Gravity 25% Reduction
FOR WASTEWATER TREATMENT

Owner:	IREDELL GROUP
Address:	109-C Williamson Road Mooresville, NC 28115
Phone:	704-663-4050
County:	Iredell
Location:	Walden Ridge Subdivision Lot #3
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Daily Wastewater Production:	480 gpd
System Flow:	NA

Design Specifications

Drainfield Size:	400
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:	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:	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.

WALDEN RIDGE SUBDIVISION LOT 3

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.3
TOTAL AREA TRENCH BOTTOM:	1200
TOTAL LATERAL LENGTH:	400
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	400
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:	N/A

WALDEN RIDGE LOT #3

Project #: 01-1069

LAYOUT FOR 4 BEDROOM HOME — March 14, 2006

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		N/A			100.00		
TANK		N/A	N/A				
HOUSE		N/A	N/A				
INSTR. 1			N/A				
1	ORANGE			N/A	N/A	104	104
2	PINK			N/A	N/A	130	130
3	BLUE			N/A	N/A	156	156
4	RED			N/A	N/A	178	178
5	***ORANGE***			***N/A***	***N/A***	***185***	***100***
6	***PINK***			***N/A***	***N/A***	***157***	***100***
7	***BLUE***			***N/A***	***N/A***	***121***	***100***
8	***RED***			***N/A***	***N/A***	***107***	***100***
					Total	**1138**	**968**

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
****System***	***400***	***0.30***	***ACCEPT.***	***0.30***	***25% RED.***	**GRAVITY DISTRIBUTION**
Repair	568	0.30	*ACCEPT.*	0.30	25% RED.	PRESSURE MANIFOLD

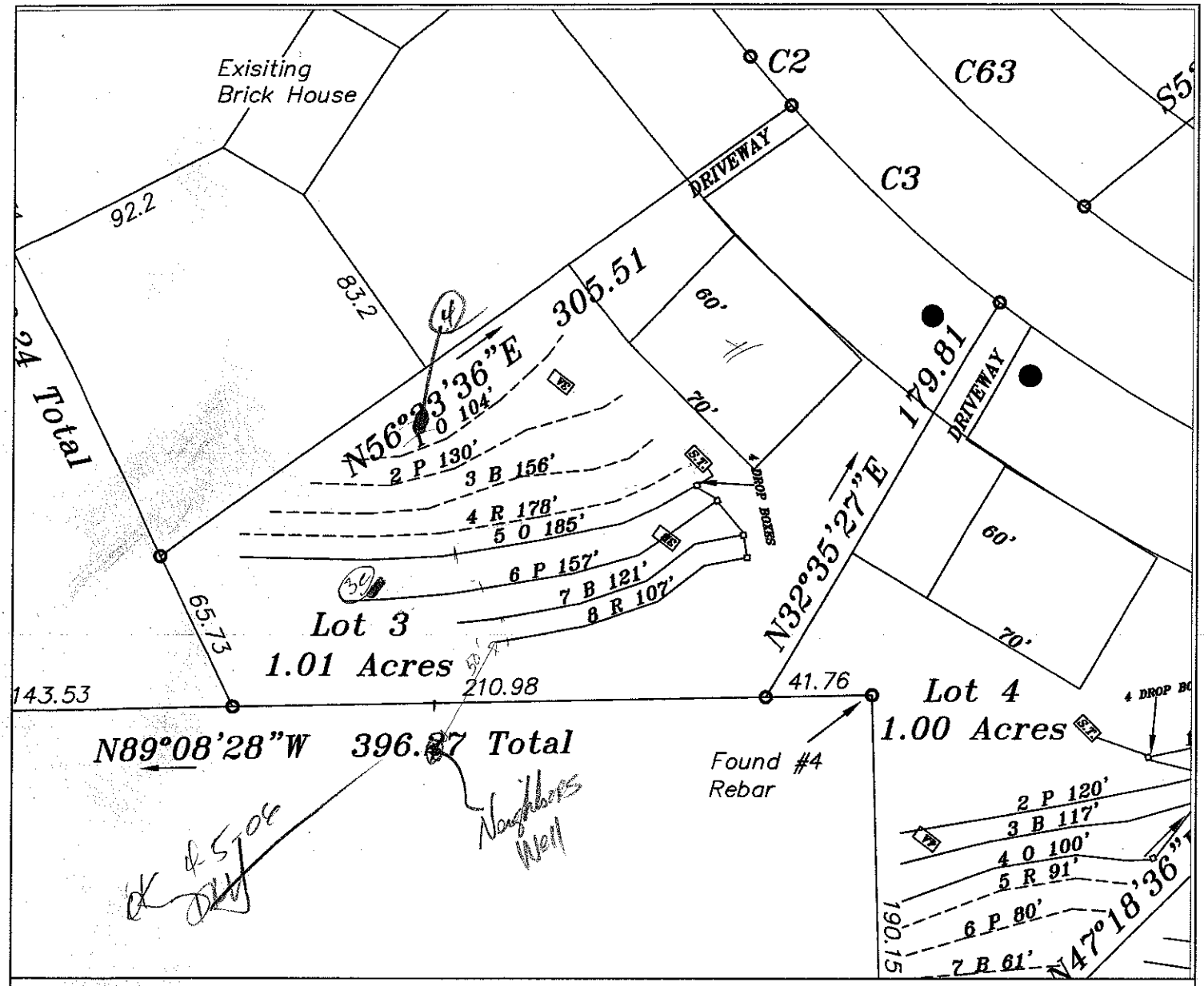
Notes:

** TBM NOT REQUIRED

**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.
- Unsuitable areas.
- System lines.
- Repair lines.
- Temporary Bench Mark (TBM)
- Well Location.

GRAPHIC SCALE
1" = 60'

60 0 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

ROLLANS SOIL & ENVIRONMENTAL SERVICES
2120 GRAHAM ROAD
MOUNT ULLA, NC 28125
PHONE/FAX: (704) 278 - 0989
ASHLEY ROLLANS, NC LICENSED SOIL SCIENTIST
MOBILE: (704) 746 - 5046
EMAIL: ROLLANSFORTC@AOL.COM

MAP TITLE: SITE PLAN & DRAINFIELD AREAS

PROJECT NAME: REDELL GROUP LLC/WALDEN RIDGE SUBDIVISION

LOCATION/DATE: TEETER ROAD, REDELL COUNTY, NORTH CAROLINA, DECEMBER 2005

JOB # : 01-1069
FILE: C:\JOBS\01-1069
PROJECT MGR.: CBF
FIELD WORK: CBF AND AP
DRAWN BY: CBP AND AP

CALCULATIONS

Location WALDEN RIDGE SUBDIVISION

Project Number 01-1069

Lot No: Lot 3

No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.3	$^{gal}/_{ft^2\,day}$
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	NA	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Lateral Line Volume	261.2	gal.
Dosing Volume	NA	gal.

Note: Dosing Volume based on70% of lateral line volume

Tank Draw Down	NA
Pump Run Time	NA
Elevation Head	NA
Pressure Head	NA
Friction Factor	NA
Friction Head	NA
Total Dynamic Head (+15%)	NA

Generic Draw Down of 21 gal.per in.

minutes

ft.
ft.
ft./100 ft. *(From the interpolater.)*
ft.

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 1 of ____
PROPERTY ID #: ____
COUNTY: IREDELL

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: IREDELL GROUP LLC — APPLICATION DATE 3/06
ADDRESS: 109-C WILLIAMSON RD MOORESVILLE — DATE EVALUATED: 3/06
PROPOSED FACILITY: RES — PROPOSED DESIGN FLOW (.1949): 480 — PROPERTY SIZE: ____
LOCATION OF SITE: Walden Ridge LOT 3 — PROPERTY RECORDED: 4
WATER SUPPLY: ☒ Private ☐ Public ☐ Well ☐ Spring ☐ Other ____
EVALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut — TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
3A 1	LSS 8-10%	0-6	BSCL GR	fri SSSP Sexp	N/A	51"	N/A	N/A	PS .3 gpd/ft²
		6-31	RC SBK/ABK	fri SSSP Sexp					
		31-51	RCL MASBK	fri SSSP Sexp					
3B 2	LSS 8-10%	0-27	RC SBK/ABK	fri SSSP Sexp	N/A	49"	N/A	N/A	PS .3 gpd/ft²
		27-49	RCL MASBK	fri SSSP Sexp					
3C 3	4-5%	0-13	SBK Brown CL	FR SSSP					.3
		13-30	SBK Red C	FR SSSP Sexp					
		30-31	WK SBK CL	FR SSSP					
4	8% S	0-10	WK SBK Brown CL	FR SSSP					.3
		10-42	SBK/MK Red C	FR SSSP Sexp					
		42-50	WK SBK YR CL	FR SSSP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	1200 ft²	1704 ft²
System Type(s)	25% Red	25% Red
Site LTAR	.3	.3

OTHER FACTORS (.1946): ____
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Rollins Soil & Environmental Services
OTHER(S) PRESENT: ____

COMMENTS: