LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant: Robert Elliott

Address: 20326 Bethelwood Lane
Cornelius, NC 28031
Phone: 704-896-9751
County: Iredell
Location: Honeycutt Road Subdivision Lot #6

Source of Wastewater Flow: 4 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 480 gpd
System Flow: 32.83153846

Design Specifications

Drainfield Size: 347
Loading Rate: 0.275 gpd/ft.^{2}
Depth of Gravel in Trench: NA (PPBPS)
Gravel Size: NA (PPBPS)
Trench Depth: 36 in.
Trench Width: 36 in.
Septic Tank Size: 1000
Pump Tank Size: 1000

Estimated Supply Line Length: 135
Supply Line Diameter: 2 in. SCH 40 PVC
Supply Line Volume: 23.49
Dosing Volume: 193.15
Supply Manifold: N/A
Supply Manifold Length: N/A
Supply Manifold Volume: N/A

Recommended Float Controls: SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel: SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.

Pressure Head: 2 ft.
Friction Head: 3.20
Elevation Head: 16.20
Total Dynamic Head: 24.61

Threaded Union: In Tank
Gate Valves: 1 in Tank
1 per lateral (7)
Check Valves: In Tank
Anti-Siphon Hole: NA
Additional Comments: Soil suitability was performed by Rollans Soil & Environmental Services

Honeycutt Road Lot 6
LP PPBPS

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.3 gpd/ft²
TOTAL AREA TRENCH BOTTOM:	480
TOTAL LATERAL LENGTH:	347
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	290.9090909
SUPPLY LINE LENGTH:	135
TOTAL DYNAMIC HEAD:	24.61
MANIFOLD SIZE:	N/A
DOSING VOLUME:	193.15
PUMP TANK DRAW DOWN*:	9.2
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

LP PPBPS TAPSHEET - Honeycutt Road Lot 6

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
6	*BLUE*	88.9	*39*	0.156	**0.41**	117	9
7	*PINK*	87.6	*43*	0.156	**0.41**	129	10
8	*RED*	86.1	*44*	0.156	**0.41**	132	10
9	*ORANGE*	86.2	*63*	0.156	**0.41**	189	15
10	*BLUE*	84.9	*57*	0.156	**0.41**	171	13
11	*PINK*	83.5	*52*	0.156	**0.41**	156	12
12	*PINK*	81.8	*49*	0.156	**0.41**	147	11
	total	**feet =**	~~308~~ 347	**gal/min =**	**32.831538**		
			Des. Flow	**480**			
			Pump Run=	**5.88**			
			soil LTAR	**0.275**			
			LTAR +5%	**0.28875**			
			LTAR with mod.	**0.55**			
			LTAR with mod.. + 5%	**0.5775**			

.156 equals 5/32 inch hole

CALCULATIONS

Location Honecutt Road

Project Number 01-1210

Lot No: Lot 6

No. of Bedrooms 4

Design Flow 480 $^{gal}/_{day}$

LTAR 0.275 $^{gal}/_{ft^2\ day}$

PPBPS? (YES OR NO) YES

Supply Line Length 135 ft.

Supply Line Volume 23.49 gal.

Required Feet of Line 290.9091 ft.
Amount of Line from Layout 347 ft.

Gallons per Minute 32.83154 $^{gal}/_{min}$

Note: Flow/hole (.41gpm) x # of panels (65)

Required Septic Tank Capacity 1000 gal.
Minimum Standard Tank Size 1000

Panel Volume 3.6 gal.
# of Panels 80
Dosing Volume 193 gal.

Note: Dosing Volume based on 67% of # of panels times 3.6 gal/panel

Tank Draw Down 9.2 *Generic Draw Down of 21 gal.per in.*

Pump Run Time 5.88 minutes

Elevation Head 16.2 ft.
Pressure Head 2 ft.
Friction Factor 2.37 ft./100 ft. *(From the interpolater.)*
Friction Head 3.20 ft.

Total Dynamic Head (+15%) 24.61 ft.

FRICTION FACTOR
INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
	-1.28
30	1.78
	-1.76
35	2.37
	-2.25
40	3.03
43.07	3.48
45	3.77
48.14	4.28
50	4.58
57.11	5.89
60	6.42