Gravity 25% Reduction
FOR WASTEWATER TREATMENT

Owner: Brad Torrence

Address: 509 N. Church Street
Mooresville, NC 28115

Phone: 704.902.1185

County: Iredell

Location: BARFIELD ROAD 1.21 Acre Parcel

Source of Wastewater Flow: 3 Bedroom Single Family Residence

Estimated Gallons Per Day Flow: 360

System Flow: NA

Design Specifications

Drainfield Size: 300

Loading Rate (gpd/ft.^{2}): 0.3

Depth of Gravel in Trench: NA (25% reduction)

Gravel Size: NA (25% reduction)

Trench Depth: 27 in.

Trench Width: 36 in.

Septic Tank Size: 1000

Pump Tank Size: N/A

Estimated Supply Line Length: 36

Supply Line Diameter: 3 in. SCH 40 PVC

Supply Line Volume: 6.26

Dosing Volume: NA

Supply Manifold: SERIAL DISTRIBUTION

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.

BARFIELD ROAD 1.21 Acre Parcel

DESIGN FLOW (gpd):	360
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	900
TOTAL LATERAL LENGTH:	300
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	300
SUPPLY LINE LENGTH:	36
TOTAL DYNAMIC HEAD:	NA
MANIFOLD SIZE:	NA
DOSING VOLUME:	NA
PUMP TANK DRAW DOWN*:	NA
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	N/A

BARFIELD ROAD 1.21 Acre Parcel

Project: Brad Torrence / Barfield Road

LAYOUT FOR 3 BEDROOM HOME

February 17, 2012

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
1	***BLUE***				*N/A*	*100*	*100*
2	***PINK***				*N/A*	*114*	*100*
3	***RED***				*N/A*	*113*	*100*
4	ORANGE				N/A	136	136
5	BLUE				N/A	111	111
6	PINK				N/A	86	86
7	RED				N/A	64	64
					Total	**724**	**697**

	LINE LENGTH	LTAR GPD/FT²	SYSTEM TYPE	SOIL LTAR GPD/FT²	TRENCH SYSTEM	DISTRIBUTION
**** System***	***300***	***0.30***	***ACCEPT.***	***0.30***	***25% RED.***	**GRAVITY**
Repair	397	0.30	*ACCEPT.*	0.30	25% RED.	**DISTRIBUTION** GRAVITY DISTRIBUTION

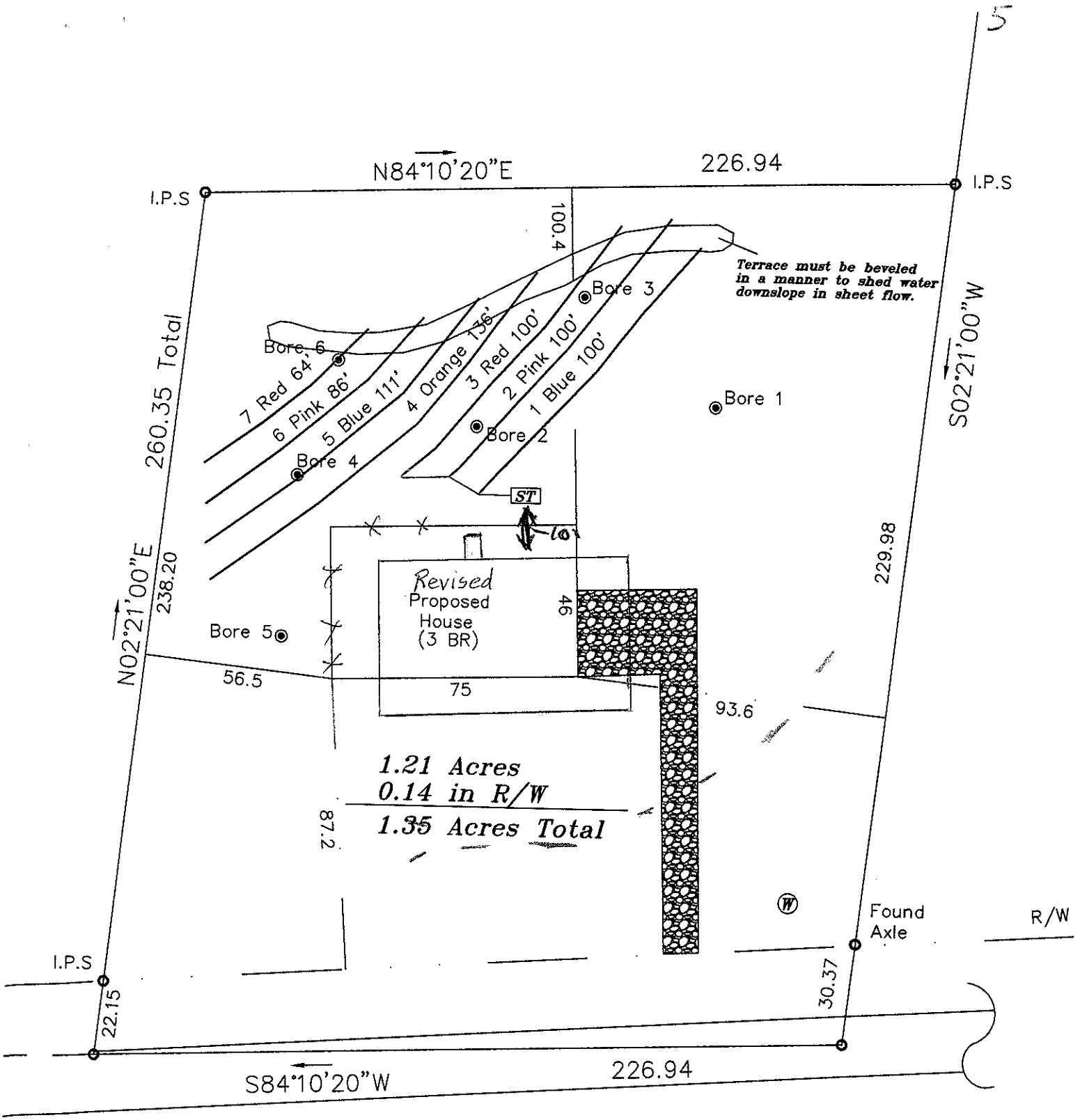
Notes:

** TBM not necessary (gravity system).

**All measures in feet

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

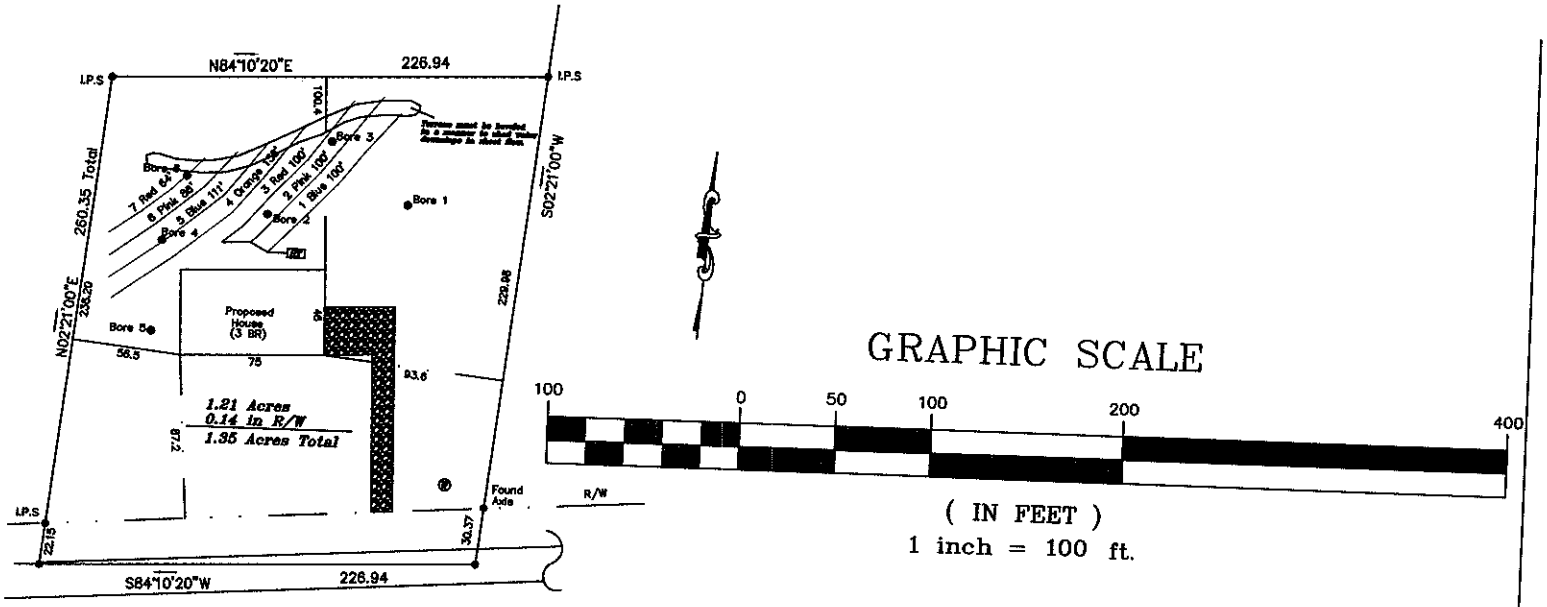
**BS, HI, and FS indicate rod readings



BARFIELD ROAD S.R. 1306

Approved ICAD
3-8-12 jm

1" = 40'



JOB NAME: *BOUNDARY SURVEY OF A PORTION OF JAMES C. TORRENCE JR. PROPERTY*		
LOCATION: CODDLE CREEK TWSP., IREDELL CO., NC TAX PARCEL ID: 4649808910	DRAWN BY: JHP	CHECKED BY: JHP
	SCALE: 1" = 100'	
TO BE ACQUIRED BY:	DATE OF FIELD SURVEY: FEBRUARY, 2012	
BRAD TORRENCE	DATE OF MAP: FEBRUARY 10, 2012	
	JOB NUMBER: 12011	BOOK NO:

Land Surveying by:
PATTERSON LAND SURVEYING, PA
C-3390
P.O. Box 5010, Mooresville, NC 28117
704/361-0415 * Fax 704/799-8565

CALCULATIONS

Location Barfield Road

Project Number N/A

Lot No: N/A

No. of Bedrooms 3

Design Flow 360 $^{gal}/_{day}$

LTAR 0.30 $^{gal}/_{ft^2\,day}$

25% RED.? (YES OR NO) YES

Supply Line Length 36 ft.

Supply Line Volume 6.264 gal.

Required Feet of Line 300 ft.
Amount of Line from Layout 300 ft.

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

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

Lateral Line Volume 195.9 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