S&ME

April 28, 2014

Alan Simonini Homes
501 East Morehead Street, Suite 4
Charlotte, North Carolina 28202

Attention: John A. Tammaro, II

Reference: **Technical Assistance with Fast Track Septic Permitting**
Lot 495 - The Point Subdivision
Iredell County, North Carolina
S&ME, Inc. Project No. 1584-13-030A

Dear Mr. Tammaro:

S&ME, Inc (S&ME) has provided technical assistance to obtain a possible four bedroom septic Improvement Permit from the Iredell County Health Department (ICHD). The technical assistance was performed in general accordance with S&ME Proposal No. 43-1400234 dated March 8, 2014.

Attached is the Application for the Septic Improvement Permit, the Environmental Health Requirements form, and the ICHD Fast Track requirements presented to the ICHD on your behalf. The lot was originally permitted by the ICHD in 1999 for a 80 by 80 foot, 4 bedroom house pad. This Improvement Permit has now expired. You are now requesting a 4 bedroom Improvement Permit with a new house pad. Mr. Paul Penninger with S&ME visited the lot on March 18, 2014 to flag the proposed system and place hand auger borings on the lot. Weathered rock and saprolite were observed in the hand auger borings and backhoe pits were reviewed on March 24, 21014. Hard weathered rock material was observed in two of the five pits dug. Because of this, the T&J Panel system and repair area could not be re-permitted as shown on the 1999 Improvement Permit. You began the process of requesting permission from Crescent Communities to place part of the repair area in the 53 foot Landscape, ingress, and utility easement on the front of the lot and locating the utilities on the lot. Three additional hand auger borings were placed in the utility easement and one hand auger boring was placed on the rear of the lot. The Duke Energy power line and a cable line were installed outside the 53 foot easement.

We are proposing a 4 bedroom T&J Panel Primary system with 270 feet of line at the 0.3 gallons per day per square foot Long Term Acceptance Rate (LTAR) permitted by the ICHD in 1999. Your surveyor has located the proposed T&J Primary system lines as shown on the attached site plan. The surveyor has also located the flagged utilities on the lot and the proposed house pad and motor court. Because of shallow soils observed on parts of the repair area, we are proposing a subsurface drip repair area with TS-1

Pretreatment. Mr. Adrian Pruett with the ICHD stated in a phone conversation with Mr. Penninger that the proposed drip lines did not have to be flagged but the required square footage shown on the site plan.

Once the septic area is permitted, it should be fenced off for protection during home construction. Access to the lot should only be by the proposed drive. The edge of the drive should be no more than 15 feet from the property line at the primary system area. There shall not be cuts of 2 feet or greater within 15 feet of any part of the permitted septic system. The existing gullies and complex topography on the lot shall be filled with clean soil material as necessary to install the proposed system. The septic area should not be cut or graded.

S&ME appreciates the opportunity to provide these services to you. The attached information is not an Improvement Permit or Authorization to Construct, and is only to assist you and the ICHD with the Fast Track site evaluation. The attached plan is not intended to be a Professional Engineer plan. The ICHD must approve each lot and only the ICHD can issue these permits. The ICHD should verify all soils and system specifications, required setbacks, and whether a professional engineer plan is required before permitting and/or septic system installation. The attached soil information is only accurate for the described Soil evaluations and system layouts are done based on interpretations of the rules governing wastewater treatment and disposal systems and are not guarantees for site approval or future septic system performance.

If you have any questions or require additional information please contact us at your convenience.

Sincerely,

S&ME, Inc.

Paul G. Penninger, L.S.S.
Soil Scientist

Rob Willcox, L.S.S.
Senior Project Manager

Attachments:

1. ICHD Improvement Permit Application, Zoning Permit, Health Department Requirements, and Approval to use 53 Foot Easement for the Repair Area
2. Site Plan and System Specifications
3. Soil Profile Descriptions
4. 1999 Expired Improvement Permit

Copy: ICHD

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The Point 495 Fast Track System Specifications
Alan Simonini Homes 4-28-14

Number of Bedrooms	4
Basement or Crawl	**Crawl/Slab Garage/Basement**
Design Flow (gpd)	480
Primary LTAR (gpd/sqft)	0.3
Primary System Type	**LP PPBPS**
No. Lines	4 (See Table)
Total Linear Feet	270
Trench Width	3' min.
Trench Spacing	9' min.
Pump Required	Yes
Distribution Device	Gate Valve Box w/ LPP Distribution
Maintenance Agreement Required	Yes
Length and Diameter of Supply Pipe	approx. 350' of 2 " SCH 40 PVC
Size of laterals	1 1/4" SCH 40 PVC
Flow Rate through the system	30.5 gpm
Elevation head	Approx. 26'
Pressure head	3.0'
Friction head	approx. 7'
20% Contingency	7.2'
Total Head	43.2'
Pump Requirements	30.5 gpm @ 43.2' of head To be verified by installer and ICHD.
Maximum Dosing Volume	219 gallons max
Volume of water pumped per dose	Calculated to specific tank by measure or dealer engineering specifications (1 cubic ft. of water equals 7.48 gal.)
Pump Run per dose	approx. 7.2 min.
Check Valve	yes
Siphon Break hole	no
Repair System	**TS-1 Pretreatment Drip / LP PPBPS**
Total Linear Feet	5,100 sq ft shown (3,840 sq ft required for drip)
Repair LTAR (gpd/sqft)	0.125

***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 occurs, reduce floats by 25 gallons and reset until no overflow is observed.**

Table 1: The Point 1B Lot 14 Fast Track Summary of Primary Line Specifications

Line No.	Use	Line Color	System Type	Line Length (Ft.)	Elevation (Ft.)	Panels	Holes	Hole Spacing	Hole Size (In.)
1	System	orange	LPPPBPS	40	812.8	9	9	1 per panel	5/32"
2	System	blue	LPPPBPS	60	812.7	14	14	1 per panel	5/32"
3	System	red	LPPPBPS	90	812.5	20	20	1 per panel	5/32"
4	System	white	LPPPBPS	80	811.5	18	18	1 per panel	5/32"
						Total: 61	Total:61(1 in each panel turned up)		

Total System: 270' (267' required)

Tank		1500 gal (2 compartment)	
Pump Tank		1500 gal.	approx. 795
House	(LF)		806.8

Note: **Installer and ICHD shall verify all line locations, tank locations, and elevations prior to installation.**
System is to be installed according to any other ICHD requirements or policies.
These specifications are to satisfy the ICHD Fast Track LSS checklist and are not intended to represent an Engineered System Design.
Use trench depth and other specifics on ICHD IP.
Elevations estimated from site plan contours and rod readings - must be verified by installer.

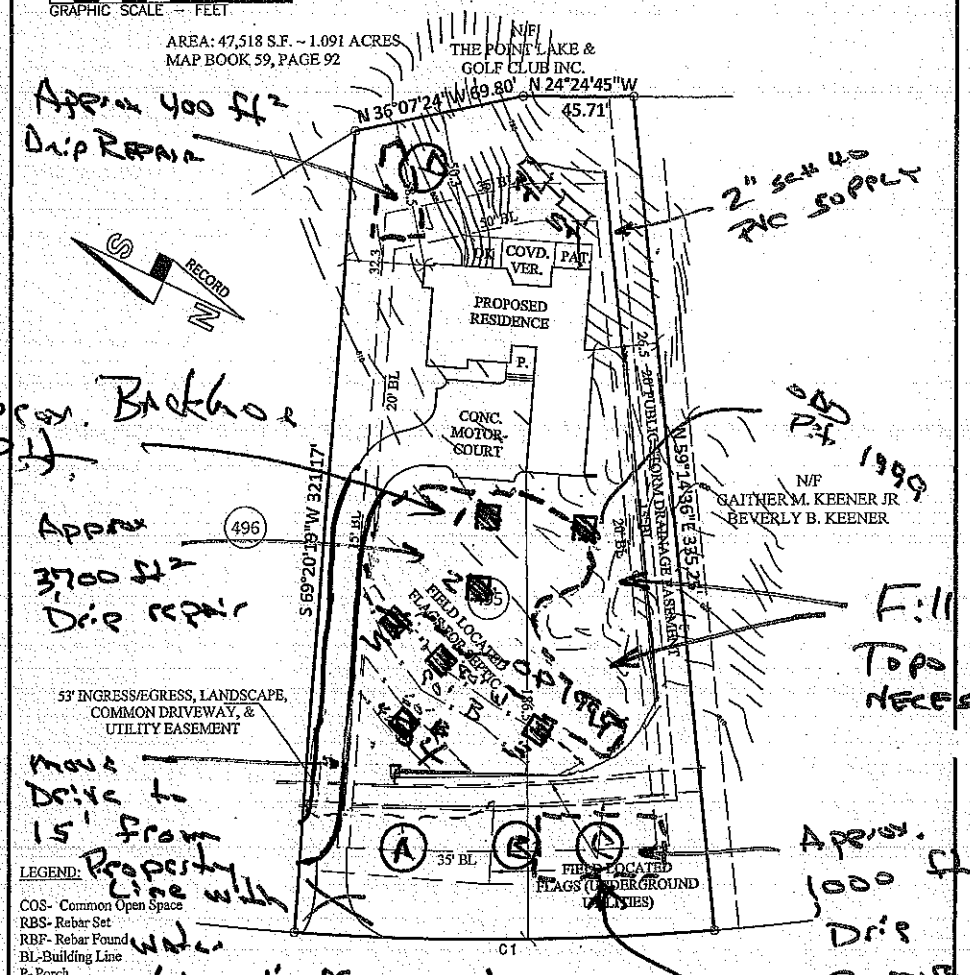
GENERAL NOTES
1. NO FIELD WORK HAS BEEN PERFORMED.
2. THIS PROPERTY IS SUBJECT TO ADDITIONAL EASEMENTS OR RESTRICTIONS OF RECORD.
3. CARTER LAND SURVEYORS IS UNABLE TO WARRANT THE ACCURACY OF BOUNDARY INFORMATION, STRUCTURES, EASEMENTS, AND BUFFERS THAT ARE ILLUSTRATED ON THE SUBDIVISION PLAT.
4. THIS PLAT IS FOR EXCLUSIVE USE BY CLIENT. USE BY THIRD PARTIES IS AT THEIR OWN RISK.
5. DIMENSIONS FROM HOUSE TO PROPERTY LINES SHOULD NOT BE USED TO ESTABLISH FENCES.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF DIMENSIONS PRIOR TO CONSTRUCTION.
7. THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 10,000 FEET.

SCALE: 1" = 50'

50' 0' 50'

GRAPHIC SCALE — FEET

Curve	Radius	Length	Chord	Chord Bear.
C1	1165.00'	172.28'	172.12'	S 24°53'51" E



N/F
GAITHER M. KEENER JR
BEVERLY B. KEENER

LEGEND:
COS- Common Open Space
RBS- Rebar Set
RBF- Rebar Found
BL-Building Line
P- Porch
UE- Utility Easement
-X- Fence
CB- Catch Basin
SSE- Sanitary Sewer Easement
R/W- Right of Way
CONC- Concrete
Dk- Deck
Pat- Patio
S- Stoop
PSDE- Permanent Storm Drainage Easement
FPE-Flood Protection Elevation
-D- Drainage Easement
-S- Sewer Easement

HOUSE LOCATION PLAN

BOX DIMENSION TO BE STAKED:
72.0' WIDTH X 92.5' DEPTH

HLP FOR:
ALAN SIMONINI HOMES

SUBDIVISION: THE POINT ON NORMAN
LOT : 495 PHASE 5, MAP 5
DAVIDSON TOWNSHIP,
IREDELL COUNTY, NORTH CAROLINA
ORDER DATE: 04/15/2014

2014040827 SIMONINI

CARTER LAND SURVEYORS AND PLANNERS
2780 Peachtree Industrial Boulevard
Duluth, GA 30097
Ph: 770.495.9793
Toll Free: 866.637.1048
www.carterland.com
Atlanta • Charlotte • Houston • Dallas
Galveston • Beaumont

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Approx 400 ft² Drip Repair

2" sch 40 PVC Supply

Approx. Backhoe Pit

Approx 3700 ft² Drip repair

Old Pit 1999

Fill Compk Top as necessary

Move Drive to 15' from Property Line with W&S Line 1' off property Line and >10' from system.

Approx. 1000 ft² Drip Repair

4-28-14

NTS.

Approx Hand Auger Boring

Point 495 Backhoe Pit and Hand Auger Boring Locations

DENR/DEH

ON-SITE WASTEWATER SECTION

Sheet 1 of 3
PROPERTY ID #:
COUNTY:

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Ree
OWNER: Simmons Homes
ADDRESS:
PROPOSED FACILITY: 4 bd
PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE: Point 49
APPLICATION DATE
DATE EVALUATED: 3-24-14
PROPERTY SIZE:
PROPERTY RECORDED: 1999
WATER SUPPLY: • Private • Public • Well • Spring • Other
EVALUATION METHOD: • Auger Boring • Pit • Cut
TYPE OF WASTEWATER: • Sewage • Industrial Process • Mixed

OK 4/29/14 MD

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 ~10%	0-9	WS3K scl	fr ss/sc	mott br 5YR 5/1	52	—	—	PS .3
		9-24	MFABK C	fr s/p					
		24-52	WS3K cl	fr ss/sp	5YR 5/6 f10YR 6/6				
2	L ~10%	0-5	WS3K cl	fr ss/sp					PS .25-.3
		5-20	SBK/MPK C	fr s/p	2.5YR 4/8 - f10YR 5/6				f. 36"
		20-43	SBK - C - scl	fr ss/sc	2.5YR 5/6	5Y-43			
		43-48	WP/SAP	→	Zone WP in SC well, 36"				
3	L ~5-10%	0-6	SBK scl	fr ss/sp					PS .3
		6-29	ABK C	fr s/p	2.5YR 5/8 f-c 10YR 5/8				
		29-43	SBK cl - scl	fr ss/sp	2.5YR 5/6, C SAP				
		43-53	MASS sl - SAP	fr ss/sc		43" PS	—		
			Inclus. of CL soil in SAP						
4	L ~5%	0-12	SBK cl	fr ss/sp					PS .3
		12-36	SBK C	fr s/p - ss/sc	mott	52	—	—	
		36-52	SBK cl	fr ss/sc					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	T.J	T.S (Drip)
Site LTAR	.3	.12

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: PGP mtg w/ Lee
OTHER(S) PRESENT: Applied by Lee

COMMENTS: Drip

S&ME, INC.
SITE/SOIL EVALUATION

Pg 2/3

Project No. Point 49 **Phone No.** _____ **Date:** _____
Location _____ **Pin** _____ **County:** _____ **Property Size** _____

Proposed Facility: 4 Bdrm **Water Supply:** On-Site Well ☐ **Evaluation:** Auger Boring ☒
must be APP for SD Community ☐ Pit ☒
Described By: PGP - bz (END Public ☐ Cut ☐
Weather: _____ **Antecedent Moisture** _____ **Surface Water:** _____

3-24-14 4-2-14 → OK MP 4/29/14

FACTORS	PROFILE S	PROFILE A	PROFILE B	PROFILE C
Landscape Position %	L ~10	L ~5%	L ~5%	L ~5%
Horizon Depth I	0-6	0-10	0-9	0-3
Color Munsell	br	br		br
Texture	scl	sl(c)l	sa-s	sl
Structure	wfsbk	wfsbk		wfsbk
Consistence	fr ss/sp	fr ss/sp	fr ss/sp	fr ss/sp
Boundary				
Horizon Depth II	6-28	10-32	9-22	3-12
Color – Munsell	rbr	rbr	rbr	rbr
Texture	c	c	c	c
Mottles		f sap		
Structure	mfsbk	mfsbk	mfsbk	mfsbk
Consistence	fr sp	fi-fr ss/sp	fi-fr ss/sp	sa. vhrt compacted l. s/p
Boundary	(S3)			
Horizon Depth III	28-38	32-48	22-44	12-30
Color – Munsell	5yr rbr	5yr rbr		rbr
Texture	scl gravelly		sa	c-cl
Mottles	c sap	c sap		
Structure	wfsbk	wfsbk		mfsbk
Consistence	fr ss/sp	fr ss/sp		fr ss/sp
Boundary				
Horizon Depth IV	38-43			30-48 (S3)
Color – Munsell	wR			5yr br
Texture				cl
Mottles	(wbr)			c sap
Structure	sap			wfsbk
Consistence				fr ss/sp
	Rock 28-53"			
Boundary				
Soil Wetness				
Restrictive Horizon	28 sr2 WR			
Saprolite	WEAS END			
LTAR				
Classification	PS.3 EAST END fr ss/sp	PS.3	C.3	PS.3

W END
Dup LPP -12s

LEGEND

LANDSCAPE POSITION

R	Ridge Interfluve
S	Shoulder
L	Linear Slope
FS	Foot Slope
N	Nose Slope
H	Head Slope
Cc	Concave Slope
Cv	Convex Slope
T	Terrace
P	Flood Plain

TEXTURE

s	sand
ls	loamy sand
sl	sandy loam
l	loam
si	silt
sil	silt loam
sicl	silty clay loam
cl	clay loam
scl	sandy clay loam
sc	sandy clay
sic	silty clay
c	clay

CONSISTENCE WET

Ns	non-sticky
Ss	slightly sticky
S	sticky
Vs	very sticky
Np	non-plastic
Sp	slightly plastic
P	plastic
Vp	very plastic

MOIST

vfr	Very friable
fr	friable
fi	firm
vfi	Very firm

STRUCTURE

sg	single grain
m	massive
cr	crumb
gr	granular
sbk	subangular blocky
abk	angular blocky
pl	platy
pr	prismatic