LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant: Anniston LLC

Address: 17824 Statesville Rd STE 112
Conover, NC 28031

Phone:

County: Iredell

Location: Anniston Subdivision Lot 117

Source of Wastewater Flow: 4 Bedroom Single Family Residence

Estimated Daily Wastewater Production: 480 gpd

System Flow: 24.60

Design Specifications

Drainfield Size: 280

Loading Rate: .3 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: 164

Supply Line Diameter: 2 in. SCH 40 PVC

Supply Line Volume: 28.54

Dosing Volume: 144.72

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: 3.89

Elevation Head: 11.20

Total Dynamic Head: 19.65

Threaded Union: In Tank

Gate Valves: 1 in Tank
1 per lateral

Check Valves: In Tank

Anti-Siphon Hole: NA

Additional Comments: Soil suitability was performed by Rollans Soil & Environmental Services

ANNISTON LOT 117
LP PPBPS

DESIGN FLOW:	480
SOIL APPLICATION RATE:	.3 gpd/ft²
TOTAL AREA TRENCH BOTTOM:	840
TOTAL LATERAL LENGTH:	280
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	266.67
SUPPLY LINE LENGTH:	164
TOTAL DYNAMIC HEAD:	19.65
MANIFOLD SIZE:	N/A
DOSING VOLUME:	144.72
PUMP TANK DRAW DOWN*:	4.7
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.*

Anniston Lot 117

Project #:01-1005

LAYOUT FOR 4 BEDROOM HOME

August 21, 2007

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		2.9			100.00		
INSTR. 1			102.90				
HOUSE CNR				10.90	92.00		
P. TANK				10.50	92.40		
1	***BLUE***			***4.30***	***98.60***	***41***	***40***
2	***PINK***			***4.70***	***98.20***	***53***	***50***
3	***ORANGE***			***5.30***	***97.60***	***55***	***55***
4	***ORANGE***			***5.30***	***97.60***	***55***	***55***
5	***RED***			***6.30***	***96.60***	***83***	***80***
6	BLUE			7.30	95.60	75	75
7	PINK			8.30	94.60	110	110
9	ORANGE			9.40	93.50	64	64
10	RED			10.50	92.40	38	38
					Total	**574**	**567**

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
****System***	***280***	***0.3***	***MOD.***	***0.30***	***PPBPS***	***LOW PRESSURE***
Repair	287	0.3	MOD.	0.30	PPBPS	LOW PRESSURE

Notes:
** TBM located top of ground (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 - Anniston Lot 117

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	***BLUE***	98.6	***40***	0.156	**0.41**	120	9
2	***PINK***	98.2	***50***	0.156	**0.41**	150	12
3	***ORANGE***	97.6	***55***	0.156	**0.41**	165	13
4	***ORANGE***	97.6	***55***	0.156	**0.41**	165	13
5	***RED***	96.6	***80***	0.156	**0.41**	240	13
							60
	total	feet =	280	gal/min =	24.6		

Des. Flow	480
Pump Run=	5.88
soil LTAR	0.3
LTAR +5%	0.315
LTAR with mod.	0.27
LTAR with mod.. + 5%	0.2835

.156 equals 5/32 inch hole

CALCULATIONS

Location Anniston Subdivision

Project Number 01-1005

Lot No: Lot 117

No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.3	$^{gal}/_{ft^2\ day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	164	ft.
Supply Line Volume	28.536	gal.
Required Feet of Line	266.6667	ft.
Amount of Line from Layout	280	ft.
Gallons per Minute	24.6	$^{gal}/_{min}$

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

Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Panel Volume	3.6	gal.
# of Panels	60	
Dosing Volume	145	gal.

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

Tank Draw Down	4.7	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	5.88	minutes
Elevation Head	11.2	ft.
Pressure Head	2	ft.
Friction Factor	2.37	ft./100 ft. *(From the interpolater.)*
Friction Head	3.89	ft.
Total Dynamic Head (+15%)	19.65	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