ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625 PERMIT # AP 318648.

SEPTIC: IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM

PIN # 4775 --04--3280

APPLICANT/OWNER: Cornerstone III Properties APPLICANT ADDRESS: 259 Textile Way FT Mill SC 29715

SITE ADDRESS: 177 Winding Brook Way Statesville NC 28625. PHONE: ALT. PHONE

SITE DIRECTIONS: New Salem Rd Cor Winding Brook Way SAP CONTROLLED: ☐ YES ☒ NO

SUBDIVISION: Spring Forest SECTION: - LOT # 19 LOT AREA: .63 AC DESIGN FLOW: 360 L.T.A.R.: .30

Septic Tank	1000 (gal)	STB	7160	Date	6/19/22	☒ New System	☐ Repair	☐ Expansion	System Type: I II III IV V VI	☒ Residence	No. Bedrooms 3
Pump Tank	1000 (gal)	PT	363	Date	6/19/22	System Description:	PM- 25% Reduction			☐ Business	No. Persons 6
Pump Make	Goulds	Model	WE0S1H	Serial #		Repair System Description:	PM- 25% Reduction			☐ Other	No. Employees
# Nitrification Fields	1	# Lines	3	Linear Ft	300	Maintenance Agreement Required:	☐ YES	☒ NO		☐ Slab	☒ Crawl Space
Trench Width	36 in	Trench Bottom Depth(~~Max side~~)	24 in max	Gravel Depth	-		☐ GRAVITY	☒ PRESSURE		☐ Basement w/ plumbing	☐ Basement w/o plumbing

Water Supply: ☐ Private ☒ Public ☐ Community

Comments / Conditions:

INITIAL SITE SKETCH

This permit is issued pursuant to Section 11 . (C) of S.L. 2018-114 using the signed and sealed LSS Evaluation by:

ANT Engineers + Soil Scientists

LSS # 1324 Dated June 3, 2021

AS BUILT SKETCH

FOR SEPTIC FINAL INSPECTION CALL: 704-664-3703 between 8am-9am the day the inspection is needed. Be sure to speak with an inspector to confirm your time.

Installed as Drawn

PM
Lines
Tanks CW 8/2/22
Alarm
Floats
Electrical 9/26/22

Permit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system. **CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION**

☐ **IMPROVEMENT PERMIT** *with plat valid without expiration.* ☒ **IMPROVEMENT PERMIT** *with site plan valid for 60 mos.* ☒ **AUTHORIZATION TO CONSTRUCT** *valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.*

Owner / Applicant Signature: Stan Ruff Date: 7/19/21 Installed by: Lentz

IMPROVEMENT PERMIT by: Benjamin R Beck Date: 7/2/2021 OPERATION PERMIT by: Date: 9/26/22

AUTHORIZATION TO CONSTRUCT by: Benjamin R Beck Date: 7/2/2021 Existing System Inspected by: Date:

FOR SEPTIC FINAL INSPECTION: CALL 704-664-3703 between 8am-9am the day the inspection is needed.

Item	Date	Initials
Drain Lines Checked		
Tanks Checked		
Pressure Manifold or Valve Box Checked		
Pressure Head Set		
Electrical Checked		
Floats Set		
Alarm Checked		
Maintenance Contract Needed? Y / N		
Comments:		

Repairs Only	
	State Code
Failing System Code	
Type of Distribution	G or P
Type of Failure/Malfunction	
Primary Cause of Failure/Malfunction	
Age of System? _____	
Initial or Repair? _____	

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

Sheet __1__ *of* __1__
PROPERTY ID #: _4775043280__
COUNTY: Iredell Co.__

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

CLIENT: _____Cornerstone (Buller River Development)_____ _ APPLICATION DATE_____
ADDRESS:____ _____ Winding Brook Way (Lot 19) DATE EVALUATED: __5/11/21 _
PROPOSED FACILITY: _Single Family Residence___PROPOSED DESIGN FLOW (.1949): ___360 GPD____ PROPERTY SIZE: ___0.63 ac.____
LOCATION OF SITE: Winding Brook Way (Lot 19)_____ PROPERTY RECORDED: _____
WATER SUPPLY: ☐ Private ☒ Public ☐ Well ☐ Spring ☐ Other _____
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
SB 1	6%	0-8"	SiL; GR	SS; SP; Fr		48+"			Provisionally Suitable 0.3
		8-34"	C; WSBK	SS; SP; FI					
		34-48+"	CL; SBK	SS; SP; Fr					
SB 2	5%	0-7"	SiL; GR	SS; SP; Fr		38"		Saprolite	Provisionally Suitable 0.3
		7-16"	SCL; WSBK	SS; SP; Fr					
		16-38"	C; SBK	SS; SP; FI					
		38-48+"	L; MA	SS; SP; VFr					
SB 3	8%	0-6"	SL; Gr	SS; SP; Fr		48"			Provisionally Suitable 0.3
		6-15"	SCL; SBK	SS; SP; Fr					
		15-48+"	C; SBK	SS; SP; FI					
SB 4	10%	0-13"	SL; Gr	SS; SP; Fr		44+"		Saprolite	Provisionally Suitable 0.3
		13-40"	C; SBK	SS; SP; FI					
		40-44"	CL; WSBK	SS; SP; Fr					
		44+"	L; MA	SS; SP; Fr					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	Provisionally Suitable	Provisionally Suitable
System Type(s)	Conventional Innovative	Conventional Innovative
Site LTAR	0.3 GPD/Ft^2	0.3 GPD/Ft^2

OTHER FACTORS (.1946): _____
SITE CLASSIFICATION (.1948): _____

EVALUATED BY: ___Chris McGee_____
OTHER(S) PRESENT: _____Trevor Hackney_____

COMMENTS

Attachment 2: Soil Boring Description Sheets

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

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

PROPERTY ID #: _4775043280_
DATE OF EVALUATION: ___5/11/21__
COUNTY: _ Iredell Co.__

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
SB 5	13%	0-10"	SCL; Gr	SS; SP; Fr		48+"			Provisionally Suitable 0.3
		10-29"	C; WSBK	SS; SP; FI					
		29-48"	CL; SBK	SS; SP; Fr					

LEGEND

use the following standard abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope) CV (Convex Slope) D (Drainage Way) DS (Debris Slump) FP (Flood Plain) FS (Foot Slope) H (Head Slope) L (Linear Slope) N (Nose Slope) R (Ridge) S (Shoulder Slope) T (Terrace)	I	S (Sand) LS (Loamy Sand)	1.2 - 0.8	0.6 - 0.4	SEXP (Slightly Expansive) EXP (Expansive)	G (Single Grain) M (Massive) CR (Crumb) GR (Granular) SBK (Subangular Blocky) ABK (Angular Blocky) PL (Platy) PR (Prismatic)
	II	SL (Sandy Loam) L (Loam)	0.8 - 0.6	0.4 - 0.3		
	III	Si (Silt) SiCL (Silty Clay Loam) CL (Clay Loam) SCL (Sandy Clay Loam) SiL (Silt Loam)	0.6 - 0.3	0.3 - 0.15		
	IV	SC (Sandy Clay) SiC (Silty Clay) C (Clay)	0.4 - 0.1	0.2 - 0.05		
		O (Organic)	None	None		

MOIST	WET
VFR (Very Friable)	NS (Non-sticky)
FR (Friable)	SS (Slightly Sticky)
FI (Firm)	S (Sticky)
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.

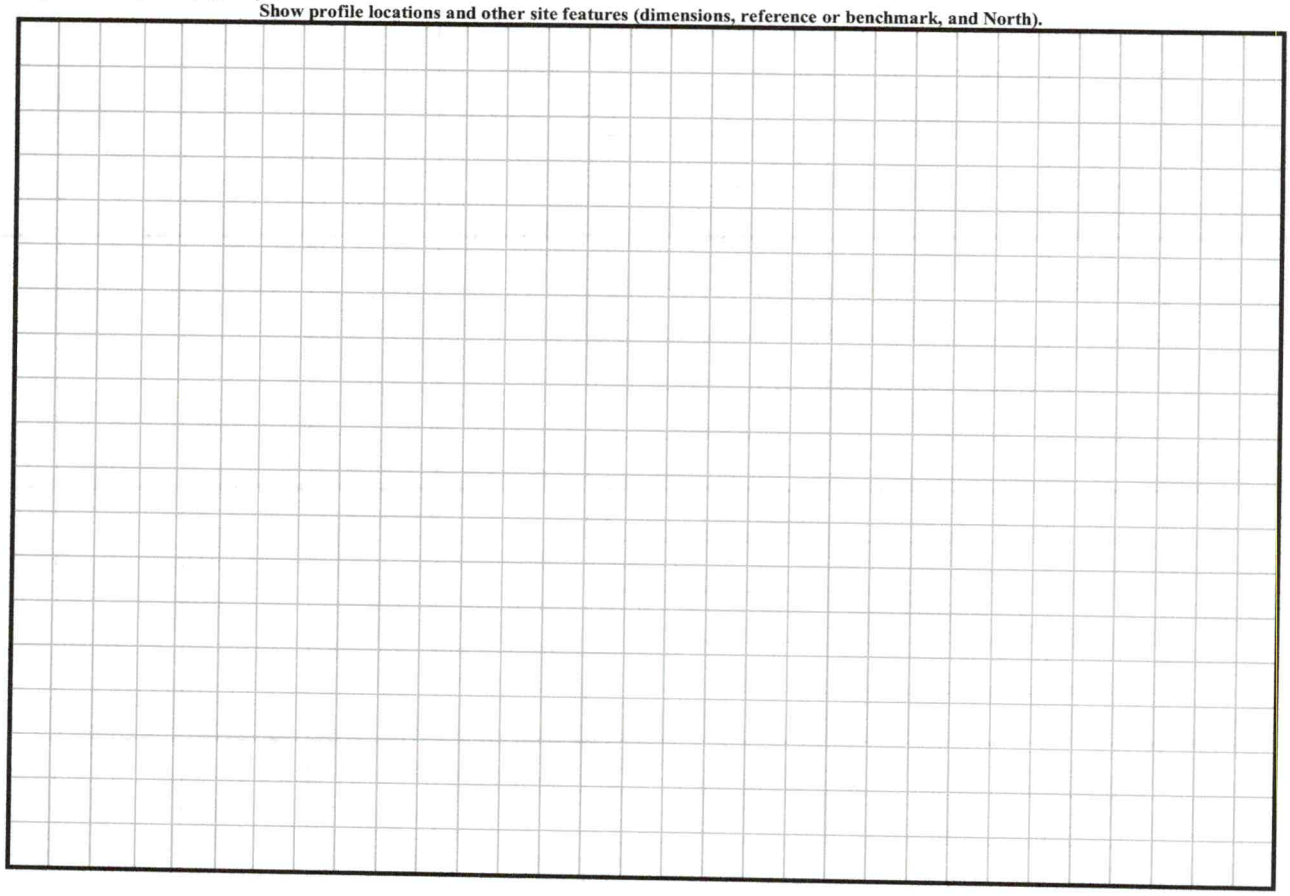
NOTES

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)

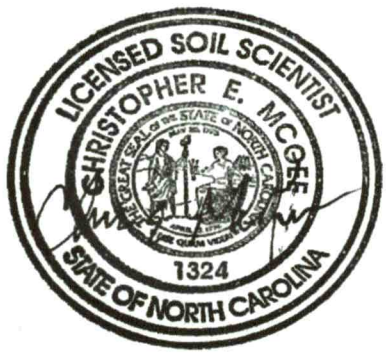
Evaluation of saprolite shall be by pits.

Long-term Acceptance Rate (LTAR): gal/day/ft^2

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



Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-859-0669
www.agriwaste.com



Soil Suitability for Domestic Sewage Treatment and Disposal Systems
Lot 19 Winding Brook Way, Statesville, NC 28625
(PIN: 4775043280; Iredell County)

PREPARED FOR: Cornerstone (Buller River Development), Client

PREPARED BY: Chris McGee, Senior Soil Scientist
Trevor Hackney, Environmental Scientist

DATE: June 3, 2021

Soil suitability for domestic sewage treatment and disposal systems was evaluated on May 11, 2021 for the property located at Lot 19 Winding Brook Way, Statesville, NC. Chris McGee and Trevor Hackney of Agri-Waste Technology, Inc. (AWT) conducted the soil evaluation. This evaluation was done to facilitate permitting for a septic system. This report and attached documents were prepared to meet the requirements for a Licensed Soil Scientist evaluation to meet SL 2018-114 (c).

A drawing of the site plan, septic layout, and boring locations is included in Attachment 1. Profile descriptions for each boring are included in Attachment 2. Additional documentation about the property is included in Attachment 3.

The total property area is approximately 0.63 acres. The property is completely wooded. The home is proposed near the front of the property and the septic system is proposed towards the back of the property. The proposed system is a pump to pressure manifold septic system.

Soil Suitability for Domestic Sewage Treatment and Disposal Systems
The drawing in Attachment 1 details the property boundaries (as surveyed by Bateman Civil Survey Company), soil boring locations, and layout of drain field trenches (Completed by AWT). Five soil borings were assessed on the property. Soil borings were examined to determine soil suitability for on-site sewage disposal systems in accordance with 15A 18A .1900 Rules for Sewage Treatment and Disposal Systems. These borings were advanced with a hand auger. Soil Borings 1, 2, 3, 4, & 5 were all

provisionally suitable for a conventional style trench. All soil borings that are provisionally suitable are being utilized for the drain field area.

A septic layout was performed to demonstrate available space (.1945). The layout in Attachment 1 indicates there is available space for a three-bedroom pump to pressure manifold initial and repair system utilizing the 25% reduction of innovative drain field material.

The proposed LTAR (Long Term Acceptance Rate) by AWT is 0.3 GPD/ft^2. The soils on this property are group IV soils within the distribution and treatment zone as used to define the LTAR. Since usable soil depths meet or exceed 38" AWT is recommending the use of innovative style trench to utilize the 25% reduction for the initial and repair system. With an LTAR of 0.3 GPD/ft^2, 600 linear feet of innovative trench are necessary to support a three-bedroom home initial and repair system. The maximum trench bottom should not exceed 24". The attached drawing proves that 612 linear feet of trench can be installed with the proposed home location on the property.

Any disturbances or grading done in the usable area or within the proposed setbacks will change the potential of using the area designated for a drain field. Prior to moving forward with building on the property, Iredell County Environmental Health Department should be contacted to complete the necessary review of this documentation to issue an IP (Improvement Permit) for the property.

Conclusions

An IP (Improvement Permit) for this property can be issued with the site plan that is in Attachment 1. The county issues an Operation Permit after the system has been installed to meet the specifications of the Authorization to Construct. Septic layouts and system design can be performed as needed. It will be critical to not disturb any of the proposed septic area or there is a risk that the IP will be voided. The LSS Evaluation is being submitted pursuant to and meets the requirements of the SL 2018-114 Section 11. (c)

We appreciate the opportunity to assist you in this matter. Please contact us with any questions, concerns, or comments.

Sincerely,

Christopher McGee, LSS

Trevor Hackney

Trevor Hackney

LEGEND

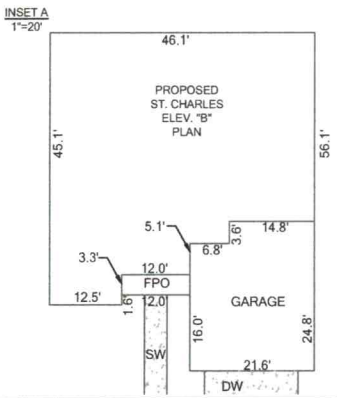
- IPS - IRON PIPE SET (½" UNLESS NOTED OTHERWISE)
- IPF - IRON PIPE FOUND
- LIGHT POLE
- CABLE PEDESTAL
- TELE. PEDESTAL
- FIBER OPTIC MARKER
- FENCE
- ADJOINING PROPERTY
- TREE LINE
- SD — STORM DRAIN PIPE
- DB DEED BOOK
- PG PAGE
- PB PLAT BOOK
- R/W RIGHT OF WAY
- DW CONCRETE DRIVEWAY
- SW CONCRETE SIDEWALK
- FPO CONCRETE FRONT PORCH
- CMP CORRUGATED METAL PIPE

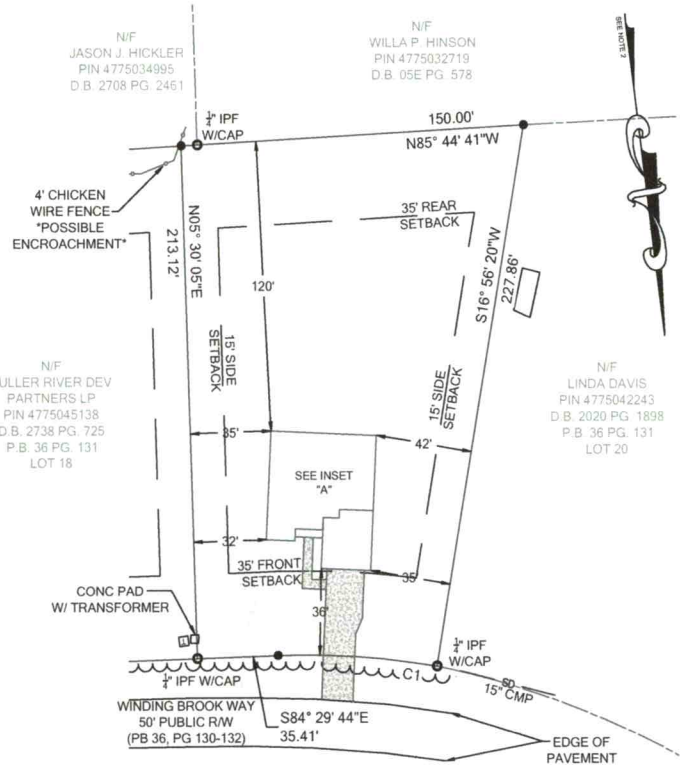
CURVE TABLE				
CURVE#	LENGTH	RADIUS	BEARING	CHORD
C1	69.83'	350.00'	S78° 46' 29"E	69.72'

PROPOSED IMPERVIOUS:

TOTAL IMPERVIOUS = 3,363 SF
HOUSE : 1,750 SF
GARAGE: 512 SF
DW: 951 SF
SW : 110 SF
FPO: 40 SF
CONCRETE PAD W/ TRANSFORMER: 3 SF
TOTAL LOT AREA = 0.63 AC / 27,633 SF
PERCENT IMPERVIOUS = 12.17%

THIS MAP IS CONSIDERED PRELIMINARY, NOT FOR RECORDATION, CONVEYANCE OR SALES UNLESS SIGNED AND SEALED BY THE LICENSED SURVEYOR.





THIS MAP IS OF AN EXISTING PARCEL OF LAND AND IS ONLY INTENDED FOR THE PARTIES AND PURPOSES SHOWN. THIS MAP NOT FOR RECORDATION. NO TITLE REPORT PROVIDED.

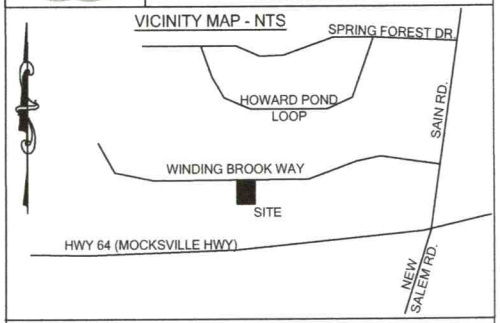
NOTES

1. THIS SURVEY WAS PREPARED BY BATEMAN CIVIL SURVEY COMPANY, UNDER THE SUPERVISION OF STEVEN P. CARSON, PLS.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES AND ALL BEARINGS ARE BASED ON NAD 83/NSRS 2011,NAVD 88,STATE PLANE COORDINATES UNLESS OTHERWISE SHOWN.
3. THE PROPERTY LIES IN ZONE 'X' PER NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP # 3710477500J DATED 03/18/2008.
4. SITE ZONED "R20" PER IREDELL COUNTY GIS.
5. AREAS COMPUTED BY COORDINATE METHOD.
6. NO GRID MONUMENTS FOUND WITHIN 2000' PER REFERENCE.
7. THIS MAP IS NOT FOR RECORDATION AND SHOULD BE REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH APPLICABLE LAND DEVELOPMENT REGULATIONS.
8. THIS PLAN HAS BEEN PREPARED FOR LAYOUT AND PERMITTING PURPOSES ONLY.
9. SURVEY HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
10. NO INVESTIGATION INTO THE EXISTENCE OF JURISDICTIONAL WETLANDS OR RIPARIAN BUFFERS PERFORMED BY THIS FIRM.

BUILDING SETBACKS:
PER IREDELL COUNTY
FRONT = 35 ft
SIDE = 15 ft
REAR = 35 ft
CORNER SIDE = 25 ft
MAXIMUM BUILDING HEIGHT = 35 ft

0 25 50
SCALE:
1" = 50 ft.

BATEMAN CIVIL SURVEY COMPANY
ENGINEERS • SURVEYORS • PLANNERS
2524 RELIANCE AVENUE, APEX, NC 27539
PHONE: (919) 577-1080 FAX: (919) 577-1081
INFO@BATEMANCIVILSURVEY.COM
NCBELS FIRM# C-2378



I, STEVEN P. CARSON, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY DIRECT SUPERVISION FROM A SURVEY MADE UNDER MY SUPERVISION (PLAT BOOK REFERENCED IN TITLE BLOCK); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION LISTED UNDER REFERENCES; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARD OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA. L-4752
DATED:

PRELIMINARY

BUILDER TO VERIFY HOUSE LOCATION, DIMENSIONS AND REVIEW TOTAL IMPERVIOUS NOTED ON THIS PLOT PLAN.

Plot Plan
Exclusively For:
Buller River Development Partners, LP

SPRING FOREST SUBDIVISION LOTS 19
WINDING BROOK WAY, STATESVILLE
CHAMBURSBURG TOWNSHIP - IREDELL COUNTY - NORTH CAROLINA

DATE: 02/12/2021 DRAWN BY: GCS CHECKED BY: SPC

REFERENCE: PB 36 PG. 131 BCSC# 200537 SCALE: 1" = 50'

Attachment 3: Additional Documentation

SYSTEM NOTES:

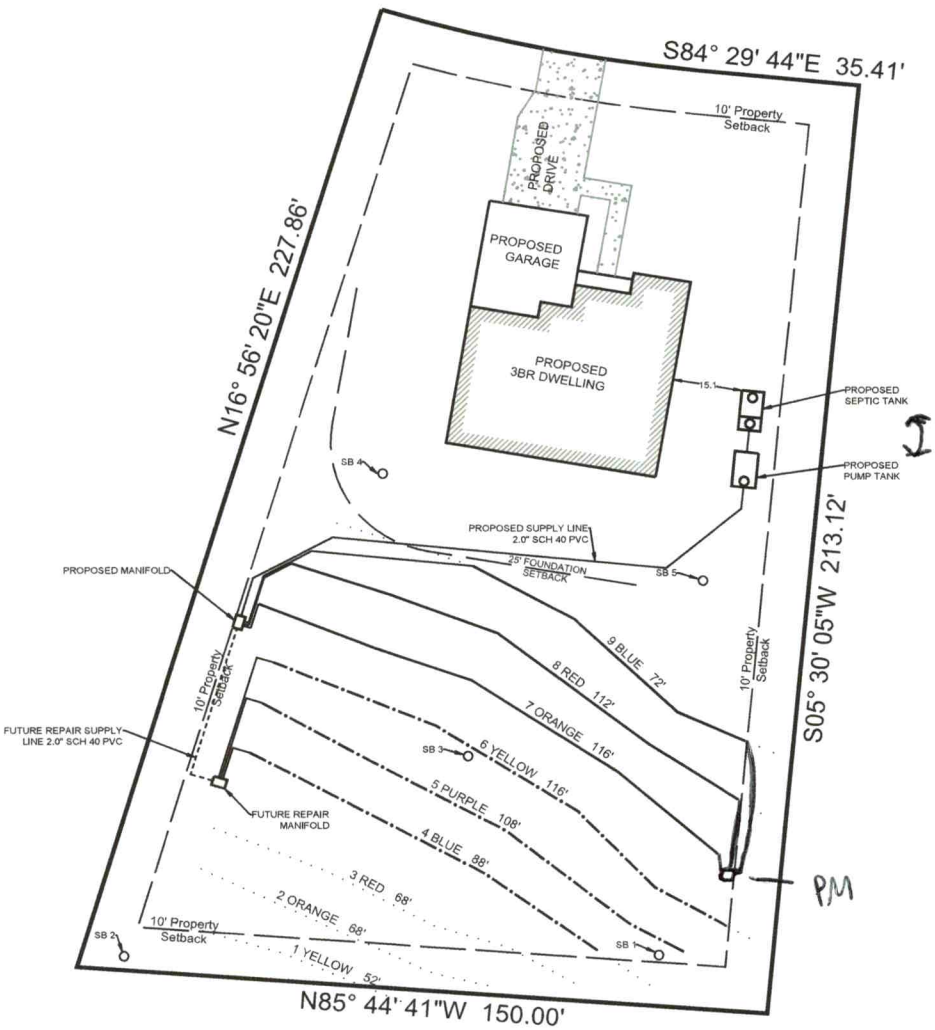
LTAR: 0.3 GAL/FT^2/DAY

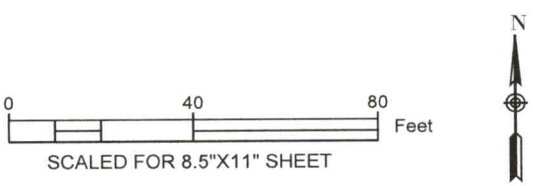
3-BEDROOM SFR

PRIMARY SYSTEM: ————————
-300 LINEAR FT PUMP TO PRESSURE MANIFOLD
w/ CHAMBERS (LINES: 7-9)

REPAIR SYSTEM: —·—·—·—·—
-312 LINEAR FT PUMP TO PRESSURE MANIFOLD
w/ CHAMBERS (LINES: 4-6)

UNUSED LAYOUT: . . . . . .





SHEET TITLE

Property Layout

PROJECT CONTACT:	
T. Hockney	704-268-9160
DRAWN BY: T. Davis	CREATED ON: 5/25/2021
REVISED BY: T. Davis	REVISED ON: 6/28/2021

SHEET NAME:

WW-1

Owner Information:
Buller River Development
c/o Stan Pressley
259 Textile Way
Fort Mill, SC 29715

Property Information:
Lot 19 Spring Forest Subdivision
177 Winding Brook Way
Statesville, NC
Iredell County
PIN: 4775-04-3280

GENERAL NOTES

1)BOUNDARY INFORMATION TAKEN FROM PROPERTY SURVEY PERFORMED BY BATEMAN CIVIL SURVEY COMPANY.

2)LOCATION OF SEPTIC COMPONENTS (EXISTING AND PROPOSED) TAKEN FROM ENGINEERS SURVEY.

3)DRAWING DOES NOT REPRESENT A SURVEY PRODUCT.

AWT
Engineers and Soil Scientists
Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-859-0669
www.agriwaste.com

Attachment 1: Site Plan/Drawing

CONVENTIONAL SEPTIC SYSTEM DESIGN (Primary)

Designed by: TD
Revised: 6/29/2021

Site Information

Project: Lot 19 Spring Forest WWTS
Site Address: Winding Brook Way
Statesville, NC
County: Iredell

Design Information

Estimated Daily Flow:	360	gal/day
L.T.A.R. (from Wake Co.):	0.3	gal/day/ft^2
L.T.A.R. + 5%:	0.315	gal/day/ft^2
Trench Width:	3	ft.
Line Length Required:	400	ft.
Line Length w/ 25% Reduction:	300	ft. (for Chamber or EZ Flow Product)
L.T.A.R. Reduced:	0.400	gal/day/ft^2
L.T.A.R. Reduced + 5%:	0.420	gal/day/ft^2

DRAINFIELD INFO. - **Primary**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using Chamber or EZ-Flow Product***

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
7	Orange	116	3/4in SCH 40	12.5	0.108	0.403
8	Red	112	3/4in SCH 40	12.5	0.112	0.417
9	Blue	72	1/2in SCH 40	7.11	0.099	0.369
TOTAL		**300**		**32.11**		0.396

Total Run Time =	11.21	min.	
% of Dose Volume =	75.0%		(Req. Range 66% - 75%)
Dose Volume =	146.9	gal/dose	
Run Time/Dose =	**4.6**	**min**	(Range 5-7 min unless uphill, checked)
Volume/depth =	20.16	gal/in	(Dependent upon tank manufacturer, to be field verified)
Estimated Drawdown =	7.29	in.	

Manifold Box

Number of Taps =	3		
Manifold Length =	3.0	ft.	(approximate)

CONVENTIONAL SEPTIC SYSTEM DESIGN (Repair)

Designed by: TD
Revised: 6/29/2021

Site Information

Project: Lot 19 Spring Forest WWTS
Site Address: Winding Brook Way
Statesville, NC
County: Iredell

Design Information

Estimated Daily Flow:	360	gal/day
L.T.A.R. (from Wake Co.):	0.3	gal/day/ft^2
L.T.A.R. + 5%:	0.315	gal/day/ft^2
Trench Width:	3	ft.
Line Length Required:	400	ft.
Line Length w/ 25% Reduction:	300	ft. (for Chamber or EZ Flow Product)
L.T.A.R. Reduced:	0.400	gal/day/ft^2
L.T.A.R. Reduced + 5%:	0.420	gal/day/ft^2

DRAINFIELD INFO. - **Repair**

Proposed Type of System/Distribution: ***Pump to Pressure Manifold using Chamber or EZ-Flow Product***

Line No.	Flag Color	Line Length (ft.)		Flow (gpm)	Flow/Foot (gpm/ft)	Line L.T.A.R.
4	Blue	88	3/4in SCH 80	10.1	0.115	0.392
5	Purple	108	3/4in SCH 40	12.5	0.116	0.396
6	Yellow	116	3/4in SCH 40	12.5	0.108	0.368
TOTAL		**312**		**35.1**		0.385

Total Run Time =	10.26	min.	
% of Dose Volume =	75.0%		(Req. Range 66% - 75%)
Dose Volume =	152.8	gal/dose	
Run Time/Dose =	**4.4**	**min**	(Range 5-7 min unless uphill, checked)
Volume/depth =	20.16	gal/in	(Dependent upon tank manufacturer, to be field verified)
Estimated Drawdown =	7.58	in.	

Manifold Box

Number of Taps =	3		
Manifold Length =	3.0	ft.	(approximate)

PUMP DESIGN

Designed by: TD

System (initial/repair): **Primary**

Revised: 6/29/2021

Project: Lot 19 Spring Forest WWTS
Site Address: Winding Brook Way
Statesville, NC
County: Iredell

Friction Losses

Suction Head =	0	ft.	*(submersible = 0)*
Elev. Difference (highest point from pump) =	12.90	ft.	
Design Pressure At Outlet =	2	ft.	

Supply Line - *2.0" Schedule 40 PVC* (Includes Length of Pipe within Pump Tank)

Pipe Diameter (ID) =	2.047	in.	Flow =	32.11 gpm
Pipe Length =	138	ft.	Velocity =	3.13 ft/sec
Pipe Length for Fittings =	13.8	ft.		
Est. Friction Loss per 100' =			1.86	ft/100 ft.
Estimated Friction Loss =			2.82	ft.
Pressure Filter Friction Loss =			0.69	ft. *(from manufacturer)*
Friction Loss - Taps/Special Fittings =			3.5	ft.
TOTAL =			**21.91**	**ft.**

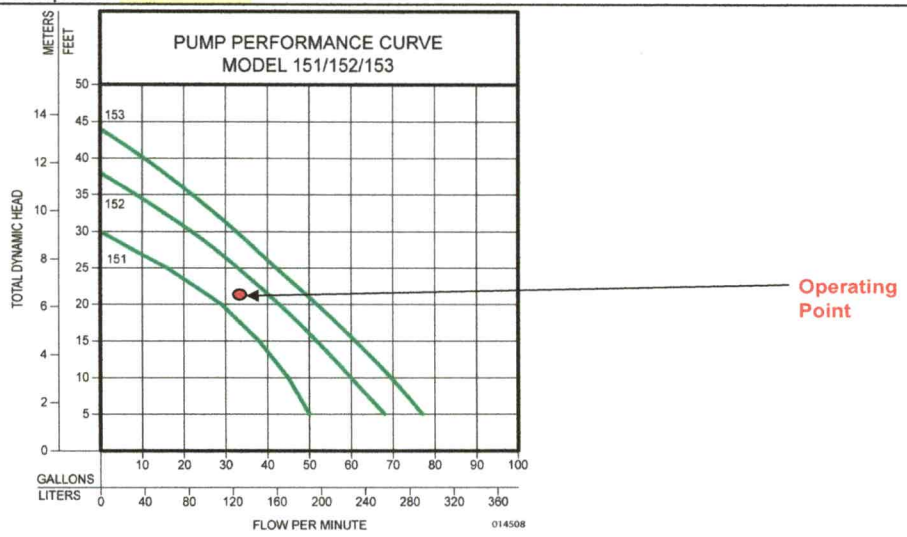
Flow for Vent Hole

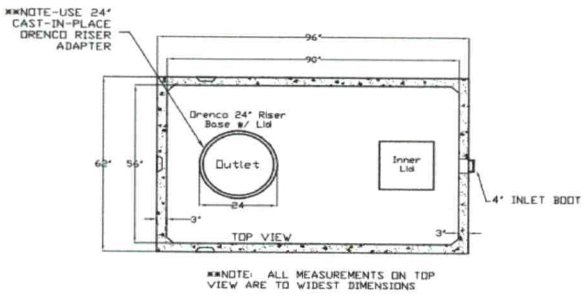
Hole Diameter =	1/8	in.
Hole Flowrate =	0.86	gpm

Pump Efficiency =	0.7	*(assumed, typical)*
Motor Efficiency =	0.9	*(assumed for electric pumps)*
Flow =	**32.97**	**gpm**
Required Horsepower =	0.29	hp
TDH =	**21.91**	**ft.**

Pump Selection

Manufacturer: **Zoeller**
Model: **152** (or equivalent alternative)
Horsepower: **2/5**

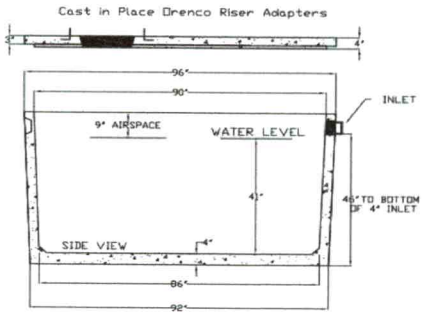


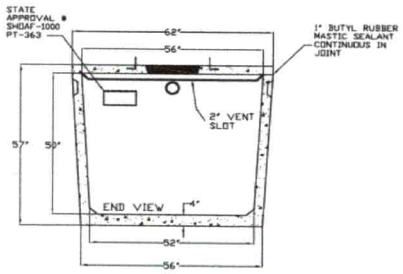


SHOAF PRECAST SEPTIC INC.
4130 WEST US HWY 64
LEXINGTON, NC 27295
PHONE (336) 787-5826
FAX (336) 787-2826
WWW.SHOAFPRECAST.COM
SHOAF-1000 NON TRAFFIC RATED
PT-363 NON TRAFFIC
LIQUID CAPACITY-1008 US GALLONS INCLUDING 9" AIRSPACE
GALLONS PER INCH-20.16 (AVGERAGE)
TANK HEIGHT-57"
BOTTOM OF TANK TO CENTER OF INLET-48"
BOTTOM OF TANK TO CENTER OF OUTLET-48"
LENGTH TO WIDTH RATIO-2 TO 1
SIZE OF INLET & OUTLET-3" OR 4" PIPE
TYPE OF INLET & OUTLET-POLYLOCK OR EQUAL (MEETS ASTM C-923)
CONCRETE PSI-4000; TANK WEIGHT-9,000 LBS.
REINFORCING PER STATE CODE

MODEL: TS 1000 PT
NON TRAFFIC
1000 Gallon Pump Tank

SCALE - N.T.S.





Interior Height (in.)	**50.0**
Avg. Gals/Inch	**20.16**

Primary System

Elevations, measured from bottom towards top (0 = Interior Bottom of Tank):

Top of pump (including 4" block)	16.1 in.	(Pump approx. 12.1" tall)
Pump Off	18.0 in.	(allows pump to remain submerged)
Pump On	25.29 in.	(set for dose volume)
Alarm on	31.29 in.	(6" above ON Float)

Emergency Storage Available		
Pump Tank	377.2 gal	
Days of Storage	1.05 days	

(determined from interior top of tank - "High Water Alarm")

Engineers and Soil Scientists

Agri-Waste Technology, Inc.
501 N. Salem Street, Suite 203
Apex, North Carolina 27502
919-859-0669
www.agriwaste.com

June 22, 2021

To: Applicant- Lot 19, Winding Brook Way, Statesville, NC 28625

Re: Site/Soil Investigation for Lot 19, Winding Brook Way in Statesville (Iredell County, NC)

I, STAN PRESSLEY / GRANDSTONE III PROP. (applicant name, print), acknowledge that "the LSS Evaluation attached to this application is to be used to produce design and construction features for permitting in accordance with SL 2018-114 Section 11.(c)."

Applicant Signature: Stan Pressley

Date: 6/23/21

Sincerely,

Chris McGee, LSS
Soil Scientist
Agri-Waste Technology, Inc.

RECEIVED JUN 1 1 2021

APPLICATION MUST BE FILLED OUT COMPLETELY & BE LEGIBLE OR IT WILL NOT BE PROCESSED

Iredell County Health Department – Environmental Health Division

S L. *SEPTIC* PAGE 1: *APPLICATION FORM* AP-318648 $1200.00

Application For: ( ) New Well Permit ( ) Well Repair Permit ( ) Well Abandonment
( ) Septic Improvement Permit (✓) Authorization to Construct ( ) Existing System Inspection ( ) Septic System Repair

THE ABOVE PERMIT DOCUMENTS WILL BECOME INVALID IF INFORMATION PROVIDED ON THIS APPLICATION IS FALSIFIED OR CHANGED, OR IF THE SITE IS ALTERED. THE IMPROVEMENT PERMIT IS VALID FOR EITHER 60 MONTHS OR WITHOUT EXPIRATION DEPENDING UPON DOCUMENTATION SUBMITTED. APPLICATION WITH SITE PLAN 60 MONTHS, APPLICATION WITH COMPLETE, SCALED PLAT WITHOUT EXPIRATION. SEE 15A NCAC 18A .1937(f) FOR DETAILS.

Page 2: *Site Plan Worksheet* form MUST accompany this application

The following optional attachments may also be submitted: ( ) Survey Plat, scaled no more than 1 inch = 60 feet
Please an (X) beside whichever is submitted if applicable ( ) Custom Site Plan, scaled no more than 1 inch = 60 feet

Applicant Information: (PRINT CLEARLY)

Applicant Name: CORNERSTONE II PROPERTIES Address: 259 TEXTILE WAY FT. MILL SC Zip: 29715
Applicant Email: STAN@CORNERSTONESC.COM Phone: 704 301 3229 Alt. Phone: X
Owner Name: BULLS RIVER DEVELP. Address: 259 TEXTILE WAY FT. MILL, SC Zip: 29715
Owner Email: N/A Phone: N/A Alt. Phone: N/A

Property Information:

Street Address: 177 WINDING BROOK WAY 4775 04 3280
Subdivision Name: SPRING FOREST Section/Phase: _____ Lot Number: 19
Driving Directions: NEW SALEM RD NORTH / LEFT ON WINDING BROOK WAY

Site Development Information: *(check or complete ALL that apply)*

(✓) New Single Family Residence
( ) New Multi-Family Residence
( ) Accessory Building
( ) Bedroom(s) Addition
( ) Repair to failing septic system ___ Tank ___ Drain lines Describe Problem: _____
Non-Residential Site Development Type of Business: _____
Square Footage of Building: _____ Max. Number of Employees: ____ Max. Number of Seats/Beds/Other: ____

Maximum Number of Bedrooms: 3
Maximum Number of Occupants: 3
( ) Swimming Pool
( ) Other Addition/Structure: _____

CHECK FOUNDATION TYPE
(✓) Crawl Space Foundation
( ) Concrete Slab Foundation
( ) Basement with Plumbing
( ) Basement without Plumbing

Water Supply: ( ) Replacement Well – Reason: _____
( ) Multi-connection Well Number of Houses: 1 Number of Persons: _____
( ) New Well ( ) Existing Well ( ) Community Well ( ) City Water (✓) Other Public Water

Desired Septic System Type: *(you may rank in order of preference)* Year existing system installed: _____
( ) No Preference ( ) Alternative (✓) Conventional ( ) Innovative ( ) Modified Conventional ( ) Other: _____

Please answer the following to the best of your ability:
( ) Yes (✓) No Does the site contain any jurisdictional wetlands?
( ) Yes (✓) No Is any non-domestic sewage (i.e. industrial) to be generated?
( ) Yes (✓) No Is the site subject to approval by any other public agency?

I have read this application and certify that the information provided herein is true, complete, and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed.

Signature: Stan Cowley 6/4/21
Property owner or owner's legal representative signature (SIGNATURE REQUIRED) DATE

IREDELL COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

DOCUMENTATION TO AUTHORIZE AN OWNER'S LEGAL REPRESENTATIVE

(Check and sign only ONE of the options below)

1. *** APPLICANT AND OWNER ARE THE SAME. *** (*Sign here*) _____

Applications for permits require the "signature of the owner or owner's legal representative" (15A NCAC 18A .1937). If the owner does not sign the application himself or herself, they can submit any one of the following documents to designate their legal representative: *Power of Attorney; Real Estate Contract; Estate executor; Bankruptcy trustee; Court ordered guardianship* In the absence of the above documentation, the property owner may provide the local health department with documentation that designates a legal representative. A property owner may:
Complete this form to document his or her legal representative, or provide his or her own form that contains the information in this form. If there are multiple property owners, then all property owners must sign the form that designates a legal representative.
By signing a form that designates a legal representative for purposes of 15A NCAC 18A .1937, the property owner authorizes that representative to act on their behalf in matters pertaining to the application and permitting process, including signing or receiving any application, document or permit. The owner retains full responsibility to meet all permit conditions specified by the local health department.

2. I, PAM HARDING/BULLER RIVER, am the legal owner(s) of the property located at 177 WINDING BROOK WAY, identified as

PIN (Parcel Identification Number) 4775 04 3290, located in Iredell County, North Carolina.

I do hereby authorize (**print legal representative/company name**) STAN PRESSLEY/CORNERSTONE III _____, to act as an agent on my behalf in applying for/signing/obtaining any of the documents described below.

- Application for Improvement Permit (IP) / Authorization to Construct (AC)
- Improvement Permit (IP) / Authorization to Construct (AC)
- Application for soil-site evaluation (new/repair)
- Application/permit for private drinking water well/well abandonment
- Application for Compliance Inspection

I agree to abide by all decisions and/or conditions between the legal representative acting on my behalf and the Iredell County Department of Public Health, Environmental Health Division.

Pam Harding/Buller River Dockmaster — 6/4/21

Signature of Owner(s) — Date

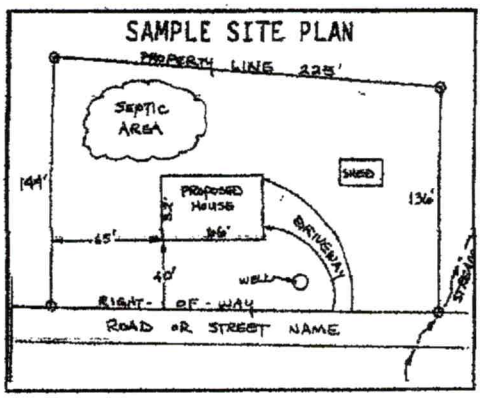
Mooresville - Environmental Health
ronda.hart@co.iredell.nc.us
Fax: 704-662-3239
610 E. Center Avenue, Mooresville, NC 28115

Statesville - Environmental Health
adrienne.shea@co.iredell.nc.us
Fax: 704-871-3483
349 N. Center Street, Statesville, NC 28677

IREDELL COUNTY DEPARTMENT of ENVIRONMENTAL HEALTH

SITE PLAN WORKSHEET

SEE THE "SAMPLE SITE PLAN" BELOW. *INCOMPLETE SITE PLANS WILL BE RETURNED TO YOU FOR COMPLETION AND MAY RESULT IN A DELAY IN THE ISSUANCE OF YOUR SEPTIC SYSTEM OR WELL PERMIT!!!*



Place an (X) beside each item as you complete the site plan:

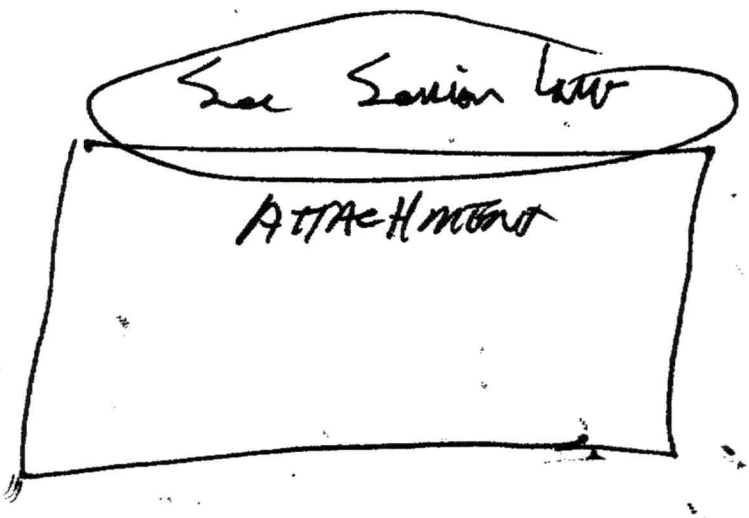
- (X) Property Line measurements are clearly identified
- (X) All proposed structures are indicated
- (X) Front and side setbacks from property line
- (X) Preferred driveway location
- (X) Preferred well location
- (X) Preferred septic system location
- (X) North arrow, or other sufficient indicator of direction

Circle N/A on the following if appropriate:

Location of septic systems and wells within 100' of your property (N/A)
Location of easements and rights of ways on your property (N/A)
Location of any designated wetlands on the property (N/A)

USE THIS SPACE TO DRAW YOUR SITE PLAN

Show: proposed house or business footprint, wells, water lines, patios, pools and decks, and any other item that will occupy space on the site



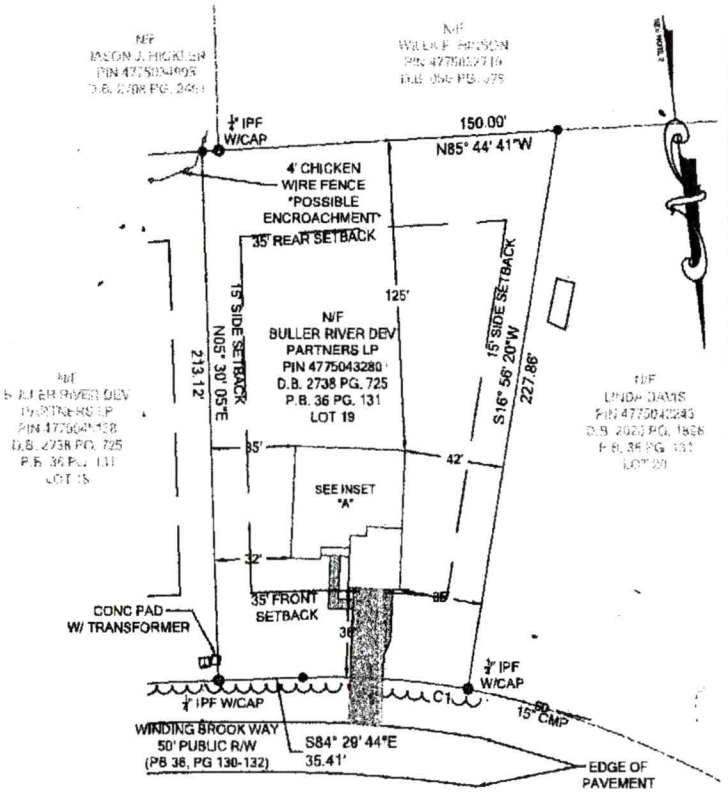
Signature: Stan Crowley **6/4/21**

Property owner or owner's legal representative signature (SIGNATURE REQUIRED) DATE

LEGEND

- IPS - IRON PIPE SET (1" UNLESS NOTED OTHERWISE)
- IPF - IRON PIPE FOUND
- LIGHT POLE
- CABLE PEDESTAL
- TELE. PEDESTAL
- FIBER OPTIC MARKER
- FENCE
- ADJOINING PROPERTY
- TREE LINE
- SD — STORM DRAIN PIPE
- DB DEED BOOK
- PG PAGE
- PB PLAT BOOK
- R/W RIGHT OF WAY
- DW CONCRETE DRIVEWAY
- SW CONCRETE SIDEWALK
- FPO CONCRETE FRONT PORCH
- CMP CORRUGATED METAL PIPE

CURVE TABLE				
CURVE#	LENGTH	RADIUS	BEARING	CHORD
C1	69.83'	350.00'	S78° 46' 29"E	69.72'



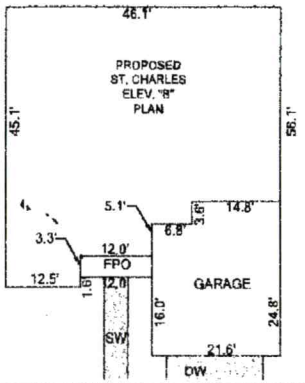
PROPOSED IMPERVIOUS:

TOTAL IMPERVIOUS = 2,970 SF
- HOUSE : 1,750 SF
- GARAGE: 512 SF
- DW: 555 SF
- SW : 110 SF
- FPO: 40 SF
- CONCRETE PAD W/ TRANSFORMER: 3 SF

TOTAL LOT AREA = 0.63 AC / 27,633 SF
PERCENT IMPERVIOUS = 10.73%

THIS MAP IS CONSIDERED PRELIMINARY, NOT FOR RECORDATION, CONVEYANCE OR SALES UNLESS SIGNED AND SEALED BY THE LICENSED SURVEYOR.

INSET A
1"=20'



BUILDING SETBACKS:
PER IREDELL COUNTY
FRONT = 35 ft
SIDE = 15 ft
REAR = 35 ft
CORNER SIDE = 25 ft
MAXIMUM BUILDING HEIGHT = 35 ft

THIS MAP IS OF AN EXISTING PARCEL OF LAND AND IS ONLY INTENDED FOR THE PARTIES AND PURPOSES SHOWN. THIS MAP NOT FOR RECORDATION, NO TITLE REPORT PROVIDED.

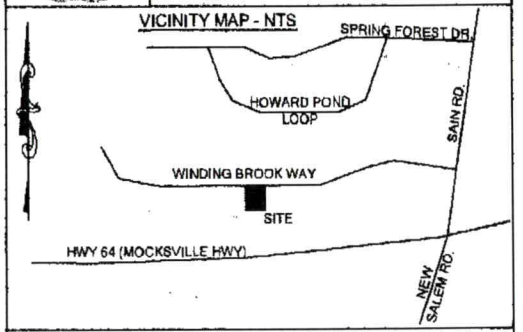
NOTES

1. THIS SURVEY WAS PREPARED BY BATEMAN CIVIL SURVEY COMPANY, UNDER THE SUPERVISION OF STEVEN P. CARSON, PLS.
2. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES AND ALL BEARINGS ARE BASED ON NAD 83/NSRS 2011,NAVD 88,STATE PLANE COORDINATES UNLESS OTHERWISE SHOWN.
3. THE PROPERTY LIES IN ZONE 'X' PER NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP # 3710477500J DATED 03/18/2008.
4. SITE ZONED "R20" PER IREDELL COUNTY GIS.
5. AREAS COMPUTED BY COORDINATE METHOD.
6. NO GRID MONUMENTS FOUND WITHIN 2000' PER REFERENCE.
7. THIS MAP IS NOT FOR RECORDATION AND SHOULD BE REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH APPLICABLE LAND DEVELOPMENT REGULATIONS.
8. THIS PLAN HAS BEEN PREPARED FOR LAYOUT AND PERMITTING PURPOSES ONLY.
9. SURVEY HAS MADE NO INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
10. NO INVESTIGATION INTO THE EXISTENCE OF JURISDICTIONAL WETLANDS OR RIPARIAN BUFFERS PERFORMED BY THIS FIRM.

SCALE:
1" = 50 ft.

BATEMAN CIVIL SURVEY COMPANY
ENGINEERS • SURVEYORS • PLANNERS
2524 RELIANCE AVENUE, APEX, NC 27539
PHONE: (919) 577-1080 FAX: (919) 577-1081
INFO@BATEMANCIVILSURVEY.COM
NCBELS FIRM# C-2378

VICINITY MAP - NTS



I, STEVEN P. CARSON, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY DIRECT SUPERVISION FROM A SURVEY MADE UNDER MY SUPERVISION (PLAT BOOK REFERENCED IN TITLE BLOCK); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION LISTED UNDER REFERENCES; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000+; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARD OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA. L-4752
DATED:

PRELIMINARY

BUILDER TO VERIFY HOUSE LOCATION, DIMENSIONS AND REVIEW TOTAL IMPERVIOUS NOTED ON THIS PLOT PLAN.

Plot Plan
Exclusively For:
Buller River Development Partners, LP

SPRING FOREST SUBDIVISION LOTS 19
WINDING BROOK WAY, STATESVILLE
CHAMBURSBURG TOWNSHIP - IREDELL COUNTY - NORTH CAROLINA

DATE: 02/12/2021 DRAWN BY: GCS CHECKED BY: SPC

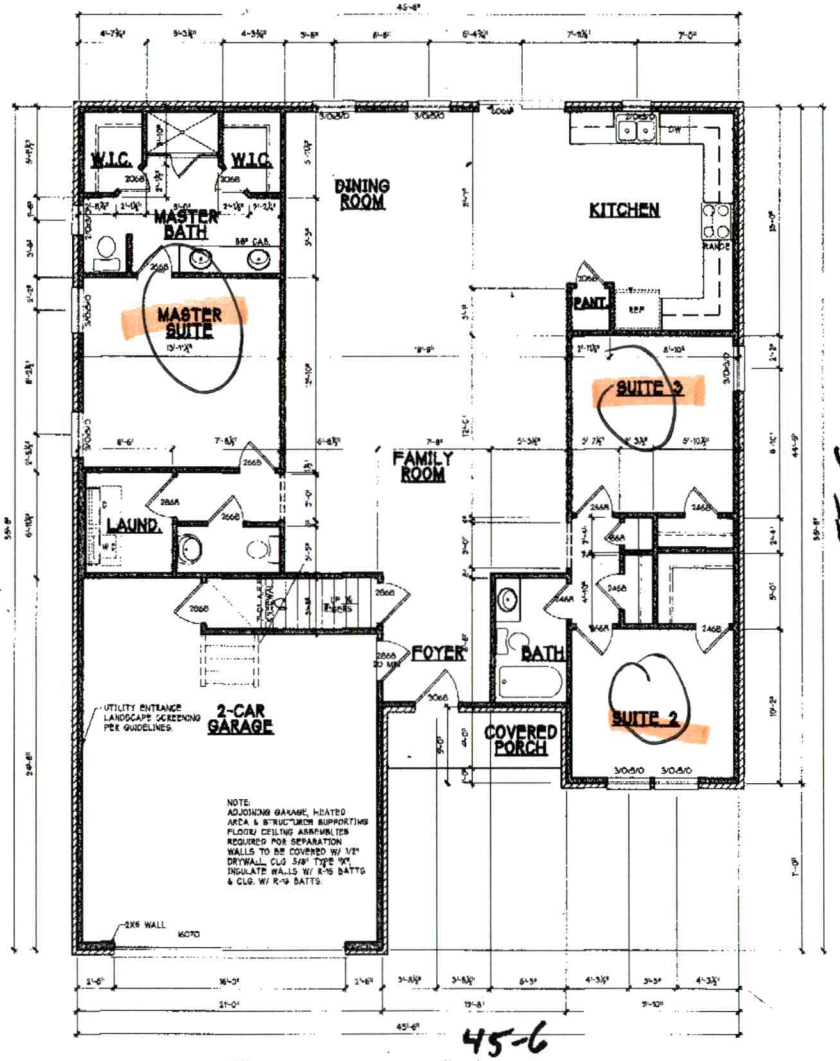
REFERENCE: PB 36 PG. 131 BCSC# 200537 SCALE: 1" = 50'

45-6

55-6

55-6

45-6

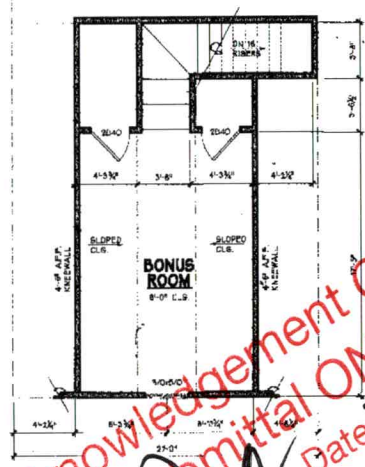


1 4.0 FIRST FLOOR PLAN

SCALE: 1/4"=1'-0" (11"X17" SHEET SIZE)
SCALE: 1/4"=1'-0" (22"X36" SHEET SIZE)

FIRST FLOOR NOTES:

- PULL 4" OR 6" EXTERIOR WALL WIRE USED IN DETERMINING DIMENSIONS ON PLANS
- FRAMERS SHALL START ALL WALL LAYOUTS FROM THE REAR OF THE HOUSE
- ALL ANGLED WALLS ARE 45 DEGREES OR 90 DEGREES UNLESS NOTED OTHERWISE
- ALL OVERALL DIMENSIONS SHALL BE FROM OUT TO OUT OF FRAMING, INTERIOR DIMENSIONS SHALL BE FROM ONE SIDE OF STUD
- ALL INTERIOR DOORS ARE 4" FROM WALL (UNLESS NOTED OTHERWISE)
- WHEN HOUSE IS REVERSED, WASHER AND DRYER HOOKUPS TO REMAIN ORIENTED WITH WASHER ON LEFT AND DRYER ON RIGHT
- MASTER MOUNTS SHALL BE PLACED ON ALL EXTERIOR LIGHTS AND HOSE BIBBS
- "FRAMED CAVITY WALLS (IE. TUBS, SHOWERS, STAIRS & FIREPLACES) SHALL BE INSULATED WITH AIR BARRIER PER ENERGY CODE
- ANY WINDOW W/ A SILL OF LESS THAN 24" AFF. OR EQUAL TO OR GREATER THAN 72" SFF. MUST HAVE WOOD & MAY BE SUBJECT TO FALL PROTECT RULE
- ALL SHEETROCK OPENINGS SHALL BE 12" BELOW CEILING TYP. U.N.O.
- ALL PANTRY/LINEN SHALL HAVE (5) 12" SHELVES TYP. U.N.O.



2 4.0 SECOND FLOOR PLAN

SCALE: 1/4"=1'-0" (11"X17" SHEET SIZE)
SCALE: 1/4"=1'-0" (22"X36" SHEET SIZE)

Acknowledgement Of Plan Submittal ONLY!

Date 7/19/21

Date

SQUARE FOOTAGE:

1ST FLR.	1807 SQ. FT.
2ND F.R.	385 SQ. FT.
TOTAL HEATED	2252 SQ. FT.
FRONT PORCH	44 SQ. FT.
TOTAL UNHEATED	44 SQ. FT.
2-CAR GAR	488 SQ. FT
TOTAL UNDER ROOF	2784 SQ. FT

CORNERSTONE III PROPERTIES
4509 FAITH CHURCH RD
INDIAN TRAIL, NC 28079
(704) 577 - 4002

PROJECT TITLE
ST. CHARLES RESIDENCE

PROJECT NUMBER
ISSUE DATE

DRAWING DATA
DRAWN BY: CORNERSTONE III
CHECKED BY: STAN PRESSLEY
FILE NUMBER: 20-2387.CHARLES

SHEET TITLE
ELEV. "C"
FLOOR PLAN

SHEET NUMBER
4.0B

IREDELL COUNTY · NC

IREDELL COUNTY
PO Box 788
349 North Center St.
Statesville, NC 28677

APPLICATION NUMBER
318648 Issue Date:

Permit Type: ZONING

Parcel Number	Street Address	Jurisdiction
4775043280.000	177 WINDING BROOK WAY	Iredell County

Owner Information	Applicant Information
Name: BULLER RIVER DEV PARTNERS LP	Name: CORNERSTONE III PROPERTIES
Address:	Address: 4509 FAITH CHURCH
,	INDAIN TRAIL, 28 28203
Phone:	Phone: (704)906-6212

Use Requested	Zone Code
Single Family Dwelling	R-20

Lot Acreage	F Setback	B Setback	L Setback	R Setback	Watershed	Flood Zone
0.6344	35	35	15	15	N/A	NO

Remarks
sfd

The applicant certifies that there are no deed restrictions, contractual agreements or governmental regulations of any kind that interfere with or prohibit the use of the property or the use for which this permit is requested. The applicant further acknowledges that enforcement of deed restrictions, plat conditions and other contractual agreements will not be undertaken by Iredell County and is the sole responsibility of the affected parties.

Date: 06/10/2021

Signature of Owner/Contractor

Permit Number	318648	TOTAL FEES:	$77.25