

- NOTES:**
- SEE SPEC. V049-2-021 FOR INSTALLATION/ COMMISSIONING INFORMATION.
  - FOR TUBING/ PIPE SUPPORT REQUIREMENTS, SEE SPEC. V049-2-021, SECTION 10.
  - FOR GATE VALVE ANNULUS TUBING INSTALLATION SEE DWG. V049-5-007.

DWG. NO.	DESCRIPTION	DWG. NO.	DESCRIPTION
V049-0-010	P & ID LEFT END STATION	V049-0-006	P & ID 80K CRYOPUMP
V049-5-007	EQUIPMENT ARRANGEMENT LEFT END STATION	1101102	LIGO VACUUM EQUIPMENT END STATION

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	4	AS-BUILT
TOLERANCES: FRACTIONAL ± ANGULAR ± 0 BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ± FINISHED SURFACE RNS BREAK CORNERS DW OUT REMOVE ALL BURRS	3	REISSUED FOR CONSTRUCTION AS NOTED
DO NOT SCALE THIS DRAWING	2	ISSUED FOR CONSTRUCTION
USED ON:	1	ISSUED FOR FDR UPDATE & BID
NEXT ASS'Y:	0	ISSUED FOR FDR
	PI	PRELIMINARY DESIGN
	REV	DESCRIPTION

SIZE	DWG. NO.	DATE	DEC#
DMW	RDC	REC	PV
DMW	RDC	REC	RM
DMW	RDC	REC	RM
DMW	RDC	REC	GW
			RM

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

PIPING ARRANGEMENT, PLAN  
 LEFT END STATION  
 WASHINGTON SITE  
 LIGO VACUUM EQUIPMENT

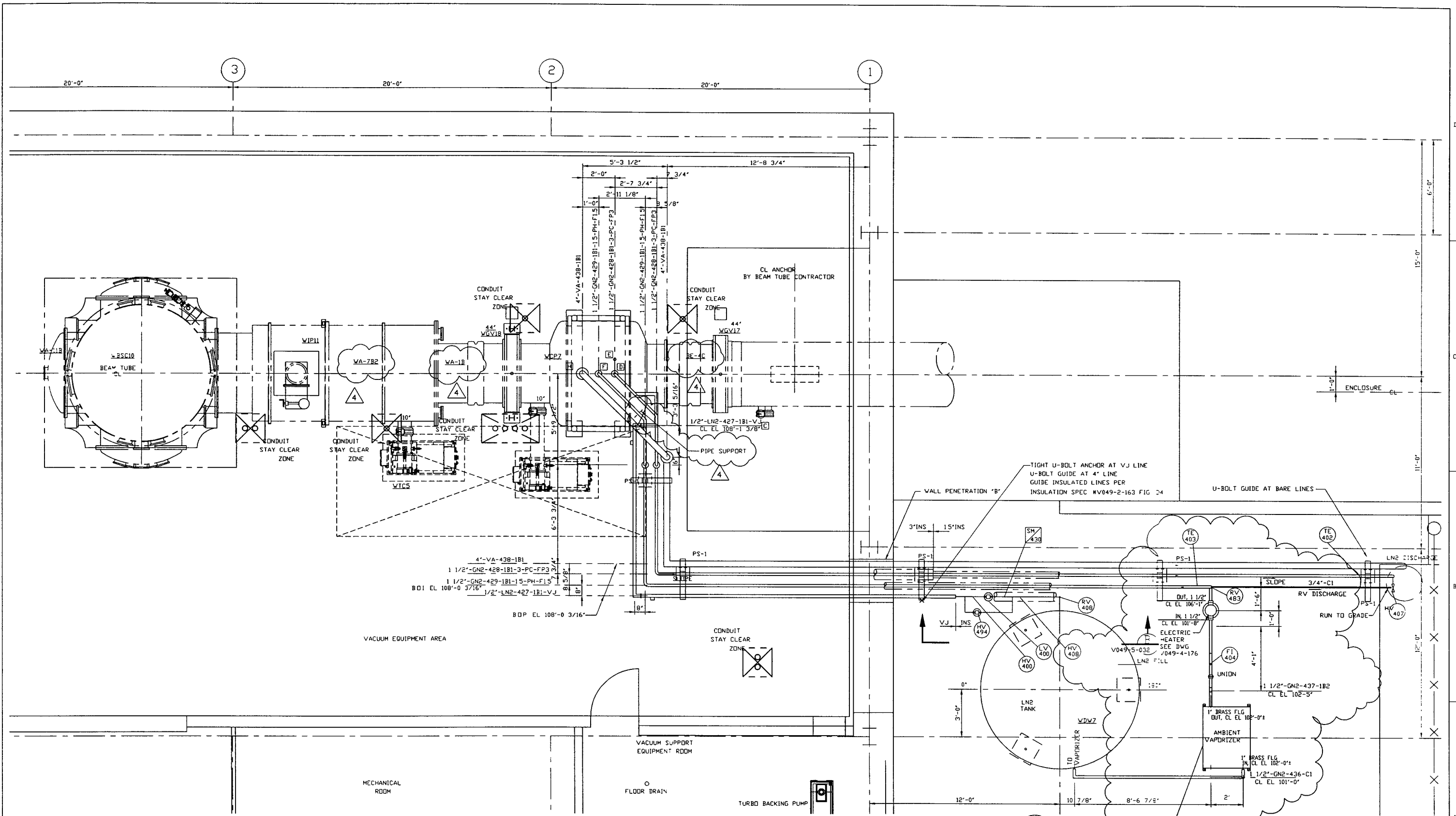
CAD FILE: V0495030/5030S1  
 SCALE: 3/8"=1'-0"  
 SHEET: 1 OF 2

REV 4  
 V049-5-030

**PROPRIETARY AND CONFIDENTIAL**

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L190-0961186-04-V



PLAN @ EL. 112'-6"

NOTE: 1. FIELD TO DETERMINE ACTUAL ELEVATIONS OF NOZZLES BEFORE FABRICATION OF PIPING.  
 2. BRASS 4-HOLE FLANGES ARE PROVIDED WITH AMBIENT VAPORIZERS. THEY ARE TO BE SILVER SOLDER BRAZED TO AN ADAPTER TO S/S PIPE. TO BE PROVIDED BY SITE CONTRACTOR

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 LIGO VACUUM EQUIPMENT

CAD FILE	SIZE	DWG NO	REV
V0495030/503052	D	V049-5-030	4
SCALE 3/8"=1'-0"	SHEET		2 OF 2

MAY 20, 1998 - 15:52:43