ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625 PERMIT # AP 318822

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

PIN # ~~4749-64-5640~~ 4723-50-9172

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

SITE ADDRESS: 140 Bradford Lane Statesville NC 28625 PHONE: 704 301-3229 ALT. PHONE –

SITE DIRECTIONS: Jennings Rd South/RT on Friendship RT on Bradford Colon Right SAP CONTROLLED: ☐ YES ☒ NO

SUBDIVISION: Bradford Acres SECTION: – LOT # 7 LOT AREA: DESIGN FLOW: 360 L.T.A.R.: .30

Septic Tank	1000	(gal)	STB	760	Date	3/3/22	☑ New System	☐ Repair	☐ Expansion
Pump Tank	1000	(gal)	PT	3603	Date	3/2/22			
Pump Make	Goulds		Model	WE0312 MV	Serial #				
# Nitrification Fields	1	# Lines	3		Linear Ft	300			
Trench Width	36 in	Trench Bottom Depth			24 in max	Gravel Depth	–		

System Type: I II (III) IV V VI

System Description: PM- 25% Reduction

Repair System Description: PM- 25% Reduction

Maintenance Agreement Required: ☐ YES ☑ NO ☐ GRAVITY ☑ PRESSURE

☑ Residence No. Bedrooms 3
☐ Business No. Persons 6
☐ Other No. Employees
☐ Slab ☑ Crawl Space
☐ Basement w/ plumbing ☐ Basement w/o plumbing

Water Supply: ☐ Private ☑ Public ☐ Community

Comments / Conditions:

5/9/22 Checked drainlines, Supply lines & Set 2ft. pressure.

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:

Michael Wood / Evan Morgan

LSS # 1219/1340 Dated August 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.

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 Pruett Date: 12/2/21 Installed by: Lentz Wastewater

IMPROVEMENT PERMIT by: Benjamin A Beckett Date: 11-19-2021 OPERATION PERMIT by: D Wreberg Date: 6/21/22

AUTHORIZATION TO CONSTRUCT by: Benjamin A Beckett Date: 11-19-2021 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	5/9/22	MD
Tanks Checked	5/5/22	MW
Pressure Manifold or Valve Box Checked	5/9/22	MD
Pressure Head Set	5/9/22	MD
Electrical Checked	6/21/22	DW
Floats Set	5/9/22	MD
Alarm Checked	5/9/22	MD
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? _____	

Notice

* Property subject to any easements and right of way on record, and all NCDOT easements and rights of way.

* This survey is subject to any facts that may be disclosed by a full and accurate title search.

* This survey plat does not show any unrecorded, written or unwritten easements, dedications or other encumbrances. Such burdens could exist on this property and not appear on this plat. Accordingly, users of this plat are warned to remain alert for the existence of such unrecorded burdens not shown hereon.

* This plat was drawn for the exclusive use of the party named hereon. Said certificates do not extend to any unnamed person without an express recertification by the surveyor naming said person.

* This plat represents an actual field survey that meets or exceeds the minimum requirements of a Class C Survey in accordance with the Standards of Practice for Land Surveying in North Carolina according to North Carolina Administrative Code Title 21, Chapter 56, Section 1600.

* The ratio of precision before any adjustments is 1:6,841.

* Area determined by coordinate computations.

* No NGS or NCGS Horiz. Control Monument found within 2,000 feet of the site.

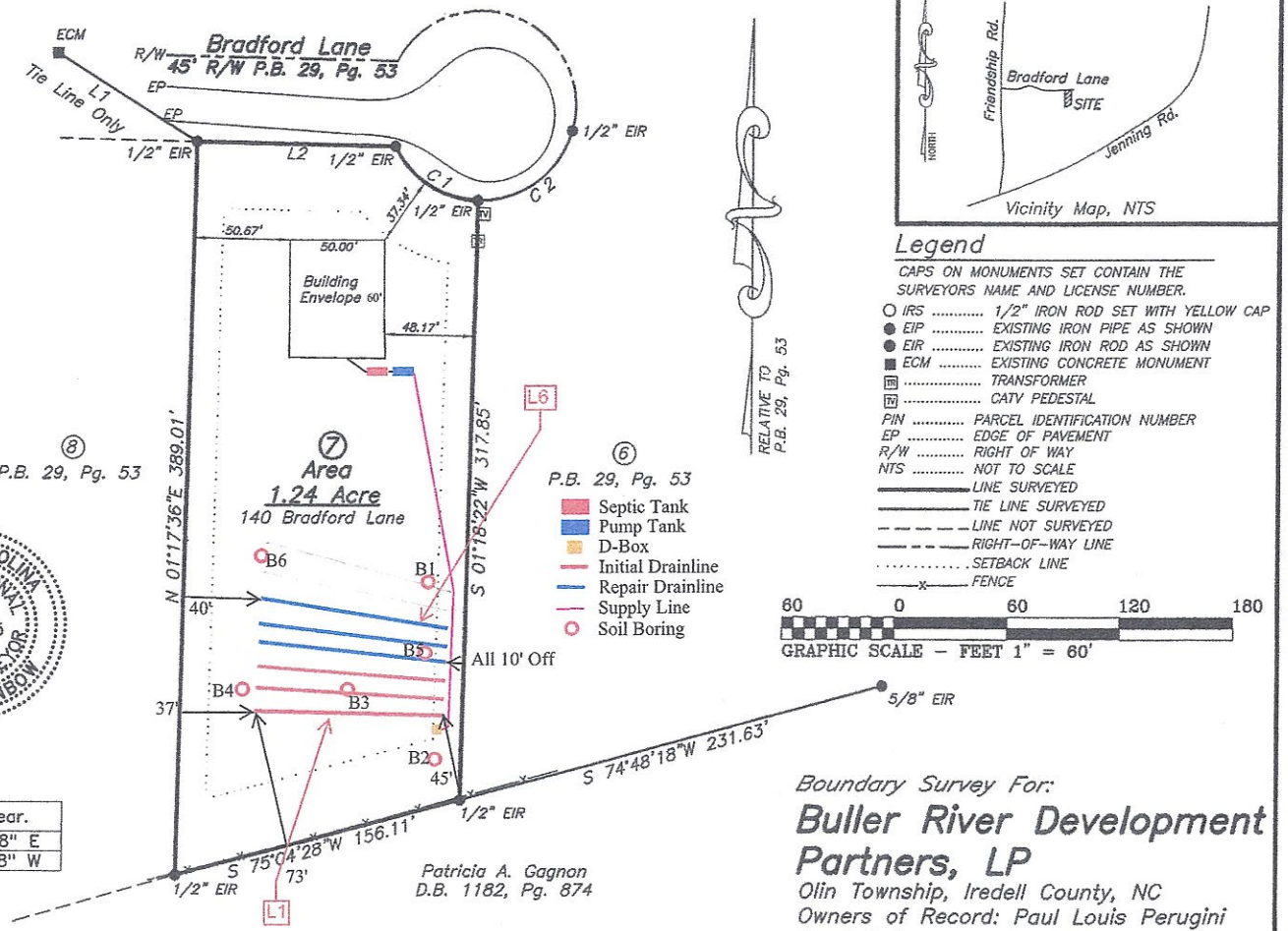
Witness this my original signature, registration number and seal this 13th day of May, 2021 A.D.

Ted M. Benbow NC PLS L-3175
Firm License # C-1588

NORTH CAROLINA PROFESSIONAL SEAL L-3175 LAND SURVEYOR TED M. BENBOW

Course	Bearing	Distance
L1	S 57°50'50" E	87.60'
L2	S 88°42'16" E	105.41'

Curve	Radius	Length	Chord	Chord Bear.
C1	50.00'	55.14'	52.39'	S 56°58'58" E
C2	50.00'	66.41'	61.64'	S 53°19'38" W



Legend

CAPS ON MONUMENTS SET CONTAIN THE SURVEYORS NAME AND LICENSE NUMBER.

- IRS ..... 1/2" IRON ROD SET WITH YELLOW CAP
- EIP ..... EXISTING IRON PIPE AS SHOWN
- EIR ..... EXISTING IRON ROD AS SHOWN
- ECM ..... EXISTING CONCRETE MONUMENT
- TR ..... TRANSFORMER
- TV ..... CATV PEDESTAL
- PIN ..... PARCEL IDENTIFICATION NUMBER
- EP ..... EDGE OF PAVEMENT
- R/W ..... RIGHT OF WAY
- NTS ..... NOT TO SCALE
- LINE SURVEYED
- TIE LINE SURVEYED
- LINE NOT SURVEYED
- RIGHT-OF-WAY LINE
- SETBACK LINE
- x FENCE

60 0 60 120 180
GRAPHIC SCALE – FEET 1" = 60'

Zoning

ZONING: RA(Iredell County)
Building Setbacks
Front – 35'
Side – 15'
Rear – 35'

Flood Hazard Area Certificate

According to mapping provided by the Federal Emergency Management Agency and shown on the Digital Flood Insurance Rate Map (DFIRM) Panel 4749, Iredell County, North Carolina, effective date: 3/18/2008, the property shown hereon is not located within a special flood hazard area. The property is entirely within an area designated "Zone X – other areas". Areas determined to be outside the 0.2% annual chance floodplain: areas outside future conditions 1% annual chance floodplain.

TED BENBOW Land Surveying
Proudly Surveying Iredell County Since 1989
630 SIGNAL HILL DRIVE EXT., STATESVILLE, NC 28625
PHONE (704) 878-9661
www.boundarydevelopment.com

Boundary Survey For:

Buller River Development Partners, LP

Olin Township, Iredell County, NC
Owners of Record: Paul Louis Perugini
Deed Reference: D.B. 1905, Pg. 1221
Plat Reference: P.B. 29, Pg. 59
PIN: 4749-64-5640
Job Number:2105123.DWG (2105124.CRD)
Field Work: 5-12-2021
Plat Date:5-13-2021

6. The maximum trench depth for this system shall be **24 inches**. Each trench shall be placed on a minimum of 9-foot on centers.

Initial & Repair Systems - 140 Bradford Lane								
Field Line #	Color	Initial/Repair	Field Length	System Length	Setup #1	Setup #2	Setup #3	Relative Elevation
1	Y	Initial	100	100	5.34			111.51
2	W	Initial	100	100	6.22			110.63
3	B	Initial	100	100	7.35			109.5
4	R	Repair	100	100	8.05			108.8
5	Y	Repair	100	100	8.25			108.6
6	W	Repair	100	100	8.5	4.72		108.35
				Proposed Pump Tank			8.83	100

F. Proper Operation Check

1. After all components of the wastewater disposal system have been installed and connected, the system shall be checked for proper operation.

G. Final Landscaping

1. The drainfield shall be shaped to shed rainwater and be free from low spots.
2. The entire area of the drainfield should be planted with grass as soon as possible to prevent erosion. The soil should be properly tilled, limed (if necessary) and fertilized prior to planting. After applying grass seed, the area should be heavily mulched with straw or other suitable material.

H. Utility/Drive Conflicts

1. The builder and property owner must take special care in planning for utilities (water, power, gas, telephone, cable lines, etc.). All utilities shall be kept clear of the septic system and its proposed repair area. Improper planning for underground utilities can negatively impact the installation and, in some cases, cause irreparable damage and permit revocation.
2. Water lines must be kept at least ten (10) feet from any portion of the septic system.
3. Irrigation systems should not be placed in the drain field area.

Maintenance

I. Operation and Maintenance

The designed system is classified as a Type III-B/G wastewater treatment and disposal system and does not require ongoing maintenance via a person certified (Certified Subsurface System Operator) by the North Carolina Department of Environment and Natural Resources to operate subsurface wastewater systems (Section .1961 Maintenance of Sewage Systems). However, the following maintenance should be considered by the owner.

1. The septic tank shall be pumped out when the solids within the septic tank reach an elevation that is equivalent to 25% of the volume of the tank. In some situations, the tanks may need to be pumped more frequently; for example, if you are using a

Michael G. Wood, LSS
620 Lee Fox Lane
Hillsborough, NC 27278

PROPERTY ID #: 4749-65-5640
COUNTY: IREDELL

SOIL/SITE EVALUATION
***for* ON-SITE WASTEWATER SYSTEM**

OWNER: BUTLER RIVER DEVELOPMENT PARTNERS
ADDRESS: 118 E. KINGSTON AVE, UNIT 16 CHARLOTTE, NC 28203
PROPOSED FACILITY: RES. PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE: 140 BRADFORD LN, STATESVILLE, NC

DATE EVALUATED: 5/22/21
PROPERTY SIZE: 1.24 AC
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) .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	L/4	0-5	GR/sl	VFR/N	—	>40	-	-	PS 0.4
		5-40+	SBK/scl	FR/S					
2	L/5	0-12	GR/sl	VFR/N	-	30	30	-	PS 0.45
		12-19	SBK/cl	FR/N					
		19-30	SBK/l	VFR/N					
		30+	m/l	VFR/N					
3	L/3	0-9	GR/sl	VFR/N	—	36	36	-	PS 0.35
		9-15	SBK/c	FI/S					
		15-36	SBK/cl	FR/S					
		36+	m/cl	FR/S					
4	L/5	0-7	GR/cl	VFR/N	—	>30	-	—	PS 0.3
		7-27	SBK/c	FR/N					
		27-38+	SBK/cl	FR/N					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	III-B 25% Red	III-B 25% Red
Site LTAR	0.30	0.30

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PROV. SUITABLE
EVALUATED BY: M. WOOD, E MORGAN
OTHER(S) PRESENT:

LICENSED SOIL SCIENTIST MICHAEL G. WOOD 1219 STATE OF NORTH CAROLINA

COMMENTS:

SOIL/SITE EVALUATION

(Continuation Sheet-Complete all field in full)

PROPERTY ID #: 4749-65-5640

DATE OF EVALUATION: 5-23-21

COUNTY: IREDELL

140 BRADFORD

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
5	L/5	0-17	GR-SBK/scl	VFR/N	—	>30	—	—	PS 0.3
		17-33	SBK/scl	FR/S					
		33-38+	SBK/SC	FR/S					
6	L/4	0-8	GR/sl	VFR/N	—	>30	—	—	PS 0.3
		8-30	SBK/C	FR/S					
		30-38+	SBK/cl	FR/S					

COMMENTS:

LICENSED SOIL SCIENTIST MICHAEL G. WOOD 1219 STATE OF NORTH CAROLINA

Initial System Design Specifics

Daily Design Flow:	360 GPD 3-bedroom house
Septic Tank Size:	1,000 Gallons (minimum)
Pump Tank Size:	1,000 Gallons (minimum)
Effluent Loading Rate:	0.300 GPD per sq. ft.
Drainfield Type:	Accepted System (25% Reduction)
Maximum Trench Depth:	24 Inches
Supply Size:	2 Inch
Supply Line Length:	Approximately 200 feet
Number of Drainlines:	3
**Drain Lines:	(3) 3' Wide x 100' Long
**Drainline Spacing:	9 Foot on Centers
Total Trench Length:	300 Linear Feet
Distribution Method:	4" SCH80 Pressure Manifold
Number of Taps:	3 (1/2in SCH 40)
Dosing Volume:	127 Gallons
Pump Run Time:	5.94 Minutes
Pressure Head:	2 Feet
Elevation/Friction Head	20.51 Feet
*Pump Requirements:	21.33 GPM at 22.51 Feet TDH
Recommended Pump:	Zoeller 130 Series or equiv.

* Total Dynamic Head (TDH) for system is estimated based upon existing elevations, approximate pump off elevation, design pressure head and supply line length. Total Dynamic Head should be reconfirmed by septic contractor at the time of system installation based upon actual tank depth and pressure manifold height.
** See drainfield layout for site locations and more details.

Repair System Design Specifics

Effluent Loading Rate:	0.300 GPD per sq. ft.
Drainfield Type:	Accepted System (25% Reduction)
Maximum Trench Depth:	24 Inches
Supply Size:	2 Inch
Supply Line Length:	Approximately 170 feet
Number of Drainlines:	3
**Drain Lines:	(3) 3' Wide x 100' Long
**Drainline Spacing:	9 Foot on Centers
Total Trench Length:	300 Linear Feet
Distribution Method:	4" SCH80 Pressure Manifold
Number of Taps:	3 (1/2in SCH 40)
Dosing Volume:	127 Gallons
Pump Run Time:	5.94 Minutes
Pressure Head:	2 Feet
Elevation/Friction Head	17.47 Feet
*Pump Requirements:	21.33 GPM at 19.47 Feet TDH
Recommended Pump:	Zoeller 130 Series or equiv.

* Total Dynamic Head (TDH) for system is estimated based upon existing elevations, approximate pump off elevation, design pressure head and supply line length. Total Dynamic Head should be reconfirmed by septic contractor at the time of system installation based upon actual tank depth and pressure manifold height.
** See drainfield layout for site locations and more details.

Residential Subsurface Wastewater Treatment and Disposal System Proposal

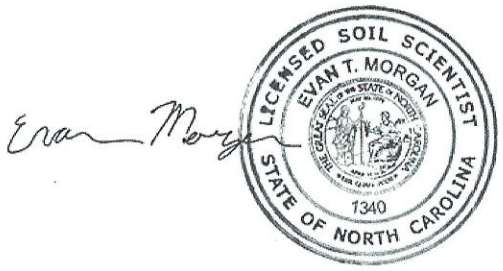
for

140 Bradford Lane
Olin Township, Iredell County, NC

PIN # 4749-64-5640
August 3, 2021

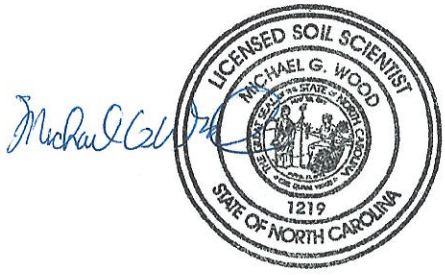
Prepared for:

Stan W Pressley
Cornerstone III Properties
704-301-3229
Stan@cornerstone3p.com



Prepared by:

Michael G. Wood, LSS
Evan T. Morgan, LSS
620 Lee Fox Lane
Hillsborough, NC 27278
Phone: 919-417-8027



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).

SL-2018-114 LSS Evaluation

140 Bradford Lane

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).

Owner's Signature — Date 6/24/21

Owner's Legal Representative Signature — Date 6/24/21

LSS Signature — Date 6/21/21

LICENSED SOIL SCIENTIST
MICHAEL C. WOOD
3219
STATE OF NORTH CAROLINA

*Septic installer must be preapproved by Michael Wood.
*Septic drainfield area must be protected from construction traffic and grading throughout the life of the project. Orange barrier fencing is recommended to protect the septic drainfield area.

Details

Cornerstone III Properties has contracted with Michael G. Wood, LSS to prepare Session Law 2018-114 Section 11 (c) septic proposal for a new 3-bedroom single family residence to be located at 140 Bradford Lane, Olin Township, North Carolina (Iredell County Parcel Number: 4749-64-5640).

Based upon a soils investigation performed by Michael G. Wood, LSS, it has been determined that a sufficient amount of "Suitable" Group IV soils is available for the installation of a **Pump to Pressure Manifold "Accepted System"** for the initial system and repair system at a 0.30 GPD/ft. sq. long term acceptance rate (LTAR).

Cornerstone Properties requests that Iredell County Environmental Health (ICEH) issue the appropriate permits for a subsurface wastewater treatment and disposal system based upon the following proposal and the enclosed Licensed Soil Scientist Evaluation. The LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11. (c).

Location

From Statesville, take I-77 north to Exit 59. Turn left onto Tomlin Mill Road and then left where it ends on Jennings Road. Take first right onto Friendship Road. In half a mile, right onto Bradford Lane. 140 Bradford Lane is on the right.

References

Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A, Section .1900, December 6, 2018.

Primary Investigator's Credentials

NC Licensed Soil Scientist No. 1219
NC Licensed Soil Scientist No. 1340

Plans and Specifications

A. Septic Tank

1. The septic tank shall be State approved (Section .1953 of 15A NCAC 18A), watertight, structurally sound, and 1,000 gallons in capacity.
2. The septic tank will be fitted with an approved effluent filter and riser for easy access and periodic maintenance.
3. It is the responsibility of the septic contractor to thoroughly inspect the septic tank prior to accepting delivery to assure that the tank has had time to properly cure and is free of cracks or other structural deficiencies.

B. Pump Tank

1. The pump tank shall be State approved, of one-piece construction, watertight, structurally sound and 1,000 gallons capacity. Again, it is the responsibility of the septic tank contractor to thoroughly inspect each pump tank prior to accepting delivery.
2. All pipe penetrations into the tank shall be booted (i.e., C-293 boot with a stainless-steel strap).
3. The pump tank shall have access risers that extend, at a minimum, 6 inches above finished grade and must have less than 36 inches of fill over its top once finished grade has been established (a reinforced concrete tank will be required if finished soil cover is 36 inches or greater in depth).
4. Floats, pump and control circuits, and the control panel shall meet the requirements of Rule .1952(c). Panel and control equipment shall include lightning protection, be protected from unauthorized access, and always remain accessible to the system operator.
5. The pump and alarm controls shall be provided with manual circuit disconnects within a watertight, corrosion resistant, NEMA 4x rated control panel. The control panel must be securely mounted outside, adjacent to the pump tank riser and at a minimum of 12 inches above finished grade. Pump and float control wiring should be long enough to reach from the tank to the control panel without splicing, routed through wire conduit, and sealed at the openings within the pump tank as well as the control panel enclosure. It is paramount that the conduit is properly sealed to prevent the escape of flammable gases from the pump tank. Furthermore, there must be two electrical circuits for the pump tank controls: one for the pump and one for the alarm controls.
6. Float switch tie downs must be made of a corrosion resistant material (per OWPS, all metal in the tanks shall be stainless steel). Floats should be mounted on a separate "float tree" rather than the pump supply line (see pump tank detail).
7. The pump removal system will be via a pump tether made of nylon rope or its equivalent. The tether material should be resistant to mildew and rot.

C. Pipes and Fittings

1. All discharge piping, connectors and supply lines should be made of SCH 40 PVC.
2. All joints must be properly "welded" utilizing the appropriate PVC cement for each application.
3. The supply line from the pump tank to the pressure manifold shall be 2-inch Schedule 40 PVC (approximate length of supply line is 200 feet).
4. There shall be a threaded PVC union above each pump to facilitate easy removal of the pumps for maintenance or replacement.

D. Distribution Method – Pressure Manifold

1. The system will be fed by a pressure manifold.
2. The pressure manifold shall be contained within an adequately sized box/vault that will allow future repair lines to be installed and is designed to allow for drainage of effluent that may accumulate in it during flushing and head pressure adjustments. The box should be placed upon a gravel base.
3. A gate valve shall be provided at the pressure manifold to allow for final pressure adjustment (2 foot of head pressure as per design).
4. The pressure manifold shall be constructed of 4" SCH 80 PVC.
5. There shall be 3 taps (SCH. 40 PVC - direct thread or saddle) at ½ inch in diameter
6. The connecting pipe between the pressure manifold taps and the drainfield shall be constructed of PVC.

E. Drainfield Installation

1. The drainfield and the proposed septic tank location have been marked on-site utilizing metal stemmed flags. Once this area has been approved by the County, the property owner/builder should mark this area and isolate it as much as possible from construction traffic. Prior to the system installation, the septic contractor shall contact the County for a preconstruction conference at which time the drainfield area will be re-verified.
2. Under no circumstances shall any construction take place within the drainfield area while the soil is in a wet condition. If the installer has doubts as to whether or not the drain field area is dry enough to begin construction, the environmental health specialist for this area should be contacted for permission to proceed with the installation.
3. The specified system is a Type III-B/G pump to pressure manifold to "Accepted Systems" drainline.
4. The initial drain field consists of three (3) lateral trenches 3 feet wide by 100 feet in length.
5. It is essential that the lateral trenches be constructed on contour with the land, with each trench being excavated level from beginning to end. The use of a tripod mounted engineer's level is essential to assure that each trench is constructed as level as possible.

garbage disposal, it is recommended that the septic and pump tanks be cleaned out annually.

2. The effluent filters should be inspected semi-annually. When it becomes necessary to clean the effluent filters, the filters should be removed and the accumulated debris washed back into the septic or pump tank – not onto the lawn.
3. All piping and valves should be inspected semi-annually for damage and corrections/repairs made immediately.
4. The drain field area should be maintained to prevent overgrowth of vegetation. Any damp areas, leakages or malfunctions should be addressed immediately.
5. Divert gutter downspouts and surface water runoff away from the septic and pump tanks.

J. Suggestions to the Homeowner

1. A garbage disposal is not recommended. The ground up garbage adds large amounts of solids into a septic tank that tend to degrade at a very slow rate.
2. Grease, cooking oils, coffee grounds and non-degradable solids (disposable diapers, cigarettes and solid paper wastes) should never be put into a septic tank.
3. Used motor oil or any oily liquids should not be disposed of in a septic tank.
4. Be aware of the amount of water that you are using in your home. Water saving fixtures and devices can be installed on sinks, toilets and showers to reduce the volume of wastewater that you are sending to your drain field.
5. Run dishwashers and washing machines only when you have a full load.
6. Repair leaky faucets and toilets. Small drips equal large volumes of water over time and can over burden your drain field.
7. Do not use chemical additives in your system. Studies have indicated that they do not increase the biological activity that naturally occurs in the septic system and in some cases certain additives have been found to be detrimental to the life of a system.

3 TAP PRESSURE MANIFOLD DESIGN

Name: Michael G Wood

Address: 140 Bradford Lane

# of BDR: 3 **Daily Flow:** 360 gal/day **L.T.A.R.:** 0.300 gal/day/sq.ft

Septic Tank: 1000 gals **Pump Tank:** 1000 gals **Sq. Foot:** 900 **Stone Depth:**

Number of Taps: 3 **Length of Trenches:** 300 ft(See Tap Chart for Details)

Depth of Trenches: 24 in **Manifold Length:** 36 in

Manifold Diameter: 4in sch 80pvc **Tap Configuration: 6 in spacing** 1 **side(s) of manifold**

Supply Line: length: 200 ft **Diameter:** 2 **in sch 40pvc**

Friction Loss + Fitting Loss: 3.00 ft(supply line length + 70' for fittings in pump tank)

Design Head: 2 ft **Elevation Head:** 17.51 ft

Total Head: 22.51 ft **Pump to Deliver:** 21.33 gals/min at 22.51 ft head

Dosing Volume: 127 gals,

Drawdown: 127 gals divided by 20 gals/in = 6.3 inches

TAP CHART

							Design Head:	2	
Pump tank elev.			100.00	Pump elev.	95.00		Manifold elev.	112.51	
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
1	Yellow	See Attached	111.51	100	1/2in SCH 40	7.11	120.00	300	0.400
2	White	See Attached	110.63	100	1/2in SCH 40	7.11	120.00	300	0.400
3	Blue	See Attached	109.50	100	1/2in SCH 40	7.11	120.00	300	0.400
		total	feet =	300	gal/min =	21.33		LTAR =	0.30
% of Dose Vol.		65		Des. Flow	360			(ltar + 5%)	0.32
Dose Volume		127		Pump Run=	16.88			(ltar W/ INOV)	0.40
Dose Pump Time		5.94		Tank Gal/IN	20			(ltar + 5%)	0.42
Drawdown in Inches		6.3		Elev. Head	17.51				
Supply Line Length		200							

Comments:

Hydraulic Profile

Manifold Elevation	112.51	200
Pump tank elev.	100.00	2
Pump elev.	95.00	0

3 TAP PRESSURE MANIFOLD DESIGN - REPAIR SYSTEM

Name: Michael G Wood

Address: 140 Bradford Lane

# of BDR: 3 **Daily Flow:** 360 **gal/day** **L.T.A.R.:** 0.30 **gal/day/sq.ft**

Septic Tank: 1000 **gals** **Pump Tank:** 1000 **gals** **Sq. Foot:** 900 **Stone Depth:**

Number of Taps: 3 **Length of Trenches:** 300 **ft(See Tap Chart for Details)**

Depth of Trenches: 24 **in** **Manifold Length:** 36 **in**

Manifold Diameter: 4in sch 80pvc Manifold **Tap Configuration: 6 in spacing** 1 **side(s) of manifold**

Supply Line: length: 170 **ft** **Diameter:** 2 **in sch 40pvc**

Friction Loss + Fitting Loss: 2.67 **ft(supply line length + 70' for fittings in pump tank)**

Design Head: 2 **ft** **Elevation Head:** 14.80 **ft**

Total Head: 19.47 **ft** **Pump to Deliver:** 21.33 **gals/min at** 19.47 **ft head**

Dosing Volume: 127 **gals,**

Drawdown: 127 **gals divided by** 20 **gals/in =** 6.3 **inches**

TAP CHART

							Design Head:	2	
Pump tank elev.			100.00	Pump elev.	95.00		Manifold elev.	109.80	
line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR
4	Red	See Attached	108.80	100	1/2in SCH 40	7.11	120.00	300	0.400
5	Yellow	See Attached	108.60	100	1/2in SCH 40	7.11	120.00	300	0.400
6	White	See Attached	108.35	100	1/2in SCH 40	7.11	120.00	300	0.400
		total	feet =	300	gal/min =	21.33		LTAR =	0.30
% of Dose Vol.		65		Des. Flow	360			(ltar + 5%)	0.32
Dose Volume		127		Pump Run=	16.88			(ltar W/ INOV)	0.40
Dose Pump Time		5.94		Tank Gal/IN	20			(ltar + 5%)	0.42
Drawdown in Inches		6.3		Elev. Head	14.80				
Supply Line Length		170							

Comments:

Hydraulic Profile

Manifold Elevation	109.80	170
Pump tank elev.	100.00	2
Pump elev.	95.00	0

St. Charles "A" RECEIVED NOV 16 2021

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

AP-318822

Iredell County Health Department – Environmental Health Division

Paid $500.00

PAGE 1: *APPLICATION FORM*

SEPTIC

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

FP W/ EXISTING PERMIT

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
( ) Custom Site Plan, scaled no more than 1 inch = 60 feet

Place an (X) beside whichever is submitted if applicable

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: BUFFER 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: 140 BRADFORD LANE PIN# 4749-64-5640

Subdivision Name: BRADFORD ACRES Section/Phase: _____ Lot Number: 6

Driving Directions: JENNING RD SOUTH / RT. ON FRIENDSHIP RD / RT. ON BRADFORD LN. / LOT ON RIGHT

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

CHECK FOUNDATION TYPE

(Y) New Single Family Residence — Maximum Number of Bedrooms: 3 — (Y) Crawl Space Foundation
( ) New Multi-Family Residence — Maximum Number of Occupants: 3 — ( ) Concrete Slab Foundation
( ) Accessory Building — ( ) Swimming Pool — ( ) Basement with Plumbing
( ) Bedroom(s) Addition — ( ) Other Addition/Structure: _____ — ( ) Basement without Plumbing
( ) 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: _____

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

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

Please answer the following to the best of your ability:
( ) Yes (Y) No Does the site contain any jurisdictional wetlands?
( ) Yes (Y) No Is any non-domestic sewage (i.e. industrial) to be generated?
( ) Yes (Y) 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 Pressley 6/11/21
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/BUFFER RIVER, am the legal owner(s) of the property located at 140 BRADFORD LANE, identified as

PIN (Parcel Identification Number) 4749-64-5640, 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/Buffer River Development — 6/11/21

Signature of Owner(s) — Date

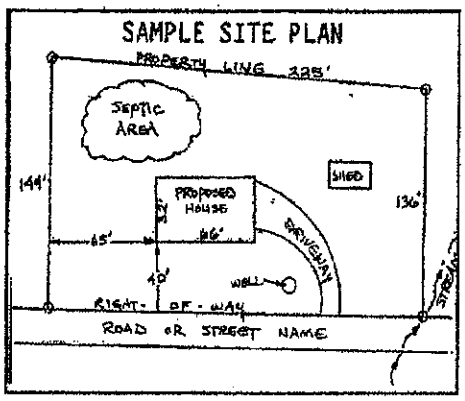
Mooresville - Environmental Health
ronda.hart@co.iredell.nc.us
Fax: 704-662-3239
610 E. Center Avenue, Mooresville, NC 28115

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:

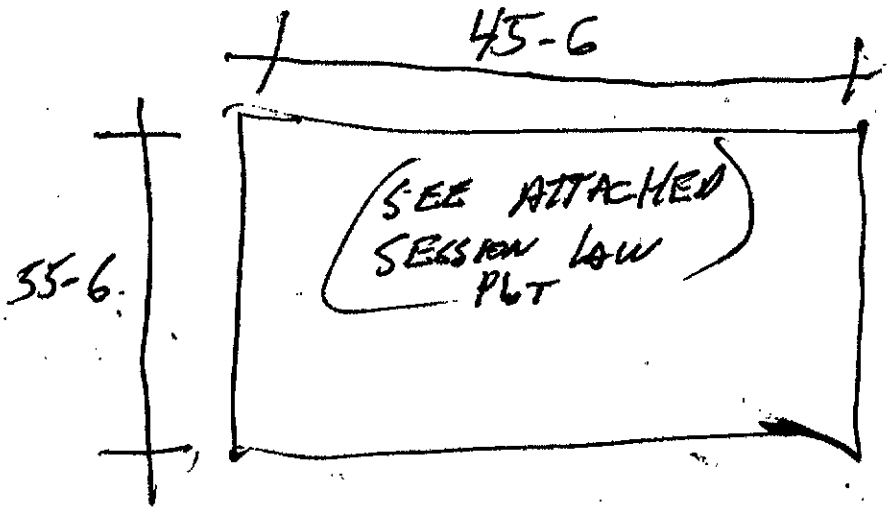
- (X) Property Line measurements are clearly identified
- (X) All proposed structures are indicated
- (X) Front and side setbacks from property line
- (X) Preferred driveway location
- (X) Preferred well location
- (X) Preferred septic system location
- (X) North arrow, or other sufficient indicator 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 Crawley — 6/11/21

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

Notice

* Property subject to any easements and right of way on record, and all NCDOT easements and rights of way.

* This survey is subject to any facts that may be disclosed by a full and accurate title search.

* This survey plat does not show any unrecorded, written or unwritten easements, dedications or other encumbrances. Such burdens could exist on this property and not appear on this plat. Accordingly, users of this plat are warned to remain alert for the existence of such unrecorded burdens not shown hereon.

* This plat was drawn for the exclusive use of the party named hereon. Said certificates do not extend to any unnamed person without an express recertification by the surveyor naming said person.

* This plat represents an actual field survey that meets or exceeds the minimum requirements of a Class C Survey in accordance with the Standards of Practice for Land Surveying in North Carolina according to North Carolina Administrative Code Title 21, Chapter 56, Section 1600.

* The ratio of precision before any adjustments is 1:6,841.

* Area determined by coordinate computations.

* No NGS or NCGS Horiz. Control Monument found within 2,000 feet of the site.

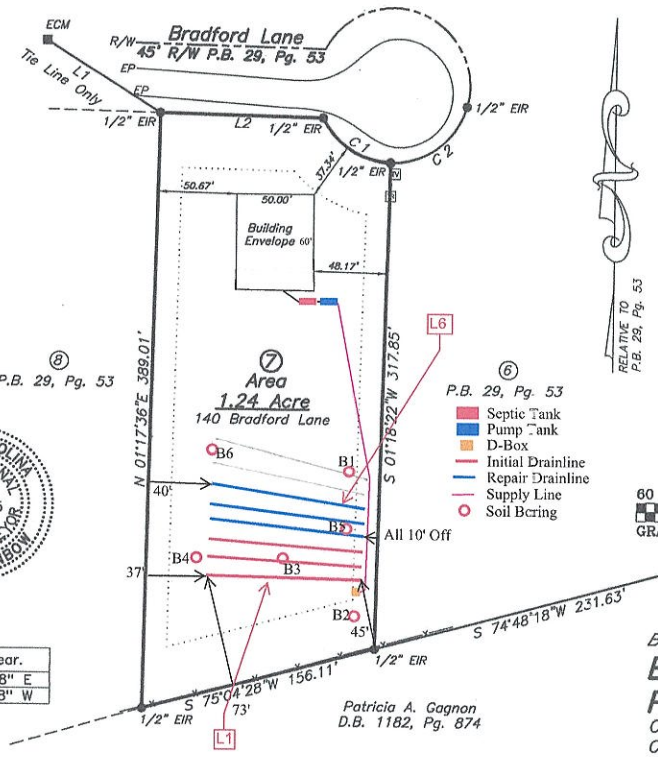
Witness this my original signature, registration number and seal this 13th day of May, 2021 A.D.

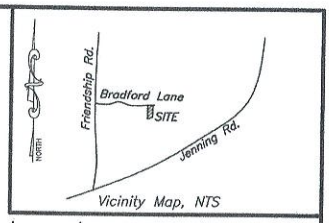
Ted M. Benbow NC PLS L-3175
Firm License # C-1588

NORTH CAROLINA PROFESSIONAL SEAL L-3175 LAND SURVEYOR T.E.D. M. BENBOW

Course	Bearing	Distance
L1	S 57°50'50" E	87.60'
L2	S 88°42'16" E	105.41'

Curve	Radius	Length	Chord	Chord Bear.
C1	50.00'	55.14'	52.39'	S 56°58'58" E
C2	50.00'	66.41'	61.64'	S 53°19'38" W





Legend

CAPS ON MONUMENTS SET CONTAIN THE SURVEYORS NAME AND LICENSE NUMBER.

- IRS ..... 1/2" IRON ROD SET WITH YELLOW CAP
- EIP ..... EXISTING IRON PIPE AS SHOWN
- EIR ..... EXISTING IRON ROD AS SHOWN
- ECM ..... EXISTING CONCRETE MONUMENT
- TR ..... TRANSFORMER
- TV ..... CATV PEDESTAL
- PIN ..... PARCEL IDENTIFICATION NUMBER
- EP ..... EDGE OF PAVEMENT
- R/W ..... RIGHT OF WAY
- NTS ..... NOT TO SCALE
- LINE SURVEYED
- TIE LINE SURVEYED
- LINE NOT SURVEYED
- RIGHT-OF-WAY LINE
- SETBACK LINE
- FENCE

60 0 60 120 180
GRAPHIC SCALE - FEET 1" = 60'

TED BENBOW Land Surveying
Proudly Surveying Iredell County
Since 1989
630 SIGNAL HILL DRIVE EXT., STATESVILLE, NC 28625
PHONE (704) 878-9661
www.boundarydevelopment.com

Zoning

ZONING: RA(Iredell County)
Building Setbacks
Front - 35'
Side - 15'
Rear - 35'

Flood Hazard Area Certificate

According to mapping provided by the Federal Emergency Management Agency and shown on the Digital Flood Insurance Rate Map (DFIRM) Pane: 4749, Iredell County, North Carolina, effective date: 3/18/2008, the property shown hereon is not located within a special flood hazard area. The property is entirely within an area designated "Zone X - other areas". Areas determined to be outside the 0.2% annual chance floodplain: areas outside future conditions 1% annual chance floodplain.

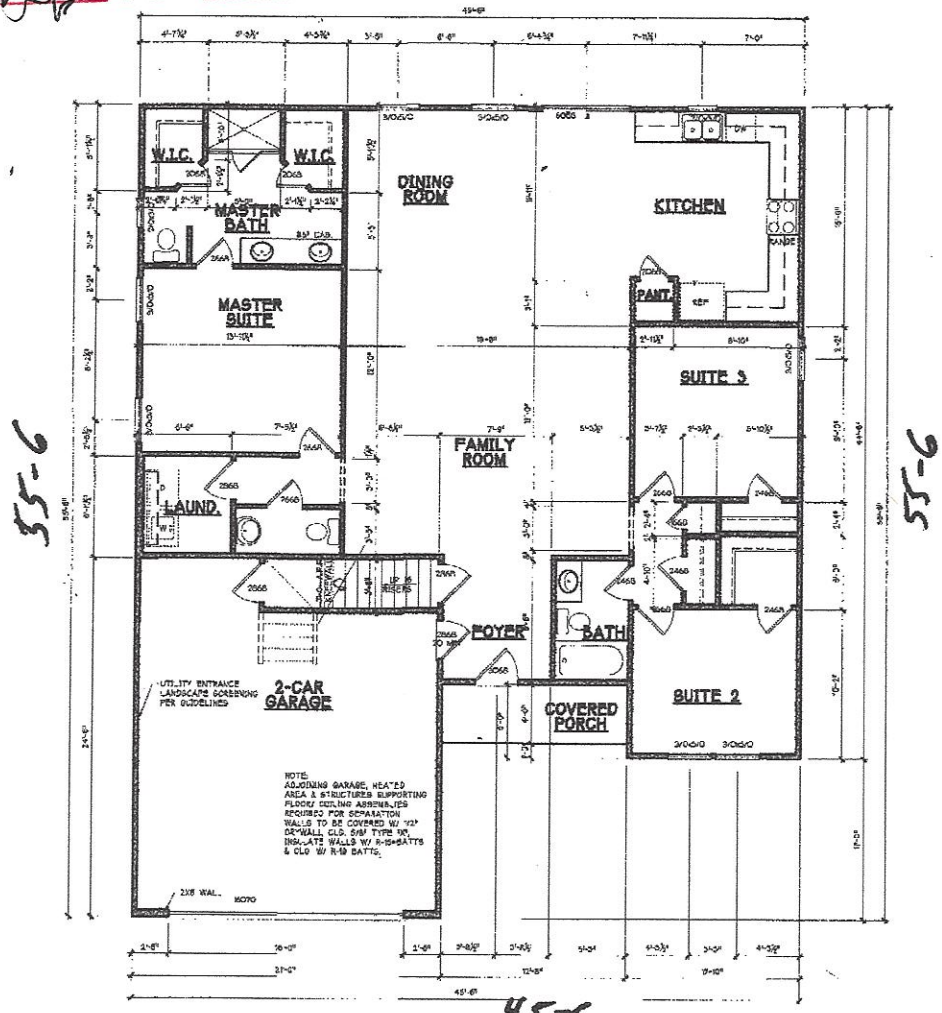
Boundary Survey For:

Buller River Development Partners, LP

Olin Township, Iredell County, NC
Owners of Record: Paul Louis Perugini
Deed Reference: D.B. 1905, Pg. 1221
Plat Reference: P.B. 29, Pg. 59
PIN: 4749-64-5640
Job Number:2105123.DWG (2105124.CRD)
Field Work: 5-12-2021
Plat Date:5-13-2021

Acknowledgement Of
Plans Submittal ONLY!
Stan Date 12/2/21
Date

45-6



55-6

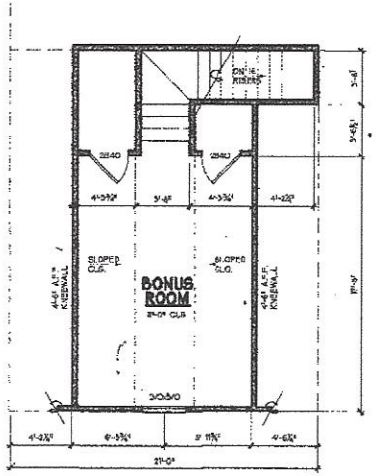
55-6

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:

- PLUS 4" OR 6" EXTERIOR WALL BRICK LEDGE 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" DFF. MUST HAVE WOOD & MAY BE SUBJECT TO FALL PROTECT RULE.
- ALL SHEETROCK OPENING SHALL BE 12" BELOW CEILING TYP. UNO.
- ALL PANTRY/LINEN SHALL HAVE (5) 12" SHELVES TYP. UNO.



2/4.0 SECOND FLOOR PLAN
SCALE: 1/4"=1'-0" (11"X17" SHEET SIZE)
SCALE: 1/4"=1'-0" (22"X36" SHEET SIZE)

SQUARE FOOTAGE

1ST FLR:	1848 SQ. FT.
2ND FLR:	928 SQ. FT.
TOTAL HEATED:	2714 SQ. FT.
FRONT PORCH:	44 SQ. FT.
TOTAL UNHEATED:	44 SQ. FT.
2-CAR GAR:	487 SQ. FT.
TOTAL UNDER ROOF:	2655 SQ. FT.

CORNERSTONE III PROPERTIES
4508 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 PRESLEY
FILE NUMBER: 20-230Y.CHARLES

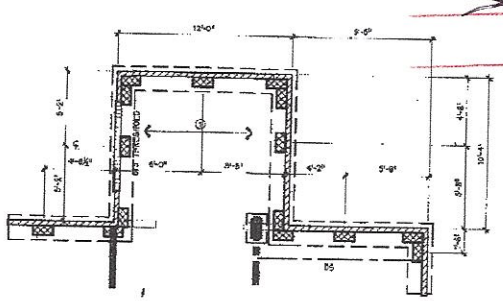
SHEET TITLE
ELEV - FLOOR PLAN

SHEET NUMBER
4.0A

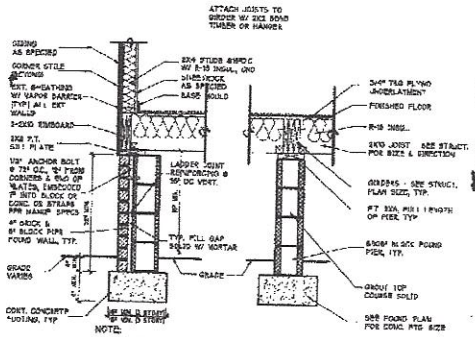
Acknowledgement Of
Plans Submittal ONLY!
Stan Pressley Date 12/2/21
Date

"A"
ELEVATION

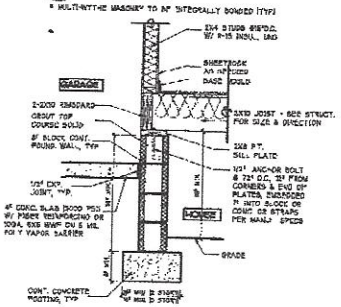
45-6



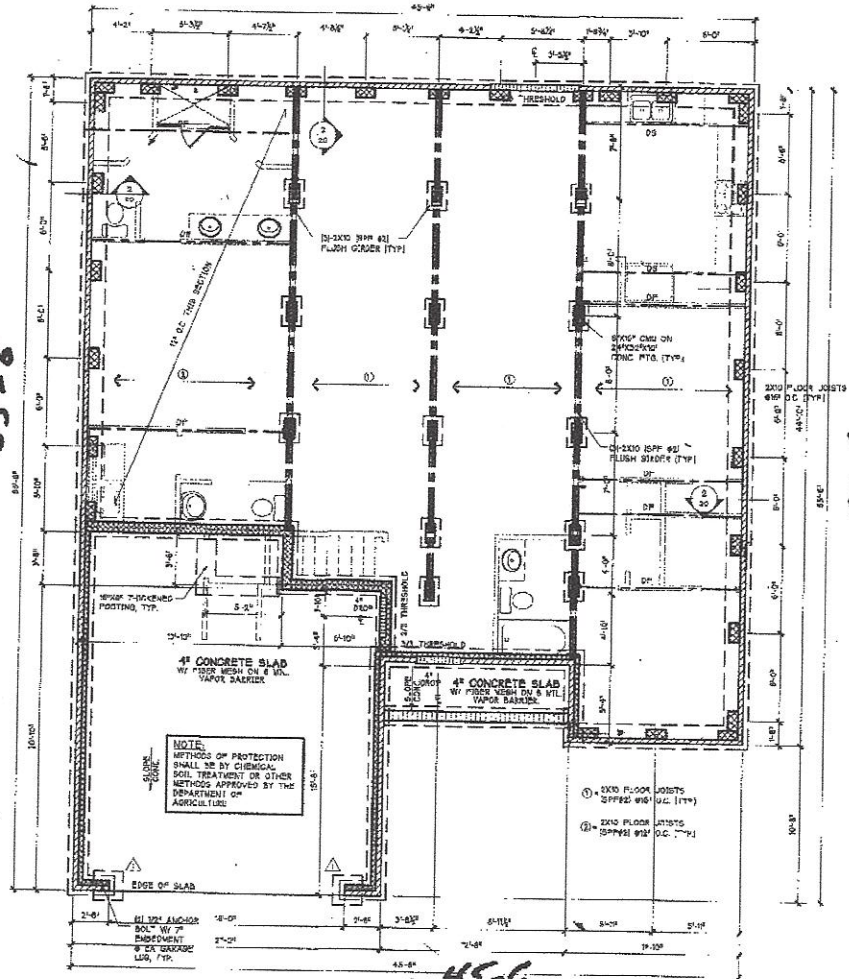
2/20 OPT. SUNROOM FOUNDATION PLAN
SCALE: 1/4"=1'-0" (24"X36" SHEET SIZE)
SCALE: 1/8"=1'-0" (12"X18" SHEET SIZE)



3/20 MAIN HOUSE - CRAWL W/ SIDING DETAIL



4/20 TYP. GARAGE WALL TO HOUSE CONNECTOR



55-6

55-6

45-6

1/20 ELEVATION "A" & "D" FOUNDATION PLAN
SCALE: 1/8"=1'-0" (24"X36" SHEET SIZE)
SCALE: 1/4"=1'-0" (12"X18" SHEET SIZE)

LEGEND

- 24"X24"x12" CONC. PTG.
- 30"x30"x12" CONC. PTG. W/ 4-#4's EA.
- 32"x32"x12" CONC. PTG. W/ 4-#4's EA.
- 36"x36"x12" CONC. PTG. W/ 4-#4's EA.
- 42"x42"x12" CONC. PTG. W/ 4-#4's EA.
- 42"x42"x14" CONC. PTG. W/ 5-#4's EA.
- 36"x60"x12" CONC. PTG. W/ #4's @ 8" O.C. EA.
- 42"x48"x18" CONC. PTG. W/ #4's @ 8" O.C. EA.
- 48" Ø CAISSON, TYP.

FOUNDATION NOTES:

- ALL ANGLED WALL ARE 45 DEGREES OR 90 DEGREES UNLESS NOTED OTHERWISE
- GARAGE SLAB TO BE 4" THICK CONCRETE (3000 PSI MIN) W/ FIBER MESH ON 6 MIL. VAPOR BARRIER.
- PROVIDE 6-MIL POLY-VAPOR BARRIER BELOW ALL CONCRETE SLABS.
- WHEN HOUSE IS REVERSED, WASHER AND DRYER HOOKUPS TO REMAIN ORIENTED WITH WASHER ON LEFT AND DRYER ON RIGHT
- CONTRACTOR TO VERIFY ALL DIMENSIONS.
- FOUNDATION DIMENSIONS ARE MEASURED FROM CMU TO CMU OR BRICK. SEE FRAMING PLANS FOR FRAMING DIMENSIONS.
- DO NOT SCALE DRAWINGS FROM PRINTS. PLANS & DETAILS ARE NOT ALWAYS DRAWN TO SCALE. USE DIMENSIONS GIVEN.

NORTH CAROLINA PROFESSIONAL SEAL 041508 ENGINEER SETH J. WHEELER
12/2/21

NORTH CAROLINA RESIDENTIAL STRUCTURES PC No. 3295 CERTIFICATE OF AUTHORIZATION

RESIDENTIAL STRUCTURES, P.C.
3410 N. Davidson St.
Charlotte, N.C. 28205
Seal For Structural Only

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 H.
CHECKED BY: STAN PRESSLEY
FILE NUMBER: 20-0367.CHARLES

SHEET TITLE
ELEV. "A"&"D" FOUNDATION PLAN

SHEET NUMBER
2.0A

IREDELL COUNTY

IREDELL COUNTY

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

APPLICATION NUMBER
318822 Issue Date:

Permit Type: ZONING

Parcel Number	Street Address	Jurisdiction
4749645640.000	140 BRADFORD LN	Iredell County

Owner Information	Applicant Information
Name: PERUGINI PAUL L Address: , Phone:	Name: CORNERSTONE III PROPERTIES INCc Address: 4509 FAITH CHURCH INDAIN TRAIL, 28 28203 Phone: (704)906-6212

Use Requested	Zone Code
Single Family Dwelling	RA

Lot Acreage	F Setback	B Setback	L Setback	R Setback	Watershed	Flood Zone
1.25	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.

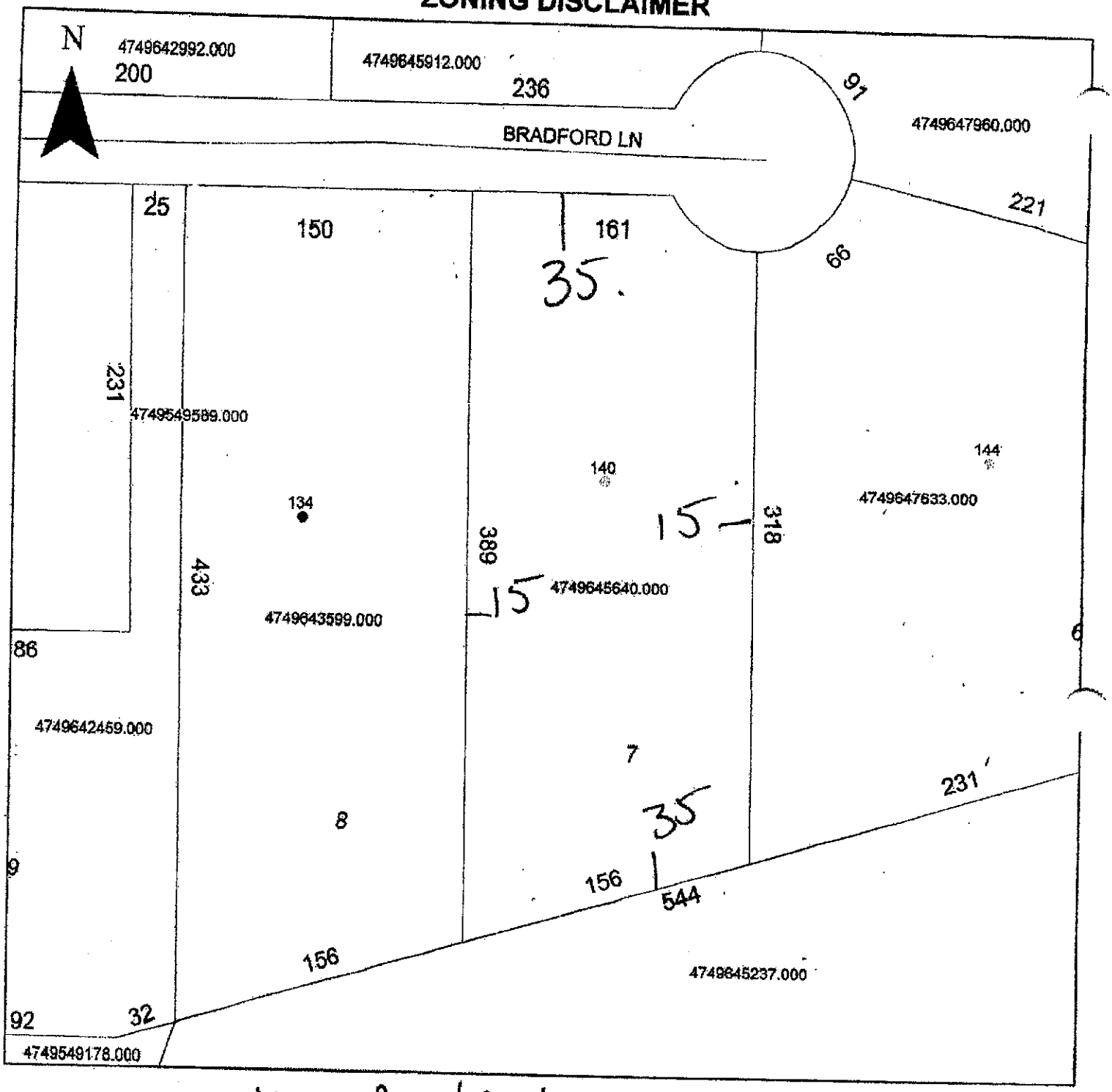
Signature of Owner/Contractor

Date: 06/15/2021

Permit Number	318822

TOTAL FEES:	$77.25

ZONING DISCLAIMER



Property Address 140 Bradford Ln

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. Applicant further acknowledges that the 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.

Stan Lewis

Applicant

6/15/21

Date