Design Specifications for Lot 35 Rock Ridge Point, Iredell, North Carolina

APPROVED JAN 2 5 2016

Date	1/8/2016	
Daily Design Flow	480	gals
Number of Bedrooms	4	bedrooms
Basement or Crawspace	Craw Space	
Dellinger Septic Tank Size	1500	gals, Effluent Poly Lock PL68 Filter or equal.
Dellinger Pump Tank Size	1500	gals
Sim/Tech Effluent Filter on Pump Tank	Yes	Connection inside pump tank vault and on supply line.
Primary System Loading Rate (LTAR)	0.30	gpd/ft^2 LTAR including Soils Evaluations were determined by Iredell County. Soils Evaluations and LTAR were not Conducted by Septic Environmental Solutions, Inc.
Number of Lines	6	Total LP PPBPS, See Scaled Dwg.
Primary System	311	ft.
Trench Width	2	ft
Trench Spacing	8	ft
Trench Maximum Depth	36	inches
Pump required	Yes	
Distribution Device	Yes	Gate Valve Box with LPP Panel Distribution
Maintenance Agreement Required	Yes	Contracted by Septic Environmental Solutions, Inc.
Length and Diameter of Supply Line	95	2" SCH 40 PVC
Lateral Diameter	Yes	1 14" SCH 40 PVC
Manifold Diameter	Yes	4" SCH 80 PVC
Number of T&J Panels	72	Total panels for primary system
Flow Rate through System	36	gpm– use 5/32" holes with 3ft head
Elevation Head	9.81	ft.
Pressure Head	3	ft.
Friction Head	2.502	ft.
20% Contingency	3.06	ft.
Total Head	18.37	ft.
Pump Requirements	36	gpm, with 19-ft of Head: Use Goulds WE03M Pump or Equivelent with Compatible Electrical
Dosing Volume	260	gallon
Pump run time per dose, approximate	7.22	min
Check Valve	Yes	
Siphon Break Hole	Yes	
Repair System Loading Rate	0.125	gpd/ft2
Repair System	Yes	Pretreated Drip, See attached dwg.
Pretreated Drip Sq-ft	3840	sq-ft
Total foot of Repair	1920	ft

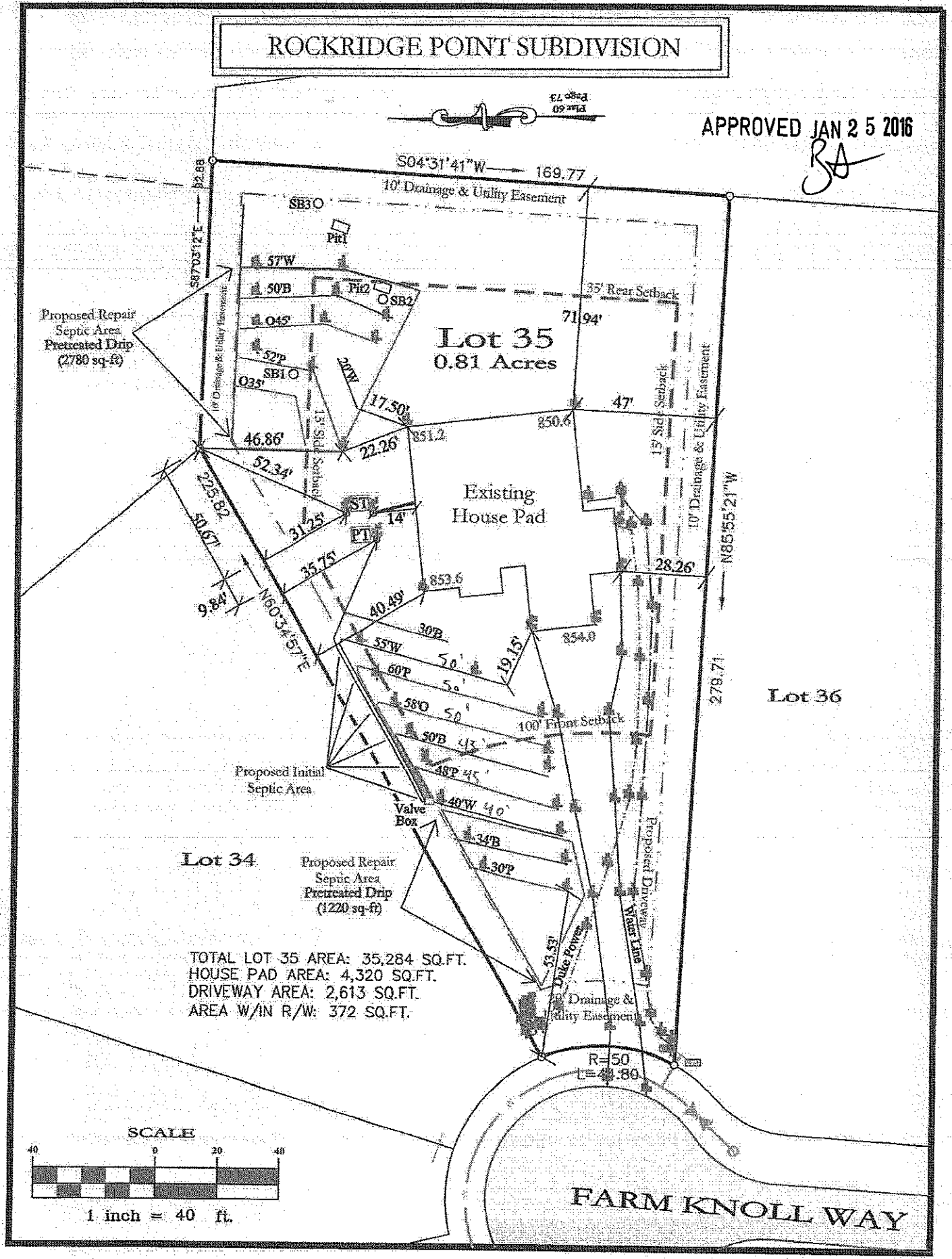
Before placement of cap block, one panel on each line near the center of the field should be observed filling to make certain that it does not overflow top chamber into air chambers of panel. If overflow occures, reduce floats by 25 gallons and reset until no overflow is observed.

LPPPPBPS Design Worksheet (Primary System)					File #/Name:	Rock Ridge
System Requirements					Tax #:	4636233131.035
Number of bedrooms	4				Lot	35
Craw Space/Basement	Craw Space				Date	1/8/2016
Daily Design Flow	480	gpd			Address:	Iredell County
LTAR	0.300	gpd/ft.^2			Consultant:	Septic Environmental Solutions Inc.
Linear footage	533.33	ft. (Conventional)			Phone:	704-502-5588, Fax 704-684-1469
Linear footage	266.67	ft. (50% Reduction)				
Trench Maximum Depth	36	inches				
Laterals	Length (ft)	# Panels	Calculated			
Line # 1	56	13	13			
Line # 2	60	14	14			
Line # 3	58	13	13			
Line # 4	50	12	12			
Line # 5	48	11	11			
Line # 6	40	9	9			
Line # 7		0	0			
Line # 8		0	0			
Line # 9		0	0			
Line # 10		0	0			
Line # 11		0	0			
Line # 12		0	0			
Totals	311	72	72			
	*Lines longer than 70 ft. must be center-fed to comply with sewage rules.					
Absorption Area						
Length (ft)	Width (ft)	Spacing	Area (ft^2)			
311	2	8	3000+			
System Pressure Head	3	ft.	Value selected by system designer (must be between 2-5 ft.)			
Orifice Diameter	5/32	in.	Size selected by system designer (1/8 in. minimum)			
Flow Rate per Orifice/Panel	0.5	gpm	Determined from orifice flow design table (use table from Flow Rate tab)			
Total System Flow Rate	36	gpm	Total number of panels required multiplied by the orifice flow rate			
System Dose Volume	260	gal.	Total number of panels required multiplied by 3.6 gal./panel			
Doses Per Day		cycles	Number of dose cycles per day based on daily design flow. Daily design flow divided by system dose volume.			
Pump Run Time	7.22	min.	System dose volume divided by the total system flow rate			
Pump Tank Volume / Inch	29	gal./in.	1,000 gal. Pump tank, volume is approximately 21 gallons per inch. 1,500 gal. pump tank, volume is approximately			
			29 gallons per inch. Contractor is responsible in verifying tank gallons per inch.			
Pump Tank Drawdown	8.97	in.	System Dose Volume divided by gallons per inch for the designed tank size.			
Supply Line Length	95.00	ft				
Elevation head+pump height	9.81	ft.				
Friction Head	2.50	ft.				
20% Contingency	3.06	ft.				
Total Head	18.4					
Comments:						
1. Install system using 2 ft. wide trenches.						
2. Install drainlines on 8 ft. centers (to be specified by the designer) and must be level and on contour.						
3. System design requires effluent pump for distribution.				Yes		
4. Requires repair septic system.		Yes		Cells with blue shading require user input.		
5. Maintanance Agreement Required		Yes		Cells with yellow shading are automatically calculated.		

T&J Panel Summary Table	
Linear Feet	# Panels
20	5
30	7
40	9
50	11
60	14
70	16
80	18
90	21
100	23
110	25
120	17
130	30
140	32
150	34
160	37
170	39
180	41
190	43
200	46

APPROVED JAN 25 2016

ROCKRIDGE POINT SUBDIVISION



DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

APPROVED JAN 25 2016 BA

Sheet 1 of 1
PROPERTY ID #: 463623311
COUNTY: MEEKER

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
(Complete all fields in full)

APPLICATION DATE: 1-8-16
OWNER: TRUE HOMES
DATE EVALUATED: 1-12-16
ADDRESS: 2649 BRECKENRIDGE CENTER DR. MONROE NC 28110
PROPOSED FACILITY: 4 BRM
PROPOSED DESIGN FLOW (.1949): 480
PROPERTY SIZE: 2.1 AC.
LOCATION OF SITE: 152 FARM FIRE WAY LOT 35
PROPERTY RECORDED: BK 2077 PG 1983
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☒ Other COMMUNITY WELL
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
Pit 2	East wall 12% L	0-3	SBK/GR/WK/SCD	FI/NS/NP/MEXP	5YR 4/4	50"	Perch of 5 mpm @ 37"	East wall	0.250 LPP Pond Protected DCP 0.125
		3-10	WK/SBK/CL having	FI/SS/SP/MEXP	10R 4/6				
		10-26	WK/SBK/C	FI/S/P/SEXP	2.5YR 4/6				
		26-50	WK/SBK/CL	FI/SS/SP/MEXP	2.5YR 4/6				
2	West wall 12% L	0-2	WK/GR	FI/NS/NP/MEXP	5YR 4/4	50"	NA		0.250 LPP Pond Protected DCP 0.125
		2-10	WK/SBK/FRM/CL	FI/SS/SP/MEXP	10R 4/6				
		10-32	WK/SBK/C	FI/S/P/SEXP	2.5YR 4/6				
		32-50	WK/SBK/CL	FI/SS/SP/MEXP	2.5YR 4/6				
2									
4									

LICENSED SOIL SCIENTIST KENNETH L. OWENS 1134 STATE OF NORTH
1-12-16

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	100%	100%
System Type(s)	LPP POND	Protected DCP
Site LTAR	0.30	0.125

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY:
OTHER(S) PRESENT:

COMMENTS:

Updated February 2014

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

APPROVED JAN 25 2016 BA

PROPERTY ID #: 4636 23811
COUNTY: IREDELL

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
(Complete all fields in full)

OWNER: TRUE HOMES
ADDRESS: 2649 BLACKBURN RIDGE CEDAR DR, MONROE, NC
PROPOSED FACILITY: 4 BRM PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE: 152 FARM KNOLL WAY LOT 35
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☐ Other Community Well
EVALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut

APPLICATION DATE 1-8-16
DATE EVALUATED: 1-13-16
PROPERTY SIZE: <10
PROPERTY RECORDED: NO PLAT
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	East Wall <2%	0-2	WK/SCL	FR/SS/SP/SMPW	5YR 4/4	28"		26" weathered rock can be hand dug by hand	Pretreat 0.20 Drip 0.125
		2-21	WK/SCL/C	FR/SS/SP/SMPW	10R 4/6				
		21-26	WK/SCL/C	FR/SS/SP/SMPW	2.5YR 4/6				
		26-48	CF SPA/SCL	VFI/weathered Rock can be dug by hand	multicolor				
2	West Wall <2%	0-2	WK/SCL	VFR/SS/SP/SMPW	5YR 4/4	22"-24"		22"-24" weathered Rock	Pretreat 0.20 Drip 0.125
		2-19	WK/SCK/C	FI/SS/SP/SMPW	10R 4/6				
		19-22	WK/SCK	FI/S/SP/SMPW	2.5YR 4/6				
		22-48	CF SPA/SL	VFI/weathered Rock can be dug by hand	multicolor				
3	North Wall <2%	0-2	WK/SCL/C	VFI/S/P/SMPW	5YR 4/4	26"		weathered Rock that can be dug by hand	Pretreated Drip 0.125
		2-16	WK/SCK/C	VFI/S/P/SMPW	10R 4/6				
		16-48	MA/CL	FR TO VFI weathered Rock that can be dug by hand multicolor	2.5YR 4/6				
4									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	100%	100%
System Type(s)	LPP 480	Pretreated Drip
Site LTAR	0.30	0.125

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY: [signature]
OTHER(S) PRESENT: LPS

LICENSED SOIL SCIENTIST KENNETH L OWENS STATE OF NORTH CAROLINA 1134

COMMENTS:

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

APPROVED JAN 25 2016

Sheet 1 of 1
PROPERTY ID #: 4636233131
COUNTY: UNION

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
(Complete all fields in full)

OWNER: TRUE HOMES
ADDRESS: 2649 BREKONRIDGE CELTRA DR, MONROE, NC
PROPOSED FACILITY: 4 BRM
PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE: 152 FARM KNOLL WAY LOT 35
WATER SUPPLY: ☐ Private ☐ Public ☐ Well ☐ Spring ☒ Other Community Well
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut

APPLICATION DATE 1-8-16
DATE EVALUATED:
PROPERTY SIZE: 1.0
PROPERTY RECORDED: AFTER 1982
TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH * (IN.)	SOIL MORPHOLOGY (.1941) STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
SB1	L <2%	0-3	W/SBK/scl	SS/SP/FR/NS	5YR 4/4	48	NH		0.275
		3-24	W/SBK/scl	SS/SP/FR/NS	2.5YR 4/4				
		24-48	W/SBK/scl	SS/SP/FR/NS	10YR 4/6				
SB2	L <2%	0-2	W/SBK/cl/scl	SS/SP/FR/NS	5YR 4/4	48	36-48	"	0.275 0.295
		2-10	W/SBK/scl/cl	SS/SP/FR	2.5YR 4/4				
		10-36	W/SBK/cl/c	SS/SP/VFR	10R 4/6				
		36-48	W/m/scl	FR/NS/NP/NSS	multicolored mottles				
SB3	L <2%	0-2	W/SBK/scl	SS/SP/FR/NSS	5YR 4/4	48	36"		0.250
		2-36	W/SBK/cl	S/P/SSS	10YR 6/6				
		36-48	m/scl	NS/NP/NSS	multicolor				
4									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	100 %	100 %
System Type(s)	1 PRIME SYSTEM	LPP PANEL
Site LTAR	0.30	0.25

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948):
EVALUATED BY: Kenneth L. Owens
OTHER(S) PRESENT: LA

COMMENTS: Repair is to be at Grade

LICENSED SOIL SCIENTIST
KENNETH L. OWENS
STATE OF NORTH CAROLINA
7134

Updated February 2014