

SEWAGE DISPOSAL SYSTEM CONSTRUCTION SPECIFICATIONS

GENERAL INFORMATION

New ☒ Repair _____ Expanded _____

Owner Tim Collins

Address 6034 Grapevine Bridge Dr., Mechanicsville, VA 23111

For a Type II Sewage Disposal System which is to be constructed on/ From Health Department. Turn right onto US-1 - Go 0.1 miles. Turn left onto Ashcake Road - Go 3.5 miles. Turn left onto McArdle Way - Go 0.3 miles. Turn right onto Trammell Ct - Go 0.5 miles. Turn right onto driveway - go approx. 0.25 miles

Estimated water use: 750 gal/day

DESIGN SPECIFICATIONS

Water Supply:

_____ Existing

☒ To be installed: Class IIIB well, as shown on site sketch; Cased: 100'; Grouted: 50'.

Building Sewer:

4 inch SCH 40 PVC, or equivalent; Slope 1.25" per 10' (minimum)

Septic Tank: Capacity 1500 Gal.;

Other: Use 1500-gallon water tight top-seam septic tank

Inlet-Outlet Structure:

SCH 40 PVC, 4" tees or equivalent

Pump and Pump Station:

No _____ Yes ☒ describe and show design if yes: Use 1000-gallon water tight top-seam pump chamber

Gravity Mains: 3" or larger I.D., minimum 6" fall per 100', 1500 lb. Crush strength or equivalent

Other:

Distribution Box:

Precast concrete with 12 ports

Other: Use concrete stilling basin and d-box

Header Lines:

Material: 4" I.D. 1500lb. Crush strength plastic or equivalent from distribution box to 2' into absorption trench.

Slope 2" minimum.

Other:

Percolation Lines:

Gravity 4" plastic 1000 lb. per foot bearing load or equivalent, slope 2" 4" (min. max.) per 100'.

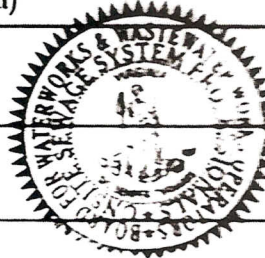
Other:

Absorption trenches:

Square ft. required 2160; depth from ground surface to bottom of trench 20"; trench width 3';

Depth of aggregate 13"; Trench length 90'; Number of trenches 8;

Additional Notes: Use 9' centers;



RYAN F. JOHNSON

Professional Engineer, State of Virginia

License No. 000046

5917

Hanover - Collins
Acreage: 20.2295 acres
Pump Information/Calculations

5 BR - 750Gallons/Day

A	Number of bedrooms	5
B	Number of Occupants	10
C	Average daily design flow in gallons per day	750
D	Minimum pump capacity in gallons per minute using 2" force main	21 gpm
E	Maximum pump capacity in gallons per minute using 2" force main	84 gpm
F	Relative elevation of force main at surge basin / distribution box	100.0 ft
G	Relative elvation of pump off float switch	84.0 ft
H	Static head in feet (F-G)	16.0 ft
I	Equivalent length of 2" pipe in feet for this system (all materials are 2"):	
1.	Length of 2" force main	110'
2.	2 90 degree bends (7' per bend)	14'
3.	2 45 degree bends (4' per bend)	8'
4.	1 check valve	28'
5.	1 gate valve	2'
	Total (1+2+3+4+5)	162'
J	Friction loss per 100' of 2" pipe (C=150)	2.17 feet/100'
K	Number of 100' pipe increments (I/100)	1.62
L	Friction head for this system (J*K)	3.50
M	Total Dynamic Head (H+L)	19.5
N	Pump chamber volume in gallons	1000 gal
O	Gallons per inch in pump chamber	20.0 gal/inch



BRYAN F. JOHNSON
Alternative Onsite Soil
License No. 00001

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