DESIGN TABLE FOR SUBSURFACE DRAINAGE

Project: Problem #4, Main #1 Location:

Designed by: Date: Checked by: Date:

Drainage Coefficient, DC: 3/8 in/day Lateral Diameter: 4 inch ver 1/10/2013

Lateral Design									
Main Connect Station ft	Lateral ID or Group ID ID	Number of Laterals in Group ea	Grade %	Spacing (S) ft	Lateral Length (L) ft	Drained Length (S+L) ft	Drained Area per Lateral* ac	Drained Area per Group ac	Accum. Drained Area ac
5+75	A	13		50	950	1000	1.15	14.95	15.0
2+25	B	7		50	950	1000	1.15	8.0	23.0
0+25	C	4		50	750	800	0.92	3.68	26.68

** Includes area drained by main and upper end of lateral =* **S x (S + L) ÷ 43,560**

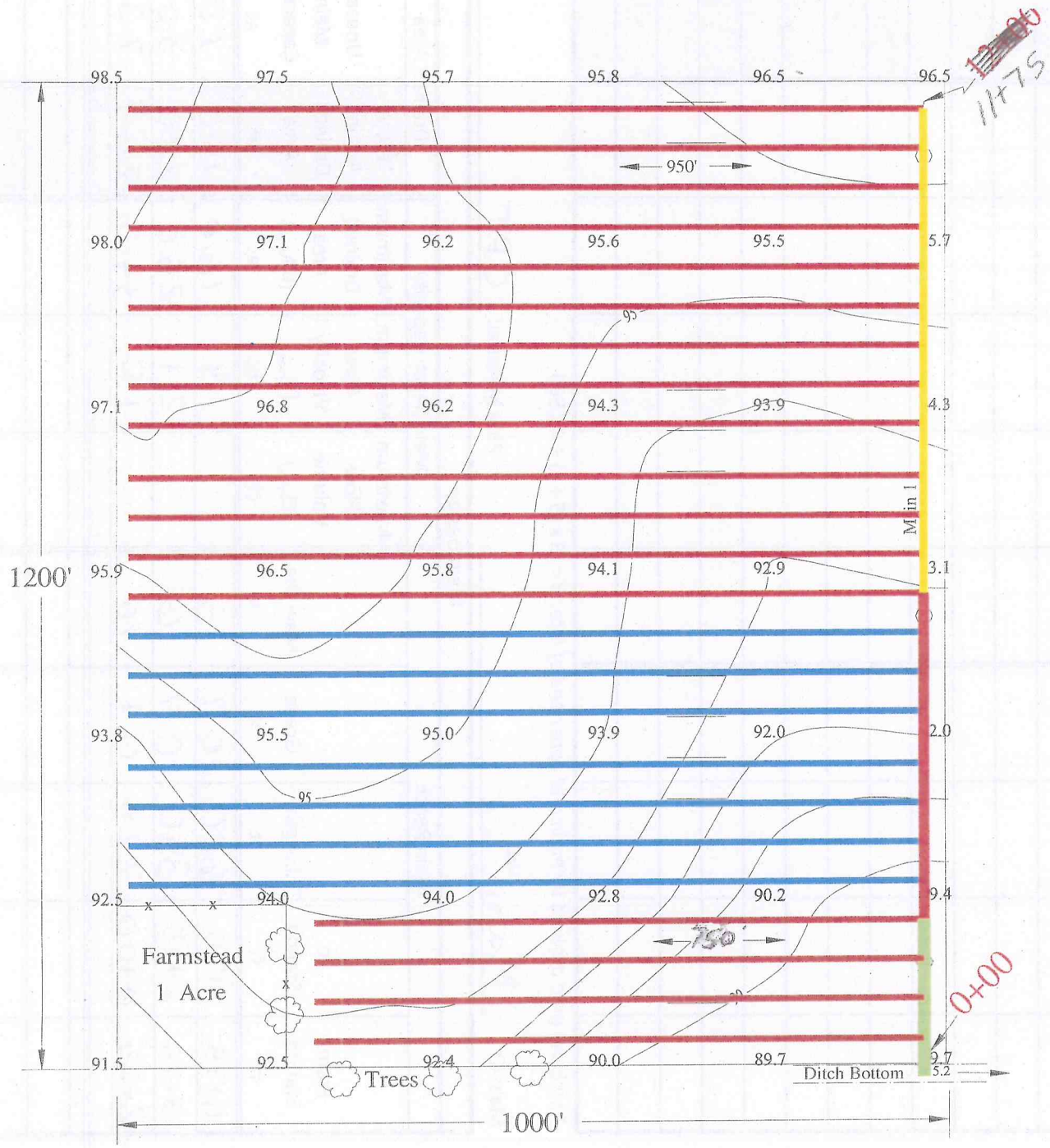
Main ID: Main # 1 Pipe Material: CPT

Main Design									
Main Reach					Main Reach Capacity			Drained Area	
From Station ft	To Station ft	Length ft	Grade %	Main Dia. in	Maximum Flow Volume (Q_{max}) cfs	Maximum Flow Velocity (V_{max}) fps	Maximum Drained Area (DA_{max}) ac	Lateral Accum. Drained Area ac	Unused Main Capacity ac
11+75	5+75	600	0.7	5		1.9	16.0	15.0	1.0
5+75	2+25	350	0.7	6		2.1	26.0	23.0	3.0
2+25	0+00	225	0.1	10		1.0	34.0	26.7	7.3

Comments:

Outlet Size: 10 in Material: PVC-SDR-35 *1 acre = 43,560 square feet*

Length: 20 feet Animal Guard (Y/N): Y Q_{req} *= 0.0421 x DC x DA*



5" (13 lat)
15.0 ac

6" (7 lat)
8 Ac

Total 23.0 ac

10" (4 lat)
3.7 ac

Total 26.7 ac