ROLLANS *SOIL & ENVIRONMENTAL SERVICES*

2120 Graham Road, Mount Ulla, NC 28125 *Phone/Fax (704) 278 – 0989*

Ashley Rollans, NC Licensed Soil Scientist
Mobile: (704) 746-5046
E-mail: Rollansfortcj@aol.com

Brady Freeman, Registered Sanitarian
Mobile: (704) 746-6497
E-mail: bfree209@yahoo.com

Attached is a design proposal for a gravity 25% reduction Septic System for a 3 bedroom single family residence on lot 4 of the Fairhaven Subdivision in Iredell County, North Carolina.

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August 22, 2005
Project No. 01-1128
Design By: Rollans Soil and Environmental Services

GRAVITY 3-BEDROOM SYSTEM
FOR WASTEWATER TREATMENT

Owner: Gray Wagner

Address: PO Box 62
Sherrills Ford, NC 28673
Phone: 828-478-9699
County: Iredell
Location: Fairhaven lot 4

Source of Wastewater Flow: 3 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 360 gpd
System Flow: Gravity/On-Demand

Design Specifications

System Type: 25% Reduction
Drainfield Size: 315 Linear feet
Loading Rate: 0.3 gpd/ft.^{2}
Depth of Gravel in Trench: NA
Gravel Size: NA
Trench Depth: 36 in.
Trench Width: 36 in.
Septic Tank Size: 1000 min.
Pump Tank Size: NA

Estimated Supply Line Length: 25
Supply Line Diameter: 3 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

NA
NA

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

Fairhaven LOT#4
DESIGN INFORMATION

DESIGN FLOW:	360
SOIL APPLICATION RATE:	0.3 gpd/ft.^{2}
TOTAL AREA TRENCH BOTTOM:	945sf
TOTAL LATERAL LENGTH:	315
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	300
DISTRIBUTION METHOD	Drop boxes
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

FAIRHAVEN LOT 4

Project #: 01-1128

LAYOUT FOR 3 BEDROOM HOME — August 22, 2005

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		5.1			100.00		
INSTR. 1			105.10				
HOUSE CNR				5.10	102.00		
S. TANK				3.20	101.90		
1	*PINK*			*3.60*	*101.50*	*45*	*45*
2	*ORANGE*			*4.50*	*100.60*	*65*	*65*
3	*BLUE*			*5.50*	*99.60*	*80*	*80*
4	*RED*			*6.60*	*98.50*	*95*	*95*
5	*PINK*			*8.20*	*96.90*	*30*	*30*
5	PINK			8.20	96.90	50	50
6	ORANGE			9.50	95.60	80	80
7	BLUE			10.90	94.20	55	55
8	RED			12.20	92.90	40	40
					Total	**540**	**540**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	INNOVATIVE SYSTEM	DISTRIBUTION
** System*	*315*	*0.30*	*INNOV.*	*0.30*	*25% RED.*	*GRAVITY*
Repair	225	0.30	*MOD.*	0.30	PPBPS	LOW PRESSURE

Notes:

** TBM located on EIP (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