



DOCUMENT CHANGE NOTICE (DCN)

DOCUMENT No. (DOC-REV-GP. ID)	TITLE	NEW REV.
D972118-B-D	LIGO BSC, Crossbeam Weldment	C
D972128-D-D	LIGO BSC, Support Pier	E
D972609-C-D	LIGO HAM, Support Pier	D
D972612-C-D	LIGO HAM, Crossbeam Weldment	D
D972126-C-D	LIGO Pier Leveling & Group Plate	N/A

CHANGE DESCRIPTION (FROM/TO):

RELEASED FOR FABRICATION

REASON FOR CHANGE:

ACTION: Incorporate change Attach DCN to drawing(s) Other action (specify):

DISPOSITION OF HARDWARE (IDENTIFY SERIAL NUMBERS)	DCN DISTRIBUTION
<input type="checkbox"/> No hardware affected (record change only) <input type="checkbox"/> List S/Ns which comply already: <input type="checkbox"/> List S/Ns to be reworked or scrapped: <input type="checkbox"/> List S/Ns to be built with this change: <input type="checkbox"/> List S/Ns to be retested per this change: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Althouse Barish Coles <input checked="" type="checkbox"/> Coyne Lazzarini Lindquist Raab Sanders ✓ Savage Shoemaker Stapfer Tyler Weiss ✓ Whitcomb Zydowicz <input checked="" type="checkbox"/> Wilcox - March Metallfab <input checked="" type="checkbox"/> Thompson - Hytec

SAFETY, COST, SCHEDULE, REQUIREMENTS IMPACT? No Yes (If yes, enter CR (CCB) or TCP (TRB) no.)

APPROVALS: ORIGINATOR: Fred Asiri <i>Fred Asiri</i> TASK LEADER: GROUP LEADER:	DATE 6/25/98	OTHER APPROVALS (specify)	DATE
DCC RELEASE:			

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REV	DESCRIPTION	DATE	APPROVED
A	SEE ECN# D972126-A FOR CHANGE LIST	11-03-97	T. THOMPSON
B	SEE ECN# D972126-B FOR CHANGE LIST	05-18-98	T. THOMPSON
C	SEE ECN# D972126-C FOR CHANGE LIST	05-26-98	T. THOMPSON

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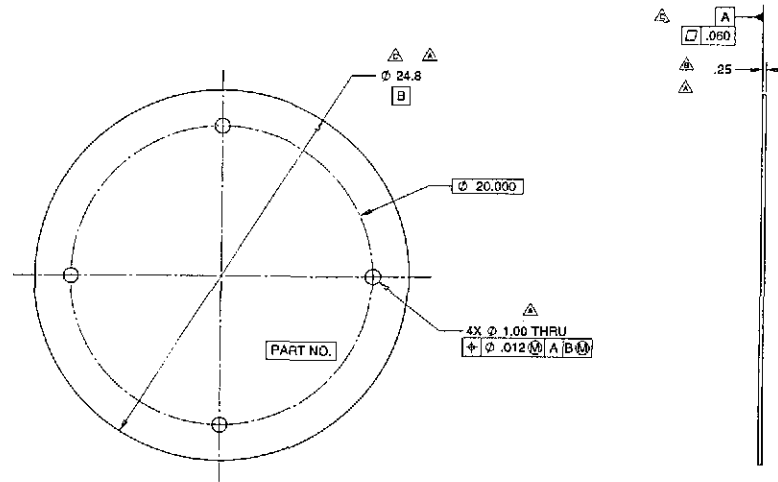
C

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B

A

A



MATL: A36 STEEL
 WEIGHT: 11.95 lbs.

NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS IN INCHES
2. DIMENSIONS AND TOLERANCING PER ANAS Y14.5M-1994
3. SURFACE TEXTURE PER ANASME B 46.1-1986
4. REMOVE ALL BURRS AND BREAK SHARP EDGES TO A MAXIMUM OF .015
5. ALL INSIDE CORNERS TO BE .015 RADIUS MAX
6. COUNTERSINK 82 DEGREES ALL TAPPED HOLES TO MAJOR DIAMETER
7. COUNTERSINK 92 DEGREES APPROXIMATELY .03108 DEEP ALL DRILLED HOLES
8. PARTS TO BE THOROUGHLY CLEANED TO REMOVE ALL OIL, GREASE, DIRT AND CHIPS
9. PART NUMBER (DRAWING NO. PLUS SHEET NO.) TO BE CLEARLY MARKED EITHER ON THE PART ITSELF, OR ON A TAG ATTACHED TO THE PART OR PACKAGE

PARTS LIST					
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES		ANGULAR ± 30°		HYTEC, INC TITLE LIGO PIER LEVELING & GROUT PLATE	
DECIMALS XX = ± .1 XX = ± .01 XXX = ± .010	SURFACE FINISH = 250				
FINISH	DESIGNED	ROGER L. SMITH	DATE	5-28-97	DWG. NO. D972126
	DRAWN	ROGER L. SMITH	DATE	5-28-97	
	CHECKED	HARRY SALZAR	DATE	8-5-97	
	ENGR.	T. THOMPSON	DATE	8-6-97	
	APPROVED	T. THOMPSON	DATE	8-5-97	
PART NO. D972126-1	SCALE 1/4"			SHEET D 1 of 1	
REVISION C					

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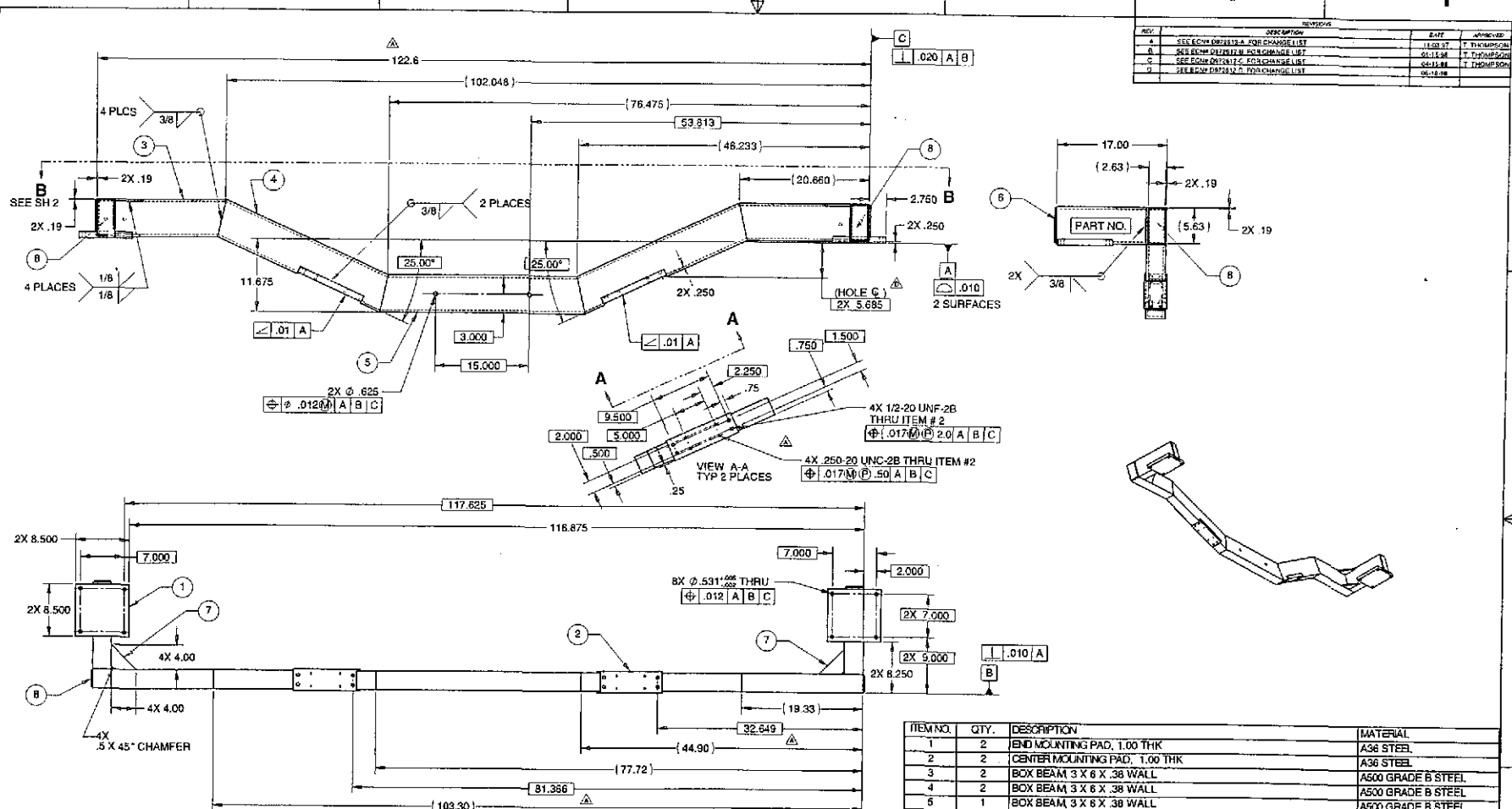
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8 7 6 5 4 3 2 1

REV.	DESCRIPTION	DATE	APPROVED
4	SEE ECHN 0212415.A FOR CHANGE LIST	11/03/07	T. THOMPSON
3	SEE ECHN 0212415.A FOR CHANGE LIST	04/15/04	T. THOMPSON
2	SEE ECHN 0212415.A FOR CHANGE LIST	04/15/04	T. THOMPSON
1	SEE ECHN 0212415.A FOR CHANGE LIST	04/15/04	T. THOMPSON

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NOTES: UNLESS OTHERWISE SPECIFIED
 1. ALL DIMENSIONS IN INCHES
 2. DIMENSIONS AND TOLERANCING PER ASME Y14.5M-1994
 3. SURFACE TEXTURE PER ANSIA SMC B 46.1-1985
 4. REMOVE ALL BURRS AND BREAK SHARP EDGES TO A MAXIMUM OF .015
 5. ALL INSIDE CORNERS TO BE R.016 RADIUS MAX.
 6. COUNTERSINK 82 DEGREES ALL TAPPED HOLES TO MAJOR DIAMETER
 7. COUNTERSINK 82 DEGREES APPROXIMATELY .03/.06 DEEP ALL DRILLED HOLES
 8. PARTS TO BE THOROUGHLY CLEANED TO REMOVE ALL OIL, GREASE, DIRT AND CHIPS
 9. PART NUMBER (DRAWING NO., DASH NO., REVISION NO., SERIAL NO.) TO BE CLEARLY MARKED ON THE PART ITSELF.
 10. PAINT:
 ALL VISIBLE SURFACES
 MEDIUM BLUE SHERWIN WILLIAMS (POLANE (R) T-PLUS,
 POLYURETHANE ENAMEL) #SW-F63TX-L-2822-5854
 PRIME WITH SHERMAN-WILLIAMS INDUSTRIAL WASH PRIMER P60G2
 11. OXI SOLV RUST INHIBITOR TO BE APPLIED PER MFG. INSTRUCTIONS TO ALL UNPAINTED SURFACES.
 BOTH TAPPED AND THRU BOLT HOLES WILL BE PLUGGED DURING APPLICATION.

WEIGHT: 321.2 lbs.

ITEM NO.	QTY.	DESCRIPTION	MATERIAL
1	2	END MOUNTING PAD, 1.00 THK	A36 STEEL
2	2	CENTER MOUNTING PAD, 1.00 THK	A36 STEEL
3	2	BOX BEAM 3 X 6 X .38 WALL	A500 GRADE B STEEL
4	2	BOX BEAM 3 X 6 X .38 WALL	A500 GRADE B STEEL
5	1	BOX BEAM 3 X 6 X .38 WALL	A500 GRADE B STEEL
6	2	BOX BEAM 3 X 6 X .38 WALL	A500 GRADE B STEEL
7	4	GUSSET, .38 THK PLATE	A36 STEEL
8	4	CLOSURE PLATE, 5.63 X 2.63 X 1/4 THK	A36 STEEL

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES		CAD GENERATED DRAWING DO NOT MANUALLY UPDATE DO NOT SCALE DRAWING		HYTEC, INC	
DECIMALS X = +.01 XX = +.005 XXX = +.002	ANGULAR = ±.30	SURFACE FINISH = 280		LIGO HAM CROSSBEAM WELDMENT	
PART NO. D972612-1		DESIGNED ROBERT SMITH	DATE 7/14/07	DWG NO. D972612	SHEET NO. D 1 of 2
		DRAWN R. SUBTME, P. OTDROZWICZ	7/16/07	SCALE 1/8"	REVISION D
		CHECKED HARRY SAJJANI	7/16/07		
		ENGINEER T. THOMPSON	7/16/07		
		APPROVED T. THOMPSON	7/16/07		

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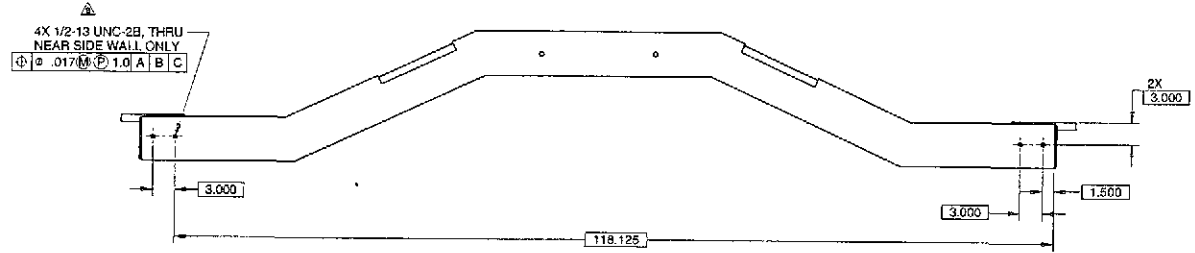
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REV	DESCRIPTION	DATE	APPROVED
A	SEE FORM D972612-B FOR CHANGE LIST	01-28-97	T. THOMPSON
B	SEE FORM D972612-C FOR CHANGE LIST	04-25-98	T. THOMPSON
C	SEE FORM D972612-D FOR CHANGE LIST	08-11-98	

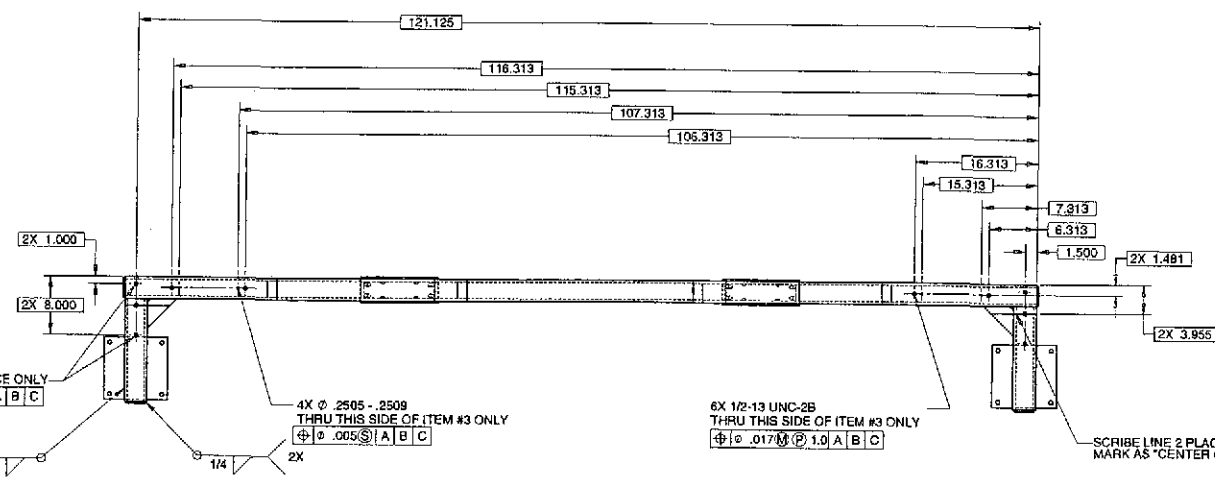
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VIEW B-B
FROM SHEET 1

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PARTS LIST			
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES:		CAD GENERATED DRAWING DO NOT MANUALLY UPDATE DO NOT SCALE DRAWING	
DECIMALS	ANGULAR ± 0.30	TITLE	
XX ± .005	SURFACE FINISH = 250	HYTEC, INC	
XXX ± .010		LIGO HAM	
		CROSSBEAM WELDMENT	
DATE	SIGNATURE	DATE	REV. NO.
	ROGER L. SMITH	5-28-97	
	ROGER L. SMITH	5-28-97	
	HARRY SALAZAR	11-8-97	
	T. THOMPSON	11-8-97	
	T. THOMPSON	11-8-97	
PART NO.	D972612-1	SCALE	1/8"
		SHEET NO.	D 2 of 2
		REV. NO.	
		REVISION	D

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REV	DESCRIPTION	DATE	APPROVED
A	SEE ECHY D972128-A FOR CHANGE LIST	11-03-97	T. THOMPSON
B	SEE ECHY D972128-B FOR CHANGE LIST	11-03-97	T. THOMPSON
C	SEE ECHY D972128-C FOR CHANGE LIST	12-02-97	T. THOMPSON
D	SEE ECHY D972128-D FOR CHANGE LIST	01-11-98	T. THOMPSON
E	SEE ECHY D972128-E FOR CHANGE LIST	05-25-98	

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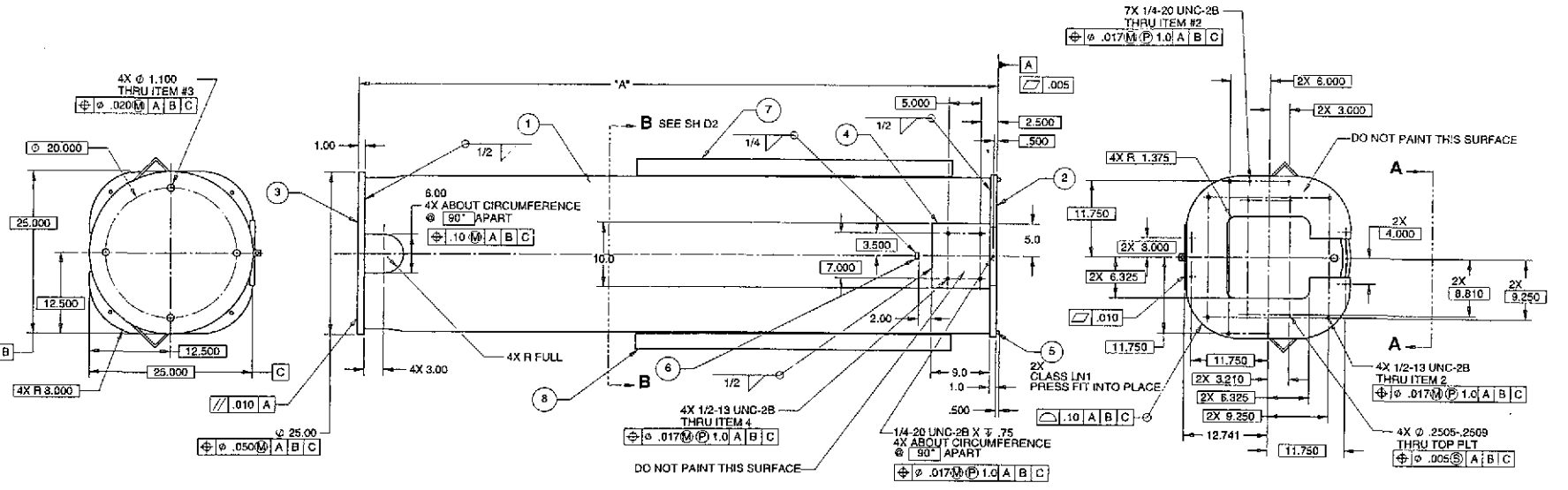
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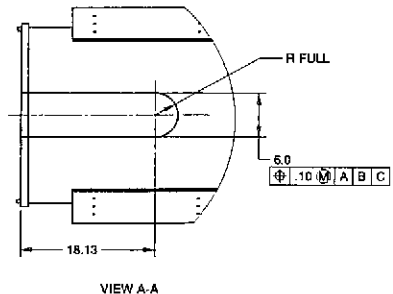
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- NOTES: UNLESS OTHERWISE SPECIFIED
- ALL DIMENSIONS IN INCHES
 - DIMENSIONS AND TOLERANCING PER ASME Y14.5M-1994
 - SURFACE TEXTURE PER ANSIS/ASME B 46.1-1995
 - REMOVE ALL BURRS AND BREAK SHARP EDGES TO A MAXIMUM OF .015
 - ALL INSIDE CORNERS TO BE .015 RADIUS MAX
 - COUNTERSINK 82 DEGREES ALL TAPPED HOLES TO MAJOR DIAMETER
 - COUNTERSINK 82 DEGREES APPROXIMATELY .03/.06 DEEP ALL DRILLED HOLES
 - PARTS TO BE THOROUGHLY CLEANED TO REMOVE ALL OIL, GREASE, DIRT AND CHIPS
 - PART NUMBER (DRAWING NO., DASH NO., REVISION NO., SERIAL NO.) TO BE CLEARLY MARKED ON THE PART ITSELF.
 - PAINT: ALL VISIBLE SURFACES MEDIUM BLUE SHERWIN WILLIAMS (POLANE (P) T-PLUS, POLYURETHANE ENAMEL) #SNW-F637X-1-2822-5954. PRIME WITH SHERMAN WILLIAMS INDUSTRIAL WASH PRIMER P80G2.
 - OXI SOLV RUST INHIBITOR TO BE APPLIED PER MFG. INSTRUCTIONS TO ALL UNPAINTED SURFACES. BOTH TAPPED AND THRU BOLT HOLES WILL BE PLUGGED DURING APPLICATION.



PART NO.	DESCRIPTION	DIM. 'A'	WEIGHT
D972128-1	BSC PIER FOR HANFORD, WA SITE	98.43	1673.4 lbs.
D972128-3	BSC PIER FOR LIVINGSTON, LA SITE	97.43	1659.1 lbs.
D972128-5	BSC PIER PROTOTYPE FOR HYTEC WITHOUT ITEMS 7 & 8	29.43	607.6 lbs.

ITEM NO.	QTY.	DESCRIPTION	MATERIAL
1	1	TUBE 24.00 DIAM. X .08 WALL	A106 STEEL
2	1	PLATE	A36 STEEL
3	1	PLATE	A36 STEEL
4	1	PLATE (.75 THK)	A36 STEEL
5	2	DOWEL PIN, 5000 DIAM. X 1.00 LG	SST
6	1	PLATE, .50 THK	A36 STEEL
7	1	ANGLE, 6 X 3.5 X .31 THK	A36 STEEL
8	1	ANGLE, 6 X 3.5 X .31 THK	A36 STEEL

UNLESS OTHERWISE SPECIFIED: DIMENSIONS AND FINISHES TOLERANCES: DECIMALS .015 ANGULAR ±.5 DEG SURFACE FINISH = 250

CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE. DO NOT SCALE DRAWING.

HYTEC, INC
LIGO BSC SUPPORT PIER

PART NO. D972128-1, 3 & 5

D972128 D 1 of 2

DATE 1/8

APPROVED T. THOMPSON

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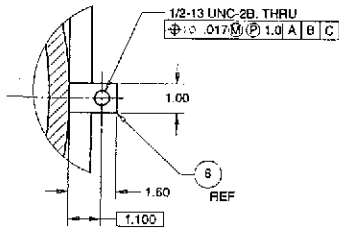
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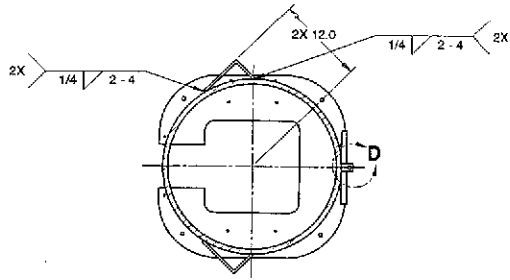
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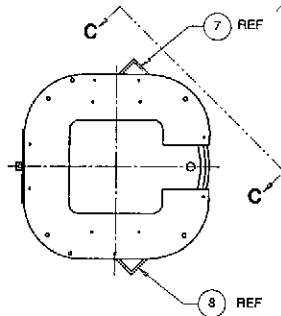
REV.	DESCRIPTION	DATE	APPROVED
C	SEE SCW 0972128-C FOR CHANGE LIST	11-28-99	T. THOMPSON
D	SEE SCW 0972128-D FOR CHANGE LIST	1-15-98	T. THOMPSON
E	SEE SCW 0972128-E FOR CHANGE LIST	8-25-98	



DETAIL D
SCALE 1:2



SECTION B-B



VIEW C-C
TYP ITEMS 7 & 8

12X 1/4-20 UNC-2B THRU
0.0125 (P) 5 A B C

9.934

REF 7

4.060

1.500

1.600

48.0

3X
14.000

8.9

7 REF

8 REF

PARTS LIST				HYTEC, INC	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES:				TITLE LIGO BSC SUPPORT PIER	
DECIMALS	ANGULAR	SIGNATURE		DATE	SCALE
XXX = ± .005	± .01	ROGER L. SMITH		10-22-97	1/8
XX = ± .01	± .02	ROGER L. SMITH		11-22-97	
X = ± .02	± .04	T. THOMPSON		02-08-98	
NO DIM.		T. THOMPSON		11-22-97	
PART NO. D972128-1, 3 & 5				DATE	SHEET NO.
				02-08-98	D 2 of 2

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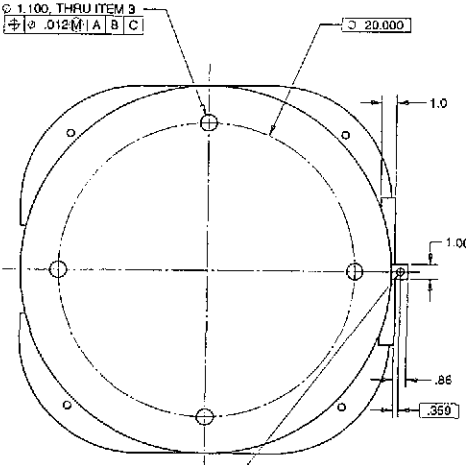
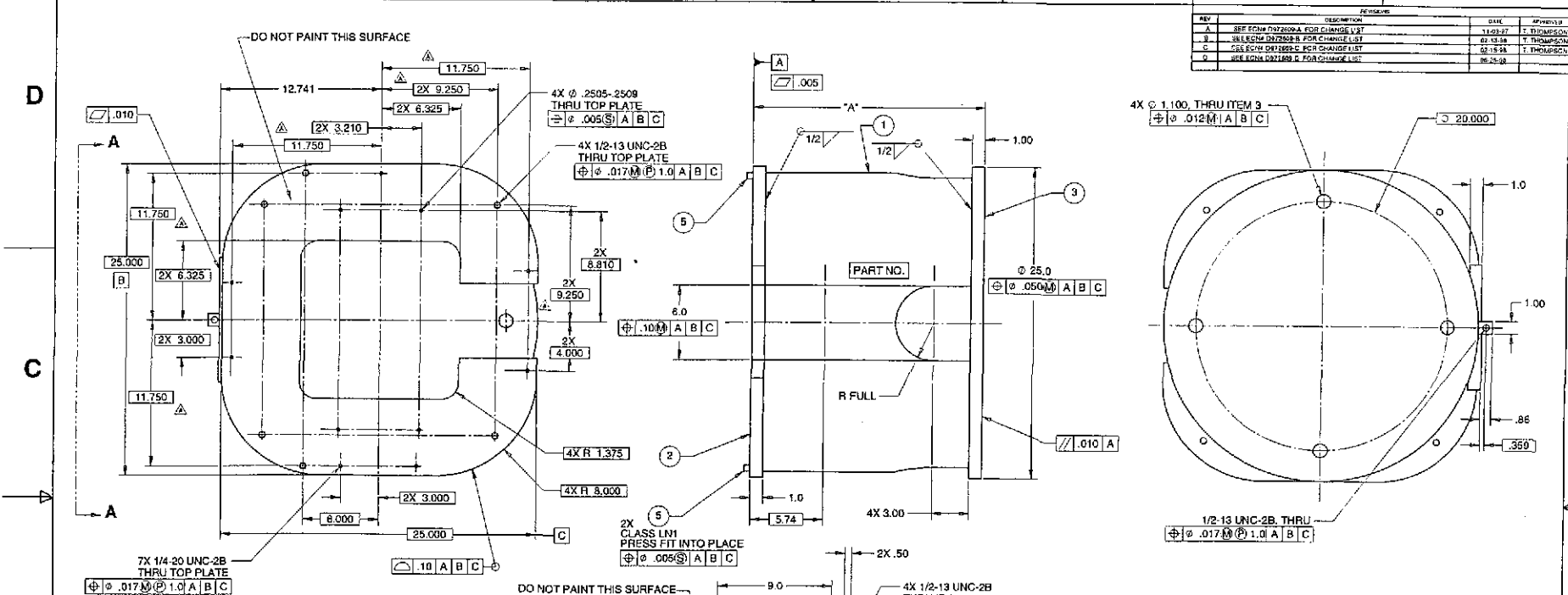
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REV	DESCRIPTION	DATE	BY
A	SEE EDN D972609-A FOR CHANGE LIST	11-23-97	T. THOMPSON
B	SEE EDN D972609-B FOR CHANGE LIST	01-13-98	T. THOMPSON
C	SEE EDN D972609-C FOR CHANGE LIST	02-16-98	T. THOMPSON
D	SEE EDN D972609-D FOR CHANGE LIST	08-25-98	T. THOMPSON



PART NO.	DESCRIPTION	QTY.	UNIT	WEIGHT
D972609-1	HAM PIER FOR HANFORD, WA SITE	1		475.4 lbs.
D972609-3	HAM PIER FOR LIVINGSTON, LA SITE	1		462.2 lbs.

ITEM NO.	QTY.	DESCRIPTION	MATERIAL
1	1	TUBE, 24.00 DIA, X .50 WALL	A106 STEEL
2	1	PLATE	A36 STEEL
3	1	PLATE	A36 STEEL
4	1	PLATE	A36 STEEL
5	2	DOWEL PIN, 5000 DIA, X 1.00 LG.	SST
6	1	PLATE, .50 THK	A36 STEEL

PARTS LIST

HYTEC, INC

LIGO
HAM
SUPPORT PIER

DESIGNED BY ROGER L. SMITH	CHECKED BY HARRY SALAZAR	DATE 5/28/97
DRAWN BY ROGER L. SMITH	ENGINEER T. THOMPSON	DATE 11/14/97
APPROVED BY T. THOMPSON	DATE 11/14/97	

PART NO. D972609-1

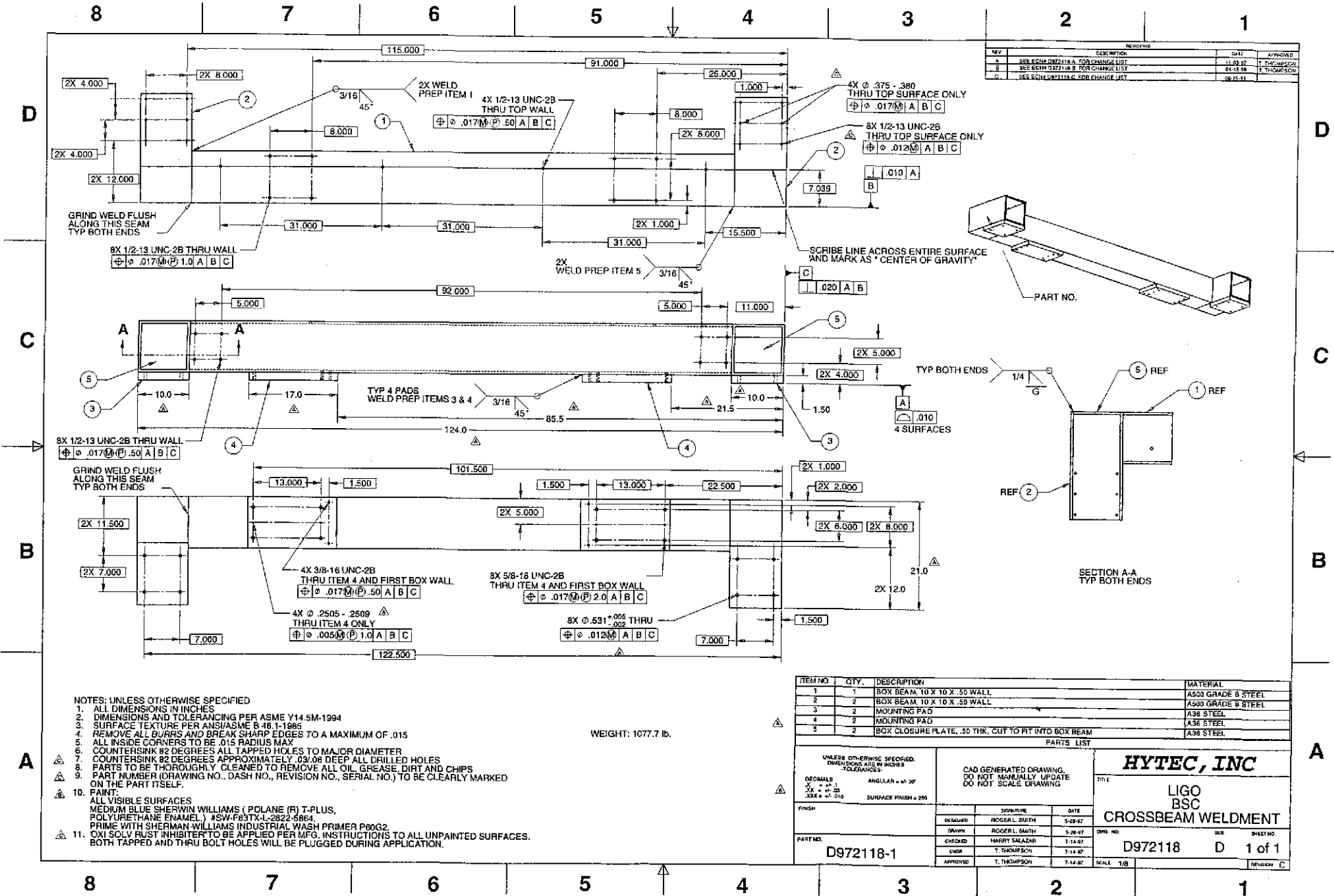
SCALE 3/4" = 1"

- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL DIMENSIONS IN INCHES
 2. DIMENSIONS AND TOLERANCING PER ASME Y14.5M-1994
 3. SURFACE TEXTURE PER ANSI/ASME B 46.1-1985
 4. REMOVE ALL BURRS AND BREAK SHARP EDGES TO A MAXIMUM OF .015
 5. ALL INSIDE CORNERS TO BE .015 RADIUS MAX
 6. COUNTERSINK 82 DEGREES ALL TAPPED HOLES TO MAJOR DIAMETER
 7. COUNTERSINK 90 DEGREES APPROXIMATELY .03/16 DEEP ALL DRILLED HOLES
 8. PARTS TO BE THOROUGHLY CLEANED TO REMOVE ALL OIL, GREASE, DIRT AND CHIPS
 9. PART NUMBER (DRAWING NO., DASH NO., REVISION NO., SERIAL NO.) TO BE CLEARLY MARKED ON THE PART ITSELF.
 10. PAINT: ALL VISIBLE SURFACES MEDIUM BLUE SHERWIN WILLIAMS (POLANE (R) T-PLUS, POLYURETHANE ENAMEL) #5W-F63TX-1-2822-5864 PRIME WITH SHERMAN-WILLIAMS INDUSTRIAL WASH PRIMER P80G2
 11. OXI SOLV RUST INHIBITOR TO BE APPLIED PER MFG. INSTRUCTIONS TO ALL UNPAINTED SURFACES. BOTH TAPPED AND THRU BOLT HOLES WILL BE PLUGGED DURING APPLICATION.

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C
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C
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A

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	SEE ECHN D972118-A FOR CHANGE LIST	11-29-97	T. THOMPSON
B	SEE ECHN D972118-B FOR CHANGE LIST	01-18-98	T. THOMPSON
C	SEE ECHN D972118-C FOR CHANGE LIST	08-25-91	



- NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL DIMENSIONS IN INCHES
 2. DIMENSIONS AND TOLERANCING PER ASME Y14.5M-1994
 3. SURFACE TEXTURE PER ANS/ASME B 46.1-1985
 4. REMOVE ALL BURRS AND BREAK SHARP EDGES TO A MAXIMUM OF .015
 5. ALL INSIDE CORNERS TO BE .015 RADIUS MAX
 6. COUNTERSINK 82 DEGREES ALL TAPPED HOLES TO MAJOR DIAMETER
 7. COUNTERSINK 82 DEGREES APPROXIMATELY .03-.08 DEEP ALL DRILLED HOLES
 8. PARTS TO BE THOROUGHLY CLEANED TO REMOVE ALL OIL, GREASE, DIRT AND CHIPS
 9. PART NUMBER (DRAWING NO., DASH NO., REVISION NO., SERIAL NO.) TO BE CLEARLY MARKED ON THE PART ITSELF.
 10. PAINT: ALL VISIBLE SURFACES MEDIUM BLUE SHERWIN WILLIAMS (POLANE (R) T-PLUS, POLYURETHANE ENAMEL.) #SW-F93TX-L-2822-6964. PRIME WITH SHERWIN WILLIAMS INDUSTRIAL WASH PRIMER P60G2
 11. OXI SOLV RUST INHIBITER TO BE APPLIED PER MFG. INSTRUCTIONS TO ALL UNPAINTED SURFACES. BOTH TAPPED AND THRU BOLT HOLES WILL BE PLUGGED DURING APPLICATION.

WEIGHT: 1077.7 lb.

ITEM NO.	QTY.	DESCRIPTION	MATERIAL
1	1	BOX BEAM, 10 X 10 X .50 WALL	A500 GRADE B STEEL
2	2	BOX BEAM, 10 X 10 X .50 WALL	A500 GRADE B STEEL
3	2	MOUNTING PAD	A36 STEEL
4	2	MOUNTING PAD	A36 STEEL
5	2	BOX CLOSURE PLATE, .50 THK. CUT TO FIT INTO BOX BEAM	A36 STEEL

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES TOLERANCES		CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE. DO NOT SCALE DRAWING.		HYTEC, INC 7th FL LIGO BSC CROSSBEAM WELDMENT	
DECIMALS X = +.015 XX = +.005 XXX = +.002	ANGULAR = ±.30°	SURFACE FINISH = 250			
PART NO. D972118-1		DESIGNED ROGER L. SMITH	SIGNATURE	DATE 5-29-97	D972118 D 1 of 1 SCALE 1/8"
		CHECKED HARRY SALAZAR	SIGNATURE	DATE 7-14-97	
		ENGR T. THOMPSON	SIGNATURE	DATE 7-14-97	
		APPROVED T. THOMPSON	SIGNATURE	DATE 7-14-97	