LOT 116 SEC 6 CL&T

LAYOUT FOR 4 BEDROOM HOME

April 8, 2013

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM							
INSTR. 1							
HOUSE CNR					772.72		
P. TANK					776.00		
1	***ORANGE***				***788.49***	*29*	*29*
2	***RED***				***788.07***	*37*	*37*
3	***PINK***				***787.23***	*47*	*47*
4	***BLUE***				***786.39***	*57*	*57*
5	***ORANGE***				***785.14***	*69*	*69*
6	***RED***				***783.80***	*28*	*28*
7	PINK				782.67	29	29
8	BLUE				782.14	31	31
9	ORANGE				781.30	32	32
10	ORANGE				772.60	50	50
11	BLUE				771.38	66	66
12	RED				769.80	90	90
					Total	565	565

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
** System*	*267*	*0.3*	*MOD.*	*0.30*	***PPBPS***	***LOW PRESSURE***
Repair	298	0.3	MOD.	0.30	PPBPS w/TS-II Pretreatment	LOW PRESSURE

**All lines located via Registered Land Surveyor

**All measures in feet

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

***** Lot deeded before July 1, 1977***

PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant:	Norman & Amanda Marttila
	Attn: Billy Allen
Address:	111-B Raceway Drive
	Mooresville, NC 28117
Phone:	704.634.2310
County:	Iredell
Location:	CL&T sec 6 lot 116
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Daily Wastewater Production:	480 gpd
System Flow:	25.42

Design Specifications

Drainfield Size:	267'
Loading Rate:	0.3 gpd/ft.^{2}
Depth of Gravel in Trench:	NA (PPBPS)
Gravel Size:	NA (PPBPS)
Trench Depth:	36 in.
Trench Width:	36 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	160
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	27.84
Dosing Volume:	154.37
Supply Manifold:	N/A
Supply Manifold Length:	N/A
Supply Manifold Volume:	N/A
Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head:	2 ft.
Friction Head:	2.85
Elevation Head:	17.49
Total Dynamic Head:	25.69
Threaded Union:	In Tank
Gate Valves:	1 in Tank
	1 per lateral (6)
Check Valves:	In Tank
Anti-Siphon Hole:	NA
Additional Comments:	Soil suitability was performed by Rollans Soil & Environmental Services

CL&T sec 6 lot 116
LOW PRESSURE PPBPS DESIGN

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.3 gpd/ft.^{2}
TOTAL AREA TRENCH BOTTOM:	534
TOTAL LATERAL LENGTH:	267
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	267
SUPPLY LINE LENGTH:	160
TOTAL DYNAMIC HEAD:	25.69
MANIFOLD SIZE:	N/A
DOSING VOLUME:	154.37
PUMP TANK DRAW DOWN*:	7.4
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

LP PPBPS DATA SHEET LOT 116 SEC 6 CL&T

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	ORANGE	788.49	29	0.156	0.41	87	7
2	RED	788.07	37	0.156	0.41	111	9
3	PINK	787.23	47	0.156	0.41	141	11
4	BLUE	786.39	57	0.156	0.41	171	13
5	ORANGE	785.14	69	0.156	0.41	207	16
6	RED	783.80	28	0.156	0.41	84	6
	total	feet =	267	gal/min =	25.42		62

Des. Flow	360
Pump Run=	5.88
soil LTAR	0.3
LTAR +5%	0.315
LTAR with mod.	0.6
LTAR with mod.. + 5%	0.63

.156 equals 5/32 inch hole

CALCULATIONS

Location : CL&T sec. 6 lot 116 Fawn Lane

Lot No: Lot 5

No. of Bedrooms	4
Design Flow	480 $^{gal}/_{day}$
LTAR	0.3 $^{gal}/_{ft^2\ day}$
PPBPS? (YES OR NO)	YES
Supply Line Length	160 ft.
Supply Line Volume	27.84 gal.
Required Feet of Line	267 ft.
Amount of Line from Layout	267 ft.
Gallons per Minute	25.42 $^{gal}/_{min}$
Required Septic Tank Capacity	1000 gal.
Minimum Standard Tank Size	1000
Panel Volume	3.6 gal.
# of Panels	64
Dosing Volume	154.37 gal.

Note: Dosing Volume based on # of panels times 3.6 gal/panel a 67%

Tank Draw Down	7.4 *Generic Draw Down of 21 gal.per in.*
Pump Run Time	6.07 minutes
Elevation Head	17.49 ft.
Pressure Head	2 ft.
Friction Factor	1.78 ft./100 ft. *(From the interpolater.)*
Friction Head	2.85 ft.
Total Dynamic Head (+15%)	25.69 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

DAS DON ALLEN & ASSOCIATES, P. A.
"Since 1971"
Commercial * Residential * Mortgage Surveys * Multi-Family
Construction Staking * Subdivision Design * Topographical
111-D Raceway Drive * Mooresville * NC * 28117
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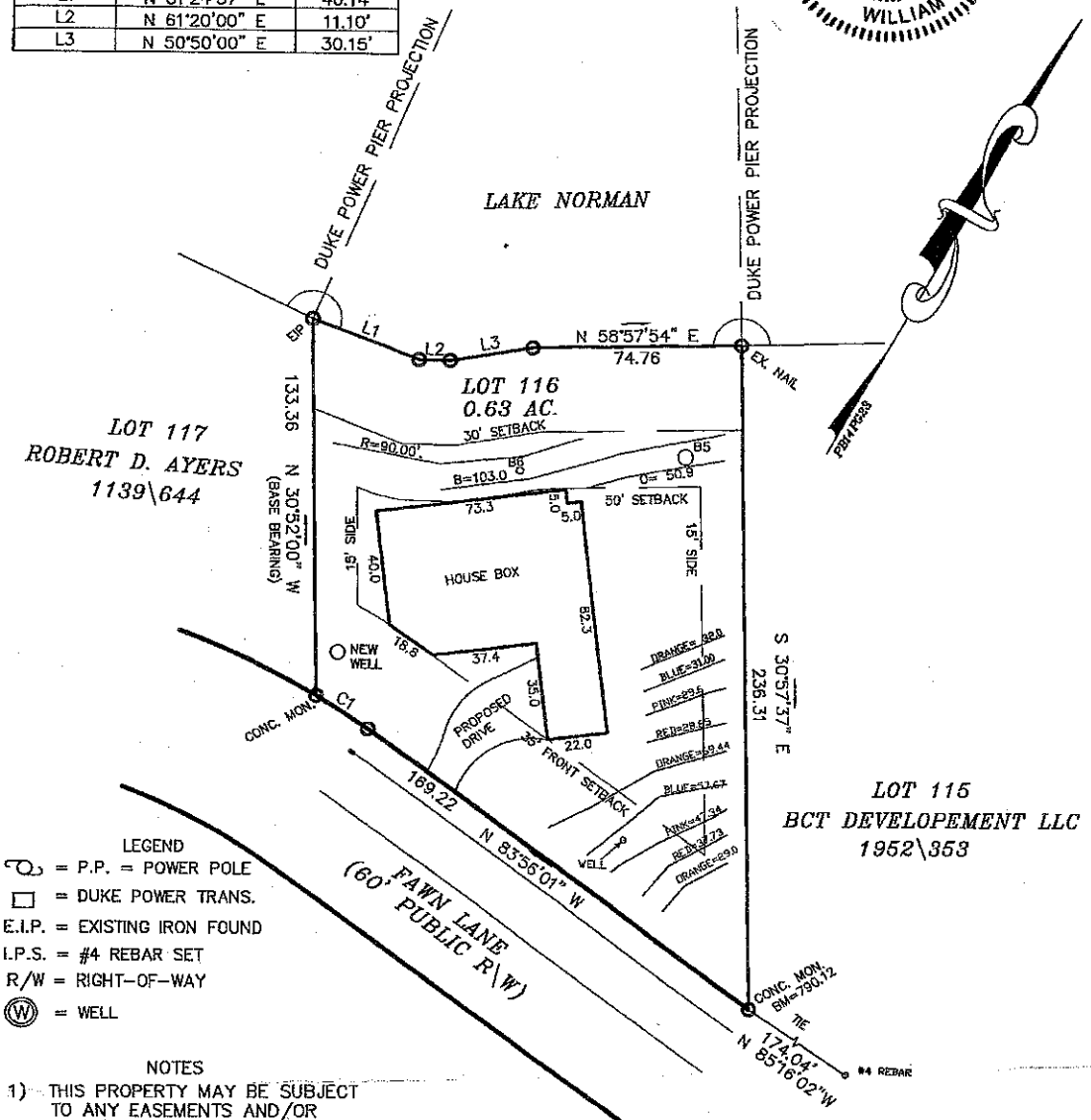
I, certify that this map was drawn under my supervision from an actual survey made under my supervision recorded in deed book 1889, page 541, and/or plat book 14, page 23, that the ratio of precision is 1':10,000, that this map was prepared in accordance with the General Statutes of North Carolina Chapter 89C. my hand and seal on the 28, day of MARCH, A.D. 20 13

WILLIAM M. ALLEN, PLS

NORTH CAROLINA PROFESSIONAL SEAL L3499 LAND SURVEYOR WILLIAM M. ALLEN

CURVE TABLE				
CURVE	RADIUS	LENGTH	BEARING	CHORD
C1	265.88'	21.79'	N 86°21'51" W	21.78'

LINE TABLE		
LINE	BEARING	LENGTH
L1	N 81°24'37" E	40.14'
L2	N 61°20'00" E	11.10'
L3	N 50°50'00" E	30.15'



LEGEND
- P.P. = POWER POLE
- = DUKE POWER TRANS.
- E.I.P. = EXISTING IRON FOUND
- I.P.S. = #4 REBAR SET
- R/W = RIGHT-OF-WAY
- (W) = WELL

NOTES
1) THIS PROPERTY MAY BE SUBJECT TO ANY EASEMENTS AND/OR RIGHTS OF WAY OF RECORD.
2) ACREAGE COMPUTED BY THE COORDINATE METHOD.
3) UNDERGROUND POWER
4) NO GRID MONUMENT FOUND WITHIN 2000 FEET.

0' 25' 50' 100'
SCALE IN FEET

BOUNDARY SURVEY

OF
180 FAWN LANE
LOT 116 CRESNT LAND & TIMBER CORP. SECT. 6

SCALE 1" = 50' DAVIDSON TWSP., IREDELL CO., N.C.

ACQUIRED BY: NORM & AMANDA MARTTILA

FIELD BOOK:
FILE: CLT LOT 116
DC FILE:
TAX MAP NO: 4615827560

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

Sheet 1 *of* 1
PROPERTY ID #: _____
COUNTY: IREDELL

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER/APPLICANT: Norman & Amanda Marthila
ADDRESS: MOORESVILLE NC 111-B Raceway Drive
PROPOSED FACILITY: RES
LOCATION OF SITE: FAWN LANE LOT 116 SEC 6 CL&T
WATER SUPPLY: ☒ Private ☐ Public ☒ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut

APPLICATION DATE _____
PROPOSED DESIGN FLOW (.1949): 480 GPD
DATE EVALUATED: 5/09/05
PROPERTY SIZE: 1AC
PROPERTY RECORDED: YES
TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	LINEAR 9%	0-12	BSCL GR	FRI SSSP SEXP	NA	48	NA	NA	PS .3GPD/FTSQ
		12-48	RC SBK	FRI SSSP SEXP					
2	LINEAR 10%	0-10	BSCL GR	FRI SSSP SEXP	NA	48	NA	NA	PS .3GPD/FTSQ
		10-48	RC SBK	FRI SSSP SEXP					
				FEW Y RELICS					
3	LINEAR 7%	0-4	BSCL GR	FRI SSSP SEXP	NA	48	NA	NA	PS .3GPD/FTSQ
		4-48	RC SBK	FRI SSSP SEXP					
4	LINEAR 4%	0-4	BSCL GR	FRI SSSP SEXP	NA	48	NA	NA	PS .3GPD/FTSQ
		4-48	RC SBK	FRI SSSP SEXP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	534 SQFT	534 SQFT
System Type(s)	LPPPBPS	LPPPBPS
Site LTAR	.3GPD/FTSQ	.3GPD/FTSQ

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: FREEMAN/ROLLANS
OTHER(S) PRESENT: _____

COMMENTS: _____

SOIL/SITE EVALUATION

(Continuation Sheet)

DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

Sheet ___ of ___

PROPERTY ID #:
DATE OF EVALUATION: March 2013
COUNTY: Iredell

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
B 5	L/18%	0-10	BRC-clwsbk	FrSSSPSEXP	-fsap	48	–	–	PS 0.3
		10-46	Rcmmsbk	" " " "					
		46-48	Rclwmsbk	" " " "					
B 6	L/15%	0-12	B1gr	FrSSSPSEXP		48	–	–	PS 0.3
		12-18	BRclwsbk	" " " "					
		18-48	Rcmmsbk	" " " "					

COMMENTS: