ROLLANS *SOIL & ENVIRONMENTAL SERVICES*

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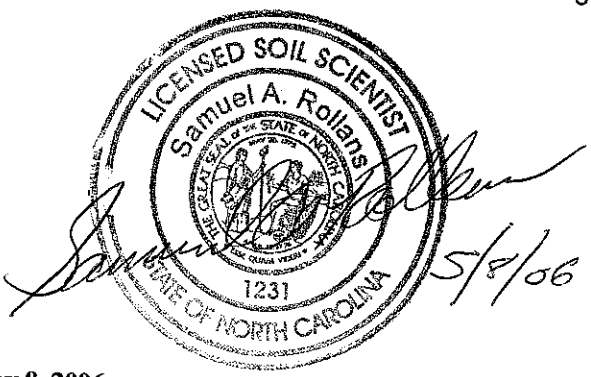
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Attached is a proposed design for a PPBPS Septic System with low pressure distribution for a 4 bedroom single family residence on Lot #523 CL&T Greyfriars Road, Iredell County, North Carolina.

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May 8, 2006
Project No. 1191
Design By: Rollans Soil & Environmental Services

LP PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant: John West

Address: 127B Promenade Dr.
Mooresville, NC 28117

Phone: 704 799 8645

County: Iredell

Location: CL&T LOT 523

Source of Wastewater Flow: 4 Bedroom Single Family Residence

Estimated Daily Wastewater Production: 480 gpd

System Flow: 25.45153846

Design Specifications

Drainfield Size: 269

Loading Rate: 0.3 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: 181

Supply Line Diameter: 2 in. SCH 40 PVC

Supply Line Volume: 31.49

Dosing Volume: 154.37

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: 2.30

Elevation Head: 18.20

Total Dynamic Head: 25.87

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

CL&T LOT 523
LP PPBPS

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.3 gpd/ft²
TOTAL AREA TRENCH BOTTOM:	480
TOTAL LATERAL LENGTH:	269
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	266.6666667
SUPPLY LINE LENGTH:	181
TOTAL DYNAMIC HEAD:	25.87
MANIFOLD SIZE:	N/A
DOSING VOLUME:	154.37
PUMP TANK DRAW DOWN*:	7.4
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.*

CL&T LOT 523

Project #: 1191

LAYOUT FOR 4 BEDROOM HOME

May 8, 2006

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		1.8			100.00		
INSTR. 1			101.80				
HOUSE CNR				9.50	92.30		
P. TANK				14.50	106.00		
1	***RED***			***3.30***	***98.50***	*63*	*63*
2	***ORANGE***			***4.30***	***97.50***	*103*	*103*
3	***BLUE***			***5.20***	***96.60***	*103*	*103*
4	PINK			6.70	95.10	100	100
5	RED			7.80	94.00	110	110
6	ORANGE			8.90	92.90	*80*	*80*
7	BLUE			10.00	91.80	*30*	*30*
					Total	589	589

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
****System***	*269*	*0.3*	*MOD.*	*0.30*	***PPBPS***	***LOW PRESSURE***
Repair	320	0.25	MOD.	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 - CL&T LOT 523

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	***RED***	98.5	***63***	0.156	**0.41**	189	15
2	***ORANGE***	97.5	***103***	0.156	**0.41**	309	24
3	***BLUE***	96.6	***103***	0.156	**0.41**	309	24

total	**feet =**	**269**	**gal/min =**	**25.451538**
		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