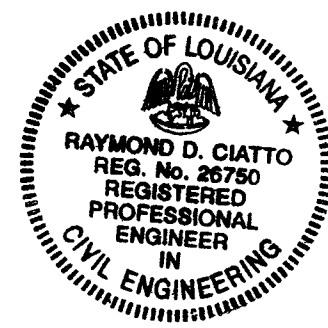
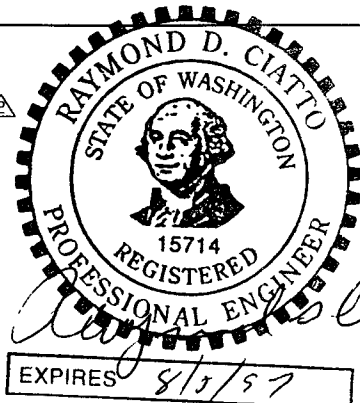
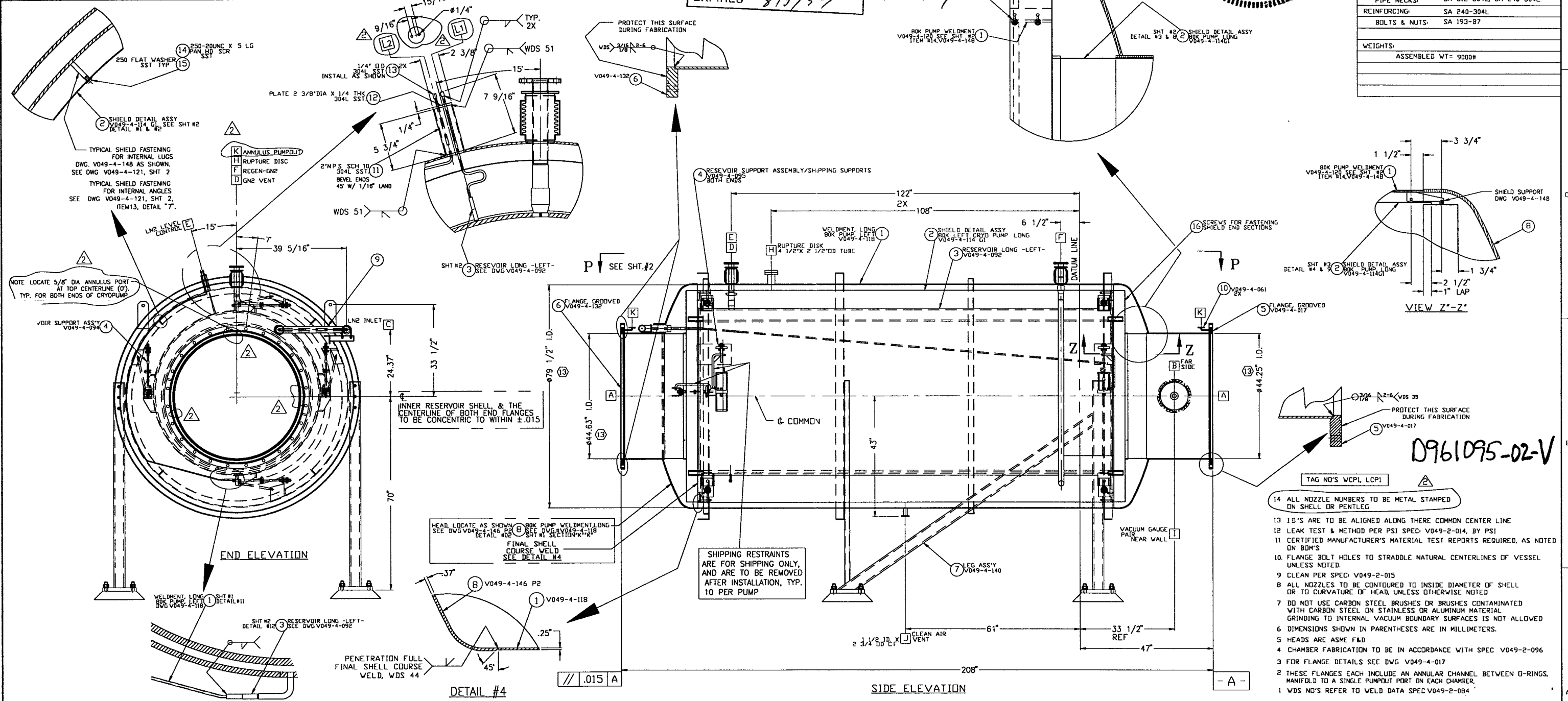


NOZZLE SCHEDULE				
MARK	QTY	SIZE	RATING	TYPE
A	2	44.63" I.D.		SEE NOTE #1 & #2 LASER BEAM / ACCESS
B	1	10" OD TUBE		1/2" OD. CONFLAT W/BLIND FLANGE PUMPOUT PORT
C	1	1/2" x 7"		VAC. JACKET W/ BAYONET BLIND LN2 INLET
I	1	1 1/2" PIPE		1 1/2" ASA FLG. 5" OD. GN2 VENT
E	1	2" O.D. PIPE		PANT LEG
F	1	1 1/2" PIPE		1 1/2" ASA FLG. 5" OD. REGEN-GN2
G	1	2 1/2" OD TUBE		4 1/2" OD CONFLAT W/BLIND FLANGE 1/E FEED THRU
I	1	1 1/2" OD TUBE		2 3/4" OD. CONFLAT W/BLIND FLANGE VACUUM GAUGE PAIR
J	1	1 1/2" O.D. TUBE		2 3/4" OD. CONFLAT W/BLIND FLANGE PURGE AIR
H	1	2 1/2" OD. TUBE		4 1/2" OD. CONFLAT W/BLIND FLANGE RUPTURE DISC.
K	2	3/4" OD TUBE		2 3/4" OD CONFLAT FLANGE ANNULUS PUMPOUT PORT

MARK	QTY.	SIZE	TYPE	DESCRIPTION
L1	1	1/4"	FPT	LN2 LEVEL CONTROL
L2	1	1/4"	FPT	LN2 LEVEL CONTROL



DESIGN DATA	
CORROSION ALLOWANCE	0
POSTWELD HEAT TREATMENT	MBS
FIREPROOFING	N/A
RADIOGRAPHING	NONE
MATERIALS	
HEADS	SA 240-304L
SHELL	SA 240-304, 304L
FLANGES	SA 182 GRADE F, 304L
PIPE NECKS	SA 312-304L, SA 240-304L
REINFORCING	SA 240-304L
BOLTS & NUTS	SA 193-B7
WEIGHTS	
ASSEMBLED WT	9000#



- 14 ALL NOZZLE NUMBERS TO BE METAL STAMPED ON SHELL OR PENTLEG
- 13 ID'S ARE TO BE ALIGNED ALONG THERE COMMON CENTER LINE
- 12 LEAK TEST & METHOD PER PSI SPEC. V049-2-014, BY PSI
- 11 CERTIFIED MANUFACTURER'S MATERIAL TEST REPORTS REQUIRED, AS NOTED ON BOM'S
- 10 FLANGE BOLT HOLES TO STRADDLE NATURAL CENTERLINES OF VESSEL UNLESS NOTED.
- 9 CLEAN PER SPEC V049-2-015
- 8 ALL NOZZLES TO BE CONTOURED TO INSIDE DIAMETER OF SHELL OR TO CURVATURE OF HEAD, UNLESS OTHERWISE NOTED
- 7 DO NOT USE CARBON STEEL BRUSHES OR BRUSHES CONTAMINATED WITH CARBON STEEL ON STAINLESS OR ALUMINUM MATERIAL GRINDING TO INTERNAL VACUUM BOUNDARY SURFACES IS NOT ALLOWED
- 6 DIMENSIONS SHOWN IN PARENTHESES ARE IN MILLIMETERS.
- 5 HEADS ARE ASME F&D
- 4 CHAMBER FABRICATION TO BE IN ACCORDANCE WITH SPEC V049-2-096
- 3 FOR FLANGE DETAILS SEE DWG V049-4-017
- 2 THESE FLANGES EACH INCLUDE AN ANNULAR CHANNEL BETWEEN O-RINGS, MANIFOLD TO A SINGLE PUMPOUT PORT ON EACH CHAMBER.
- 1 WDS NO'S REFER TO WELD DATA SPEC V049-2-084

UNCLASSIFIED AND CONFIDENTIAL

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DWG NO	DESCRIPTION	DWG. NO.	DESCRIPTION	SYMBOL	CHARACTERISTIC	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± 1/16" TWO PLACE DECIMAL ± 0.03 THREE PLACE DECIMAL ± 0.05 FINISHED SURFACE RHS 6.3 BREAK CORNERS IN DRAWING REMOVE ALL BURRS	REV	DESCRIPTION	CHKD	DRWN	DATE	DEOR
V049-4-140	SUPPORT LEG ASSY			□	FLATNESS		2	REVISED FOR FABRICATION AS NOTED	DMW	PEF	12/30/96	0346
V049-4-114 GI	SHIELD ASSY.			○	CYLINDRICITY		1	ISSUED FOR FABRICATION/FDR UPDATE - MAJOR REVISIONS	DMW	PEF	7/2/96	0144
V049-4-095	RESERVOIR SUPPORTS			∥	PARALLELISM		0	ISSUED FOR FDR				
V049-4-118	VESSEL WELDMENT			⊥	PERPENDICULARITY							
V049-4-092	80K PUMP RESERVOIR			∠	ANGULARITY							
				⊕	TRUE POSITION	DO NOT SCALE THIS DRAWING						
				⊙	CENTRICITY	USED ON: NEXT ASS'Y.						

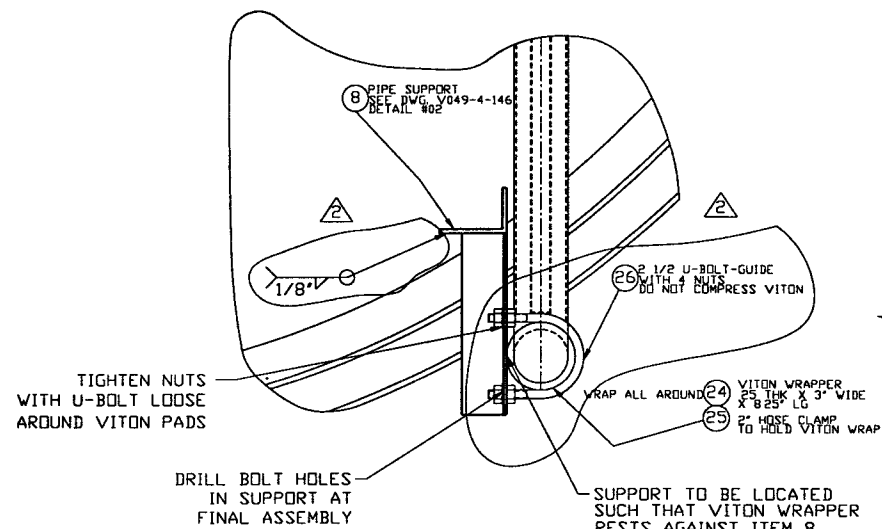
PROCESS SYSTEMS INTERNATIONAL, INC.
20 WALKUP DR. WESTBOROUGH, MASSACHUSETTS 01581 USA

80K PUMP GENERAL ARR'G'T-LONG-LEFT

LIGD VACUUM EQUIPMENT

CAB FILE 494004S1 SIZE D DWG. NO. V049-4-004 REV 2

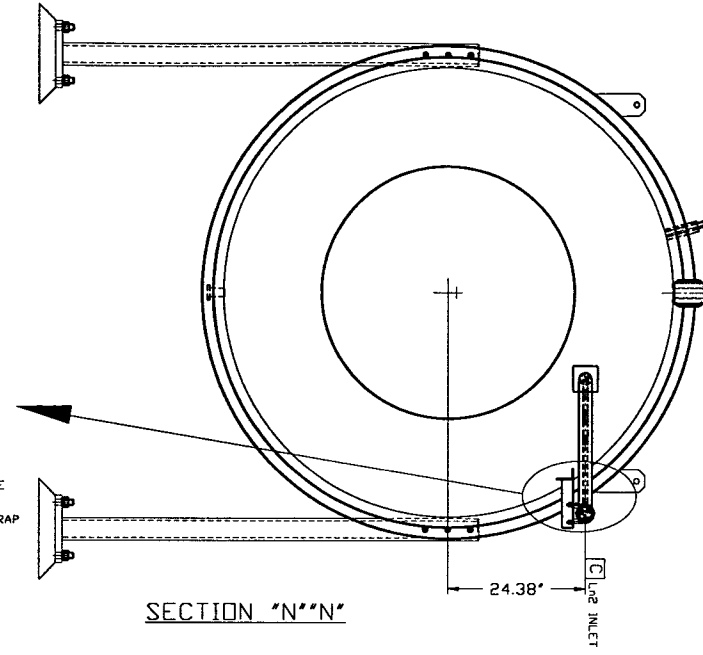
SCALE NONE SHEET 1 OF 2



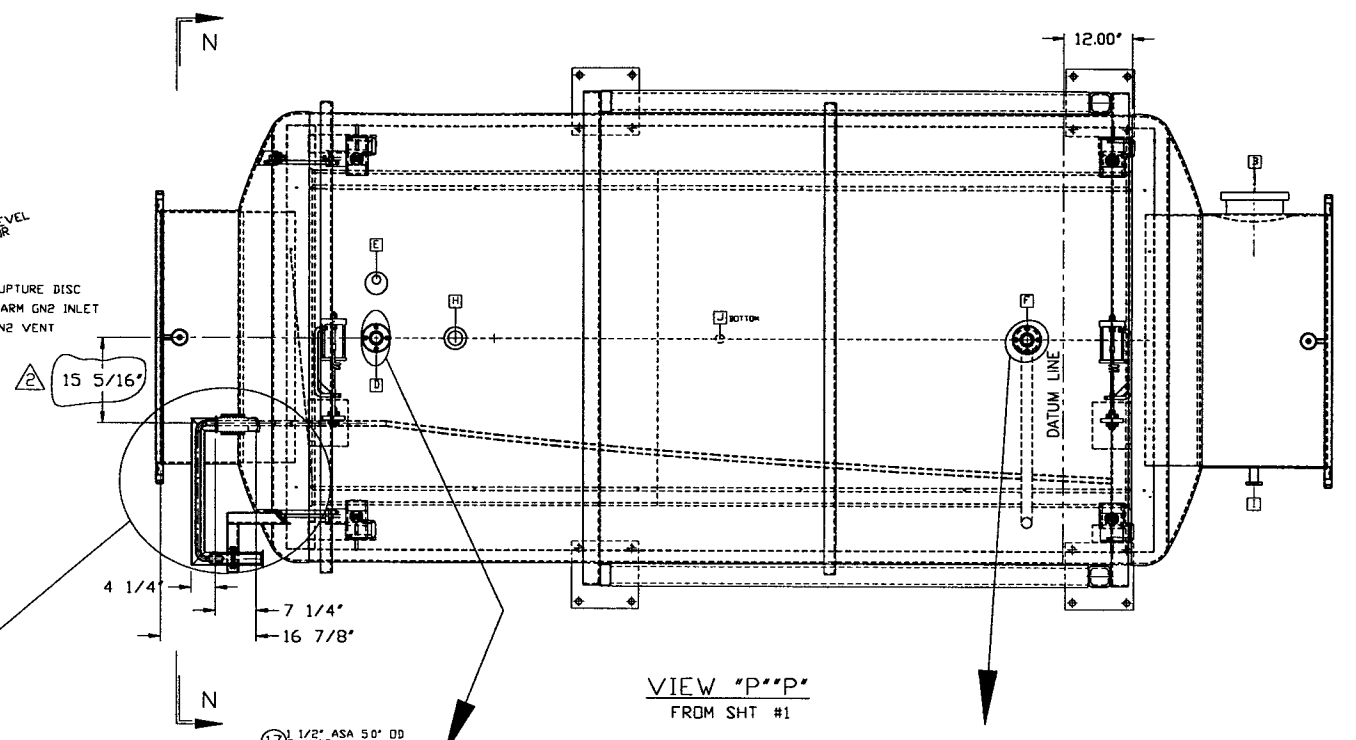
TIGHTEN NUTS WITH U-BOLT LOOSE AROUND VITON PADS

DRILL BOLT HOLES IN SUPPORT AT FINAL ASSEMBLY

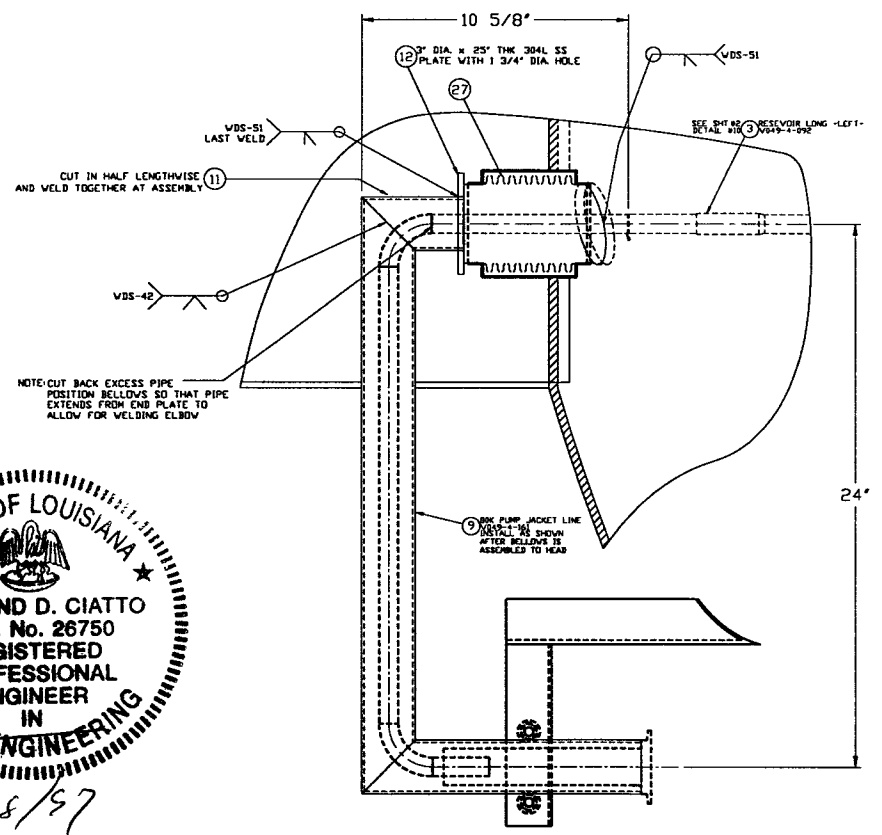
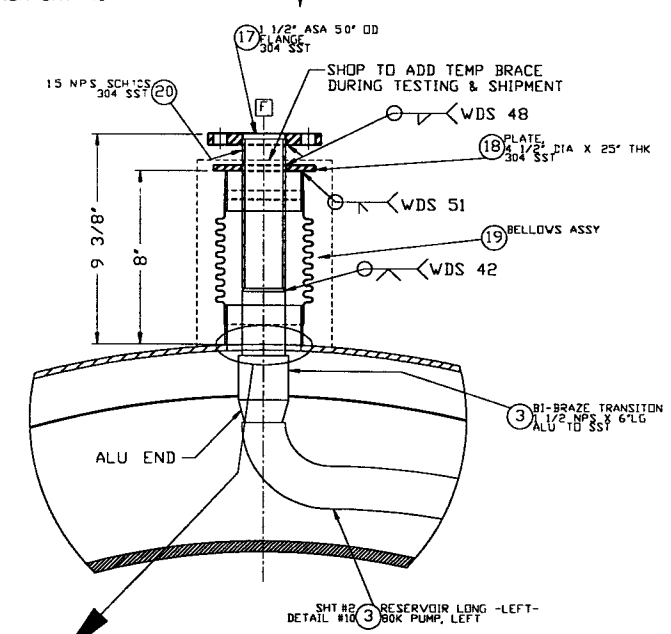
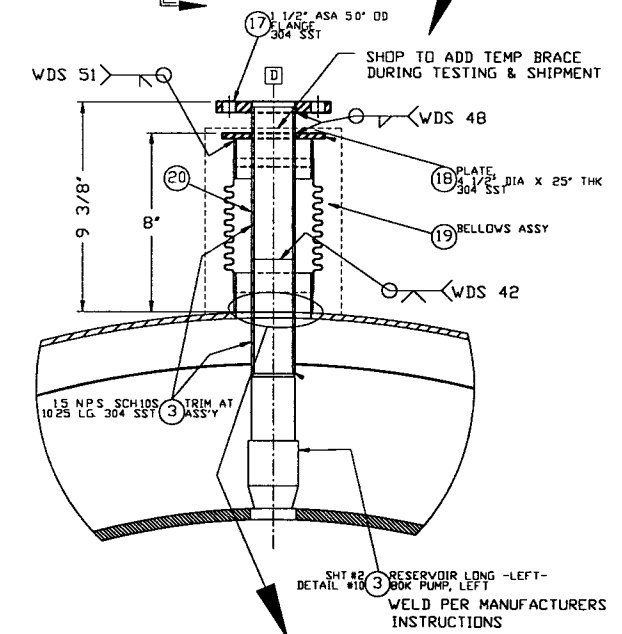
SUPPORT TO BE LOCATED SUCH THAT VITON WRAPPER RESTS AGAINST ITEM B



SECTION "N-N"



VIEW "P-P" FROM SHT #1



CUT IN HALF LENGTHWISE AND WELD TOGETHER AT ASSEMBLY

NOTE: CUT BACK EXCESS PIPE POSITION BELLOWS SO THAT PIPE EXTENDS FROM END PLATE TO ALLOW FOR WELDING ELBOW

SEE SHEET #3 RESERVOIR LONG -LEFT- DETAIL #10



SEE SHEET 1 FOR REVISIONS

PROCESS SYSTEMS INTERNATIONAL INC. 20 WALKUP DR WESTBOROUGH, MASSACHUSETTS 01581 USA			
BOK PUMP GENERAL ARR'G-LONG-LEFT			
LIGD VACUUM EQUIPMENT			
CAD FILE	SIZE	DWG. NO.	REV
494004S2	D	V049-4-004	2
SCALE	NONE	SHEET	2 OF 2

JUN 24, 1997 - 154923