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 56

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

Design Specifications

Drainfield Size: 400
Loading Rate (gpd/ft.^{2}): 0.3
Depth of Gravel in Trench: NA (25% reduction)
Gravel Size: NA (25% reduction)
Trench Depth: 36"
Trench Width: 36"
Septic Tank Size: 1000
Pump Tank Size: N/A

Estimated Supply Line Length: 10
Supply Line Diameter: 3 in. SCH 40 PVC
Supply Line Volume: 1.74
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.

CALCULATIONS

Location WATERTREE LANDING

Project Number 01-1430

Lot No: Lot 56

No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.3	$^{gpd/ft^2}$
25% RED.? (YES OR NO)	YES	
Supply Line Length	10	ft.
Supply Line Volume	1.74	gal.
Required Feet of Line	400	ft.
Amount of Line from Layout	400	ft.
Gallons per Minute	N/A	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Lateral Line Volume	261.2	gal.
Dosing Volume	N/A	gal.

Note: Dosing Volume based on75% of lateral line volume

Tank Draw Down	N/A	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	N/A	minutes
Elevation Head	N/A	ft.
Pressure Head	N/A	ft.
Friction Factor	N/A	ft./100 ft. *(From the interpolater.)*
Friction Head	N/A	ft.
Total Dynamic Head (+15%)	N/A	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

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

Sheet ___ of ___
PROPERTY ID #:
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Mid Atlantic Dev. Co.
ADDRESS:
APPLICATION DATE 12/02
PROPOSED FACILITY: Res
PROPOSED DESIGN FLOW (.1949): 650
DATE EVALUATED: 12/02
LOCATION OF SITE: LOT 56 Waterfree landing
PROPERTY SIZE:
WATER SUPPLY: ☑ Private ☐ Public ☐ Well ☐ Spring ☐ Other
PROPERTY RECORDED:
EVALUATION METHOD: ☐ Auger Boring ☑ Pit ☐ Cut
TYPE OF WASTEWATER: ☑ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
A 1	LSS 5-10%	0-6	BSCL WE	FRI SSSPSNP	-	48	-	-	PS .3
		6-48	RCL WSGY	FRI SSSPSNP					
B 2		0-7	BSCL WE	FRI SSSPSNP	-	48	PS	-	.3
		7-36	RC MPSGY	FRI SSSPSNP					
		36-48	RCL WSGY	FRI SSSPSNP					
		48-55	SLSAPRCL	FRI SSSPSNP W/ROCK INC					
C 3		0-6	BSCL WE	FRI SSSPSNP	-	53	-	-	.3
		6-24	RC MPSGY	FRI SSSPSNP					
		24-53	RCL WSGY	FRI SSSPSNP					
D 4		0-21	RC MPSGY	FRI SSSPSNP	-	48	-	-	.3
		21-48	RCL WSGY	FRI SSSPSNP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	PBBPS	PBBPS
Site LTAR	.3	.3

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY: Rollans Soil
OTHER(S) PRESENT:

COMMENTS:

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

Sheet ___ of ___
PROPERTY ID #: _____
COUNTY: _____

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: _____
ADDRESS: _____
PROPOSED FACILITY: _____ APPLICATION DATE _____
LOCATION OF SITE: water tree Lot 56 PROPOSED DESIGN FLOW (.1949): _____ DATE EVALUATED: 12/17/07
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☐ Other _____ PROPERTY SIZE: _____
EVALUATION METHOD: ☐ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☐ Sewage ☐ Industrial Process ☐ Mixed PROPERTY RECORDED: _____

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	A	0-14	msl gr C	fr ss sp sap	com sap				PS .3
		14-50	ms gr C	fr ss sp sap					
2	B	0-21	ms gr C	fr ss sp sap	com sap				PS .3
		21-36	ms gr C	fr ss sp sap					
		36-50	ms gr L	fr ss sp sap	few clay	many sap			
3	C	0-26	ms gr C	fr ss sp sap	few sap				PS .3
		26-50	ms gr C	fr ss sp sap					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
dable Space (.1945)		
em Type(s)		
.TAR		

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1943): _____
EVALUATED BY: Anthony Cobb
OTHER(S) PRESENT: _____