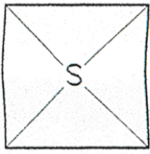
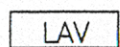
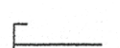


REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
1	ISSUED FOR REVIEW	10/21/03	
2	REVISED PER SHIPYARD COMMENTS	11/3/03	

PIPING MATERIAL SCHEDULE														
SYSTEM	SYSTEM CONDITIONS			VALVES				PIPE		FITTINGS		FLANGE FITTINGS		
	TEMP.	MAX. PRESS.	OPER. PRESS.	SIZE	TYPE	TRIM	BODY	SIZE	MATERIAL SPECIFICATIONS	TYPE	MATERIAL SPECIFICATIONS	NUTS	BOLTS	GASKETS
GREY & BLACK WATER SYSTEM	AMB	30	20	ALL	CHECK, SWING TYPE, FLGD.	BRONZE ASTM B-62	CAST IRON ASTM A-126	ALL	SCH 40, SMLS BLK STEEL, ASTM A-106 GR.B	FLG.	F.S. ASTM A-105 GR.II 150lb. S.O., R.F.	SEMI-FIN. HEX HEAD ASTM A-194/A194M GR. 2H ZINC PLATED W/ LOCK WASHERS ANSI B18.22	ALLOY STL. HEX HEAD ASTM A-193/A193M GR. 5 ZINC PLATED ANSI B16.5	1/16" THICK NON-ASBESTOS W/ NITRILE BINDER ANSI B16.21-28
				ALL	GATE, RISING STEM, FLGD.	BRONZE ASTM B-62	CAST IRON ASTM A-126			PIPE	BUTT-WELD, WPC ASTM A-105, GR.II			

EQUIPMENT LIST			
ITEM NO.	QTY.	DESCRIPTION	MODEL NO.
1	1	3"x3" WASTE PUMP, 3HP, 480V, 150 GPM @ 35 PSI	CROWN 2001D OR EQUAL

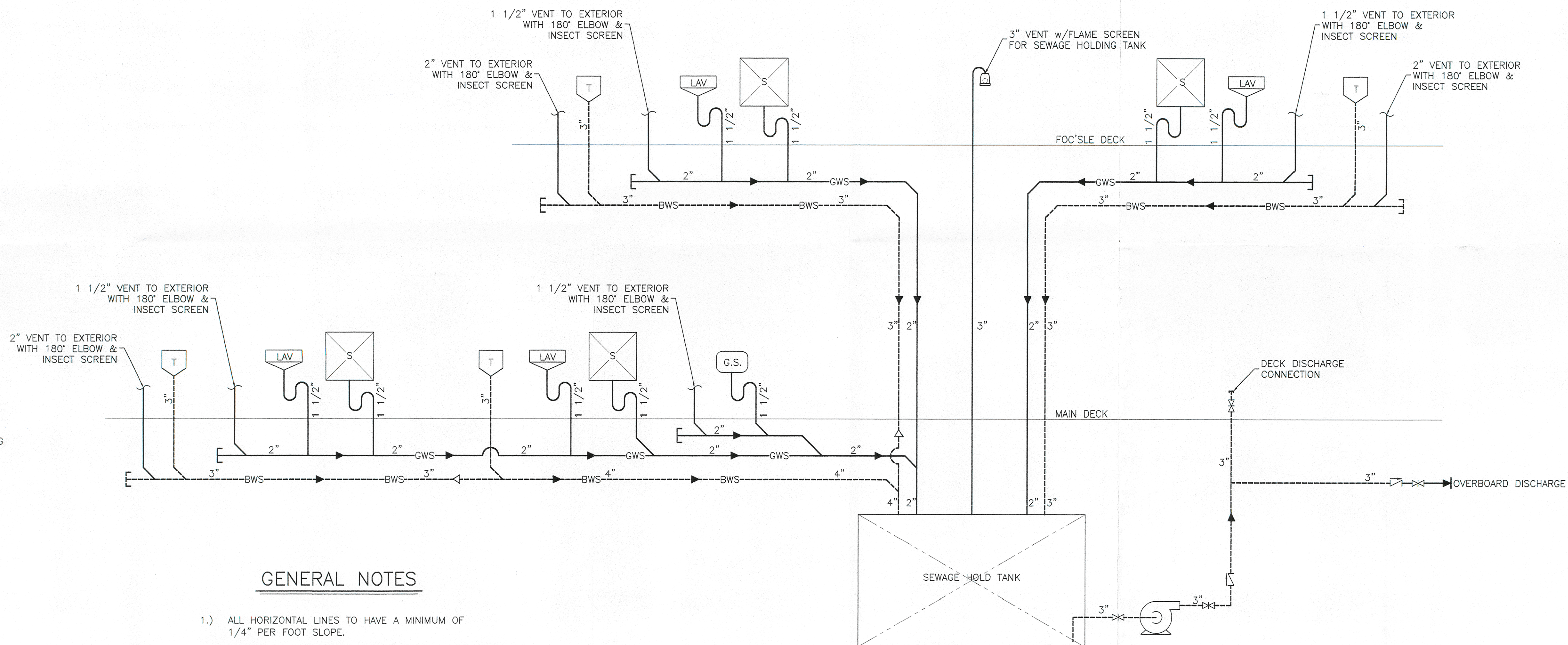
SYMBOLS LIST

	SHOWER STALL
	LAVATORY
	TOILET
	GALLEY SINK
	GREY WATER PIPING
	BLACK WATER PIPING
	GATE VALVE
	CHECK VALVE
	"P" TRAP
	PIPE CLEAN OUT
	REDUCER
	CENTRIFUGAL TRASH PUMP
	VENT w/BALL CHECK & FLAME SCREEN

GENERAL NOTES

- ALL HORIZONTAL LINES TO HAVE A MINIMUM OF 1/4" PER FOOT SLOPE.
- PIPING SHALL BE PROPERLY SUPPORTED AND BE ARRANGED SUCH THAT IT IS NOT NORMALLY USED AS A STEP OR RAIL.
- ALL VENTS FOR GREY WATER & BLACK WATER PIPING SHALL BE FITTED WITH AN INSECT SCREEN.
- DECK AND BULKHEAD PENETRATIONS SHALL BE REINFORCED IN ACCORDANCE WITH ABS RULES.
- ALL PIPING SHALL BE IN ACCORDANCE WITH APPLICABLE ABS & USCG REGULATIONS PER CONTRACT SPECIFICATIONS.

SEWAGE SYSTEM SCHEMATIC



STERLING MARINE, LTD.		STERLING MARINE, LTD.	
DESIGN BY: T. J. CARVER	CHECKED BY:	1150 SHADY LANE GULF BREEZE, FL 32563	
APPROVED BY:	DWG. NO.	136 FT. OFFSHORE SUPPLY VESSEL (LaFORCE SHIPYARD, INC. - HULL 137/138)	
DATE: 17 OCT 2003	CONTRACT NO.	SEWAGE SYSTEM	
LaFORCE		SIZE: D	PROJECT NO.: 137-C667-01
THIS DRAWING, DESIGN, CONCEPT AND SPECIFICATIONS ARE THE PROPERTY OF STERLING MARINE, LTD. AND ARE FURNISHED ON A CONFIDENTIAL BASIS WITH AN EXPRESSED UNDERSTANDING THAT THEY WILL NOT BE COPIED IN ANY MANNER, USED FOR MANUFACTURE, SOLD, TRANSFERRED NOR USED TO THE DETRIMENT OF SAID COMPANY WITHOUT WRITTEN PERMISSION.		SCALE: NONE	REV. 2
REFERENCES		SHEET 1 OF 1	