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Attached is a proposed design for an Accepted (25% reduction) Septic System with Gravity distribution for a 4 bedroom single family residence on Lot # 54 WATERTREE LANDING Subdivision, Iredell County, North Carolina.

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April 20, 2009
Project #: 01-1430
Design By: Rollans Soil and Environmental Services

PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner:	MID-ATLANTIC CUSTOM BUILDERS
Address:	P.O. BOX 3792 Mooresville, NC 28117
Phone:	704-202-5568
County:	Iredell
Location:	WATERTREE LANDING LOT 54

Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	ON DEMAND

Design Specifications

Drainfield Size:	425
Loading Rate (gpd/ft.^{2}):	0.3
Depth of Gravel in Trench:	NA (25% reduction)
Gravel Size:	NA (25% reduction)
Trench Depth:	**48" in upper trench**
Trench Depth:	**36" in lower trenches**
Trench Width:	36 in.
Septic Tank Size:	1000
Pump Tank Size:	N/A
Estimated Supply Line Length:	20
Supply Line Diameter:	3/4 in. SCH 40 PVC
Supply Line Volume:	3.48
Dosing Volume:	N/A
Supply Manifold:	N/A
Supply Manifold Length:	N/A
Supply Manifold Volume:	N/A
Recommended Float Controls:	N/A
Recommended Control Panel:	N/A
Pressure Head:	N/A
Friction Head:	N/A
Elevation Head:	N/A
Total Dynamic Head:	N/A
Threaded Union:	N/A
Gate Valves:	N/A
Check Valves:	N/A
Anti-Siphon Hole:	N/A
Additional Comments:	Soil suitability was performed by Rollans Soil & Environmental Services.

WATERTREE LANDING LOT 54
PRESSURE MANIFOLD DESIGN

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	1275
TOTAL LATERAL LENGTH:	425
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400
SUPPLY LINE LENGTH:	20
TOTAL DYNAMIC HEAD:	N/A
MANIFOLD SIZE:	~~4 in SCH 80 PVC~~ N/A
DOSING VOLUME:	N/A
PUMP TANK DRAW DOWN*:	N/A
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	N/A

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

WATERTREE LANDING LOT 54

Project #: 01-1430

LAYOUT FOR 4 BEDROOM HOME

April 20, 2009

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		N/A			N/A		
INSTR. 1			N/A				
HOUSE			N/A	N/A			
TANK			N/A	N/A			
1	ORANGE			N/A	N/A	53	53
2	BLUE			N/A	N/A	94	94
3	ORANGE			N/A	*N/A*	42	42
4	PINK			N/A	N/A	162	162
5	RED			N/A	*N/A*	32	32
6	RED			N/A	N/A	92	92
7	***ORANGE***			*N/A*	*N/A*	***80***	***80***
8	***BLUE***			*N/A*	*N/A*	***80***	***80***
9	***DARK PINK***			*N/A*	*N/A*	***80***	***80***
10	***RED***			*N/A*	*N/A*	***70***	***70***
11	***ORANGE***			*N/A*	*N/A*	***70***	***70***
12	***BLUE***			*N/A*	*N/A*	***45***	***45***
					Total	**900**	**900**

	LINE LENGTH	LTAR GPD/FT²	SYSTEM TYPE	SOIL LTAR GPD/FT²	TRENCH SYSTEM	DISTRIBUTION
** System*	*425*	*0.3*	*ACCEPT.*	*0.3*	*25% RED.*	**GRAVITY**
Repair	475	0.3	*ACCEPT.*	0.3	*25% RED.*	**DISTRIBUTION** LOW PRESSURE

Notes:

** TBM is not needed

**All measures in feet

**Nitrification lines are demonstrated on contour via colored pin flags

**BS, HI, and FS indicate rod readings

180
210
390

240
140
380
345
425