GRAVITY 25% REDUCTION SYSTEM FOR WASTEWATER TREATMENT

Owner:	Ryon-West Developers
Address:	127B Promenade Dr. Mooresville, NC 28117
Phone:	704-361-1084
County:	Iredell
Location:	Poplar Grove Subdivision Lot #36
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:	.3GPD/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:	10
Supply Line Diameter:	3 in. SCH 40 PVC
Supply Line Volume:	1.74
Dosing Volume:	NA
Supply Manifold:	DROP BOXES
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.

POPLAR GROVE SUBDIVISION LOT 36

DESIGN FLOW:	480	
SOIL APPLICATION RATE:	.3 GPD/FTSQ	
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:		1000

Poplar Grove Lot 36

Project #: 01-1211

LAYOUT FOR 4 BEDROOM HOME

March 7, 2006

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		0.0			100.00		
TANK		0.00	100.00				
HOUSE		0.00	100.00				
INSTR. 1			100.00				
1	***RED***			***N/A***	***N/A***	***150***	***150***
2	***PINK***			***N/A***	***N/A***	***170***	***170***
3	***ORANGE***			***N/A***	***N/A***	***80***	***80***
4	ORANGE			N/A	N/A	90	90
5	BLUE			***N/A***	***N/A***	140	140
6	RED			***N/A***	***N/A***	70	70
					Total	**700**	**700**

	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	300	0.30	*MOD.*	0.30	PPBPS	LOW PRESSURE

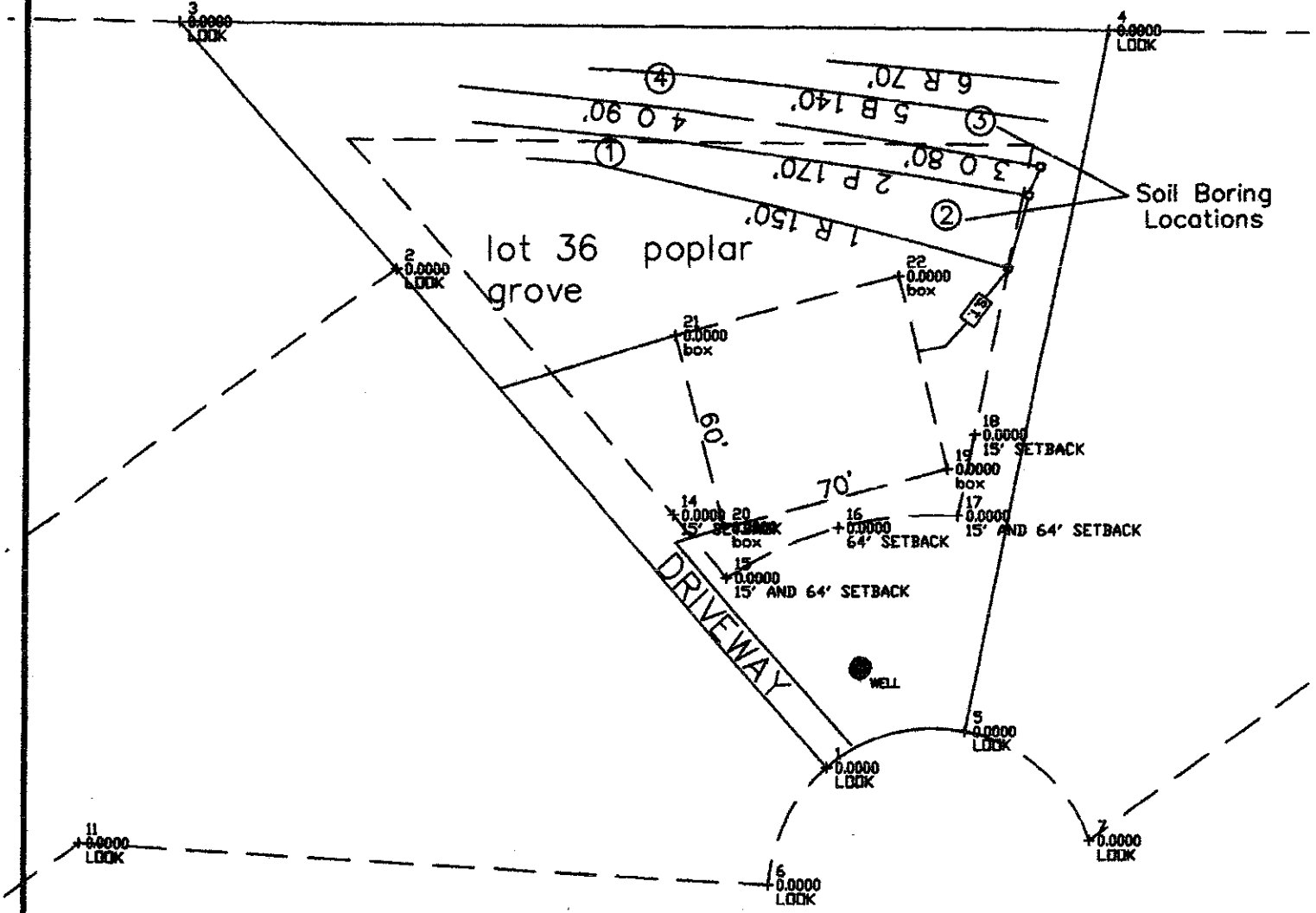
Notes:

**No TBM required on gravity "Fast-Track" designs

**All measures in feet

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

**BS, HI, and FS indicate rod readings



PLOT PLAN SURVEY

OF

LOT 36 POPLAR GROVE

SCALE 1" = 50'

ACQUIRED BY:

FIELD BOOK:
FILE: 11021
DC FILE:
TAX MAP NO:

CALCULATIONS

Location POPLAR GROVE

Project Number

Lot No: Lot 36

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 *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