LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant: Vicki Perkins

Address: 2304 Trace Creek Dr.
Waxhaw, NC 28173-9812
Phone: 704.843.0822
County: Iredell
Location: Harbor View Subdivision Lot #10

Source of Wastewater Flow: 4 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 480 gpd
System Flow: 25.26

Design Specifications

Drainfield Size: 267
Loading Rate: 0.3 gpd/ft.^{2}
Depth of Gravel in Trench: NA (PPBPS)
Gravel Size: NA (PPBPS)
Trench Depth: 30 in.
Trench Width: 36 in.
Septic Tank Size: 1000
Pump Tank Size: 1000

Estimated Supply Line Length: 150
Supply Line Diameter: 2 in. SCH 40 PVC
Supply Line Volume: 26.10
Dosing Volume: 148.62
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: 2.67
Elevation Head: 18.90
Total Dynamic Head: 27.11

Threaded Union: In Tank
Gate Valves: 1 in Tank
1 per lateral (4)
Check Valves: In Tank
Anti-Siphon Hole: NA
Additional Comments: Soil suitability was performed by Rollans Soil & Environmental Services

Harbor View Subdivision Lot #10
LP PPBPS

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.3 gpd/ft.2
TOTAL AREA TRENCH BOTTOM:	801
TOTAL LATERAL LENGTH:	267
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	266.6666667
SUPPLY LINE LENGTH:	150
TOTAL DYNAMIC HEAD:	27.11
MANIFOLD SIZE:	N/A
DOSING VOLUME:	148.62
PUMP TANK DRAW DOWN*:	7.1
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.*

HARBOR VIEW LOT 10

Project #: 01-2052

LAYOUT FOR 4 BEDROOM HOME

May 13, 2015

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		1.1			100.00		
INSTR. 1			101.10				
HOUSE CNR				13.80	87.30		
P. TANK				17.00	84.10		
1	RED	EXTRA		2.80	98.30	40	40
2	***BLUE***			***3.50***	***97.60***	***40***	***40***
3	***PINK***			***4.10***	***97.00***	***65***	***65***
4	***YELLOW***			***5.10***	***96.00***	***80***	***80***
5	***ORANGE***			***6.20***	***94.90***	***97***	***82***
					Total	322	267

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
** System*	*267*	*0.3*	*MOD.*	*0.30*	*PPBPS*	***LOW PRESSURE***
Repair	6362 SF	0.1	DRIP	0.10	DRIP IRRIG.	DRIP TUBING

Notes:
** TBM located top of ground at EIP at corner of lot (see site plan)
**TBM is assumed to be 100'
**All measures in feet
**Nitrification lines are demonstrated on contour via colored pin flags
**BS, HI, and FS indicate rod readings

LP PPBPS TAPSHEET -HARBOR VIEW LOT 10

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	# of Panels
2	***BLUE***	97.6	***40***	0.156	**0.41**	120	9
3	***PINK***	97	***65***	0.156	**0.41**	195	15
4	***YELLOW***	96	***80***	0.156	**0.41**	240	18
5	***ORANGE***	94.9	***82***	0.156	**0.41**	246	19
	total	**feet =**	**267**	**gal/min =**	**25.262308**		**62**
			Des. Flow	**480**			
			Pump Run=	**5.88**			
			soil LTAR	**0.3**			
			LTAR +5%	**0.315**			

.156 equals 5/32 inch hole

& 27
OLLEY
CHEL
637
1-3938
36
CONCRETE MONUMENT AT 14" OAK
N 63°29'56"E 79.83'
#4 REBAR
LOT 9
PHILIP COOK
DB 1076-1200
PIN 4638-76-7859
PB 28-135
S 66°00'25"E 212.81'
35' REAR SETBACK
CENTERLINE OF SWALE
35' REAR SETBACK
TBM 1.1'(Top of Ground)
#4 REBAR
DRIP REPAIR (~2,518SF)
LOT 10
1.135 ACRES
1 R 2.8' 40' (extra)
2 B 3.5' 40'
3 P 4.1' 65'
4 Y 5.1' 80'
5 O 6.2' 97'
N 04°28'24"W 229.50'
15' SIDE SETBACK
STAKE
HOUSE ENVELOPE
90'
25'
STAKE
Shot Corner 13.8'
17.0'
ST
PT
HOUSE ENVELOPE
70'
HOUSE
(CRAWL)
HOUSE ENVELOPE
15'
DRIP REPAIR (~3,844SF)
15' SIDE SETBACK
SPLIT RAIL FENCE
S 28°41'21"W 221.01'
STAKE
HOUSE ENVELOPE
35' FRONT SETBACK
STAKE
DRIVE
Located by Survey
LOT 9
TROY WHITI
DB 1340-13
PB 26-7(
PIN 4638-76-
TIE ONLY
N 88°25'08"E 65.35'
#4 REBAR
C1
BENCHMARK
NAIL IN PP
773.4'
INV. IN
770.1'
N 65°46'22"W
39.20'
BENT #4 REBAR
TRANSFORMER PAD
WATER METER
BASED ON PB 28-76 APRIL 26, 1996
0
40
1" = 40'
N 39°28'48"E 115.35'
18" CMP FLOW
INV. OUT
766.8'
HIDEAWAY LANE
60' PUBLIC R/W
OVERHEAD POWER

NOTES:

CALCULATIONS

Location HARBOR VIEW

Project Number #01-2052

Lot No: Lot 10

No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.3	gpd/ft2
PPBPS? (YES OR NO)	YES	
Supply Line Length	150	ft.
Supply Line Volume	26.1	gal.
Required Feet of Line	266.6667	ft.
Amount of Line from Layout	267	ft.
Gallons per Minute	25.26	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Panel Volume	3.6	gal.
# of Panels	62	
Dosing Volume	148.62	gal.

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

Tank Draw Down	7.1	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	5.88	minutes
Elevation Head	18.9	ft.
Pressure Head	2	ft.
Friction Factor	1.78	ft./100 ft. *(From the interpolater.)*
Friction Head	2.67	ft.
Friction Factor +15%	2.047	
Total Dynamic Head	27.11	ft.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
25.26	1.30
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