rec'd. 5-6-05
@ 5:12 pm

ROLLANS *SOIL & ENVIRONMENTAL SERVICES*

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Attached is a design proposal for a gravity 25% reduction Septic System for a 4 bedroom single family residence on lot 29 of the River Ridge Subdivision in Iredell County, North Carolina.

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LICENSED SOIL SCIENTIST
Samuel A. Rollans
1231
STATE OF NORTH CAROLINA

5/5/05

May 4, 2005
Project No. 01-1097
Design By: Samuel A. Rollans, LSS

GRAVITY 4-BEDROOM SYSTEM
FOR WASTEWATER TREATMENT

Owner or Applicant:	Lake Norman Realty
	Attn: Suzie McCann
Address:	522 River Highway
	Mooresville, NC 28117
Phone:	(704) 663 - 3655
County:	Iredell
Location:	River Ridge Lot #29

Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Daily Wastewater Production:	480 gpd
System Flow:	Gravity/On-Demand

Design Specifications

System Type:	25% Reduction
Drainfield Size:	400 Linear feet
Loading Rate:	0.3 gpd/ft.^{2}
Depth of Gravel in Trench:	NA
Gravel Size:	NA
Trench Depth:	24 in.
Trench Width:	36 in.
Septic Tank Size:	1000 min.
Pump Tank Size:	NA

Estimated Supply Line Length:	30
Supply Line Diameter:	4 in. SCH 40 PVC
Supply Line Volume:	NA
Dosing Volume:	NA
Supply Manifold:	NA
Supply Manifold Length:	NA
Supply Manifold Volume:	NA

Recommended Float Controls:	NA

Recommended Control Panel:

Pressure Head:	NA
Friction Head:	NA
Elevation Head:	NA
Total Dynamic Head:	NA

Threaded Union:	NA
Gate Valves:	NA
	NA
Check Valves:	NA
Anti-Siphon Hole:	NA

Recommended Pump:	NA

RIVER RIDGE LOT #29
DESIGN INFORMATION

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.3 gpd/ft.^{2}
TOTAL AREA TRENCH BOTTOM:	1200sf
TOTAL LATERAL LENGTH:	400'
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400'
DISTRIBUTION METHOD	Distribution Box
SUPPLY LINE LENGTH:	45'
TOTAL DYNAMIC HEAD:	NA
MANIFOLD SIZE:	NA
DOSING VOLUME:	NA
PUMP TANK DRAW DOWN*:	NA
SEPTIC TANK SIZE:	1000min
PUMP TANK SIZE:	NA
RECOMMENDED PUMP:	NA

RIVER RIDGE / LOT #29

Project #: 01-1097

May 3, 2005

LAYOUT FOR 4 BEDROOM HOME

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		16.6			100.00		
INSTR. 1			116.60				
HOUSE CNR				16.30	100.30		
S. TANK				15.70	100.90		
1	GREEN			1.00	115.60	50	50
2	RED			3.50	113.10	50	50
3	YELLOW			5.60	111.00	50	50
4	GREEN			7.90	108.70	50	50
5	RED			10.50	106.10	50	50
6	YELLOW			13.50	103.10	50	50
7	***GREEN***			***19.60***	***97.00***	*133*	*133*
8	***RED***			***22.50***	***94.10***	*133*	*133*
9	***YELLOW***			***25.70***	***90.90***	*133*	*133*
					Total	**433**	**433**

	LINE LENGTH	LTAR GPD/FT²	SYSTEM TYPE	SOIL LTAR GPD/FT²	TRENCH SYSTEM	DISTRIBUTION
** System*	***400'***	***0.30***	***INNOV.***	***0.30***	***25% RED.***	***GRAVITY***
Repair	300'	0.30	*MOD.*	0.30	***25% RED.***	LOW PRESSURE

Notes:

** TBM located on notch in flagged oak (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

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

Sheet _1_ *of* _2_
PROPERTY ID #: 01-1097
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Lake Norman Realty _____ APPLICATION DATE _____
ADDRESS: River Ridge Lane _____ DATE EVALUATED: 4/05
PROPOSED FACILITY: 4 – bedroom house PROPOSED DESIGN FLOW (.1949): 480GPD PROPERTY SIZE: 1.45 Ac.
LOCATION OF SITE: Buffalo Shoals Road South, L on Laurel Cove, Lt on Island Terrace, L on River Ridge, 1st lot on Lt.
WATER SUPPLY: ☒ Private ☐ Public ☒ Well ☐ Spring ☐ Other _____
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
1	L / 20-30%	0-6	FWSBK/SCL	FR/SS/SP / SEXP	>45"	45"	N/A	>45"	PS 0.3 GPD/FT2
		6-30	MSBK/C	FR/SS/SP / SEXP					
		30-45	FWSBK/SCL	FR/SS/SP / SEXP					
2	L / 20-30%	0-8	GR/SL	FR/NS/SP / SEXP	>48"	48"	N/A	>48"	PS 0.3 GPD/FT2
		8-48	MSBK/C	FR/SS/SP / SEXP					
3	L / 20-30%	0-8	FWSBK/SCL	FR/SS/NP / SEXP	>48" RELICT	48"	N/A	>48"	PS 0.3 GPD/FT2
		8-48	MSBK/C	FR/SS/P / SEXP					
		8-36	MSBK/C	FR/SS/SP / SEXP					
		36-46	FVWSBK/SCL	FR/SS/SP / SEXP					
4	L / 20-30%	0-6	FWSBK/SCL	FR/SS/SP / SEXP	>46" RELICT	46"	N/A	>46"	PS 0.3 GPD/FT2
		6-46	MSBK/ABK/C	FR/SS/SP / SEXP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	25% Reduction	25% Reduction
Site LTAR	0.3gpd/ft2	0.3gpd/ft2

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _PS (System)_PS (Repair)

EVALUATED BY: Samuel A. Rollans, LSS
OTHER(S) PRESENT: _____

COMMENTS: