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Attached is a proposed design for an Accepted (25% reduction) Septic System with Gravity distribution for a 3 bedroom single family residence on Lot #26 Wheatfield Subdivision, Iredell County, North Carolina.

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April 21, 2010
Project #: 01-1612
Design By: Rollans Soil and Environmental Services

Gravity 25% Reduction
FOR WASTEWATER TREATMENT

Owner: Corinthian/Brazos

Address: PO Box 990
Denver, NC 28037
Phone: 704 535 4080
County: Iredell
Location: Wheatfield lot 26

Source of Wastewater Flow: 3 Bedroom Single Family Residence
Estimated Gallons Per Day Flow: 360
System Flow: NA

Design Specifications

Drainfield Size: 310
Loading Rate (gpd/ft.^{2}): 0.30
Depth of Gravel in Trench: NA (25% reduction)
Gravel Size: NA (25% reduction)
Trench Depth: 36 in.
Trench Width: 36 in.
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: 3.60
Dosing Volume: NA
Supply Manifold: DROP-BOX
Supply Manifold Length: NA
Supply Manifold Volume: N/A

Recommended Float Controls: NA

Recommended Control Panel: NA

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

Wheatfield lot 26

DESIGN FLOW (gpd):	360
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	930
TOTAL LATERAL LENGTH:	310
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	300
SUPPLY LINE LENGTH:	10
TOTAL DYNAMIC HEAD:	NA
MANIFOLD SIZE:	NA
DOSING VOLUME:	NA
PUMP TANK DRAW DOWN*:	NA
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	NA

WHEATFIELD LOT 26

Project #: 01-1612

LAYOUT FOR 3 BEDROOM HOME

April 21, 2010

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		NA			NA		
INSTR. 1			NA				
HOUSE CRN				NA	NA		
P. TANK				NA	NA		
1	ORANGE			NA	NA	35	35
2	BLUE			NA	NA	35	35
3	PINK			NA	NA	35	35
4	ORANGE			NA	NA	35	35
5	BLUE			NA	NA	35	35
6	DARK PINK			NA	NA	35	35
7	***ORANGE***			***NA***	***NA***	***80***	***80***
8	***BLUE***			***NA***	***NA***	***70***	***70***
9	***DARK PINK***			***NA***	***NA***	***55***	***55***
10	***BLUE***			***NA***	***NA***	***45***	***45***
11	***ORANGE***			***NA***	***NA***	***35***	***35***
12	***DARK PINK***			***NA***	***NA***	***25***	***25***
					Total	**520**	**520**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
****System***	***310***	***0.30***	***ACCEPT.***	***0.30***	***25% RED.***	**GRAVITY**
Repair	210	0.30	*MOD.*	0.30	PPBPS	**DISTRIBUTION** LOW PRESSURE

Notes:

** TBM Is Not Required.

**All measures in feet

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

**BS, HI, and FS indicate rod readings

CALCULATIONS

Location WHEATFIELD

Project Number 01-1612

Lot No: 26

No. of Bedrooms 3

Design Flow 360 $^{gal}/_{day}$

LTAR 0.30 $^{gal}/_{ft^2\ day}$

25% RED.? (YES OR NO) YES

Supply Line Length 10 ft.

Supply Line Volume 3.6 gal.

Required Feet of Line 300 ft.
Amount of Line from Layout 310 ft.

Gallons per Minute NA $^{gal}/_{min}$

Required Septic Tank Capacity 1000 gal.
Minimum Standard Tank Size 1000

Lateral Line Volume 202.43 gal.

Dosing Volume NA gal.
Note: Dosing Volume based on70% of lateral line volume

Tank Draw Down NA *Generic Draw Down of 21 gal.per in.*

Pump Run Time NA minutes

Elevation Head NA ft.
Pressure Head NA ft.
Friction Factor NA ft./100 ft. *(From the interpolater.)*
Friction Head NA ft.

Total Dynamic Head (+15%) NA 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