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 # 142 ANNISTON Subdivision, Iredell County, North Carolina.

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April 4, 2008
Project No. 01-1005
Design By: Rollans Soil and Environmental Services

INFORMATION FOR THE INSTALLER:

- The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.
- Tanks shall be approved by NCDENR, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning trenches.
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as an Accepted 25% reduction installation.
- Repair is specified as an Accepted 25% reduction installation.
- Rake trench walls, lime sidewalls, install trenches 36" wide and have no more than 1/4" fall in 10 feet.

FOR WASTEWATER TREATMENT

Owner: Niblock Development Corp.

Address: 300 McGill Ave. NW
Concord, NC 28027
Phone: 704 361 1201
County: Iredell
Location: ANNISTON Lot # 142

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

Design Specifications

Drainfield Size: 630
Loading Rate: 0.25
Depth of Gravel in Trench: NA (25% reduction)
Gravel Size: NA (25% reduction)
Trench Depth: **26 in.**
Trench Width: 36 in.
Septic Tank Size: 1500 gal.
Pump Tank Size: N/A

Estimated Supply Line Length: 26
Supply Line Diameter: 3 in. SCH 40 PVC
Supply Line Volume: 4.52
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 # 142
25% GRAVITY DESIGN

DESIGN FLOW:	600
SOIL APPLICATION RATE:	0.25
TOTAL AREA TRENCH BOTTOM:	1890
TOTAL LATERAL LENGTH:	630
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	600
SUPPLY LINE LENGTH:	26
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

**Pump tank draw down based on a volume basis of 31 gallons per inch. Draw down may vary among pump tank manufacturers.*

ANNISTON LOT # 142

Project #: 01-1005

LAYOUT FOR 5 BEDROOM HOME

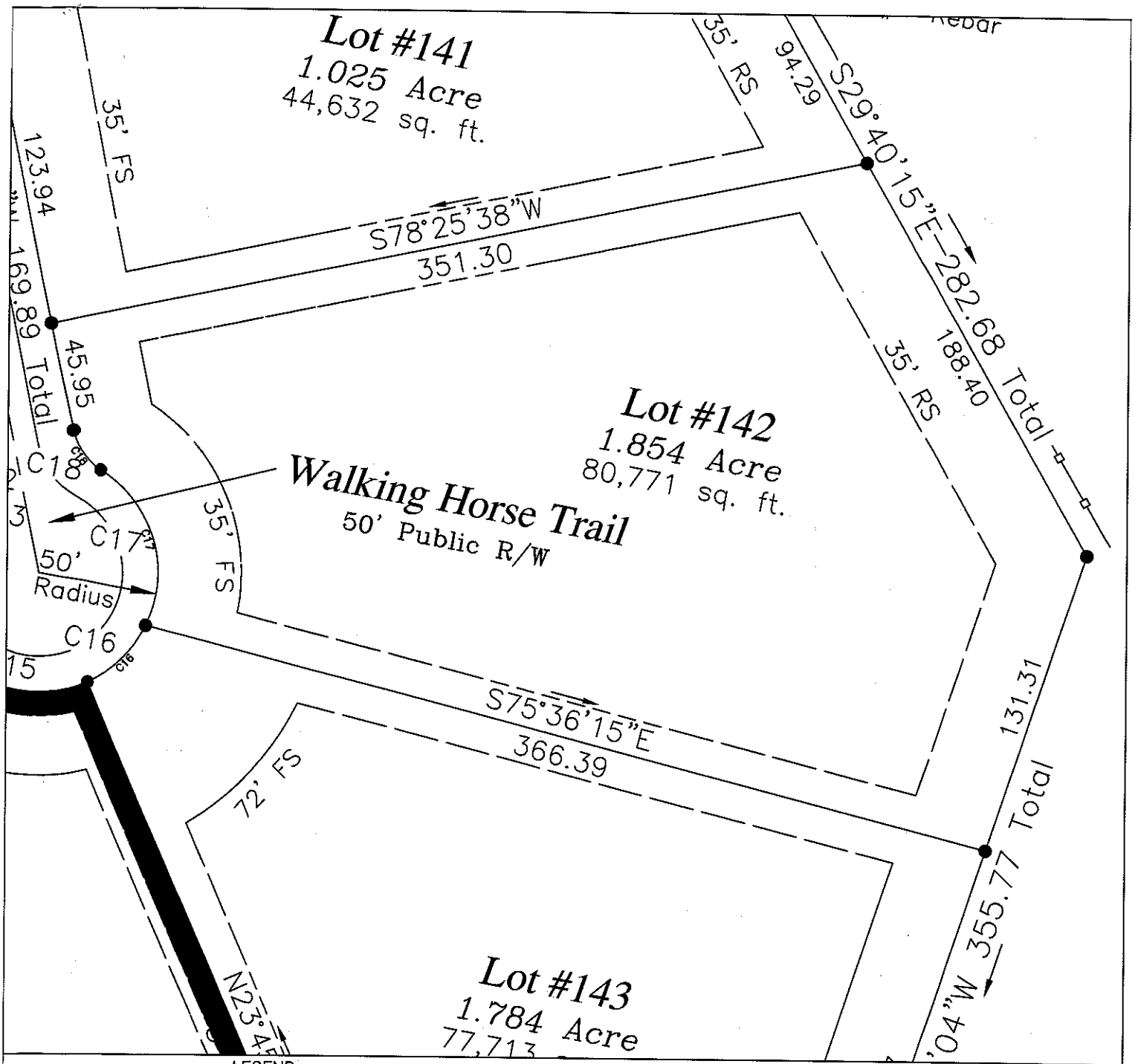
April 2, 2008

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	***65***	***65***
2	***RED***			N/A	N/A	***65***	***65***
3	***ORANGE***			N/A	N/A	***70***	***70***
4	***ORANGE***			N/A	N/A	***70***	***70***
5	***BLUE***			N/A	N/A	***92***	***90***
6	***BLUE***			N/A	N/A	***92***	***90***
7	***PINK***			N/A	N/A	***96***	***90***
8	***PINK***			***N/A***	***N/A***	***96***	***90***
9	RED			N/A	N/A	202	202
10	ORANGE			N/A	N/A	206	206
11	BLUE			N/A	N/A	145	145
12	PINK			N/A	N/A	83	83
					Total	**1282**	**1266**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
****System***	***630***	***0.250***	***ACCEPT.***	***0.250***	***25% RED.***	**GRAVITY DISTRIBUTION**
Repair	636	0.250	*ACCEPT.*	0.250	25% RED.	GRAVITY DISTRIBUTION

Notes:

** TBM located on angle point of lot (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



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 (All 70' x 70')
- System lines.
- Repair lines.
- TBM.
- Well Location.
- A — RS&ES Pit Location.
- (25) — RS&ES Boring Location.
- (28) — Health Dept. Pit Location.

GRAPHIC SCALE

o 1" = 60'

60 60 120

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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470 NORTH BROAD ST., SUITE D
MOORESVILLE, NC 28115
PHONE: 704.658.1723 FAX: 704.658.1724
ASHLEY ROLLANS, NC LICENSED SOIL SCIENTIST
MOBILE: (704) 746 - 5046
EMAIL: ROLLANS@WINDSTREAM.NET

MAP TITLE: SITE PLAN & DRAINFIELD AREAS

LOCATION/DATE: SHEARER CHAPEL ROAD, IREDELL COUNTY, NORTH CAROLINA, APRIL 2008

PROJECT NAME: NIBLOCK DEVEOPMENT CORP. / ANNISTON PHASE IV

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 142

No. of Bedrooms 5

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

LTAR 0.25 $^{gpd/ft^2}$

25% RED.? (YES OR NO) YES

Supply Line Length 26 ft.

Supply Line Volume 4.524 gal.

Required Feet of Line 600 ft.
Amount of Line from Layout 630 ft.

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

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

Lateral Line Volume 411.39 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.*

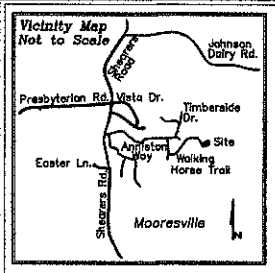
Pump Run Time N/A minutes

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







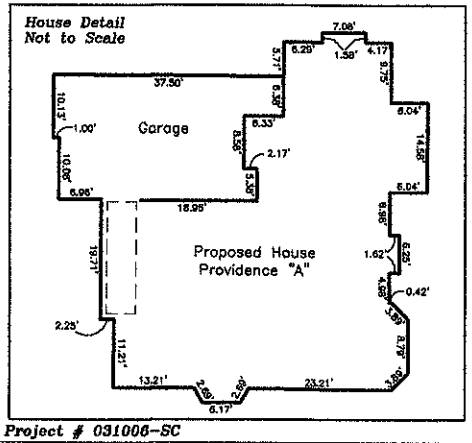
Surveyor's Notes

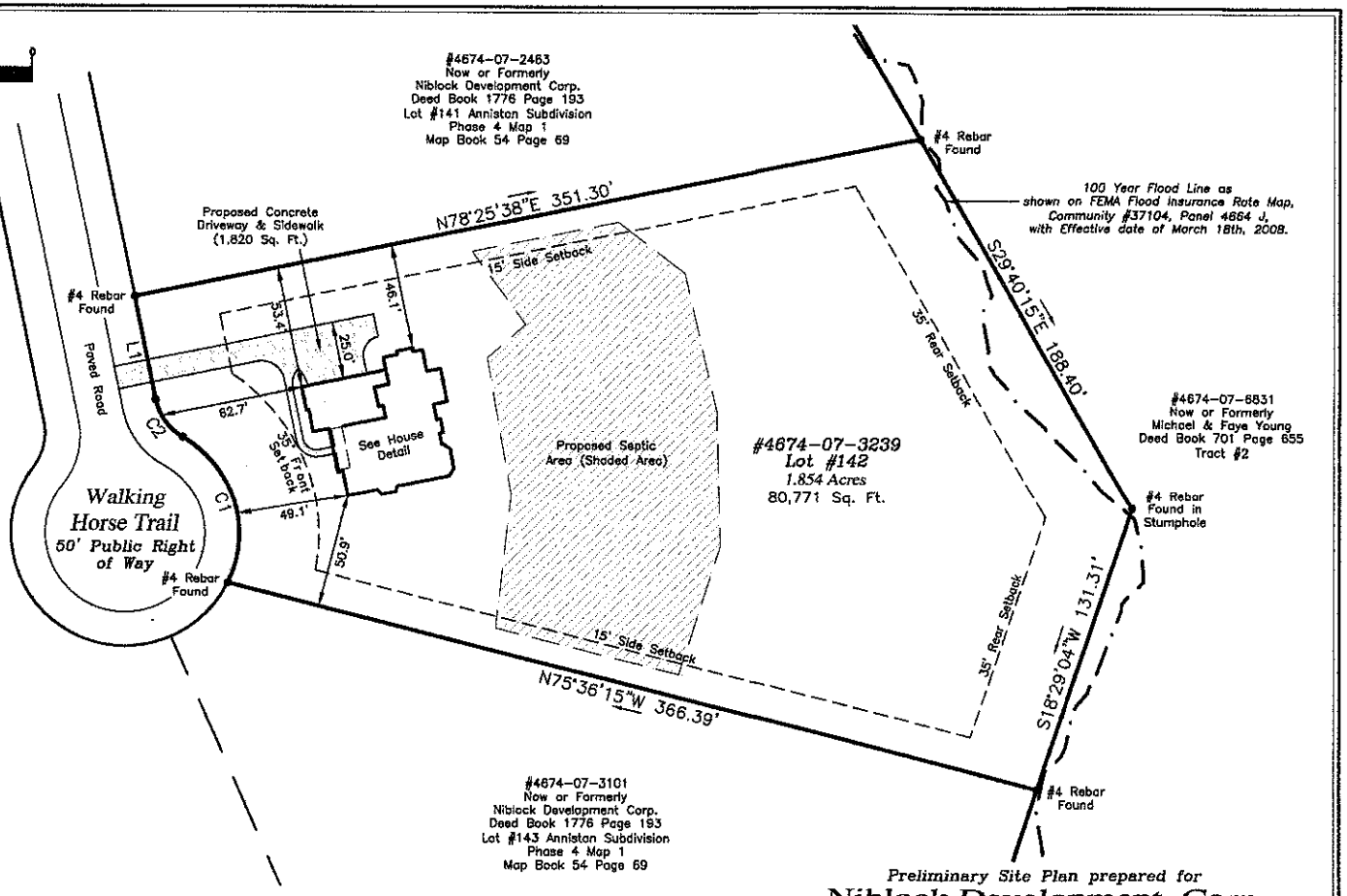
- Parcel #4674-07-3239
- Current Owner: Niblock Development Corp. 300 McGill Ave NW, Concord, NC 28027
- Property Address: 307 Walking Horse Trail, Davidson, NC 28036
- Current Zoning: RA
- A portion of this Property Does Not Lie in a Special Flood Hazard Area as shown Per FEMA FIRM Panel 4664J, Community #370313, with an effective date of March 18th, 2008.
- Area Computed by the Coordinate Method
- This Survey was performed without the benefit of Title Search and is therefore subject to any Easements, Restrictions and/or Rights-of-Ways of Record.

Legend

- ●....Existing Corner as Described
- ⊙....Set #4 Rebar
- ○....Calculated Point

CMP....Corrugated Metal Pipe
FS.....Front Setback
SS.....Side Setback
RS.....Rear Setback





LINE TABLE		
LINE	LENGTH	BEARING
L1	45.95	N11°34'22"W

CURVE TABLE				
CURVE	LENGTH	RADIUS	CHORD DIRECTION	CHORD LENGTH
C1	74.78	50.00	N16°54'53"W	68.01
C2	21.03	25.00	N35°49'03"W	20.41

Preliminary Site Plan prepared for

Niblock Development, Corp.

Coddle Creek Township Iredell County N. C.
Scale 1"= 50' – Date of Survey April 12th, 2010
Reference
Parcel #4674-07-3239, Lot #142 Anniston Subdivision
Phase 4 Map 1, Map Book 54 Page 69, Deed Book 1776 Page 193
Property Address: 307 Walking Horse Trail, Davidson NC 28036
Current Owner: Niblock Development, Corp.
300 McGill Avenue NW, Concord, NC 28027

PIEDMONT DESIGN ASSOCIATES, P.A.
ENGINEERING – SURVEYING – PLANNING
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Project # 031006-SC