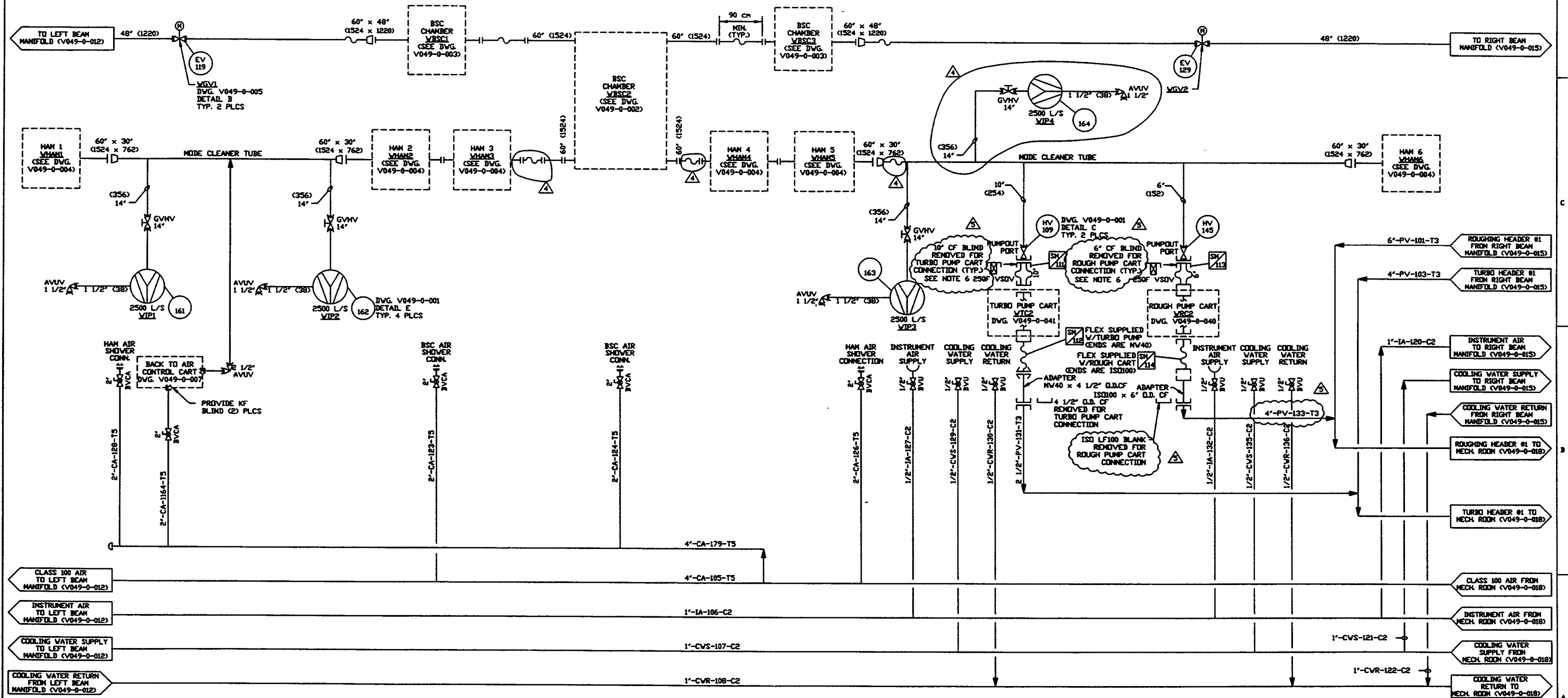


NOTES:

1. EACH PUMPOUT PORT LOCATION HAS BOTH POWER & CONTROL PLUG-IN CONNECTIONS.
2. ALL VACUUM GAUGES TO BE BAKED OUT AT 250 C DURING PUMP-DOWN, USING A REMOVABLE BLANKET TYPE HEATER. ALL VACUUM SECTIONS SHALL ALSO BE BAKED OUT AT 150 C DURING PUMP-DOWN USING A REMOVABLE BLANKET TYPE HEATER. SEE DWG. V049-0-043 FOR BAKEDOUT SYSTEM.
3. DIMENSIONS IN () ARE IN MILLIMETERS.
4. BEAM MANIFOLD DIMENSIONS INDICATE INSIDE DIAMETERS.
5. BEAM MANIFOLD FLANGE ANNULUS ION PUMP DETAILS LATER.
6. PROVIDE OF BLIND WITH 25 OF SEAL-OFF FITTING.



DWG. NO.	DESCRIPTION	DWG. NO.	DESCRIPTION	EQUIP. THIS DWG.	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS: .001\"/>
V049-0-015	P & ID RIGHT BEAM MANIFOLD	V049-0-041	P & ID TURBO PUMP CART	WHAM1	V/BSC3
V049-0-012	P & ID LEFT BEAM MANIFOLD	V049-0-040	P & ID MAIN ROUGHING PUMP CART	WHAM2	GVV1
V049-0-004	P & ID HORIZONTAL ACCESS MODULE	V049-0-018	P & ID MECHANICAL ROOM	WHAM3	GVV2
V049-0-003	P & ID BEAM SPLITTER CHAMBER			WHAM4	VTP1
V049-0-002	P & ID BEAM SPLITTER CHAMBER			WHAM5	VTP2
V049-0-001	P & ID LEGEND			WHAM6	VTP3
				V/BSC1	VTP4
				V/BSC2	VTC2

REV	DESCRIPTION	ISSUE DESCRIPTION	CHKD	DRWN	DATE	DESB
5	REISSUED FOR FDR UPDATE				6/11/97	0499
4	REVISED				02.14.97	0435
3	REVISED				02.03.97	0394
2	ISSUED FOR FDR UPDATE	TS	RT	SH	10.25.96	0309
1	ISSUED FOR FDR	REB	TS	RT	04.26.96	0134
0	ISSUE FOR DESIGN	REB	TS	RT	02.03.96	0031
P1	PRELIMINARY DESIGN UPDATE	REB	TS	RT	09.26.95	0003

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

PIPING & INSTRUMENTATION DIAGRAM
LIGO VACUUM EQUIPMENT
WASHINGTON SITE
VERTEX SECTION

CAR FILE: V0490013
 Dwg. No.: V049-0-013
 REV: 5

SCALE: NONE
 SHEET: 1 OF 1