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ROLLANS *SOIL & ENVIRONMENTAL SERVICES*

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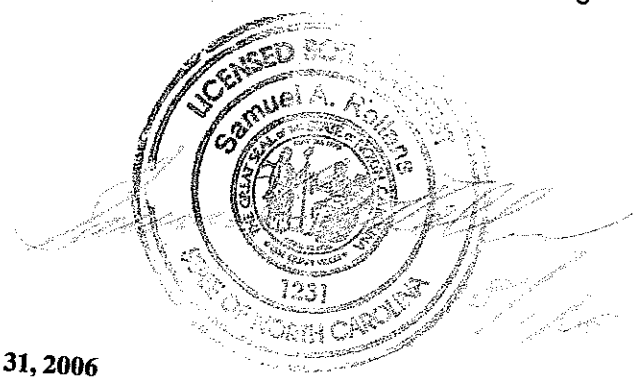
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Attached is a proposed design for a PPBPS Septic System with low pressure distribution for a 5 bedroom single family residence on Lot 49 in Anniston Subdivision Iredell County, North Carolina.

Contents:

	Page
Information for the Installer	1
Design Information	
Design Specifications	2-3
Layout Specifications	4
System Tapsheet	5
Site Plan/System Plan	6
Calculations	7
Profile Descriptions	8



July 31, 2006
Project No.01-1005
Design By: Rollans Soil & Environmental Services

LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant: Anniston, LLC

Address: 17824 Statesville Rd., Suite 112
Cornelius, NC 28031

Phone: (704) 362-5007

County: Iredell

Location: Anniston Subdivision Lot 49

Source of Wastewater Flow: 5 Bedroom Single Family Residence

Estimated Daily Wastewater Production: 600 gpd

System Flow: 37.85

Design Specifications

Drainfield Size: 400

Loading Rate: .25 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: 1500 gal.

Pump Tank Size: 1500 gal.

Estimated Supply Line Length: 46

Supply Line Diameter: 2 in. SCH 40 PVC

Supply Line Volume: 8.00

Dosing Volume: 221.90

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: 1.39

Elevation Head: 4.20

Total Dynamic Head: 8.73

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 49
LP PPBPS

DESIGN FLOW:	600
SOIL APPLICATION RATE:	.25 gpd/ft.2
TOTAL AREA TRENCH BOTTOM:	1200
TOTAL LATERAL LENGTH:	400
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400.00
SUPPLY LINE LENGTH:	46
TOTAL DYNAMIC HEAD:	8.73
MANIFOLD SIZE:	N/A
DOSING VOLUME:	221.90
PUMP TANK DRAW DOWN*:	7.7
SEPTIC TANK SIZE:	1500 gal.
PUMP TANK SIZE:	1500 gal.

**Pump tank draw down based on a volume basis of 29 gallons per inch. Draw down may vary among pump tank manufacturers.*

Anniston Lot 49

Project #:01-1005

LAYOUT FOR 5 BEDROOM HOME

July 31, 2006

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		15.3			100.00		
INSTR. 1			115.30				
HOUSE CNR				15.00	100.30		
P. TANK				13.70	106.00		
1	RED			6.10	109.20	79	79
2	ORANGE			7.00	108.30	78	78
3	BLUE			7.70	107.60	84	84
4	PINK			8.80	106.50	94	94
5	RED			9.40	105.90	98	98
6	*ORANGE*			*10.10*	*105.20*	*104*	*100*
7	*BLUE*			*11.20*	*104.10*	*103*	*100*
8	*PINK*			*11.90*	*103.40*	*103*	*100*
9	*RED*			*12.60*	*102.70*	*104*	*100*
					Total	847	833

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR	TRENCH SYSTEM	DISTRIBUTION
** System*	*400*	*0.2*	*MOD.*	*0.25*	*PPBPS*	*LOW PRESSURE*
Repair	433	0.185	MOD.	0.225-0.25	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 49

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
6	*ORANGE*	*105.20*	*100*	0.156	**0.41**	300	23
7	*BLUE*	*104.10*	*100*	0.156	**0.41**	300	23
8	*PINK*	*103.40*	*100*	0.156	**0.41**	300	23
9	*RED*	*102.70*	*100*	0.156	**0.41**	300	23
	total	**feet =**	**400**	**gal/min =**	**37.846154**		92

Des. Flow	**600**
Pump Run=	**5.86**
soil LTAR	**0.25**
LTAR +5%	**0.2625**
LTAR with mod.	**0.5**
LTAR with mod.. + 5%	**0.525**

.156 equals 5/32 inch hole

CALCULATIONS

Location Anniston Subdivision

Project Number 01-1005

Lot No: Lot 49

No. of Bedrooms 5

Design Flow 600 $^{gal}/_{day}$

LTAR 0.25 $^{gal}/_{ft^2\ day}$

PPBPS? (YES OR NO) YES

Supply Line Length 46 ft.

Supply Line Volume 8.004 gal.

Required Feet of Line 400.00 ft.
Amount of Line from Layout 400 ft.

Gallons per Minute 37.85 $^{gal}/_{min}$

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

Required Septic Tank Capacity 1250 gal.
Minimum Standard Tank Size 1500 gal.

Panel Volume 3.6 gal.
# of Panels 92
Dosing Volume 222 gal.

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

Tank Draw Down 7.7 *Generic Draw Down of 29 gal.per in.*

Pump Run Time 5.86 minutes

Elevation Head 4.2 ft.
Pressure Head 2 ft.
Friction Factor 3.03 ft./100 ft. *(From the interpolater.)*
Friction Head 1.39 ft.

Total Dynamic Head (+15%) 8.73 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