RESIDENTIAL PRESSURE MANIFOLD DESIGN

Davidson Homes
123 Golden Leaf Farms Road

# of BDR: 5   **Daily Flow:** 480   gal/day   **L.T.A.R.:** 0.4000   gal/day/sq.ft

Septic Tank: 1250 gals   **Pump Tank:** 1250 gals   **Sq. Foot:** 1035   **System Type:** Accepted

Number of Taps: 5   **Length of Trenches:** 345   ft(See Tap Chart for Details)

Depth of Trenches: 18 in   **Manifold Length:** 48 in

Manifold Diameter: 4in sch 80pvc   **Tap Configuration: 6 in spacing** 1 side(s) of manifold

Supply Line: length: 70 ft   **Diameter:** 2 in sch 40pvc

Friction Loss + Fitting Loss: 1.34 ft(supply line length + 70' for fittings in pump tank)

Design Head: 2 ft   **Elevation Head:** 8.00 ft

Total Head: 11.34 ft   **Pump to Deliver:** 19.70 gals/min at 11.34 ft head

Dosing Volume: 157 gals,

Drawdown: 157 gals divided by 21.4 gals/in = 7.3 inches

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats to be determined by type of pump tank used. A septic tank filter is required.

TAP CHART

Benchmark 0 is = 100.00 set at   **Design Head:** 2
Pump tank elev. 10   90.00   **Pump elev.** 85.00   **Manifold elev.** 93.00

line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	# of Panels (PPBPS)	Spacing of Panels (in)
1		8.00	92.00	120	1/2in SCH 40	7.11	173.24	360	0.4812		
2		8.20	91.80	130	1/2in SCH 40	7.11	173.24	390	0.4442		
3		8.50	91.50	95	1/2in SCH 80	5.48	133.52	285	0.4685		

		Total Feet =	345	**gal/min =**	19.70			**LTAR =**	0.3500	
		Feet Required =	113	**Velocity =**	1.88			(ltar + 5%)	0.3675	

Total # of Panels (PPBPS)   **Des. Flow** 480   (ltar w/25% red) 0.4667
% of Dose Vol. 70   **Pump Run=** 24.37   (ltar + 5%) 0.4900
Dose Volume 157   **Tank Gal/IN** 21.4
Dose Pump Time 7.97   **Elev. Head** 8.00
Drawdown in Inches 7.3
Comments: