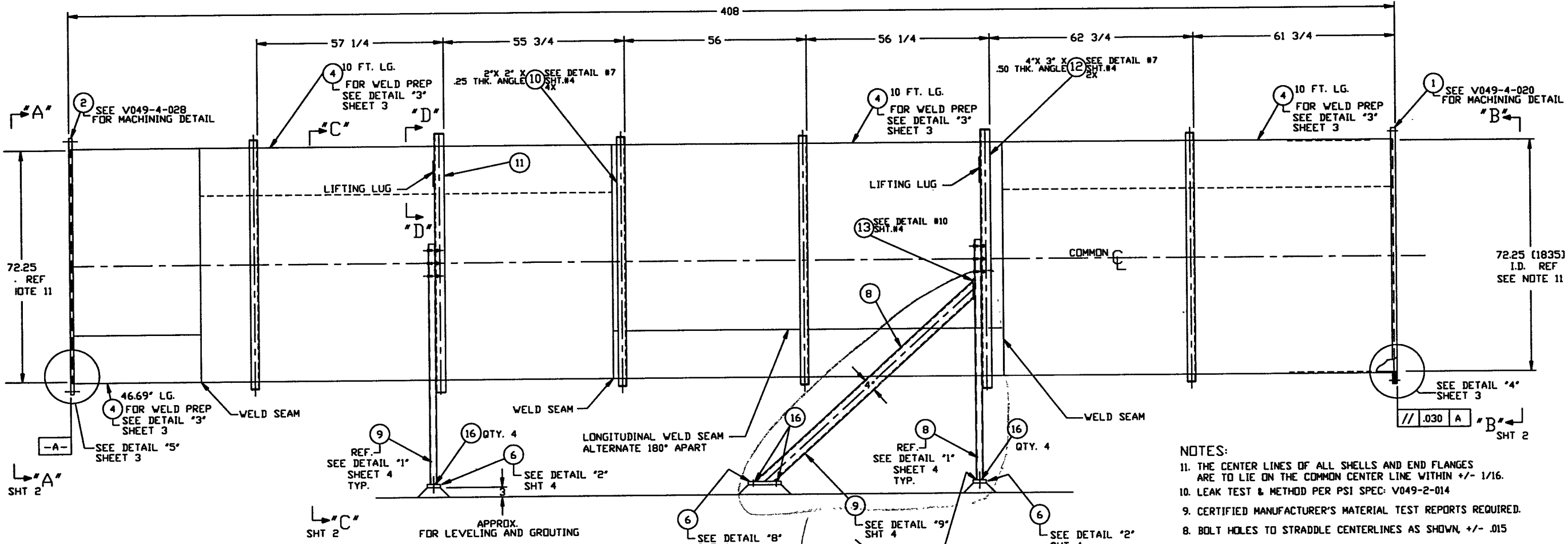
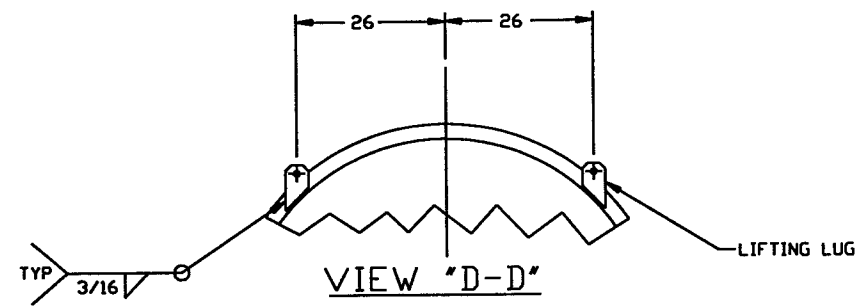


ITEM	PART NUMBER	SUFFIX	QTY	UN	DESCRIPTION
1	V0494020		1	EA	FLANGE, GROOVED, 72 1/4" ID X 80" OD
2	V0494028		1	EA	FLANGE, FLAT FACED, 72 1/4" ID X 80" OD
4	XX		XX	SF	PLATE, 304L SST, 1/4" THK.
6	XX		XX	SF	PLATE, A36, 1" THK.
8	XX		XX	FT	TUBE STEEL, 4" X 2" X 5/16"
9	XX		XX	FT	TUBE STEEL (TS) 4" X 2" X 3/16" A500 GR B
10	XX		XX	FT	ANGLE, 2" X 2" X 1/4" 304 SST.
11	XX		XX	FT	ANGLE, 4" X 3" X 1/4" 304 SST.
12	XX		XX	FT	ANGLE, 4" X 3" X 1/2" 304 SST.
13	XX		XX	FT	PLATE, A36, 3" X 6.5 X 1/2"
14	XX		12	EA	BOLT, 5/8-11 UNC X 3 1/2" LG, A325
15	XX		12	EA	NUT, 5/8-11 UNC
16	XX		8	EA	ANCHOR 1" DIA MILTI HVA 8 1/2" MIN. EMBED
17	XX		12	EA	LOCK WASHER, 5/8"



**NOT FOR CONSTRUCTION**  
*Raymond D. Watts, P.E.*  
 5/6/92

- NOTES:**
- THE CENTER LINES OF ALL SHELLS AND END FLANGES ARE TO LIE ON THE COMMON CENTER LINE WITHIN +/- 1/16.
  - LEAK TEST & METHOD PER PSI SPEC: V049-2-014
  - CERTIFIED MANUFACTURER'S MATERIAL TEST REPORTS REQUIRED.
  - BOLT HOLES TO STRADDLE CENTERLINES AS SHOWN, +/- .015
  - CLEAN PER SPEC: V049-2-015
  - DO NOT USE CARBON STEEL BRUSHES OR BRUSHES CONTAMINATED WITH CARBON STEEL ON STAINLESS OR ALUMINUM MATERIAL.
  - DIMENSIONS SHOWN IN PARENTHESES ARE IN MILLIMETERS.
  - SPOOL FABRICATION TO BE IN ACCORDANCE WITH SPEC. V049-2-097.
  - FOR FLANGE DETAILS SEE DWGS.
  - THESE FLANGES EACH INCLUDE AN ANNUAL CHANNEL BETWEEN O-RINGS, MANIFOLD TO A SINGLE PUMP-OUT PORT ON EACH CHAMBER, SEE DWG V049-4-1.
  - REGISTERED TRADEMARK, VARIAN VACUUM PRODUCTS; COMPATIBLE ALTERNATIVES ARE ACCEPTABLE.

*LIGO D961159-00-V*

**PROCESS SYSTEMS INTERNATIONAL, INC.**  
 20 WALRUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA

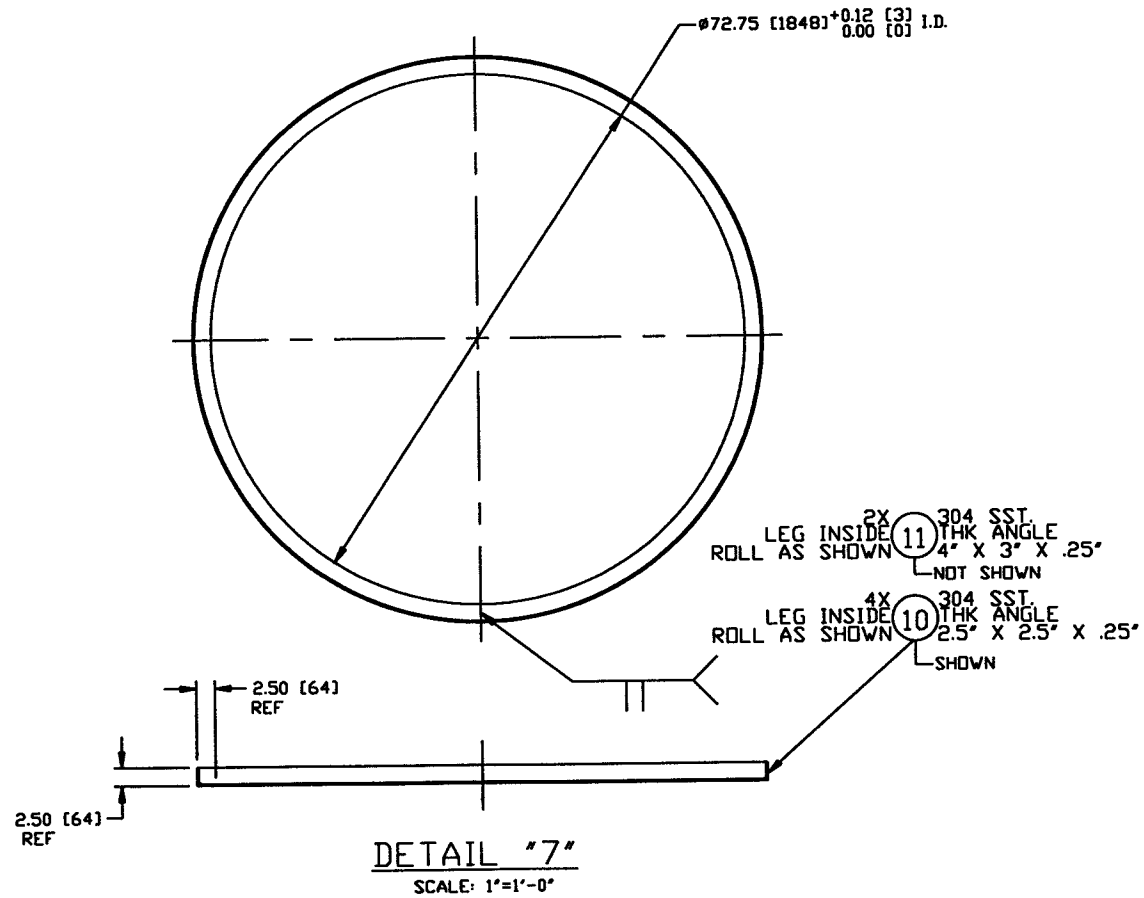
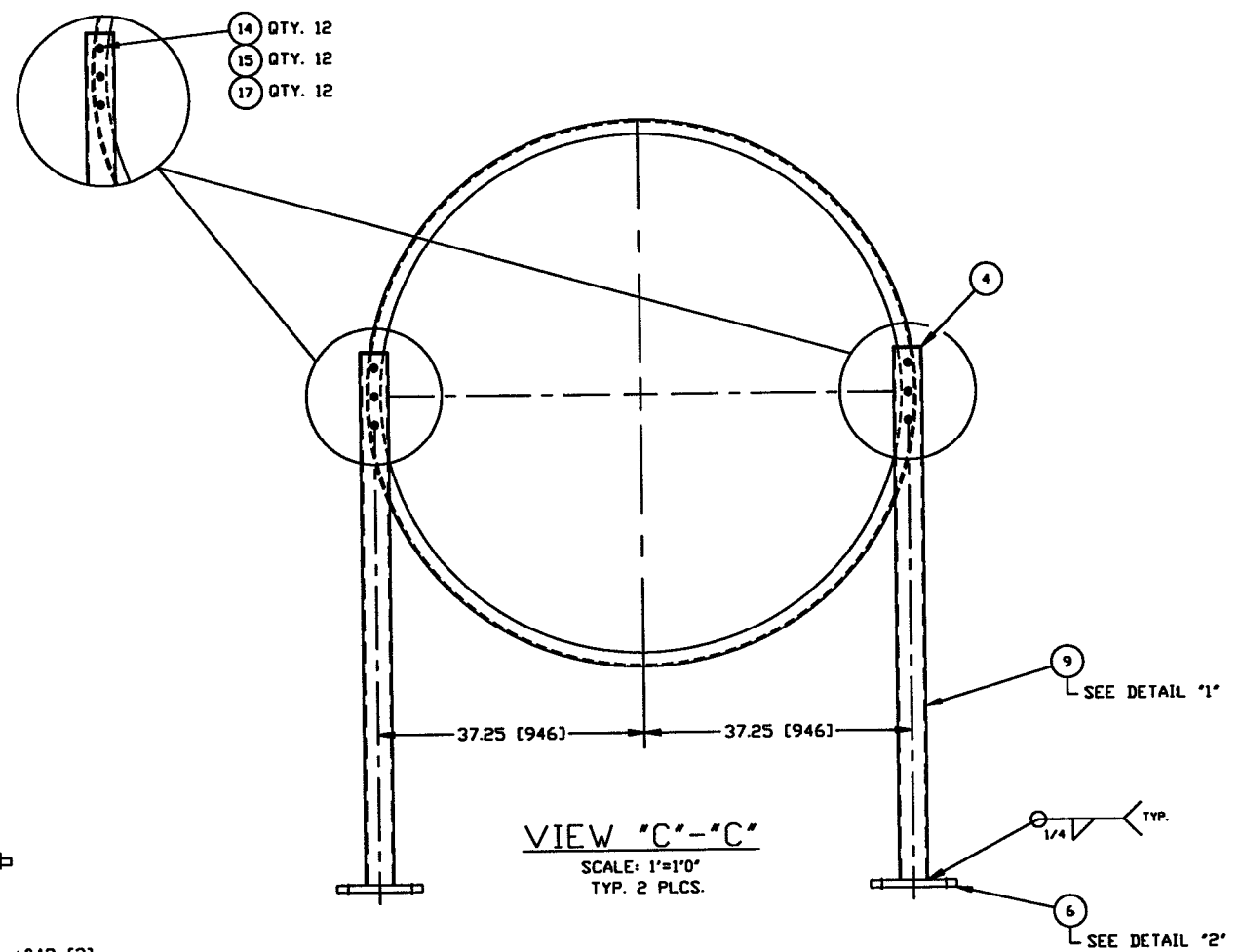
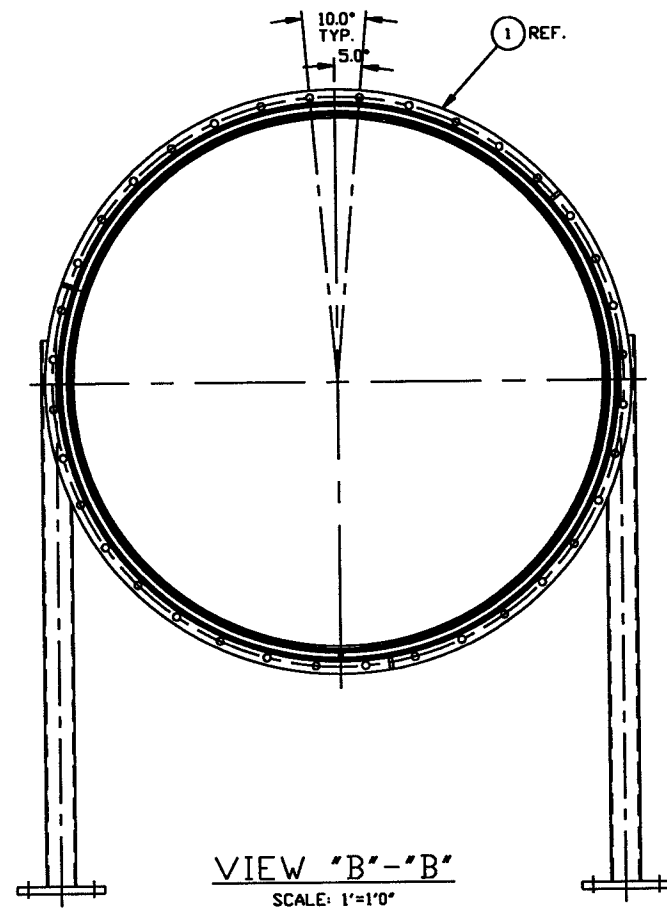
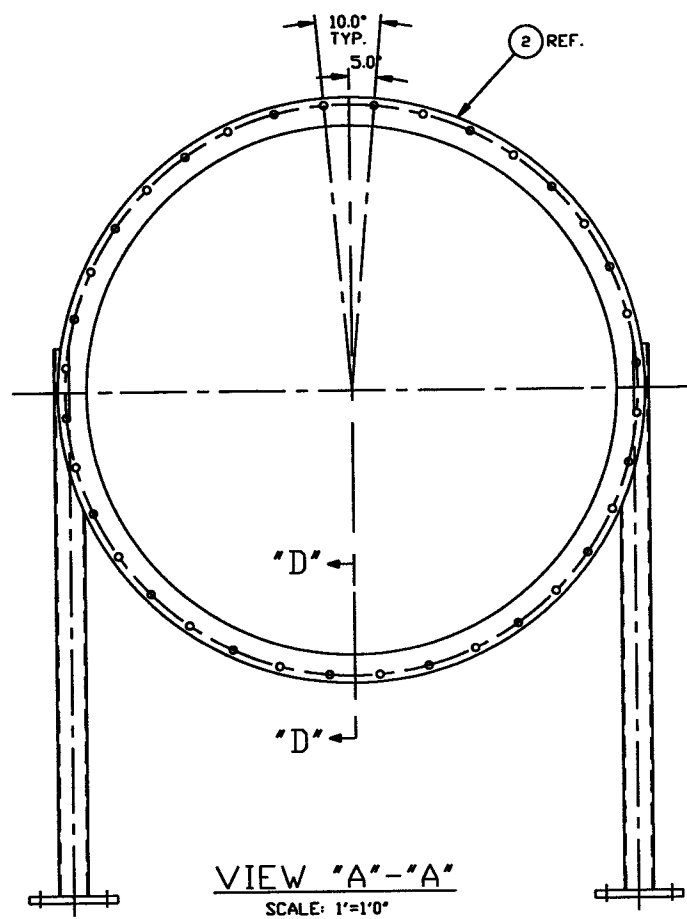
**SPOOL B-9**  
 72.25" ID  
 LIGO VACUUM EQUIPMENT

DA	4/29/96	0146
GW	3/20/96	
CHKD	DRWN	DATE
DEC 0	DEC 0	DEC 0

CAR FILE V049489/48951    SIZE D    DWG NO. V049-4-B9    REV. 0

SCALE 3/4" = 1'-0"    SHEET 1 OF 4

PARTY AND CONFIDENTIAL		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
		TOLERANCES:	
		FRACTIONAL ± .1	
		ANGULAR ± .30°	
		TWO PLACE DECIMAL ± .01	
		THREE PLACE DECIMAL ± .005	
		FINISHED SURFACE RING	
		BREAK CORNERS BY .005"	
		REMOVE ALL BURRS	
		DO NOT SCALE THIS DRAWING	
		USED ON:	
		NEXT ASSY:	

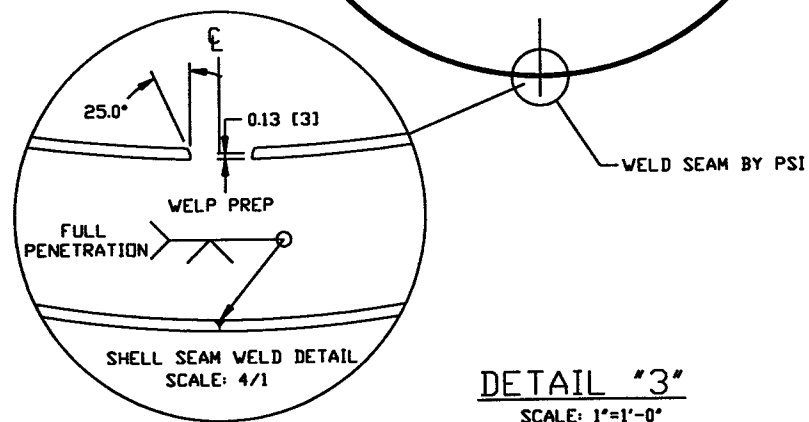
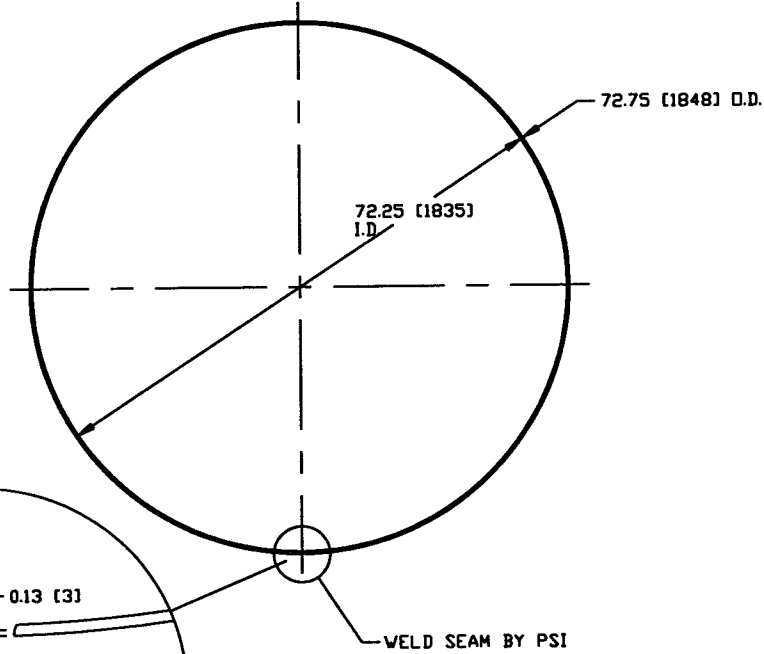
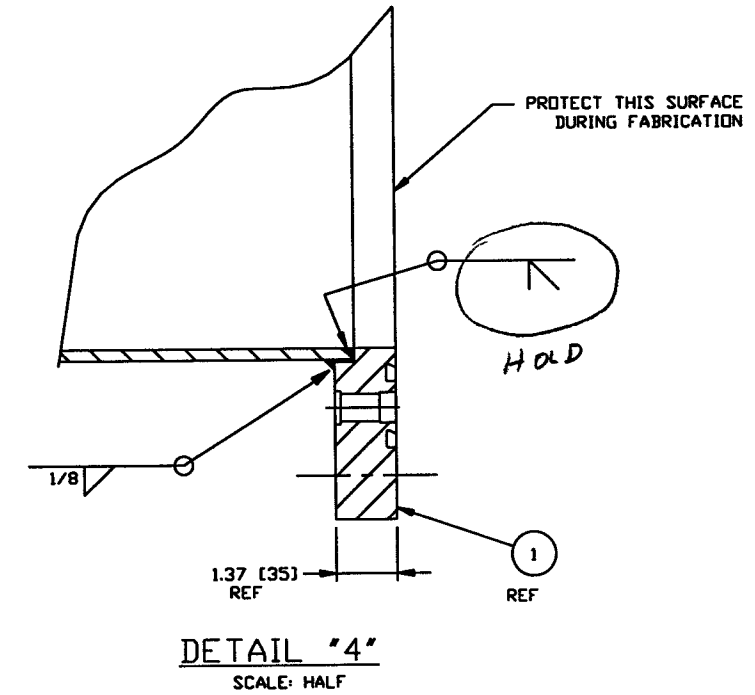
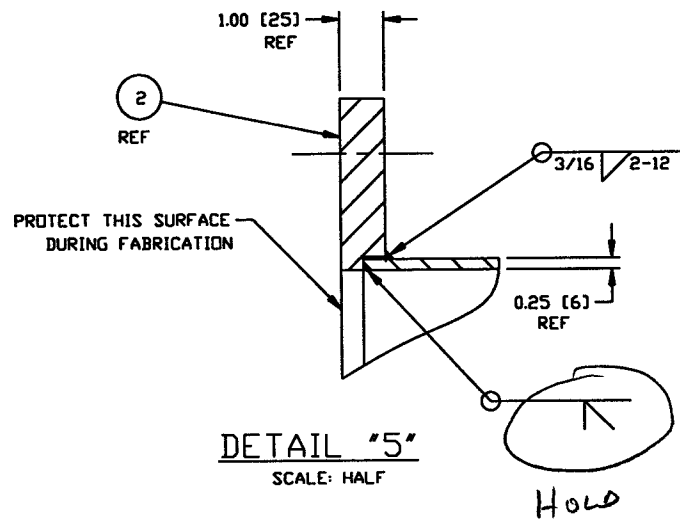
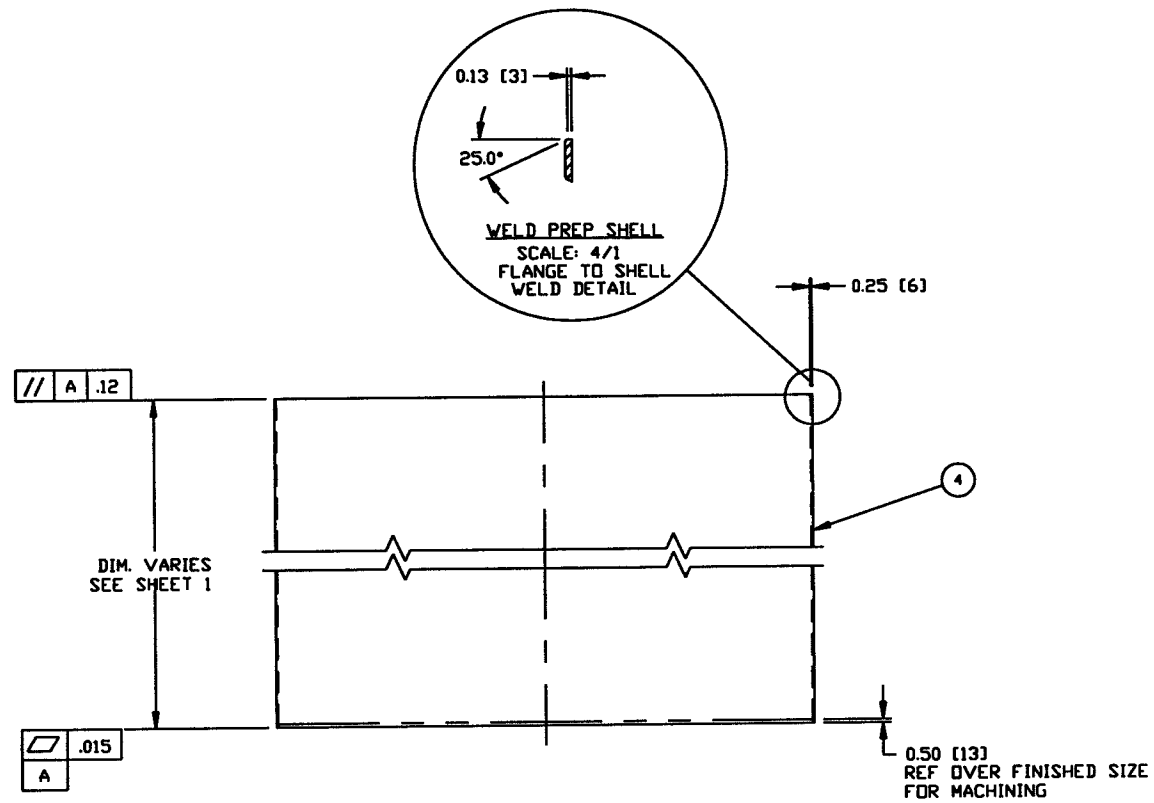


**NOT FOR CONSTRUCTION**

*Raymond D. Gatto, PE*  
5/6/96

Hold  
LIGO D91611S9-00-V

<b>PROCESS SYSTEMS INTERNATIONAL, INC.</b> <small>20 WALKUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA</small>			
SPOOL B-9 72.25" ID LIGO VACUUM EQUIPMENT			
CAD FILE V0494B9/4B9S2	SIZE D	DWG. NO. V049-4-B9	REV. 0
SCALE AS NOTED	SHEET 2 OF 4		



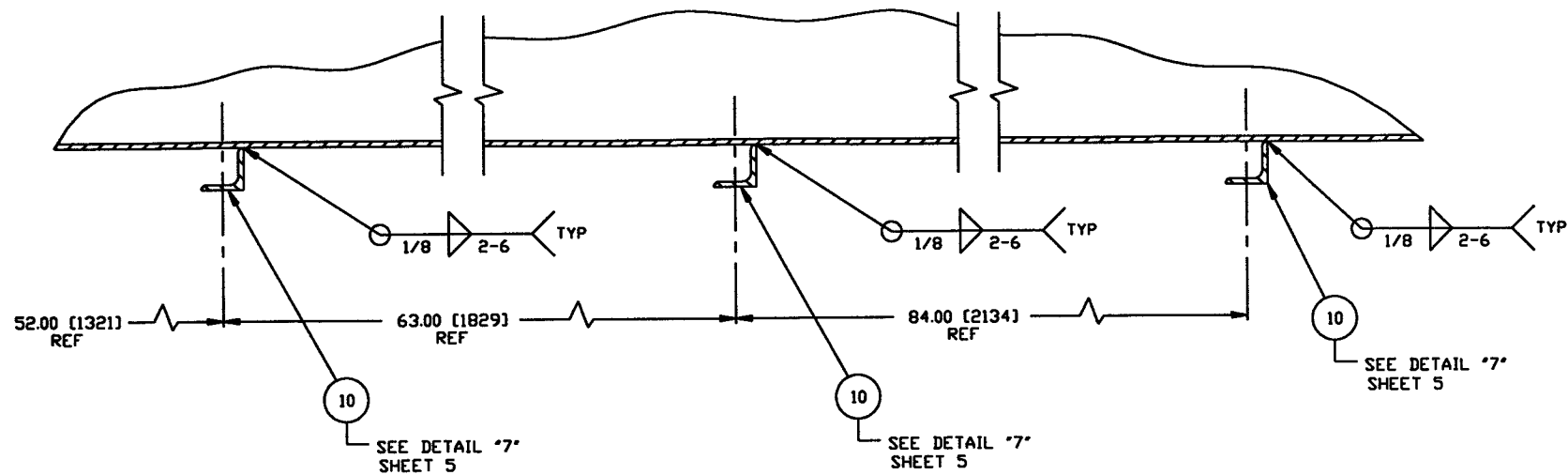
**NOT FOR  
CONSTRUCTION**

*Raymond D. Ciatta, PE*  
5/6/96

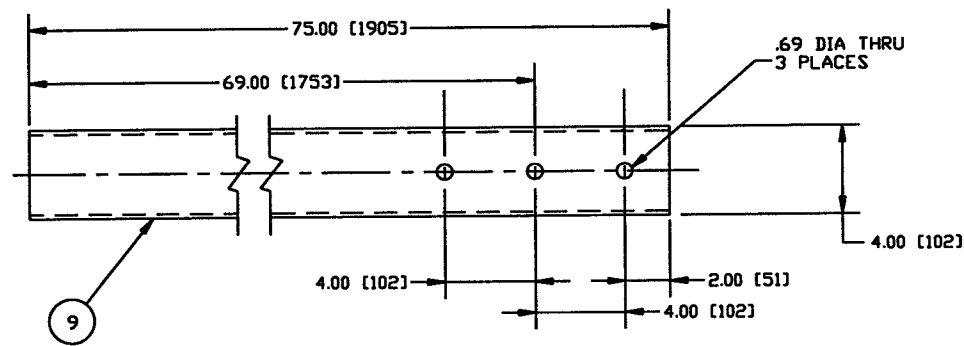
LIGO 0961159-00-V

PROCESS SYSTEMS INTERNATIONAL INC. 20 WALRUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA			
SPOOL B-9 72.25" I.D. LIGO VACUUM EQUIPMENT			
CAD FILE V049489/48953	SIZE D	ING. NO. V049-4-B9	REV. 0
SCALE AS NOTED	SHEET 3 OF 4		

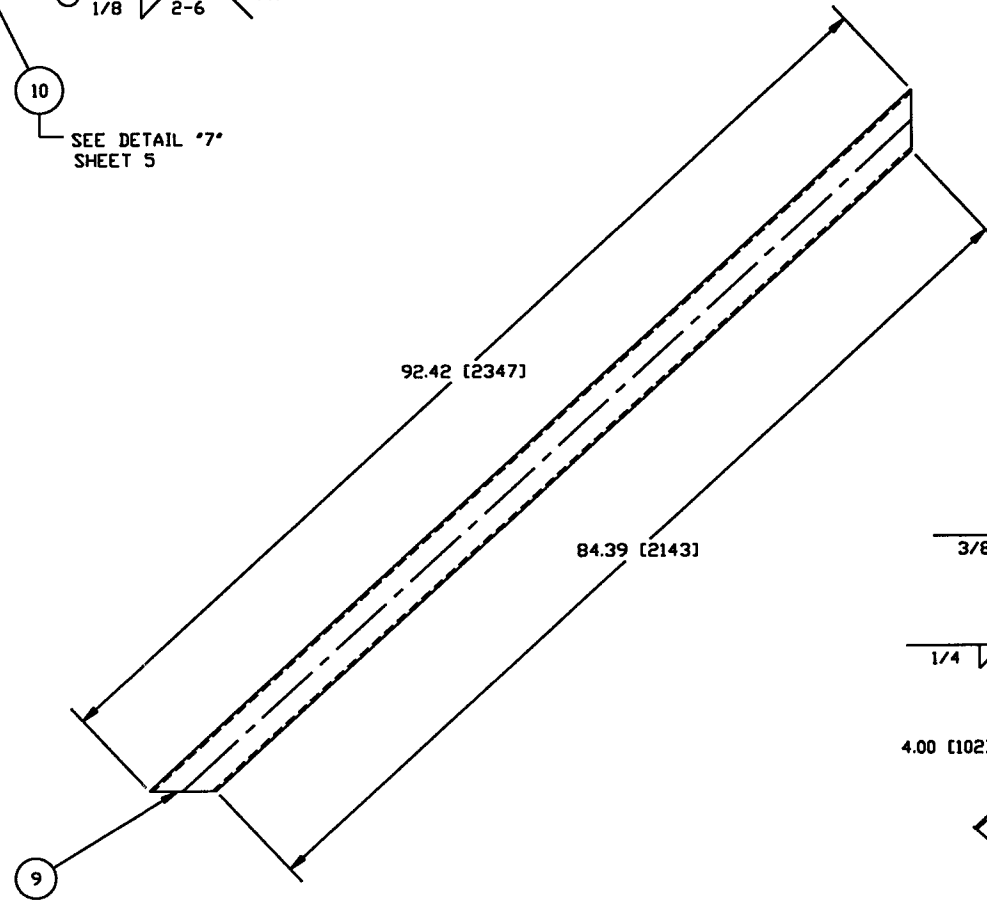
Apr 22, 1996 - 11:04:41



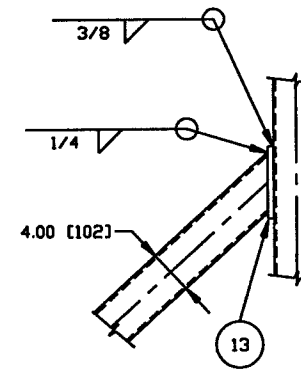
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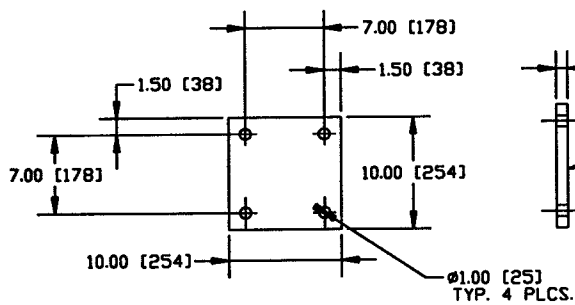
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SCALE: 3" = 1'-0"  
QTY: 4



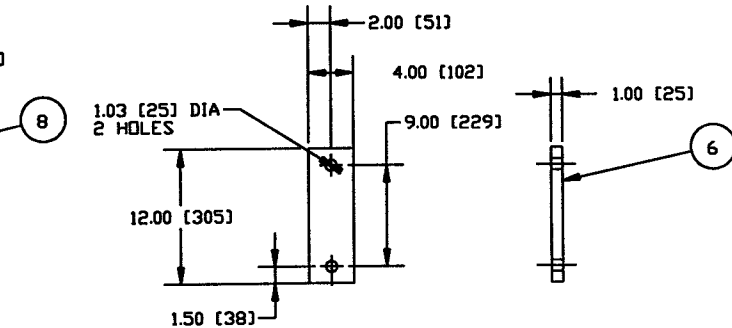
**DETAIL "9"**  
SCALE: 1 1/2" = 1'-0"



**DETAIL "10"**  
SCALE: 1 1/2" = 1'-0"



**DETAIL "8"**  
SCALE: 1 1/2" = 1'-0"  
QTY: 2



**DETAIL "2"**  
SCALE: 1 1/2" = 1'-0"  
QTY: 4

**NOT FOR CONSTRUCTION**

*Raymond D. Little*  
5/6/96

HOLD LIGO 0961159-CO-V  
SEE SHEET 1 FOR REVISIONS

<b>PROCESS SYSTEMS INTERNATIONAL INC.</b> 20 WALKUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA			
SPOOL B-9 72 1/4" I.D. LIGO VACUUM EQUIPMENT			
CAD FILE V0494B9/4B9S4	SIZE D	ENG. NO. V049-4-B9	REV 0
SCALE 1"=1'-0"	SHEET 4 OF 4		

DEC 07, 1994 - 110524