Gravity 25% Reduction
FOR WASTEWATER TREATMENT

Owner:	Mike Ryon
Address:	127B Promenade Dr. Mooresville, NC 28117
Phone:	704 361 1084
County:	Iredell
Location:	Knox Haven Subdivision Lot #6
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Daily Wastewater Production:	480 gpd
System Flow:	NA

Design Specifications

Drainfield Size:	405
Loading Rate:	.3 GPD/FTSQ
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:	1000
Estimated Supply Line Length:	29
Supply Line Diameter:	3 in. SCH 40 PVC
Supply Line Volume:	5.05
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.

Knox Haven Subdivision Lot #6

DESIGN FLOW:	480	
SOIL APPLICATION RATE:	.3 GPD/FTSQ	
TOTAL AREA TRENCH BOTTOM:	1215	
TOTAL LATERAL LENGTH:	405	
NUMBER OF FIELDS:	1	
LATERAL LENGTH REQUIRED PER FIELD:	400	
SUPPLY LINE LENGTH:	29	
TOTAL DYNAMIC HEAD:	NA	
MANIFOLD SIZE:	NA	
DOSING VOLUME:	NA	
PUMP TANK DRAW DOWN*:	NA	
SEPTIC TANK SIZE:		1000
PUMP TANK SIZE:	NA	

KNOX HAVEN LOT #6

Project #: 01-1167

LAYOUT FOR 4 BEDROOM HOME

May 9, 2007

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		NA			NA		
TANK			NA				
HOUSE							
INSTR. 1							
1	*BLUE*			*NA*	*NA*	*88*	*85*
2	*PINK*			*NA*	*NA*	*94*	*90*
3	*RED*			*NA*	*NA*	*120*	*120*
4	*ORANGE*			*NA*	*NA*	*111*	*110*
5	BLUE			NA	NA	73	73
6	BLUE			NA	NA	62	62
7	ORANGE			NA	NA	73	73
8	PINK			NA	NA	80	80
9	RED			NA	NA	46	46
					Total	747	739

	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	SOIL LTAR GPD/FT^2	TRENCH SYSTEM	DISTRIBUTION
** System*	*405*	*0.30*	*ACCEPT.*	0.30	*25% RED.*	GRAVITY DISTRIBUTION
Repair	334	0.30	*MOD.*	0.30	PPBPS	LOW PRESSURE

Notes:

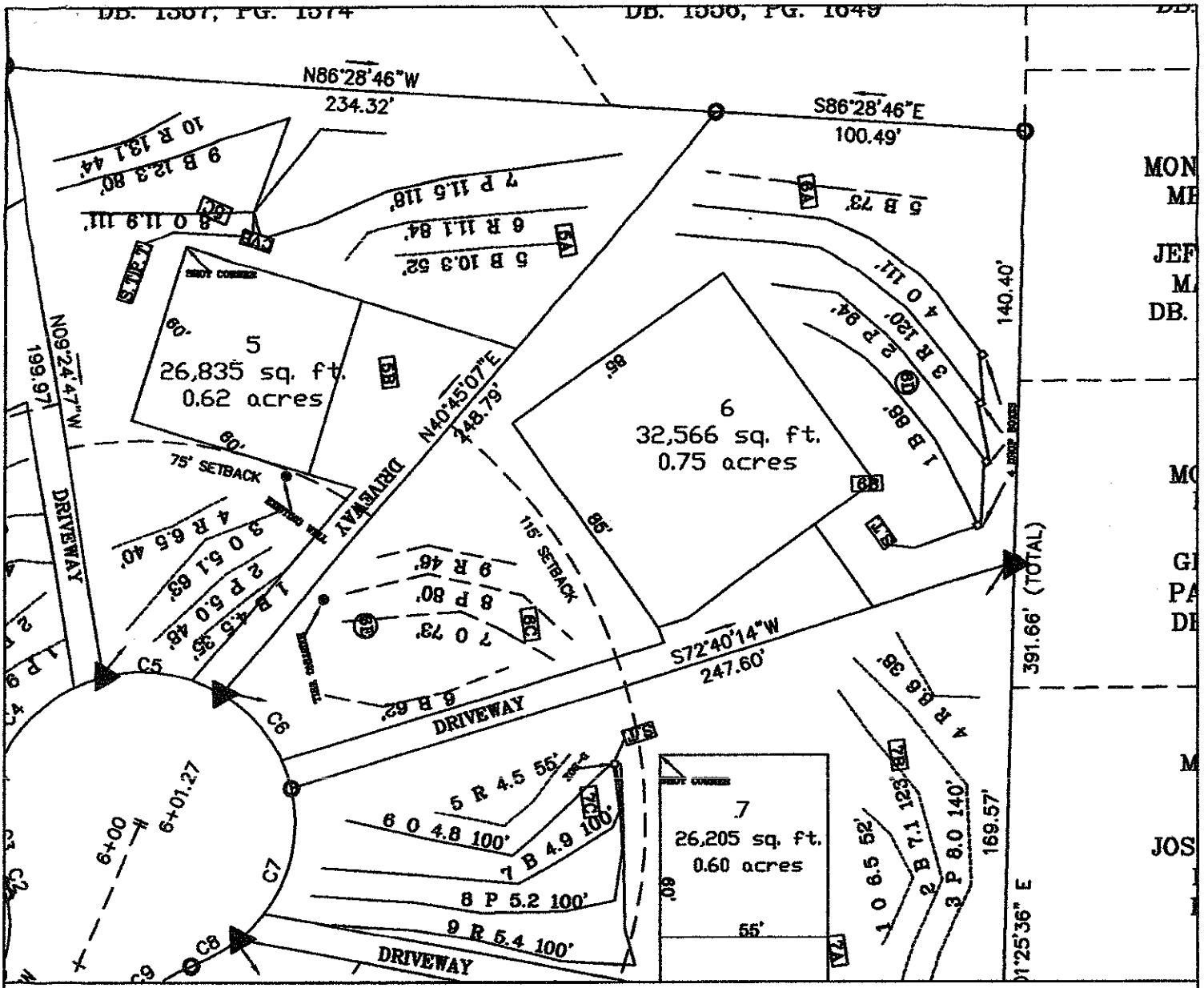
**** EXISTING WELL MUST BE PROPERLY ABANDONED.**

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

GRAPHIC SCALE
1" = 50'

50 0 50 100

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
2159 GRAHAM ROAD
MOUNT ULLA, NC 28125
PHONE/FAX: (704)278-9989
ASHLEY ROLLANS, NC LICENSED SOIL SCIENTIST
MOBILE: (704)746-5846
EMAIL: ROLLANSFORTC@AOL.COM

MAP TITLE: SITE PLAN & DRAINFIELD AREAS

PROJECT NAME: [illegible]

LOCATION/DATE: [illegible] REBEL COUNTY, NORTH CAROLINA [illegible]

JOB # : 01-1167
FILE: C:\JOBS\01-1167
PROJECT MGR.: C.B.F.
FIELD WORK: S.A.R., C.B.F. AND A.L.P.
DRAWN BY: C.B.F.

CALCULATIONS

Location KNOX HAVEN SUBDIVISION

Project Number 01-1167

Lot No: Lot 6

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 29 ft.

Supply Line Volume 5.046 gal.

Required Feet of Line 400 ft.
Amount of Line from Layout 405 ft.

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

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

Lateral Line Volume 264.465 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