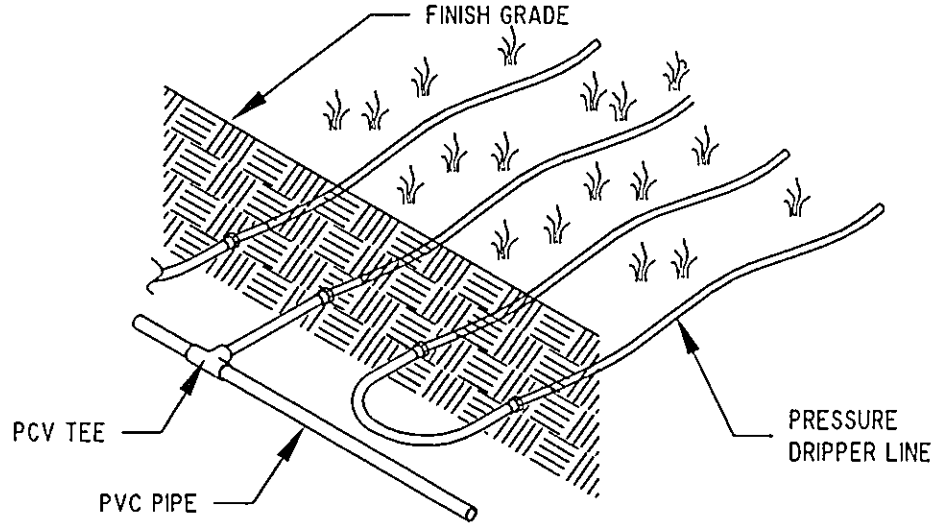


SEPTIC DRIP CALCULATION SHEET

1	417	GALLONS PER DAY	4	BEDROOMS
2	0.23	GPD/L.F. TUBING INFILTRATIVE SOIL LOADING RATE		
3	150	FT (Length)	28	FT. (Width) AREA FOR DISPOSAL LAYOUT
4	0.12	GPD/FT2 AREA SOIL LOADING RATE PROVIDED	4200	FT SQ.
5	2	ZONES		
6	1632	TOTAL DRIPPER LINE PROVIDED		
7	2000	SEPTIC TANK SIZE		
8	2000	DOSING TANK SIZE		
9	33	GALLONS PER INCH IN DOSING TANK (Recommended Minimum)		
10	ZONE ONE			
11	2100	TOTAL ABSORPTION AREA		
12	832	LINEAR FEET OF DRIP TUBING		
13	208	LONGEST LATERAL LENGTH		
14	4.23	DOSING FLOW RATE		
15	4	NO. RETURN FIELD FLUSH CONNECTIONS		
16	6.40	FIELD FLUSH FLOW RATE		
17	10.60	TOTAL FLOW REQUIRED		
18	ZONE TWO			
19	2100	TOTAL ABSORPTION AREA		
20	832	LINEAR FEET OF DRIP TUBING		
21	208	LONGEST LATERAL LENGTH		
22	4.23	DOSING FLOW RATE		
23	4	NO. RETURN FIELD FLUSH CONNECTIONS		
24	6.40	FIELD FLUSH FLOW RATE		
25	10.60	TOTAL FLOW REQUIRED		
26	10	MAXIMUM DESIGN FLUSHING FLOW		
27	8	FEET OF HEAD LOSS FROM HYDRAULIC UNIT (Based on #26)		

28	HYDRAULIC UNIT SUPPLY LINE			
29	1.5	PIPE DIAMETER		
30	15	LENGTH SUPPLY PIPE		
31	7.1	FEET OF STATIC LIFT		
32	9	TOTAL FEET HEAD LOSS IN LINE (Dynamic Head Loss + #31)		
33	FORCE MAIN SUPPLY LINE PIPE SIZE & LENGTH:			
34	1"	ZONE 1 SIZE	150	ZONE 1 LENGTH
35	1"	ZONE 2 SIZE	150	ZONE 2 LENGTH
36	RETURN FLUSH LINE SIZE & RETURN:			
37	1"	ZONE 1 SIZE	150	ZONE 1 LENGTH
38	1"	ZONE 2 SIZE	150	ZONE 2 LENGTH
39	10	FEET OF TOTAL STATIC HEAD LOSS (Vertical Lift)		
40	TOTAL PRESSURE LOSS (Add Items 27, 32, 34/35, 37/38, 39 + Flushing):			
41	76	ZONE 1 HEAD LOSS, INCLUDES	20	FEET FLUSHING
42	76	ZONE 2 HEAD LOSS, INCLUDES	20	FEET FLUSHING
43	PUMP SIZING:			
44	76	MAXIMUM TOTAL PRESSURE LOSS (Highest 41 or 42)		
45	124	DISC FILTER BACKFLUSH (#32 + 15ft. @ 15 GPM)		
46	15	GPM @	124	FEET, 115 VOLTS, 1 PHASE, 0.5 HP.
47	TIMED DOSING PER ZONE:			
48	ZONE ONE:			
49	4.58	Dosing GPM	6.84	MIN./DOSE 31.3 GALLONS PER DOSE
50	4	AVE. CYCLES	6.67	PEAK CYCLES
51	ZONE TWO:			
52	4.58	Dosing GPM	6.84	MIN./DOSE 31.3 GALLONS PER DOSE
53	4	AVE. CYCLES	6.67	PEAK CYCLES
54	4	INCHES DRAWDOWN FLOAT SWITCH SETTING (Minimum 4")		
55	Landscape Linear Loading Rate (LLLR): LLLR = 2.0			
56	Soil Loading Rate (SLR): SLR = 0.11			



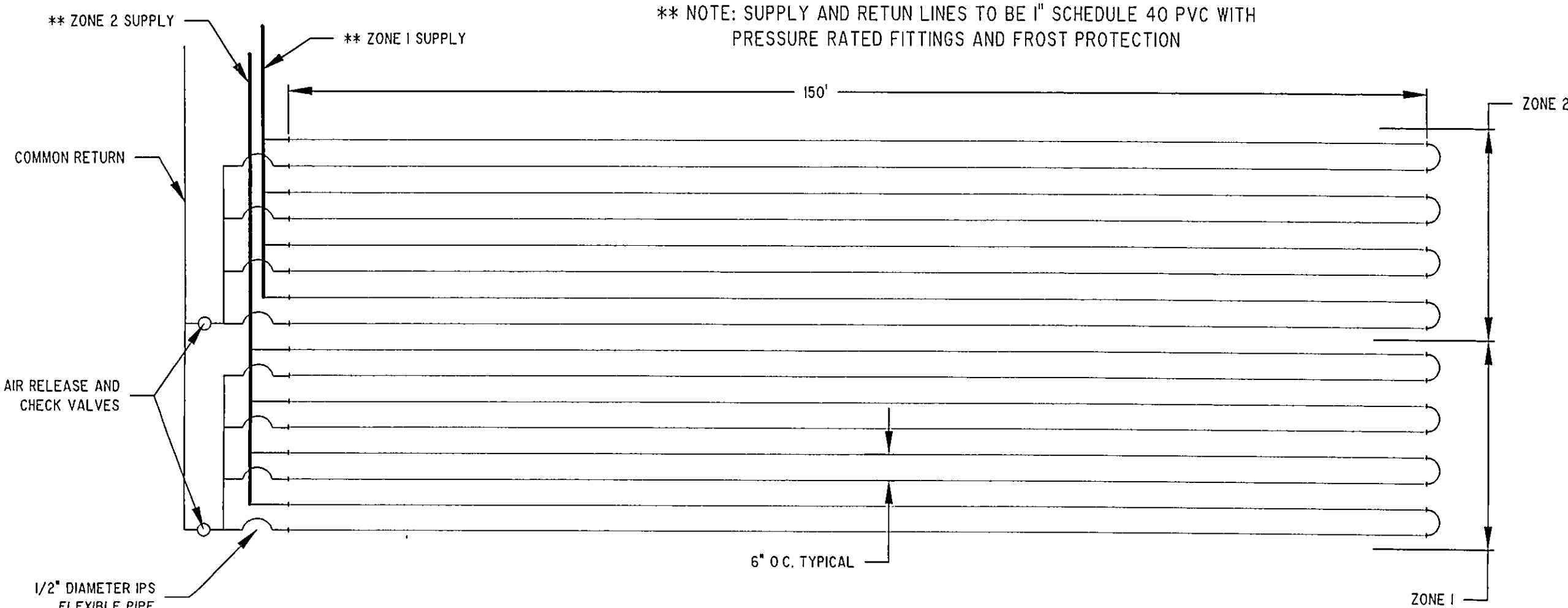
SUBSURFACE DISTRIBUTION SYSTEM

SCOPE: DOMESTIC SEWAGE WILL FLOW BY GRAVITY THROUGH THE SEPTIC TANK THEN INTO A FINAL DOSING TANK. THE CENTRAL UNIT WILL DISPOSE OF THE EFFLUENT BY ALTERNATELY DOSING MULTIPLE ZONES IN THE ABSORPTION AREA.

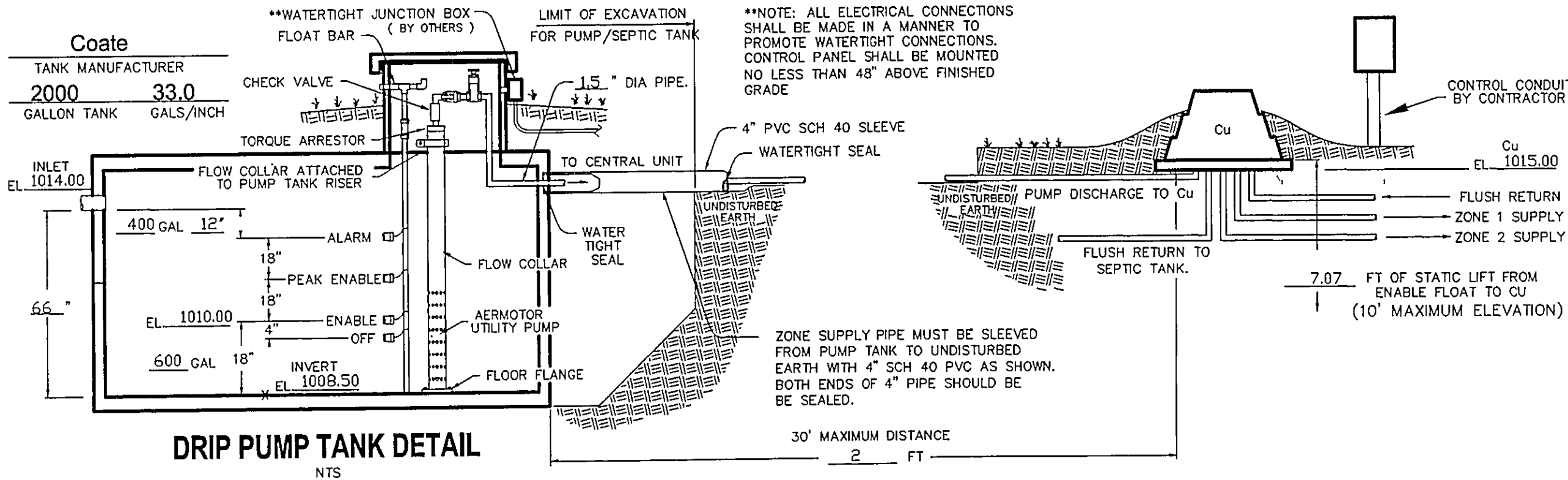
THE CENTRAL UNIT COMPRISES BOTH THE CONTROLS AND THE HYDRAULIC UNIT.

DRIPPER LINE TO FOLLOW CONTOURS WITH PVC MANIFOLD PERPENDICULAR TO GRADE. PVC MANIFOLD TO BE FREEZE PROTECTED

DRIP DETAIL SCHEMATICS

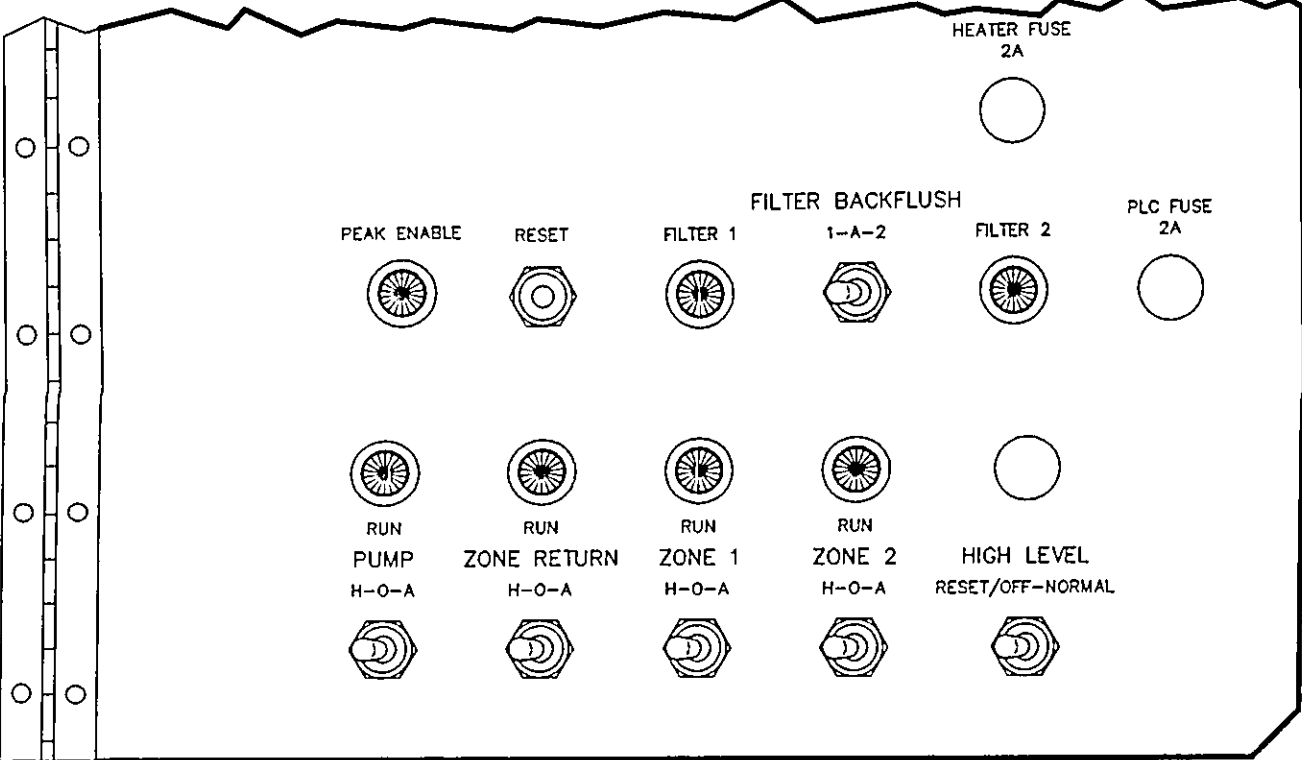


MANIFOLD DETAIL AND ZONE LAYOUT



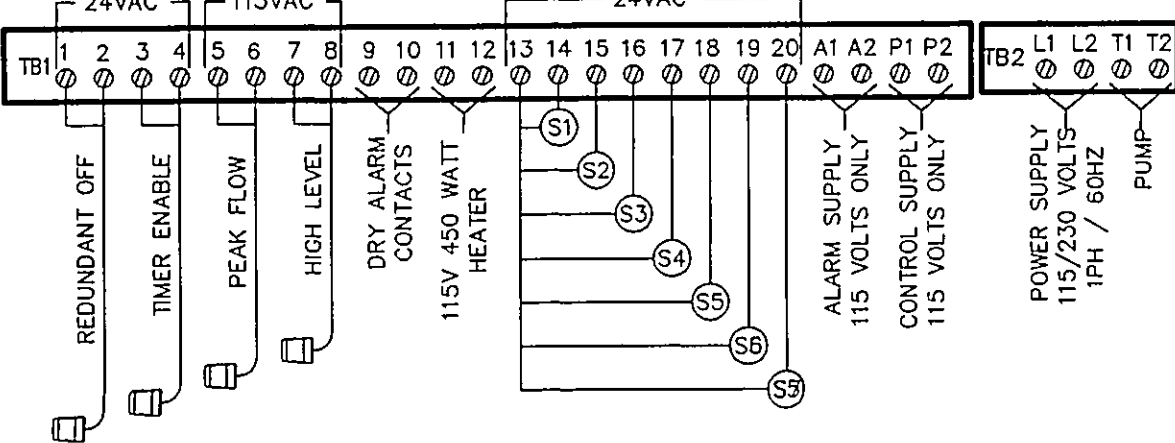
DRIP PUMP TANK DETAIL

NTS

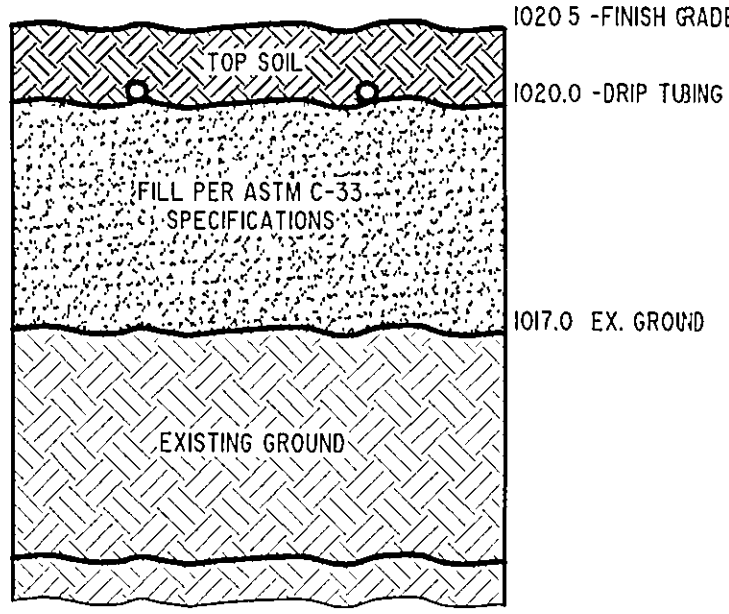


INNER DOOR LAYOUT

NTS



PUMP & CONTROL DETAIL



TYPICAL SECTION

REVISIONS	BY
REVISED SEPTIC SYS 03/08/04	DWN

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FRATE
BRUNO FRATE
38395 BRIGHTON PATH
WILLOUGHBY, OHIO 44094

DETAILS
S/L 3 GIRDED ROAD, CONCORD, OHIO 44077
P.P. No. 08A002000340
MODEL

DRAWN DWN
CHECKED DWN
DATE JUNE 15, 2004
SCALE NONE
JOB NO. 04052
SHEET 2/2
OF SHEETS