CHAMPS Gas Station - NC Hwy 401 -Harnett County

PRESSURE MANIFOLD DESIGN -Initial SYSTEM

Daily Flow: 1000 **gal/day** **L.T.A.R.:** 0.4000 **gal/day/sq.ft**

Septic Tank: 2000 **gals** **Pump Tank:** 2000 **gals** **Sq. Foot:** 1980 **System Type:** Accepted

Number of Taps: 4 **Length of Trenches:** 660 **ft(See Tap Chart for Details)**

Depth of Trenches: 24" **in** **Manifold Length:** 42 **in**

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

Supply Line: length: 200 **ft** **Diameter:** 2 **in sch 40pvc**

Friction Loss + Fitting Loss: 6.65 **ft(supply line length + 70' for fittings in pump tank)**

Design Head: 2 **ft** **Elevation Head:** 16.00 **ft**

Total Head: 24.65 **ft** **Pump to Deliver:** 32.79 **gals/min at** 24.65 **ft head**

Dosing Volume: 300 **gals,**

Drawdown: 300 **gals divided by** 21.4 **gals/in =** 14.0 **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. 2 95.00 **Pump elev.** 80.00 **Manifold elev.** 96.00

line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	# of Panels (PPBPS)	Change in Spacing of Panels (in)
1	Yellow	5.00	95.00	115	1/2in SCH 80	5.48	167.12	345	0.4844		
2	Red	5.60	94.40	145	1/2in SCH 40	7.11	216.83	435	0.4985		
3	Blue	6.50	93.50	200	3/4in SCH 80	10.10	308.02	600	0.5134		
4	Orange	7.20	92.80	200	3/4in SCH 80	10.10	308.02	600	0.5134		

Total Feet = 660 **gal/min =** 32.79 **LTAR =** 0.4000

Feet Required = 625 **Velocity =** 3.14 **(ltar + 5%)** 0.4200

Total # of Panels (PPBPS) **Des. Flow** 1000 **(ltar w/25% red)** 0.5333

% of Dose Vol. 70 **Pump Run=** 30.50 **(ltar + 5%)** 0.5600

Dose Volume 300 **Tank Gal/IN** 21.4

Dose Pump Time 9.16 **Elev. Head** 16.00

Drawdown in Inches 14.0

Comments: