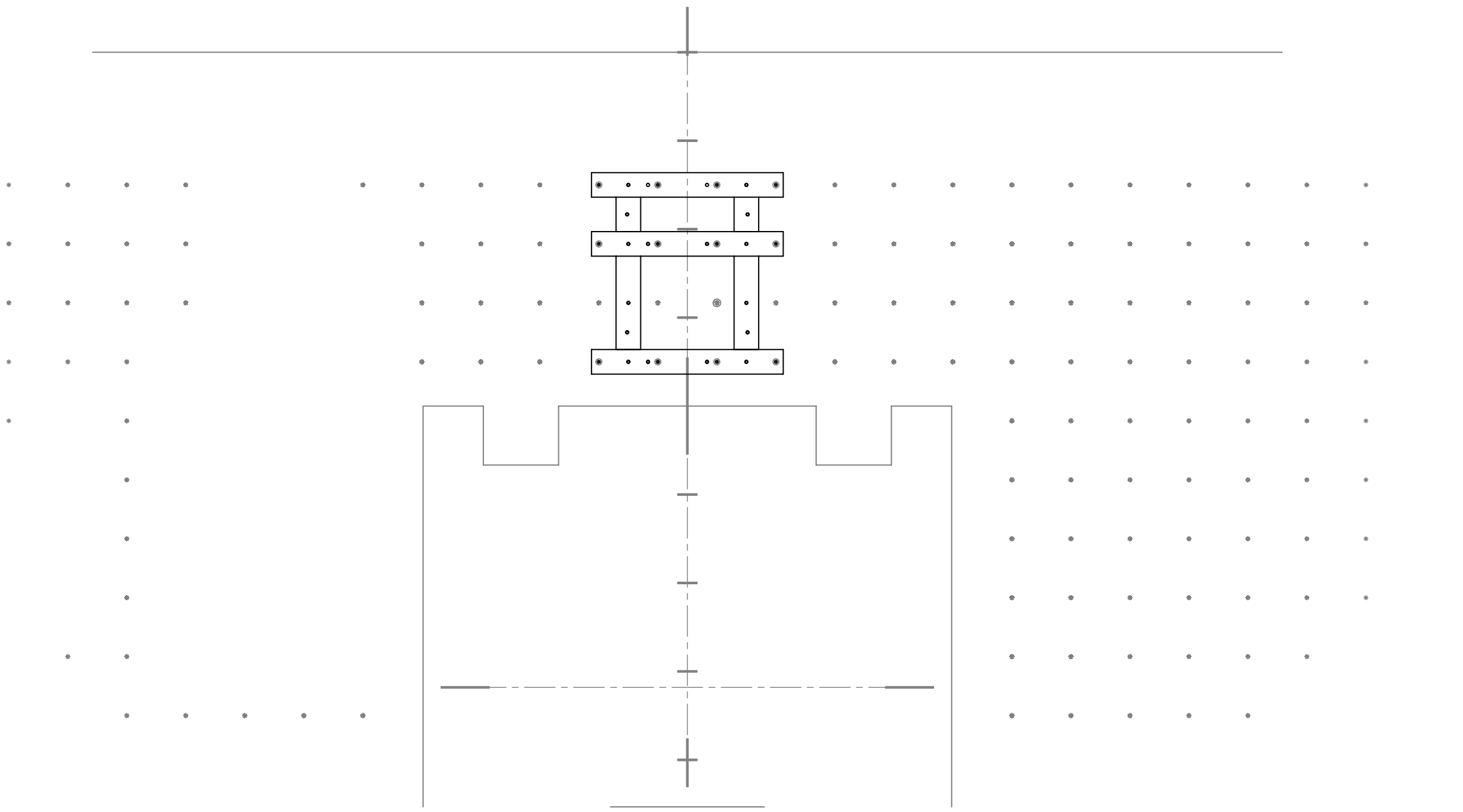


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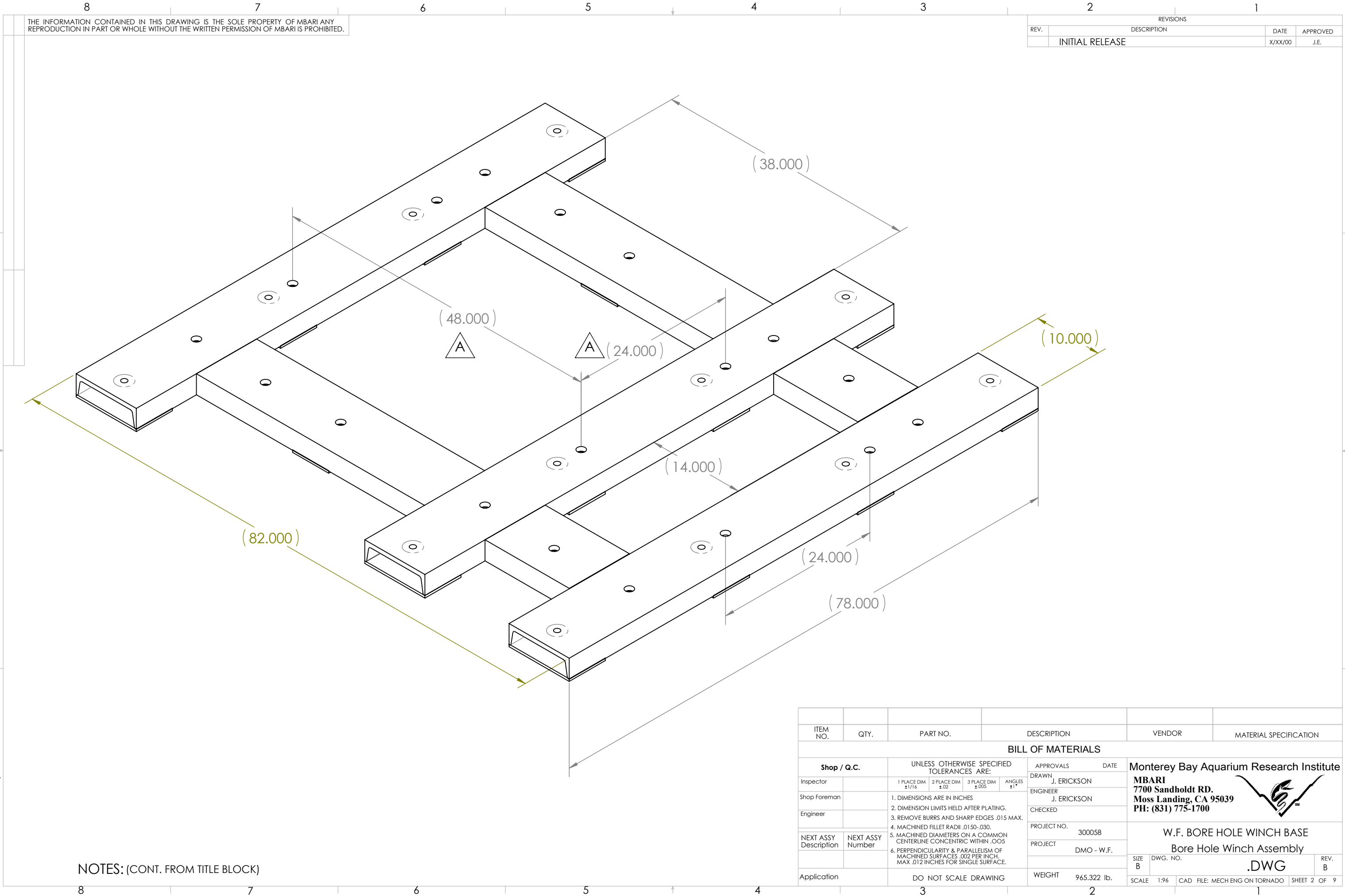
REVISIONS				
INITIAL RELEASE		REVISIONS	X/XX/01	J.E.
ZONE	REV.	DESCRIPTION	DATE	APPROVED
	A	ADDED 2 EA. HOLES (1.25 Ø) SHEET 5 of 9	2/10/2014	J.E.
	B	ADDED 4 EA. HOLES (1.25 Ø) & NUTS SHEET 3 of 9 MINI ROV	4/11/2014	J.E.



10. 3/4 - 10 UNC-2A Bolts 316 S.S. - Torque to 104 ft.-Lbf.
9. per Glosten Max. winch line load: 3600 lbf. (5:1 S.F.)
8. per Glosten W.F. Main Deck Sockets: 3500 lbf Max. Load.
7. PROJECT LIBRARY:\300058_DMO_Western-Flyer\BoreHoleWinchBase

NOTES: (CONT. FROM TITLE BLOCK)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	VENDOR	MATERIAL SPECIFICATION
BILL OF MATERIALS					
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS DATE	
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°
Shop Foreman		1. DIMENSIONS ARE IN INCHES			
Engineer		2. DIMENSION LIMITS HELD AFTER PLATING.			
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.			
		4. MACHINED FILLET RADII .0150-.030.			
NEXT ASSY Description	NEXT ASSY Number	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.			
Application		DO NOT SCALE DRAWING		WEIGHT	965.322
				DRAWN J. ERICKSON	Monterey Bay Aquarium Research Institute  MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700
				ENGINEER J. ERICKSON	
				CHECKED	
				PROJECT NO. 300058	
				PROJECT DMO - W.F.	W.F. BORE HOLE WINCH BASE Bore Hole Winch Assembly
				SIZE B	DWG. NO. .DWG
				SCALE 1:96	CAD FILE: MECH ENG ON TORNADO SHEET 1 OF 9



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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.

NOTES: (CONT. FROM TITLE BLOCK)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	VENDOR	MATERIAL SPECIFICATION
BILL OF MATERIALS					
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS	DATE
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	DRAWN J. ERICKSON	
Shop Foreman		3 PLACE DIM ±.005	ANGLES ±1°	ENGINEER J. ERICKSON	
Engineer		1. DIMENSIONS ARE IN INCHES		CHECKED	
NEXT ASSY Description	NEXT ASSY Number	2. DIMENSION LIMITS HELD AFTER PLATING.		PROJECT NO. 300058	
		3. REMOVE BURRS AND SHARP EDGES .015 MAX.		PROJECT DMO - W.F.	
		4. MACHINED FILLET RADII .0150-.030.		WEIGHT 965.322 lb.	
		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.			
Application		DO NOT SCALE DRAWING			

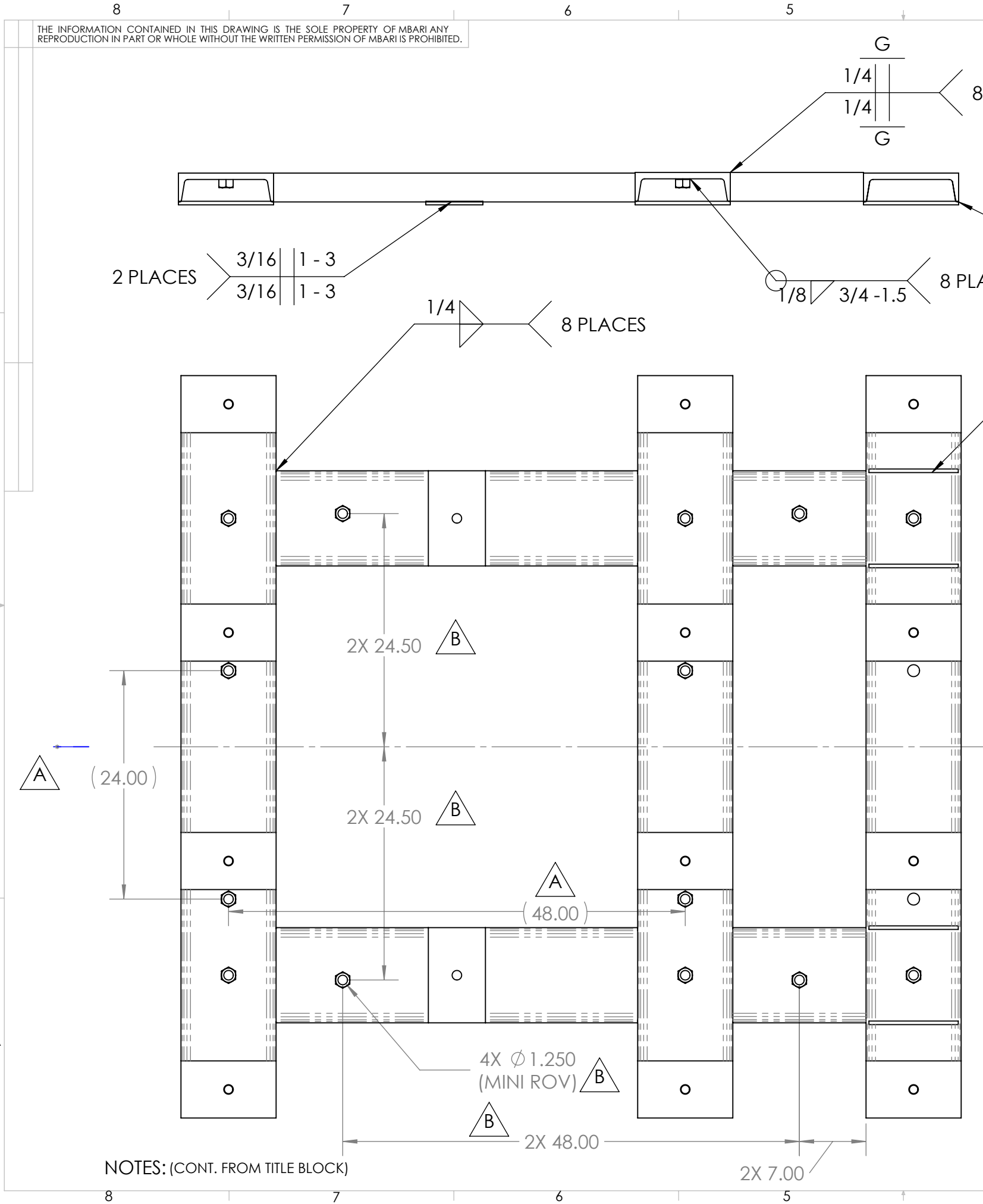
Monterey Bay Aquarium Research Institute
MBARI
7700 Sandholdt RD.
Moss Landing, CA 95039
PH: (831) 775-1700



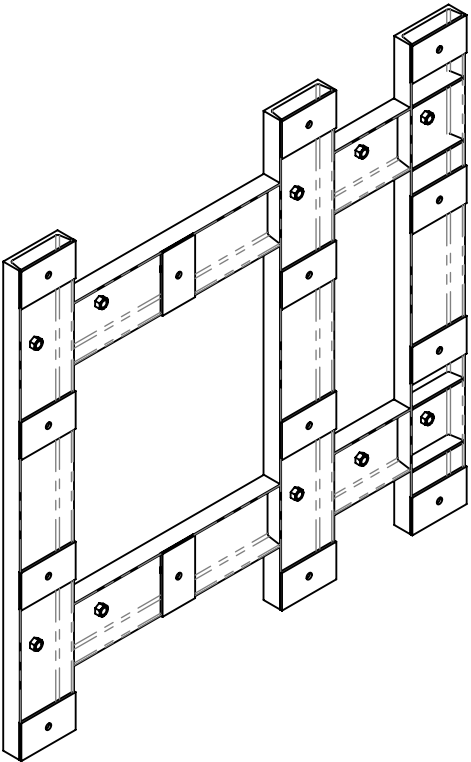
W.F. BORE HOLE WINCH BASE
Bore Hole Winch Assembly

SIZE B DWG. NO. .DWG REV. B

SCALE 1:96 CAD FILE: MECH ENG ON TORNADO SHEET 2 OF 9



REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.



ITEM NO.	QTY.	PART NO.	DESCRIPTION	VENDOR	MATERIAL SPECIFICATION
BILL OF MATERIALS					
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS	DATE
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	DRAWN J. ERICKSON	
Shop Foreman		3 PLACE DIM ±.005	ANGLES ±1°	ENGINEER J. ERICKSON	
Engineer		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.		CHECKED	
NEXT ASSY Description	NEXT ASSY Number	PROJECT NO. 300058		PROJECT DMO - W.F.	
Application		DO NOT SCALE DRAWING	WEIGHT 965.322 lb.	Monterey Bay Aquarium Research Institute MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700	
		W.F. BORE HOLE WINCH BASE Bore Hole Winch Assembly		SIZE B	DWG. NO. .DWG
		SCALE 1:96 CAD FILE: MECH ENG ON TORNADO		SHEET 3 OF 9	REV. B

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REV.

DESCRIPTION

DATE

APPROVED

INITIAL RELEASE

X/XX/00

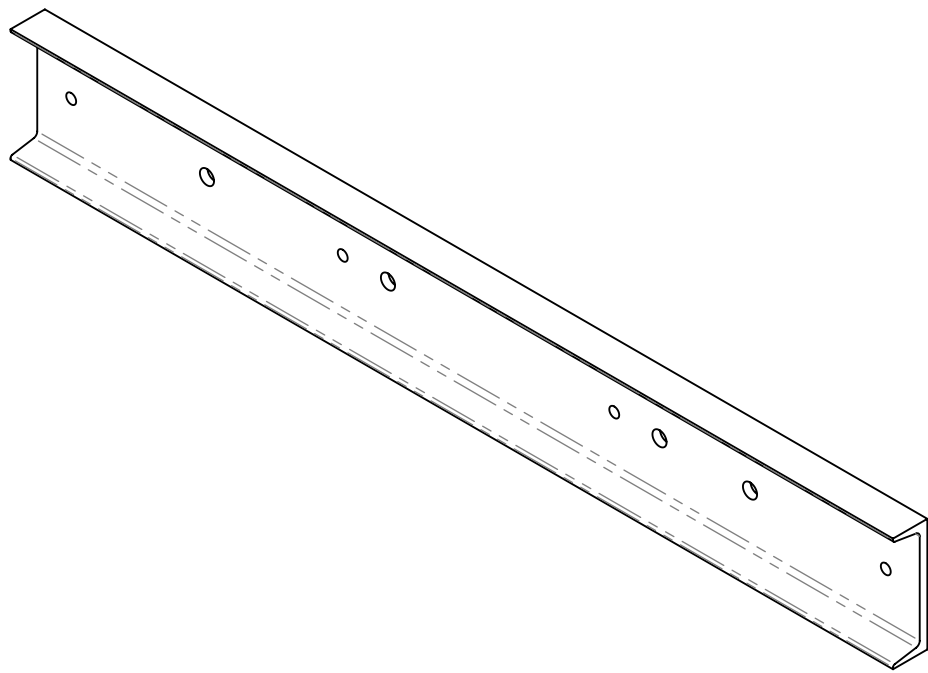
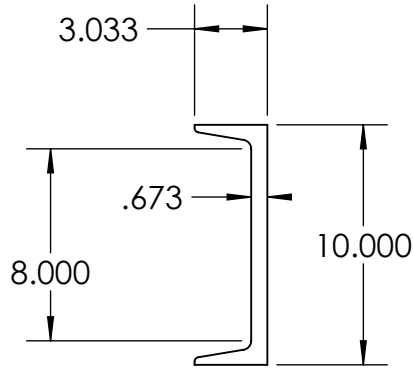
J.E.

NOTES: (CONT. FROM TITLE BLOCK)

6	16		18-8 Stainless Steel		McMASTER-CARR	304 S.S.
5	2		10 x 30 CHANNEL - PART 3			A36 STEEL
4	3		10 x 36 ChHANNEL - PART 4			A36 STEEL
3	2		10 x 30 ChHANNEL - PART 5			A36 STEEL
2	4		Channel Gusset			A36 STEEL PLATE
1	14		Winch Frame Foot Plate			A36 STEEL
ITEM NO.	QTY.	Part_Number	DESCRIPTION	Revision	Vendor	MATERIAL

BILL OF MATERIALS							
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:		APPROVALS		DATE	
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN	J. ERICKSON
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
Engineer						CHECKED	
NEXT ASSY Description	NEXT ASSY Number					PROJECT NO.	300058
Application						PROJECT	DMO - W.F.
		WEIGHT	965.322 lb.	Monterey Bay Aquarium Research Institute MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700			
				W.F. BORE HOLE WINCH BASE Bore Hole Winch Assembly			
				.DWG			
				SCALE 1:96 CAD FILE: MECH ENG ON TORNADO SHEET 4 OF 9			

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.

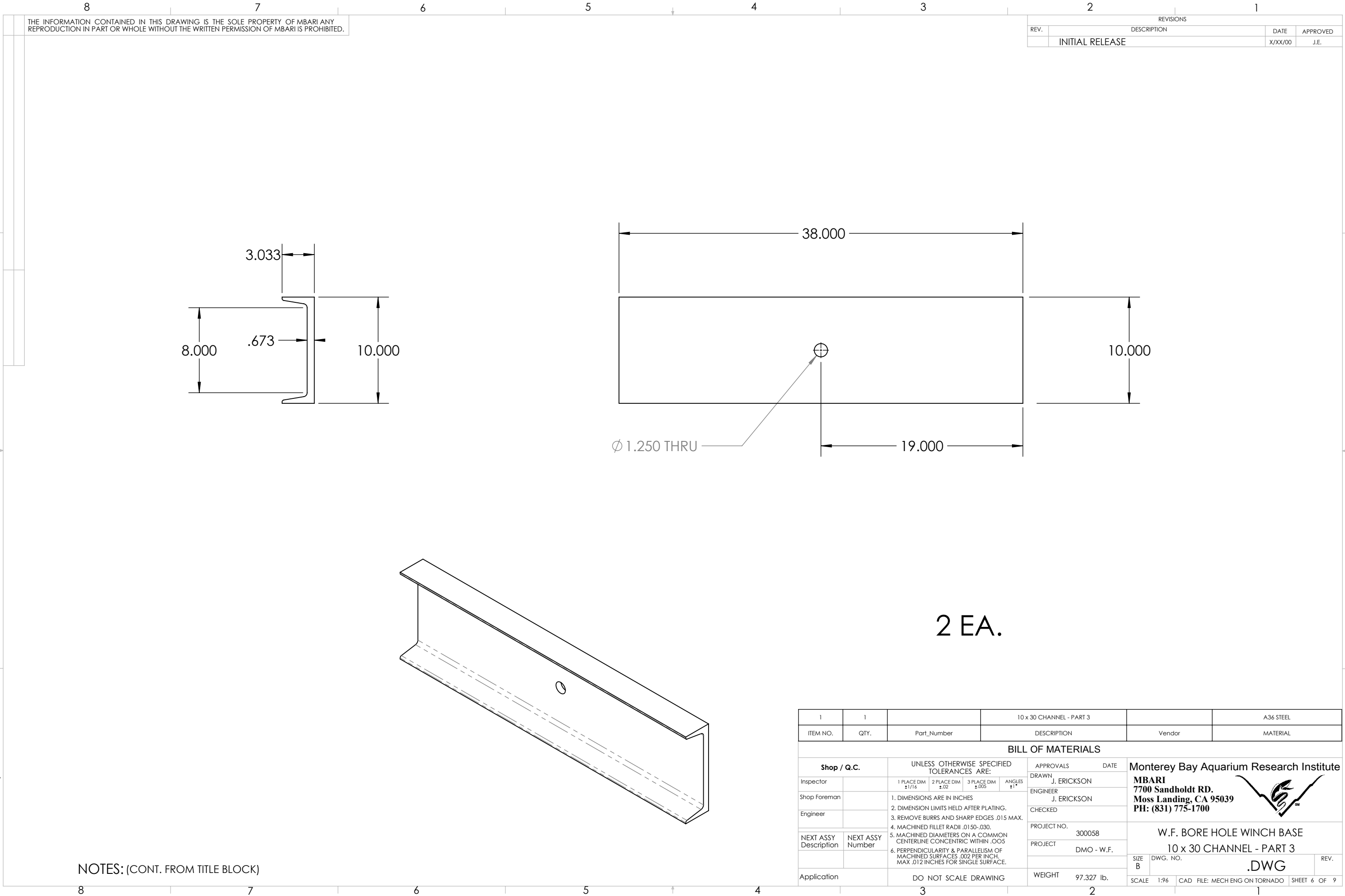


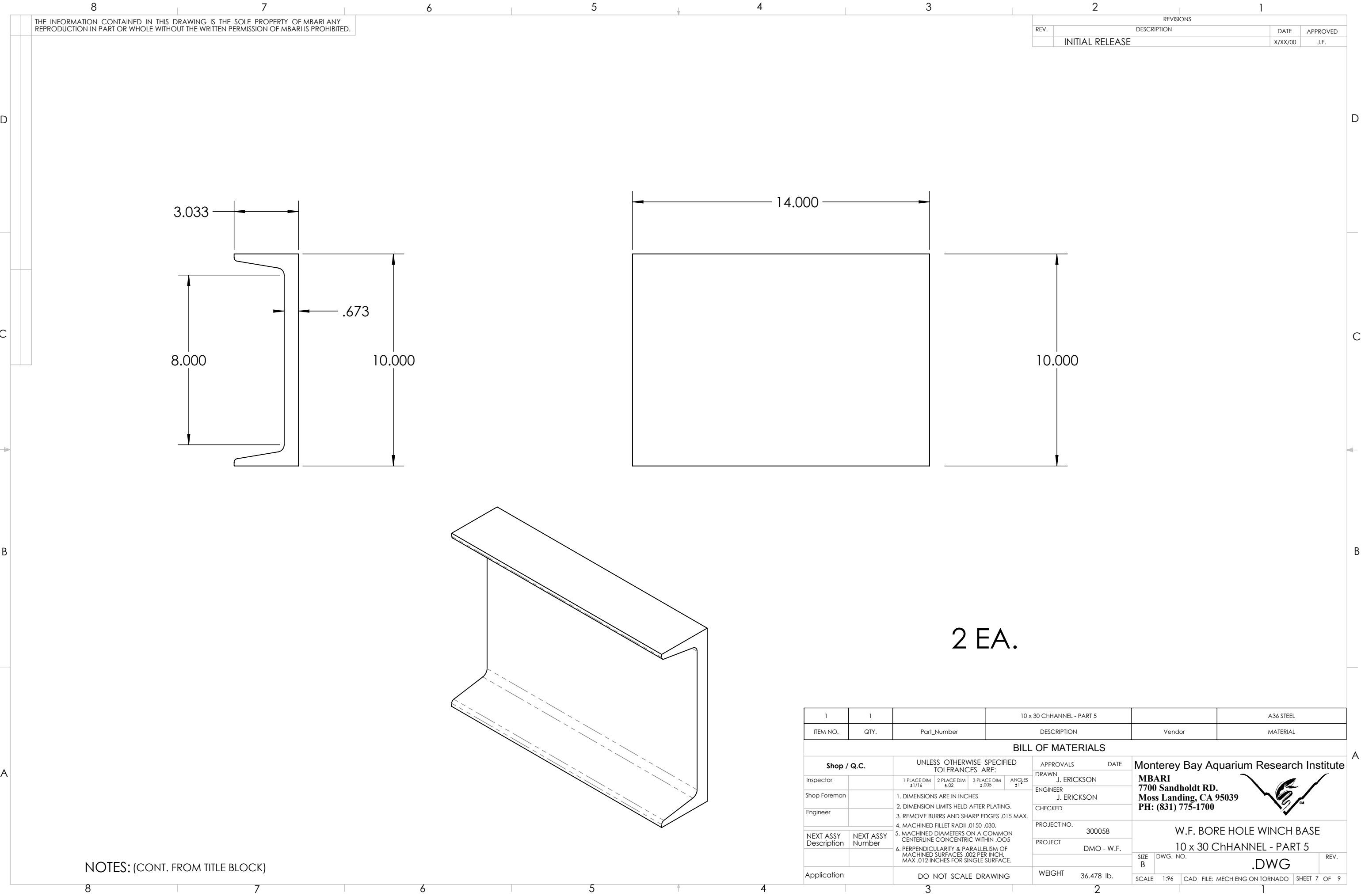
NOTES: (CONT. FROM TITLE BLOCK)

	1	10 x 36 ChCHANNEL - PART 4			A36 STEEL	
ITEM NO.	QTY.	Part Number	DESCRIPTION		Vendor	MATERIAL

BILL OF MATERIALS						
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:			APPROVALS DATE	
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	Monterey Bay Aquarium Research Institute 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.			DRAWN J. ERICKSON	
Engineer					ENGINEER J. ERICKSON	
NEXT ASSY Description	NEXT ASSY Number	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.			CHECKED	
					PROJECT NO. 300058	
					PROJECT DMO - W.F.	W.F. BORE HOLE WINCH BASE 10 x 36 ChCHANNEL - PART 4
					SIZE B DWG. NO.	
Application		DO NOT SCALE DRAWING			WEIGHT 198.862 lb.	.DWG REV. A
					SCALE 1:96 CAD FILE: MECH ENG ON TORNADO SHEET 5 OF 9	



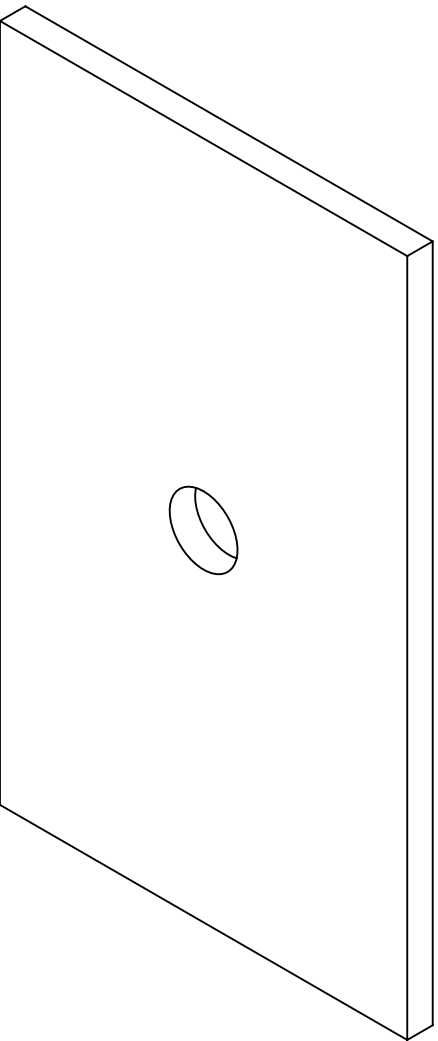
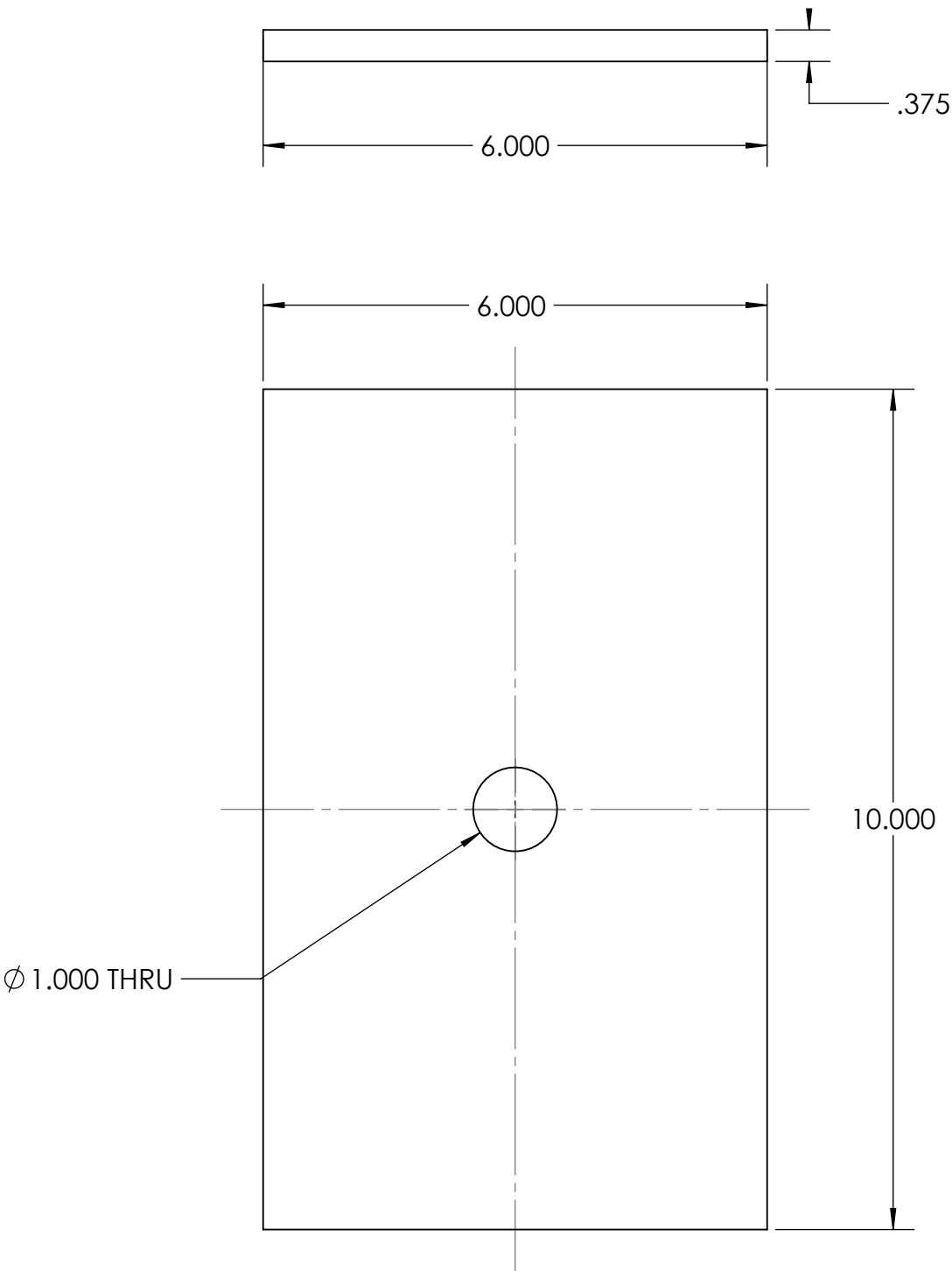




NOTES: (CONT. FROM TITLE BLOCK)

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REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.

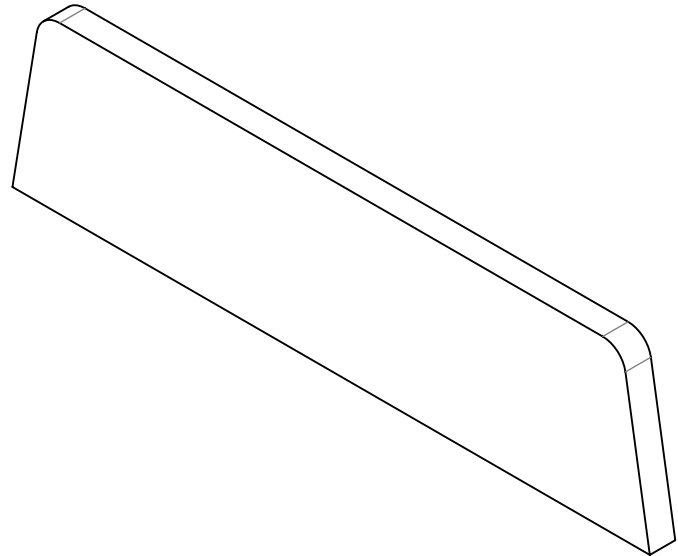


14 EA.

1	1	Winch Frame Foot Plate			A36 STEEL	
ITEM NO.	QTY.	Part Number	DESCRIPTION		Vendor	MATERIAL

BILL OF MATERIALS						
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:			APPROVALS DATE	
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	Monterey Bay Aquarium Research Institute 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						
NEXT ASSY Description	NEXT ASSY Number	PROJECT NO. 300058				
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		PROJECT NO. 300058				

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
	INITIAL RELEASE	X/XX/00	J.E.



NOTES: (CONT. FROM TITLE BLOCK)

1	1	Channel Gusset			A36 STEEL PLATE		
ITEM NO.	QTY.	Part Number	DESCRIPTION			Vendor	MATERIAL

BILL OF MATERIALS							
Shop / Q.C.		UNLESS OTHERWISE SPECIFIED TOLERANCES ARE:				APPROVALS DATE	
Inspector		1 PLACE DIM ±1/16	2 PLACE DIM ±.02	3 PLACE DIM ±.005	ANGLES ±1°	DRAWN J. ERICKSON	
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	
Engineer						CHECKED	
NEXT ASSY Description	NEXT ASSY Number					PROJECT NO. 300058	
						PROJECT DMO - W.F.	
Application		DO NOT SCALE DRAWING				WEIGHT 2.327 lb.	

Monterey Bay Aquarium Research Institute			
MBARI 7700 Sandholdt RD. Moss Landing, CA 95039 PH: (831) 775-1700			
			
W.F. BORE HOLE WINCH BASE			
Channel Gusset			
SIZE B	DWG. NO.		REV.
.DWG			
SCALE 1:96	CAD FILE: MECH ENG ON TORNADO	SHEET 9 OF 9	

A