ROLLANS *Soil & Environmental Services, Inc.*

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Attached is a proposed design for an Accepted (25% reduction) Septic System with gravity distribution for a 5 bedroom single family residence on Lot # 119 ANNISTON Subdivision, Iredell County, North Carolina.

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August 27, 2008
Project No. 01-1005
Design By: Rollans Soil and Environmental Services

AN 119
147 Walking Horse

FOR WASTEWATER TREATMENT

Owner: Anniston LLC

Address: 17825 Statesville Rd. Suite 112
Cornelius, NC 28031

Phone:
County: Iredell
Location: ANNISTON Lot # 119

Source of Wastewater Flow: 5 Bedroom Single Family Residence
Estimated Daily Wastewater Production: 600 gpd
System Flow: N/A

Design Specifications

Drainfield Size: 500
Loading Rate: 0.3
Depth of Gravel in Trench: NA (25% reduction)
Gravel Size: NA (25% reduction)
Trench Depth: 36 in.
Trench Width: 36 in.
Septic Tank Size: 1500 gal.
Pump Tank Size: N/A

Estimated Supply Line Length: 9
Supply Line Diameter: 3 in. SCH 40 PVC
Supply Line Volume: 1.57
Dosing Volume: N/A
Supply Manifold: DROP BOX
Supply Manifold Length: N/A
Supply Manifold Volume: N/A

Recommended Float Controls: N/A
N/A
Recommended Control Panel: N/A
N/A

Pressure Head: N/A
Friction Head: N/A
Elevation Head: N/A
Total Dynamic Head: N/A

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.

ANNISTON Lot # 119
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	600
SOIL APPLICATION RATE:	0.3
TOTAL AREA TRENCH BOTTOM:	1500
TOTAL LATERAL LENGTH:	500
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	500
SUPPLY LINE LENGTH:	9
TOTAL DYNAMIC HEAD:	N/A
MANIFOLD SIZE:	N/A
DOSING VOLUME:	N/A
PUMP TANK DRAW DOWN*:	N/A
SEPTIC TANK SIZE:	1500 gal.
PUMP TANK SIZE:	N/A

ANNISTON LOT # 119

Project #: 01-1005

LAYOUT FOR 5 BEDROOM HOME

August 27, 2008

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		N/A			N/A		
INSTR. 1			N/A				
HOUSE CNR				N/A	N/A		
P. TANK				N/A	N/A		
1	RED			N/A	N/A	35	35
2	ORANGE			N/A	N/A	65	65
3	PINK			N/A	N/A	92	92
4	BLUE			N/A	N/A	114	114
5	RED			N/A	N/A	124	124
6	ORANGE			N/A	N/A	125	125
7	***PINK***			***N/A***	***N/A***	***128***	***125***
8	***BLUE***			***N/A***	***N/A***	***152***	***145***
9	***RED***			***N/A***	***N/A***	***127***	***125***
10	***ORANGE***			***N/A***	***N/A***	***107***	***105***
11	PINK			N/A	N/A	80	80
					Total	**1149**	**1135**

* System	LINE LENGTH	LTAR GPD/FT²	SYSTEM TYPE	SOIL LTAR GPD/FT²	TRENCH SYSTEM	DISTRIBUTION
	500	*0.300*	*ACCEPT.*	*0.300*	*25% RED.*	GRAVITY DISTRIBUTION
Repair	635	0.300	*ACCEPT.*	0.300	25% RED.	PRESSURE MANIFOLD

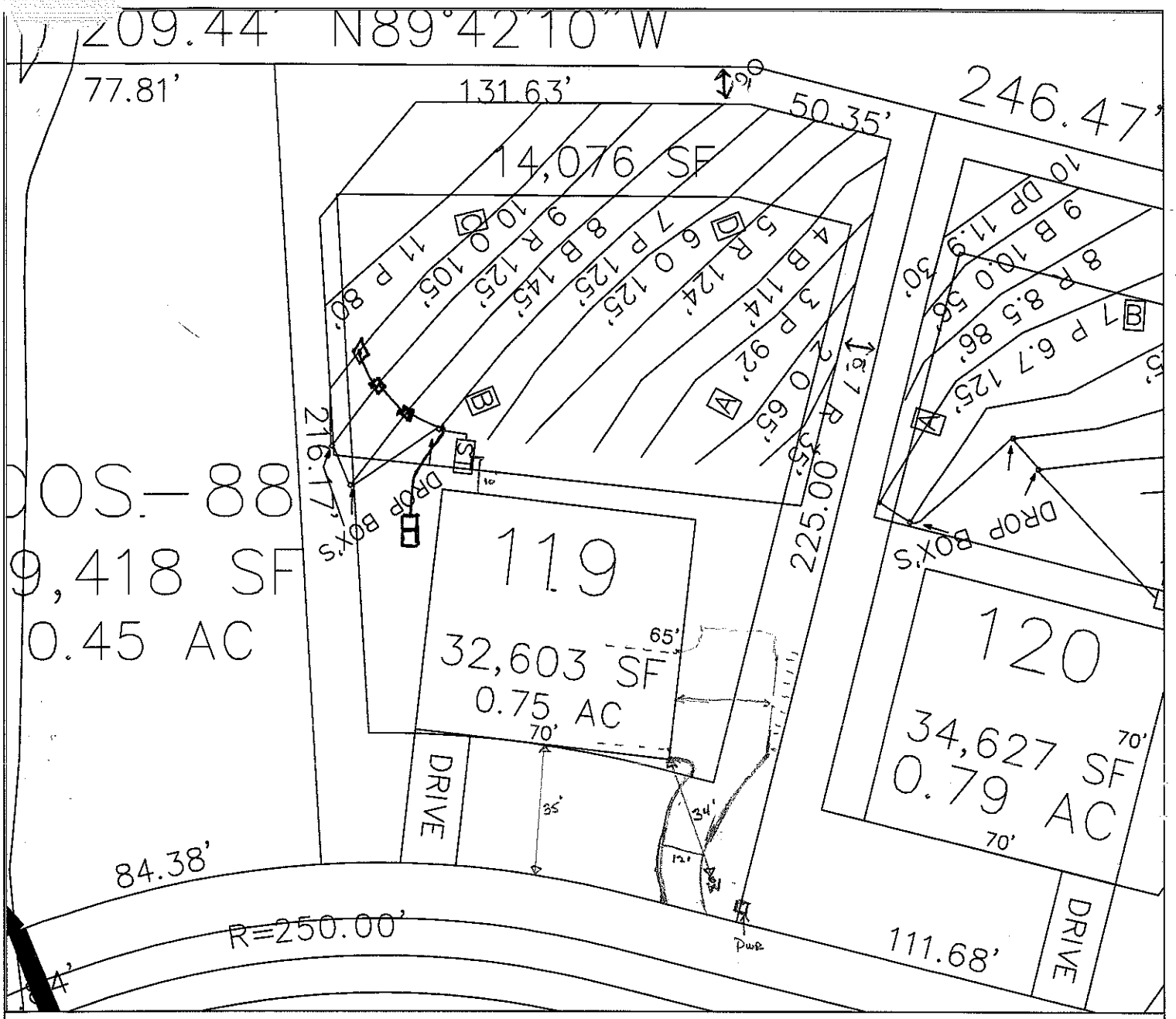
Notes:

** 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



LEGEND

- Areas contain soils with 24 inches or more of useable material and have potential for conventional, modified conventional and low-pressure pipe (lpp) septic systems.
- House Footprint
- System lines.
- Repair lines.
- Temporary Bench Mark (TBM)
- Well Location.
- (25) Pit Location.

GRAPHIC SCALE

1" = 40'

40 0 40 80

FOR PRELIMINARY PLANNING PURPOSES ONLY. ALL LOTS WILL REQUIRE FINAL APPROVAL BY THE COUNTY HEALTH DEPARTMENT ON A LOT BY LOT BASIS. THIS MAP SHOULD BY USED AS A GENERAL GUIDE, SOME ADJUSTMENTS WILL BE NECESSARY IN THE FIELD DUE TO SOIL VARIABILITY AND COMPLEX TOPOGRAPHIC FEATURES.
THIS MAP ONLY REFLECTS EXISTING SOIL SUITABILITY FOR ON-SITE SEPTIC TANK SYSTEMS.

PLEASE REFER TO ATTACHED SOIL REPORT FOR ADDITIONAL SITE SPECIFIC INFORMATION

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ASHLEY ROLLANS, NC LICENSED SOIL SCIENTIST
MOBILE: (704) 746 - 5046
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MAP TITLE: SITE PLAN & DRAINFIELD AREAS

PROJECT NAME: ANNISTON, LLC. / ANNISTON PHASE II

LOCATION/DATE: SHEARER CHAPEL ROAD IREDELL COUNTY, NORTH CAROLINA JULY 2006

JOB # :	01-1005
FILE:	C:\JOBS\01-1005
PROJECT MGR.:	S.A.R.
FIELD WORK:	S.A.R.
DRAWN BY:	S.A.R.

CALCULATIONS

Location ANNISTON PH4

Project Number 01-1005

Lot No: Lot 119

No. of Bedrooms 5

Design Flow 600 $^{gal}/_{day}$

LTAR 0.3 $^{gpd/ft^2}$

25% RED.? (YES OR NO) YES

Supply Line Length 9 ft.

Supply Line Volume 1.566 gal.

Required Feet of Line 500 ft.
Amount of Line from Layout 500 ft.

Gallons per Minute N/A $^{gal}/_{min}$

Required Septic Tank Capacity 1500 gal.
Minimum Standard Tank Size 1500 gal.

Lateral Line Volume 326.5 gal.

Dosing Volume N/A gal.

Note: Dosing Volume based on70% of lateral line volume

Tank Draw Down N/A *Generic Draw Down of 31 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