GRAVITY ACCEPTED SYSTEM FOR WASTEWATER TREATMENT

Applicant: Rollans Soil

Address: P.O. Box 832
Mooresville, NC 28115

Phone: 704.746.5046
County: Iredell
Location: Shepherd Bluff Lot 49
PIN (4659567914)

Source of Wastewater Flow: 3 Bedroom Single Family Residence
Estimated Gallons Per Day Flow: 360
System Flow: N/A

Approved
5/26/16
MD

Design Specifications

Drainfield Size: 372
Loading Rate (gpd/ft.^{2}): 0.25
Depth of Gravel in Trench: N/A
Gravel Size: N/A
Trench Depth: 18 in.
Trench Width: 36 in.
Septic Tank Size: 1000

Repair Trench Bottom 30 in.

Estimated Supply Line Length: 44
Supply Line Diameter: 4 in. SCH 40 PVC
Supply Line Volume: 28.73
Dosing Volume: N/A
Supply Manifold: N/A
Supply Manifold Length: N/A
Supply Manifold Volume: N/A

Recommended Float Controls: N/A

Recommended Control Panel: N/A

Pressure Head: N/A
Friction Head: N/A
Elevation Head: N/A
Total Dynamic Head: N/A

Threaded Union: N/A
Gate Valves: N/A

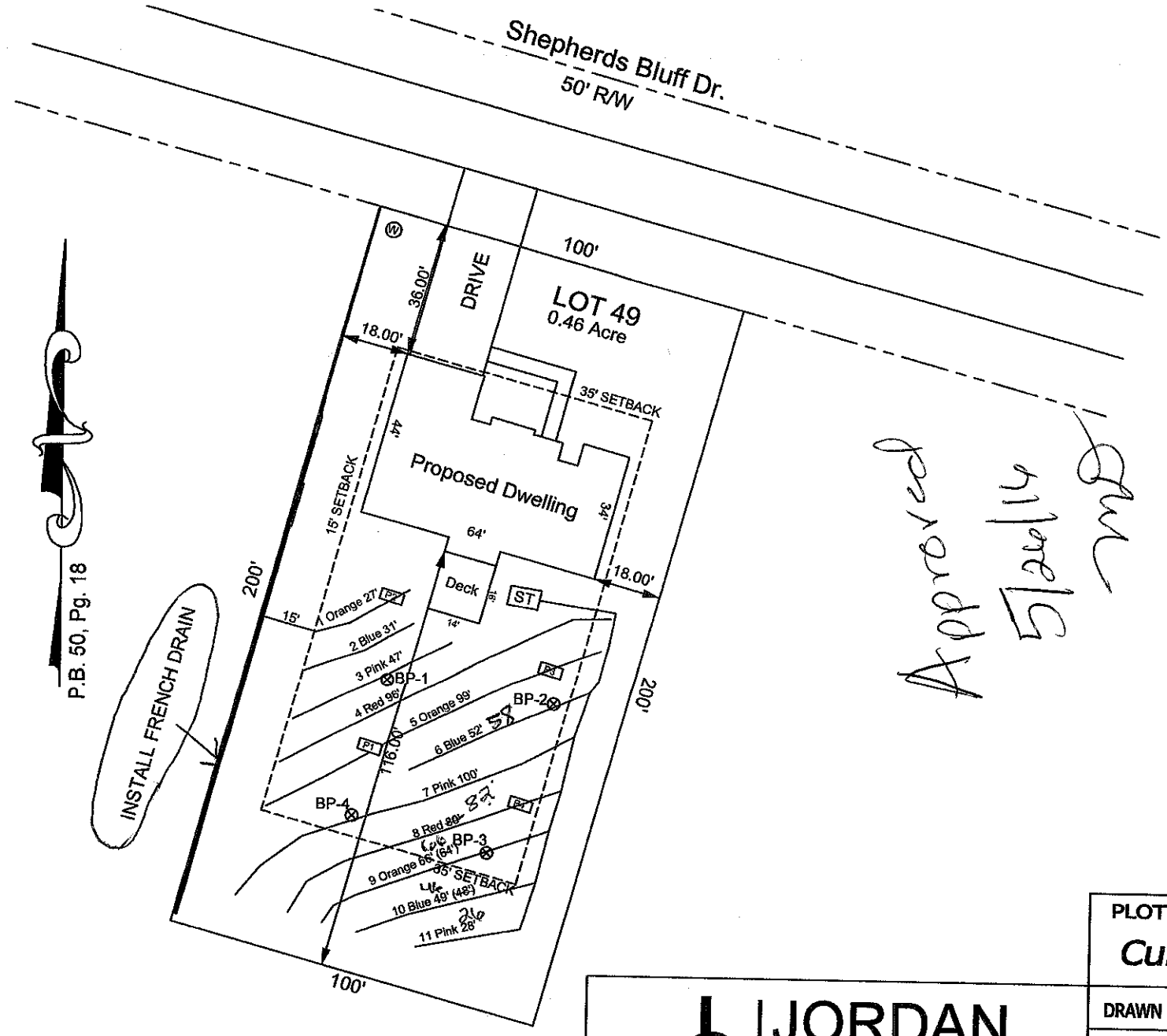
Check Valves: N/A
Anti-Siphon Hole: N/A
Additional Comments: Soil suitability was performed by ICHD
See Attached Soil Evaluation/Permit

Shepherd Bluff Lot 49

ACCEPTED SYSTEM

DESIGN FLOW (gpd):	360
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.25
TOTAL AREA TRENCH BOTTOM:	1116
TOTAL LATERAL LENGTH:	372
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	360
SUPPLY LINE LENGTH:	44
TOTAL DYNAMIC HEAD:	N/A
MANIFOLD SIZE:	N/A
DOSING VOLUME:	N/A
PUMP TANK DRAW DOWN*:	N/A
SEPTIC TANK SIZE:	1000

Approved
5/26/16
MKS



Approved
5/26/16

JORDAN GRANT

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mattg@jordan-grant.com (704) 928-7919
FIRM # P-1227

PLOT PLAN FOR:

Curtis & Barbara Barteau

DRAWN BY: MIG	CHECKED BY: WMJ
SCALE: 1"=40'	
DEED REF: 2270-1361	PIN NO: 4659-56-7914
DATE OF MAP: 02-29-16	SURVEY DATE:
REVISION: 05-10-16	DRAWING FILE: 20160206

241 SHEPHERDS BLUFF DR, MOORESVILLE, NC 28117
BARRINGER TOWNSHIP --- IREDELL COUNTY --- NORTH CAROLINA

Approved 4
5/26/16
MD

Layout Specifications - Shepherds Bluff Lot 49

Project #: 01-3166

LAYOUT FOR 3 BEDROOM HOME

May 12, 2016

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM							
INSTR. 1							
1	ORANGE					27	27
2	BLUE					31	31
3	PINK					47	47
4	RED					96	96
5	ORANGE					99	99
6	***BLUE***					*52*	*52*
7	***PINK***					*100*	*100*
8	***RED***					*80*	*80*
9	***ORANGE***					*66*	*64*
10	***BLUE***					*49*	*48*
11	***PINK***					*28*	*28*
					Total	**675**	**672**

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION
** System*	*372*	*0.250*	*ACCEPT.*	*0.250*	*25% RED*	*GRAVITY*
Repair	300	0.250	MOD.	0.250	PPBPS	LOW PRESSURE

Notes: **All measures in feet

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

****LOT REQUIRES FRENCH DRAIN (SEE PLAN)**

CALCULATIONS

Location Shepherds Bluff

Project Number 01-3166

Lot No: 49

No. of Bedrooms 3

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

LTAR 0.250 $^{gal}/_{ft^2\ day}$

PPBPS? (YES OR NO) NO

Supply Line Length 44 ft.

Supply Line Volume 28.732 gal.

Required Feet of Line 360 ft.
Amount of Line from Layout 372 ft.

Gallons per Minute N/A $^{gal}/_{min}$

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

Panel Volume N/A gal.
# of Panels N/A
Dosing Volume N/A gal.

Tank Draw Down N/A

Pump Run Time

Elevation Head N/A ft.
Pressure Head N/A ft.
Friction Factor N/A ft./100 ft. *(From the interpolater.)*
Friction Head N/A ft.

Total Dynamic Head (+15%) N/A ft.

Approved
5/20/16
MD

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 ___ of ___
PROPERTY ID #: 46-15c-79 11
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Blair Bld
ADDRESS: _____ APPLICATION DATE _____
PROPOSED FACILITY: _____ PROPOSED DESIGN FLOW (.1949): _____ DATE EVALUATED: 3/6/15
LOCATION OF SITE: Shepherd's Bluff #49 PROPERTY SIZE: _____
WATER SUPPLY: ☒ Private ☐ Public ☐ Well ☐ Spring ☐ Other _____ PROPERTY RECORDED: _____
EVALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

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
1	L 4%	0-8"	Brn SCL	wSBK SS, SP, SExp, FR					PS
		8-34"	Brn/Rd Brn C/CL	m-wSBK					
		34-50'	Rd/Brn	C/CL SBK to ABK few to many					.25
				Yel/Brn mottles		50"			
		Water coming in pit @ 34"							
2	L 5%	0-7"	Brn SCL	wSBK SS, SP, SExp, FR					PS
		7-32"	Rd/Brn C/CL	m-wSBK SS, SP, SExp					
		Water coming in Pit @ 36"							.3 to
		32-60"	Brn to Rd/Brn CL	w/few to many SAP Indus		60"			.25
3	L 5%	0-7"	Brn SCL	wSBK SS, SP, SExp, FR					PS
		7"-36"	Rd/Brn to Brn	C/CL wSBK SS, SP, SExp, FR					
		Some Yel/Brn mottles water coming in Pit @ 36"				56"			.25
		36"-54"	Rd/Brn	C/CL wSBK w/few to many SAP Indus					
4	L 4%	0-7"	Brn	SCL wSBK SS, SP, SE, FR					PS
		7-32"	Rd/Brn	C/CL m-wSBK SS, SP, SExp, FR					
		32"-48"	Rd/Brn	C wSBK SS, SP, SE w/ Yel/Brn Low Chroma Mottles					.25
		Water seeping in Pit @ 32"							

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	25% Red	25% Red
Site LTAR	.25	.25

COMMENTS: _____

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Maria Dotson
OTHER(S) PRESENT: _____

LEGEND

use the foliowing standard abbreviations

SHAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
(Concave Slope)						
(Convex Slope)	I	S (Sand)				G (Single Grain)
(Drainage Way)		LS (Loamy Sand)	1.2 - 0.8	0.6 - 0.4	NEXP (Non-expansive)	M (Massive)
DS (Debris Slump)	II				SEXP (Slightly Expansive)	CR (Crumb)
FP (Flood Plain)		SL (Sandy Loam)			EXP (Expansive)	GR (Granular)
FS (Foot Slope)		L (Loam)	0.8 - 0.6	0.4 - 0.3		SBK (Subangular Blocky)
H (Head Slope)	III					ABK (Angular Blocky)
L (Linear Slope)		Si (Silt)				PL (Platy)
N (Nose Slope)		SiCL (Silty Clay Loam)	0.6 - 0.3	0.3 - 0.15		PR (Prismatic)
R (Ridge)		CL (Clay Loam)				
S (Shoulder Slope)		SCL (Sandy Clay Loam)				
T (Terrace)		SiL (Silt Loam)				
	IV				MOIST	WET
		SC (Sandy Clay)				
		SiC (Silty Clay)	0.4 - 0.1	0.2 - 0.05	VFR (Very Friable)	NS (Non-sticky)
		C (Clay)			FR (Friable)	SS (Slightly Sticky)
		O (Organic)			FI (Firm)	S (Sticky)
			None	None	VFI (Very Firm v. Very Sticky)	VS (Very Sticky)
					EFI (Extremely Firm)	NP (Non-plastic)
						SP (Slightly Plastic)
						P (Plastic)
						VP (Very Plastic)

*Adjust LTAR due to depth, consistence, structure, soil wetness, landscape, position, wastewater flow and quality.

NOTES

HORIZON DEPTH — In inches below natural soil surface

DEPTH OF FILL — In inches from land surface

RESTRICTIVE HORIZON — Thickness and depth from land surface

SAPROLITE — S(suitable) or U(unsuitable)

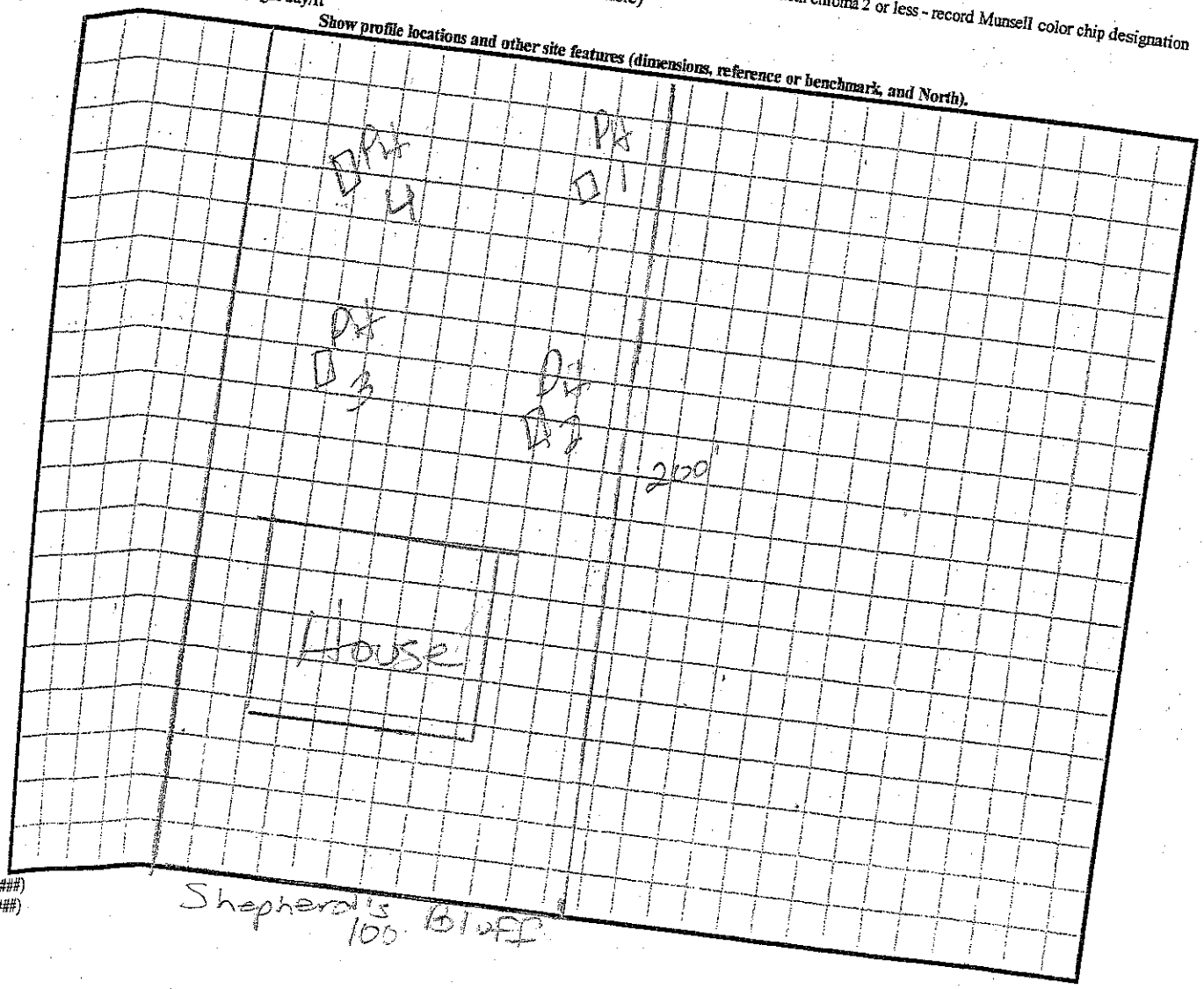
SOIL WETNESS — Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation

CLASSIFICATION — S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

Evaluation of saprolite shall be by pits.

Long-term Acceptance Rate (LTAR): gal/day/ft²

Show profile locations and other site features (dimensions, reference or benchmark, and North).



ENR (######)
view (#####)