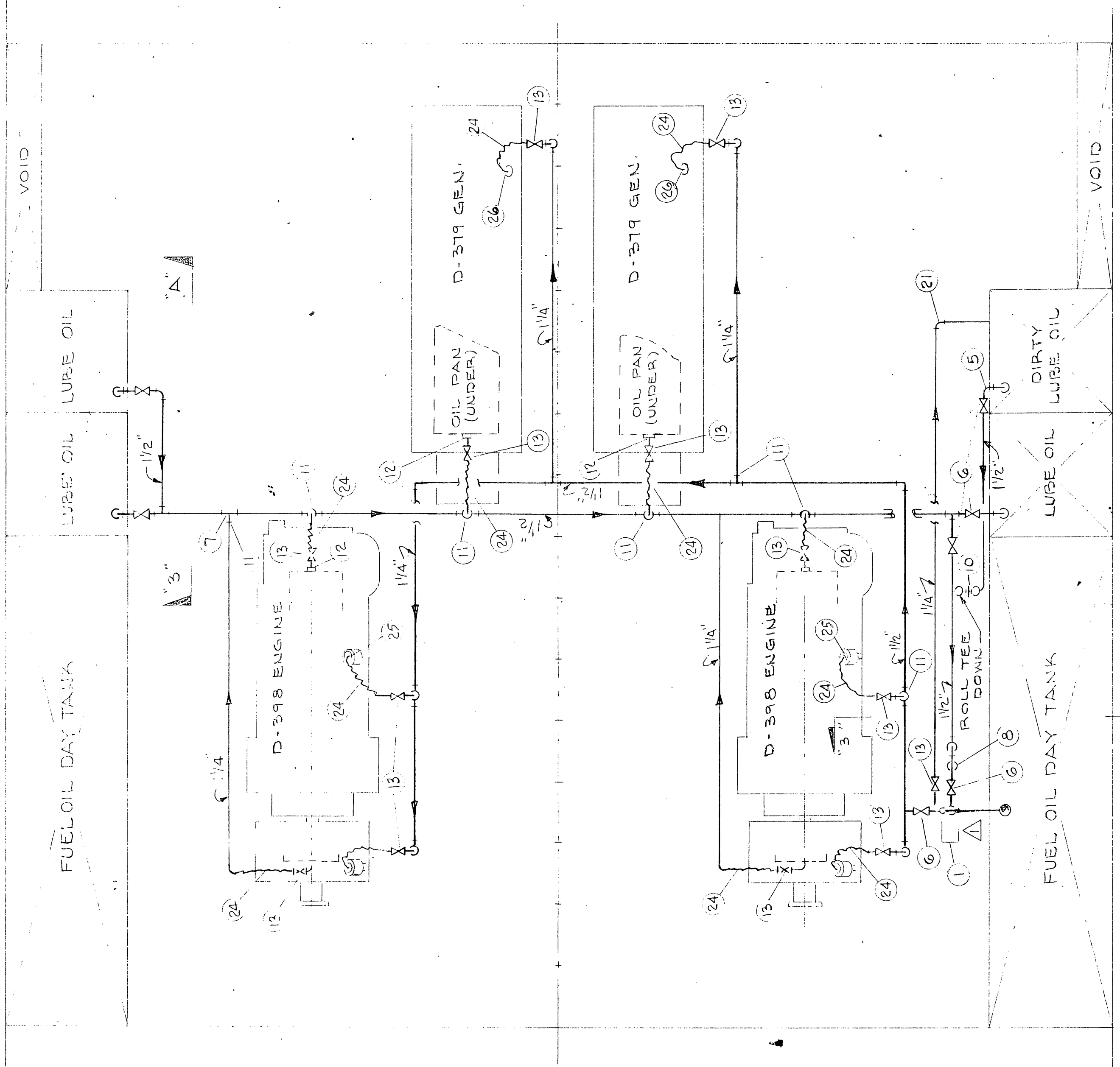
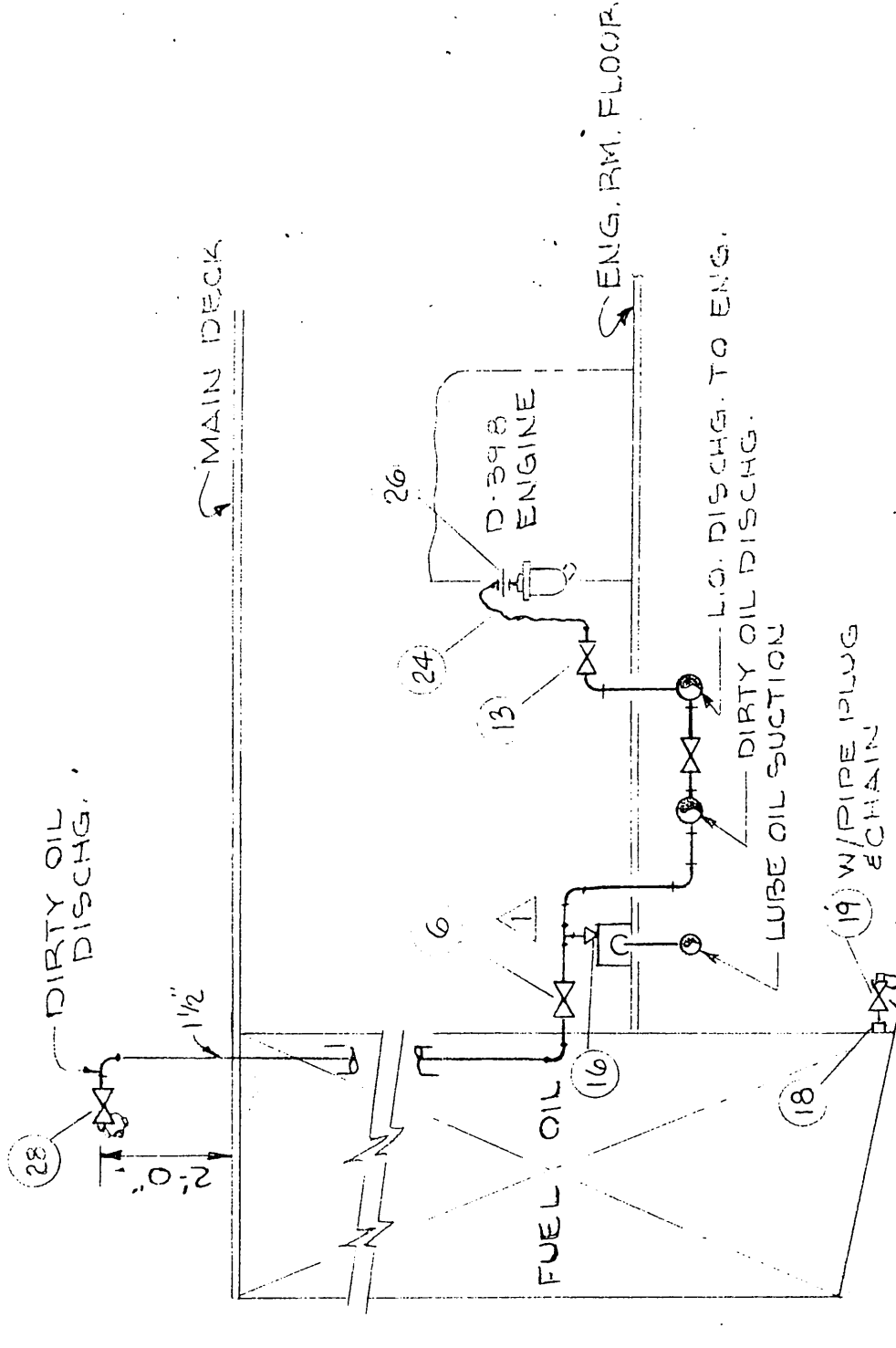
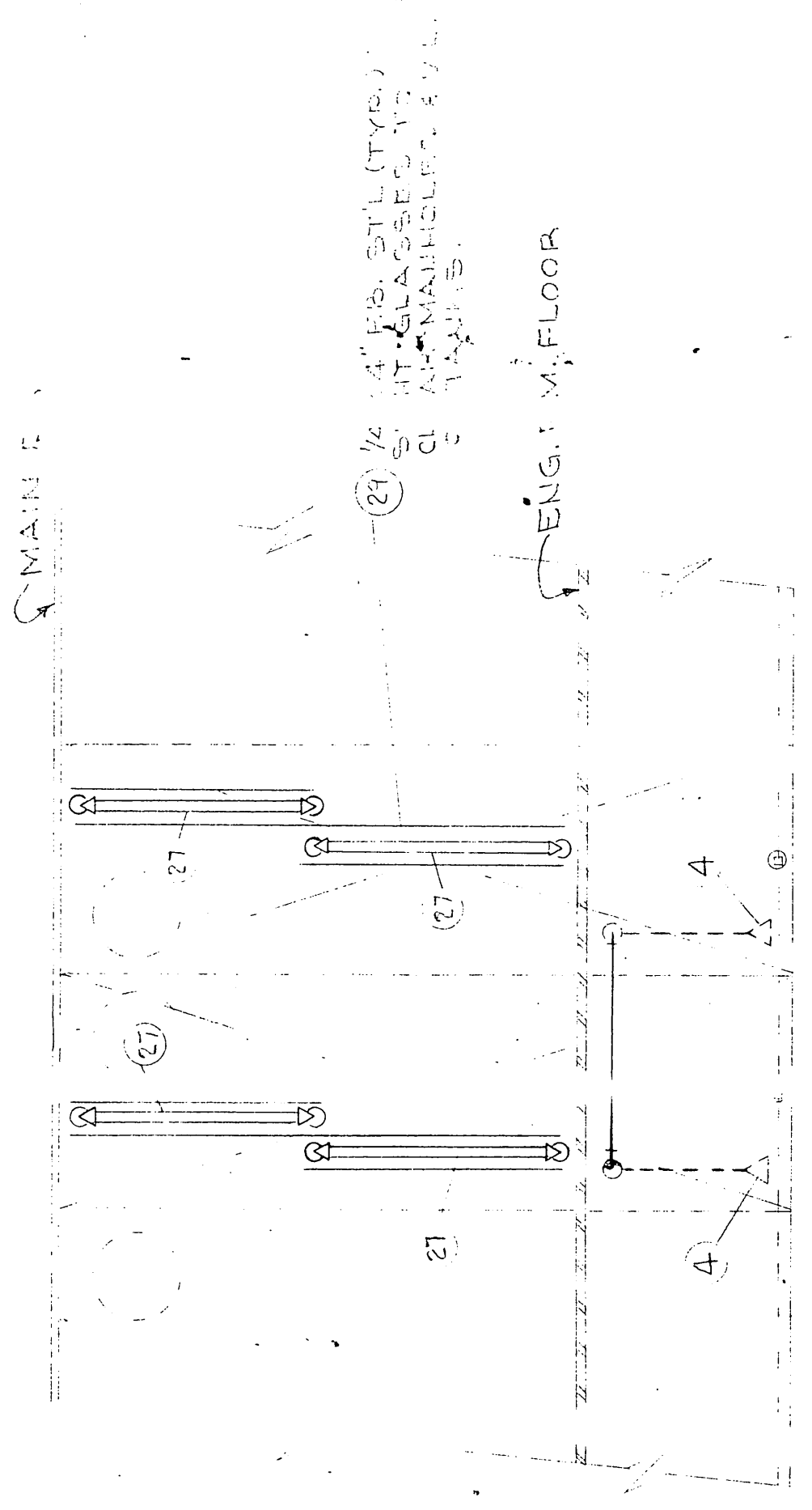


BILL OF MATERIAL

PC. NO.	QTY	SIZE	DESCRIPTION	COST ITEM	PO NO	VEND	DATE RECD	YARD
1	1		DEMING PUMP FIG. # 4253	354				
2	132	1/2"	PIPE 1/2" SCH. 40					
3	90	1/4"	PIPE 1/4" SCH. 40					
4	4	3/4"	TEE SCH. 40					
5	14	1/2"	90° ELBOW L.P. SCH. 40					
6	8	1/2"	GATE VALVE 150# BRZ.					
7	14	1/2"	TEE SCH. 40					
8	1	1/2"	FLANGES 150# BRZ.					
9	16	1/2"	PIPE NIPPLE 1/2" LG.					
10	1	1/2"	UNION SCH. 40					
11	6	1/2"	BUSHING HEX HEAD					
12	6	2x1/4"	BUSHING HEX HEAD					
13	11	1/4"	GATE VALVE 150# BRZ.					
14	2	1/4"	PIPE NIPPLE 1/4" LG.					
15	16	1/2"	ASTM A-53 GR. B					
16	1	1/2"	COUPLING 1/2" SCH. 40					
17	2	1/2"	CONC. SWAGE SCH. 40					
18	4	1"	PIPE COUPLING 1"					
19	4	1"	GATE VALVE 150# BRZ.					
20	4	1"	PIPE NIPPLE 1" LG.					
21	10	1/4"	90° ELBOW L.P. SCH. 40					
22	4	1/2x1/4"	BUSHING HEX HEAD					
23	1	1/4"	TEE SCH. 40					
24	12	1/4"	AERQUIP HOSE #1503-20-36					
25	24	1/4"	AERQUIP HOSE FITTING #412-400-20-205					
26	12	1/4"	UNION 1/2" M.I. MADE THD. 1/2" UNION 1/2" M.I. MADE THD. OTHER					
27	8	1/2"	DATED BR #20-204 X 241 LG.					
28	1	1/2"	BRZ HOSE GATE VALVE CRANE #451					
29	64	1/4x4"	FLAT BAR, ST'L					



JUL 18 1973

- GENERAL NOTES —
1. ALL PIPING SHALL BE DIRECT AS POSSIBLE.
  2. ALL BRZ FITTINGS ARE TO BE 150# M.I. BRZ. ASTM A 47
  3. ALL VALVE HANDWHEELS SHALL HAVE BRZ. ASTM A 53 GR. B
  4. VALVE HANDWHEELS SHALL HAVE BRZ. ASTM A 53 GR. B TAGS IDENTIFYING THE USE OF THAT VALVE AND SUPPORTED.
  5. ALL PIPE SHALL BE ADEQUATELY PROTECTED AND SUPPORTED.
  6. PIPE TO BE THOROUGHLY CLEANED AFTER INSTALLATION & BEFORE FUNCTION TEST.
  7. SEE DWG P-2 FOR LUBE OIL TANK VENTS, PIPING & SOUNDING.
  8. ALL PIPING SHALL BE MARKED SHOWING ITS NATIONAL COLOR CODE & SHALL INDICATE DIRECTION OF FLOW.

ENGINE LUBE OIL PIPING

3/8" = 1'-0"

NO.	DESCRIPTION	DATE	BY
1	REV. 150# BRZ. GATE VALVE CRANE #451	7/18/73	FJH

APPROVALS  
 ABC  
 USCG  
 USPHS

U.S. NAVAL SHIP SYSTEMS COMMAND  
 WASHINGTON D.C. 20380

OCEANOGRAPHIC RESEARCH SHIP  
 AGOR (UTILITY) CLASS

HALTER MARINE SERVICES, INC.  
 P.O. BOX 29266 NEW ORLEANS, LA. 70129

LUBE OIL PIPING

SCALE	AS SHOWN	DATE	HALTER	HALTER
		3-21-73	3-21-73	DWG. NO.
			AGOR	10-12
			AGOR	2187-88
			AGOR	21-211-001
			AGOR	REV. 1