ICHD - ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625 PERMIT # AP 324640

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

PIN # 4624 -- 22 -- 3478

APPLICANT/OWNER: Slate Building Group APPLICANT ADDRESS: 19701 Bethel Church Rd Suite 201 Cornelius, NC 28031

SITE ADDRESS: 130 Points End Drive, Mooresville NC 28117 PHONE: 704-997-8253 ALT. PHONE

SITE DIRECTIONS: Brawley School Rd to Points End Drive SAP CONTROLLED: ☐ YES ☒ NO

SUBDIVISION: CC+T SECTION: 6 LOT # 433 LOT AREA: .33 Ac DESIGN FLOW: 480 L.T.A.R. .30

Septic Tank	1000	(gal)	STB	760	Date	4-11-2023	☐ New System ☐ Repair ☒ Expansion	System Type: I II III IV V VI	☒ Residence	No. Bedrooms	4	Water Supply
Pump Tank	1000	(gal)	PT	363	Date	4-19-2023	System Description: PM - PPBPS - 50% Reduction		☐ Business	No. Persons	9	☒ Private
Pump Make	Goulds	Model	WE0312MV	Serial #	—		Repair System Description: TS-11 LP PPBPS - 50% Red		☐ Other	No. Employees		☐ Public
# Nitrification Fields	1	# Lines	2	Linear Ft	134		Maintenance Agreement Required: ☐ YES ☒ NO		☐ Slab	☒ Crawl Space		☐ Community
Trench Width	36in	Trench Bottom Depth	[redacted]		30in	Gravel Depth	☐ GRAVITY ☒ PRESSURE		☐ Basement w/ plumbing	☐ Basement w/o plumbing		

Comments / Conditions: Abandon well/Pump to A/C to close to proposed house addition. If well not Abandoned it will Require Variance

INITIAL SITE SKETCH

Floor plans approved 1/27/22

AS BUILT SKETCH

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

Soil & Forestry, Statesville, NC

LSS # 1251 Dated Dec 5th 2021

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.

Bam 5-23-2023

- TANK
- DRAINLINES
- P.M.
- PRESSURE HEAD
- SUPPLY
- FLOATS
- ALARM

SEE ATTACHED

Electrical SW 8/28/2023
Irrigation capped

→ Remove/Disconnect Irrigation in drainfield; Pump tank riser to be 6" above grade

Well @ 8" in ROW

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**

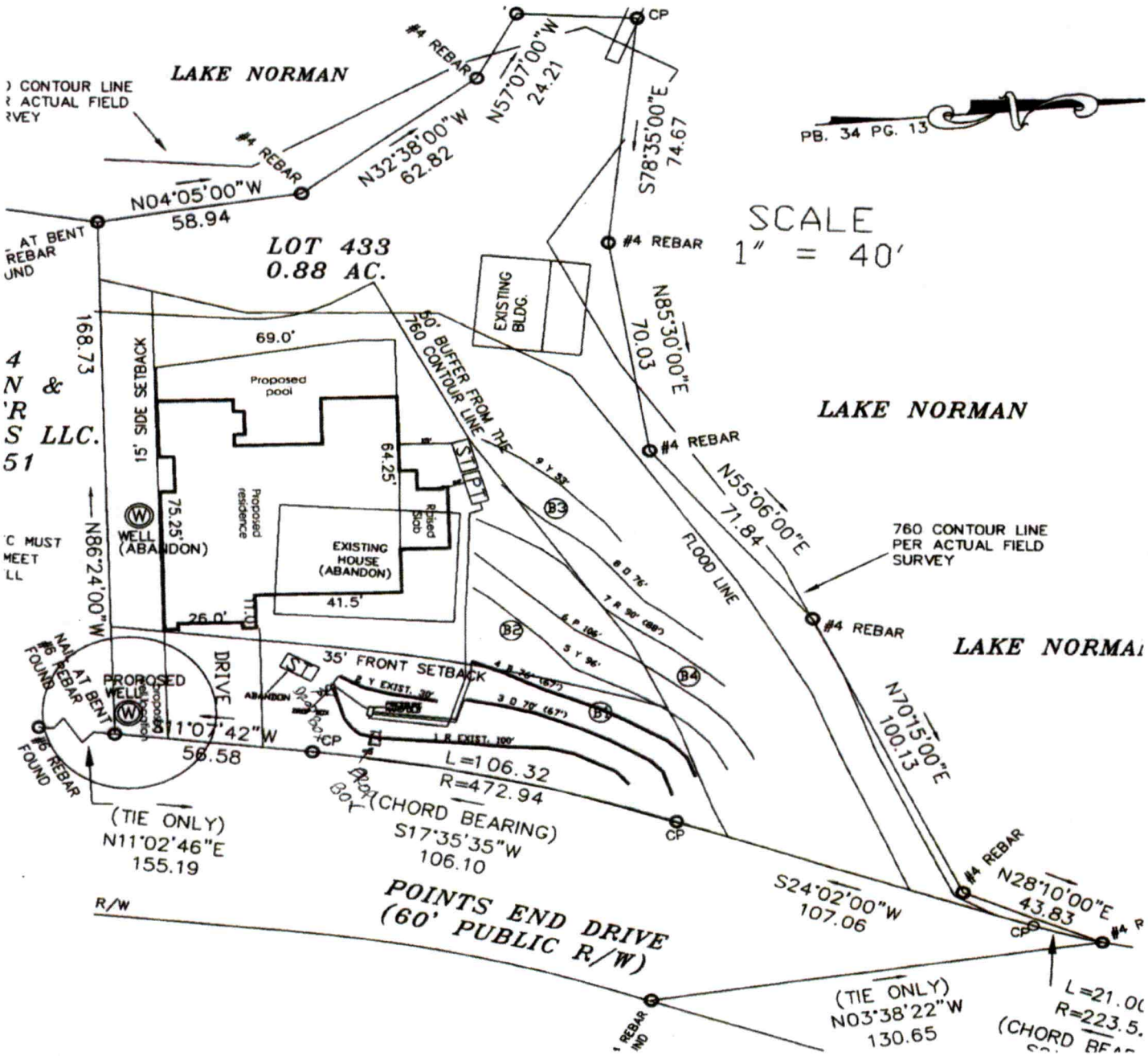
☐ **IMPROVEMENT PERMIT** *with plat valid without expiration* ☒ **IMPROVEMENT PERMIT** *with site plan valid for 60 mos.* ☒ **AUTHORIZATION TO CONSTRUCT** *valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.*

Owner / Applicant Signature: [signature] Date: 1-21-22 Installed by: LENTZ

IMPROVEMENT PERMIT by: [signature] Date: 1/19/2022 OPERATION PERMIT by: Sarah Williams Date: 11/28/23

AUTHORIZATION TO CONSTRUCT by: D. meberg Date: 3/4/22 Existing System Inspected by: Date:

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


LAKE NORMAN
CONTOUR LINE
ACTUAL FIELD
RVEY
#4 REBAR
N04°05'00"W
58.94
N32°38'00"W
62.82
N57°07'00"W
24.21
CP
S78°35'00"E
74.67
PB. 34 PG. 13
SCALE
1" = 40'
LOT 433
0.88 AC.
#4 REBAR
N85°30'00"E
70.03
EXISTING BLDG.
69.0'
168.73
15' SIDE SETBACK
Proposed pool
50' BUFFER FROM THE 760 CONTOUR LINE
STIPT
64.25'
Proposed residence
Raised Slab
EXISTING HOUSE (ABANDON)
41.5'
75.25'
WELL (ABANDON)
N86°24'00"W
26.9'
11.0'
35' FRONT SETBACK
LAKE NORMAN
N55°06'00"E
71.84
760 CONTOUR LINE PER ACTUAL FIELD SURVEY
FLOOD LINE
#4 REBAR
LAKE NORMA
N70°15'00"E
100.13
NAIL AT BENT #6 REBAR FOUND
PROPOSED WELL
DRIVE
S11°07'42"W
56.58
#6 REBAR FOUND
(TIE ONLY)
N11°02'46"E
155.19
POB
POC
L=106.32
R=472.94
(CHORD BEARING)
S17°35'35"W
106.10
CP
S24°02'00"W
107.06
#4 REBAR
N28°10'00"E
43.83
POINTS END DRIVE
(60' PUBLIC R/W)
R/W
(TIE ONLY)
N03°38'22"W
130.65
L=21.0(
R=223.5.

Sheet 1 of 1
PROPERTY ID #: 4624223428
COUNTY: Iredell

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

OWNER: William Lyall
ADDRESS: P.O. Box 5243 Mooresville NC 28117
PROPOSED FACILITY: 4BR
PROPOSED DESIGN FLOW (.1949): 480 gpd.
LOCATION OF SITE: 130 Points End Dr. Mooresville NC 28117
WATER SUPPLY: ☑ Private ☐ Public ☑ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☑ Auger Boring ☐ Pit ☐ Cut
TYPE OF WASTEWATER: ☑ Sewage ☐ Industrial Process ☐ Mixed

APPLICATION DATE
DATE EVALUATED: 01/18/21
PROPERTY SIZE: 0.33 AC
PROPERTY RECORDED: Y/S

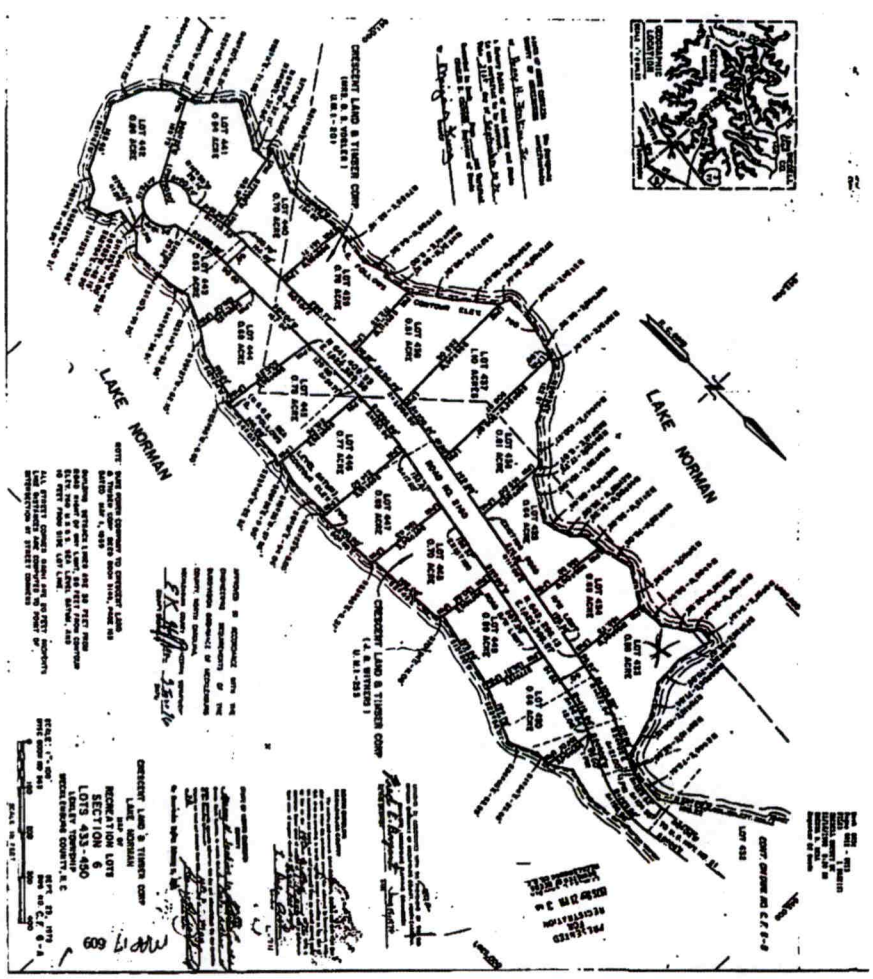
PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
B 1	L/5%	0-7	BCL wfsbk	Fr SS SP SE XP		50	-	-	PS .3-.325
		7-28	BRC wmsbk	Fr SS SP					
		28-50	RBCL wfsbk	Fr SS SP					
B 2	L/4%	0-8	BL Gr	Fr SS SP SE XP		50	-	-	PS .3-.325
		8-13	BCL wfsbk	Fr SS SP					
		13-32	BRC wmsbk	Fr SS SP					
		32-50	RBCL wfsbk	Fr SS SP					
B 3	L/5%	0-5	BL Gr	Fr SS SP SE XP		50	-	-	PS .3-.325
		5-29	BRC wmsbk	Fr SS SP					
		29-50	RBCL wfsbk	Fr SS SP					
B 4	L/5%	0-5	BL Gr	Fr SS SP SE XP		50	-	-	PS .3-.325
		5-28	BRC wmsbk	Fr SS SP					
		28-50	RBCL wfsbk	Fr SS SP	FRI SAP				

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	PS	PS
System Type(s)	Hybrid Existing NBB Expans. PPBPS	PPBPS w/ TS II
Site LTAR	0.3	0.3

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: S. Ashley Rollins
OTHER(S) PRESENT: Chad Wagner

COMMENTS:

324640


LAKE NORMAN
LAKE NORMAN
CRESCENT LAND & TIMBER CORP
CRESCENT LAND & TIMBER CORP
CRESCENT LAND & TIMBER CORP
LAKE NORMAN
RECREATION LOTS
SECTION 6
LOTS 433-450
609

CW

ICHD Environmental Health Division

INSPECTIONS: 704-664-3703 Statesville Office: (704) 878-5305 x3456 - Mooresville Office: (704) 660-3625

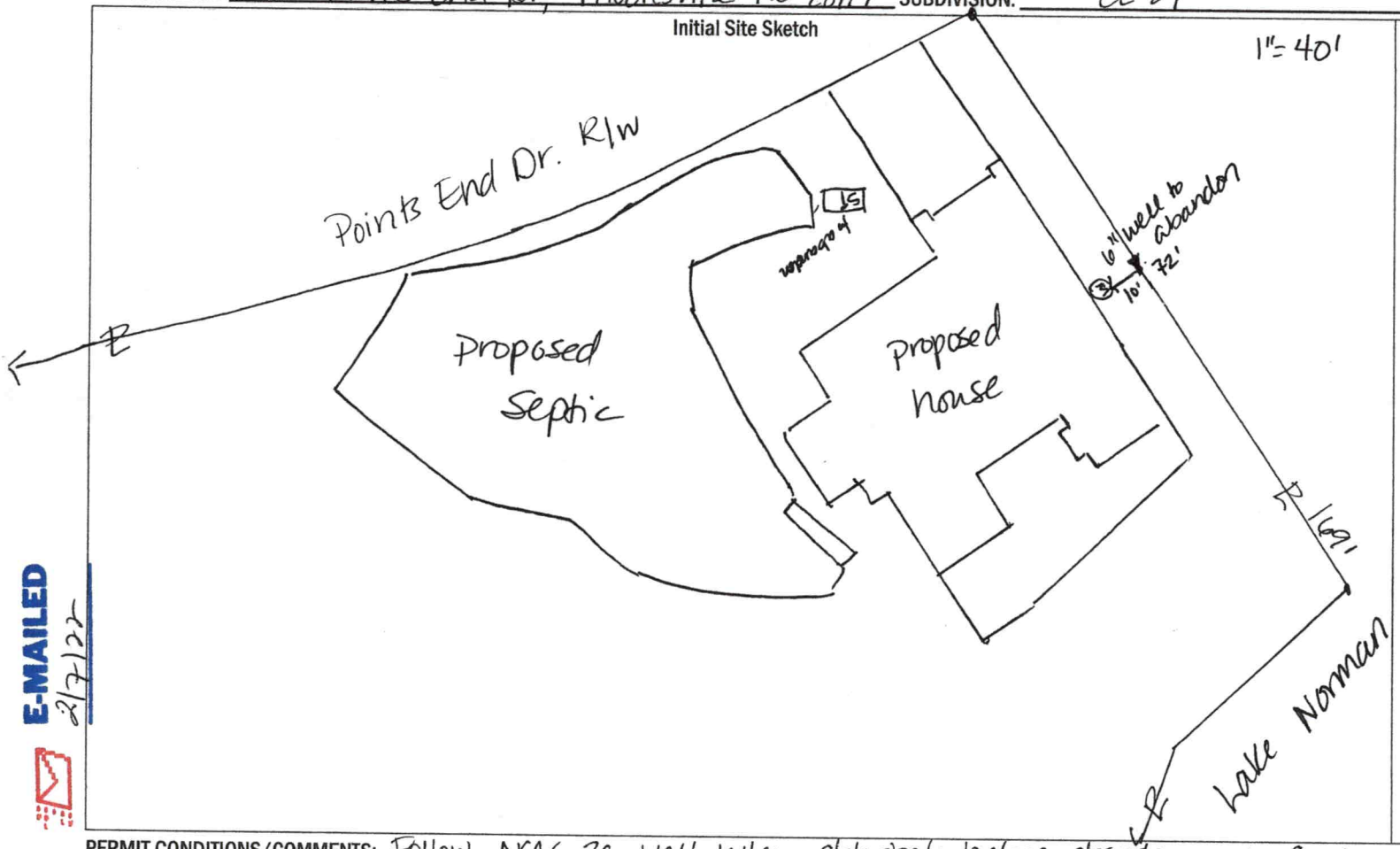
PRIVATE DRINKING WATER WELL PERMIT # 32440 **PIN #** 4624-22-3478 **Type of Permit (circle one):** New Repair **Abandonment**

APPLICANT/OWNER NAME: Slate Building Group ADDRESS: 19701 Bethel Church Rd, Suite 201, Cornelius PHONE: 704-997-8253

DIRECTIONS TO SITE: (W) Brawley School Rd → all the way to the end → lot on (R)

SITE ADDRESS: 130 Points End Dr, Mooresville NC 28117 SUBDIVISION: CL ET SECTION/LOT: 6/433

Initial Site Sketch



GROUTING RESULTS

Total Depth _____

Depth of Casing _____

Yield _____

Notes:

117' bags
Enviro plug
poured

Well GPS Latitude: _____

Longitude: _____

E-MAILED 2/7/22

PERMIT CONDITIONS/COMMENTS: Follow NCAC 2C well rules - chlorinate before abandonment, fill completely w/ approved grout

WELL PERMIT ISSUED BY: D.Wiebez DATE: 2/16/22 (Permit is valid for 5 years from date issued. This permit may be revoked if it is determined there has been a material change in any fact or circumstance upon which the permit is issued. Actions of the employees of the Iredell County Health Department shall in no way be taken as a guarantee that this well will produce water of any particular quantity or quality or for any amount of time. Employees of the Iredell County Health Department assume no liability for any damages, either direct or consequential which may be caused by this well.)

Well Contractor: David Legette - Rockwater CONTRACTOR CERT #: 4544C GROUT INSPECTION BY: D.Wiebez DATE: 2/28/22

OR CERTIFICATION OF GROUT NOT WITNESSED BY DEPT: _____ DATE: _____ WELL HEAD INSPECTION BY: _____ DATE: _____

WELL HEAD INSPECTION (check when completed): GROUT TO GROUND SURFACE ☐ WELL CONTRACTOR ID PLATE ☐ PUMP INSTALLER ID PLATE ☐ SAMPLE PORT ☐

ACCESS PORT / VENT ☐ WELL SEAL ☐ WELL HEAD 12 INCHES / PITLESS ADAPTOR 8 INCHES ABOVE GRADE ☐

CERTIFICATE OF COMPLETION BY: D.Wiebez DATE: 3/1/22 WATER SAMPLES BY: _____ DATE: _____

Attachments: Form GW-1a (required except for abandonment) ☐ Form GW-30 ☒ Water Sample Results ☐ Plat ☐ CALL 704-664-3703 to schedule grout or well head inspections between 8-9am

4

WELL ABANDONMENT RECORD

1. Well Contractor Information:

4544 DAVID LEGGETT
Well Contractor Name (or well owner personally abandoning well on his/her property)

4544 C
NC Well Contractor Certification Number

Rock Water Well
Company Name

2. Well Construction Permit #: 324640
List all applicable well construction permits (i.e. UIC, County, State, Variance, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☒Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☐Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 2/28/2022

5a. Well location:

State Building Group
Facility/Owner Name

Facility ID# (if applicable)

130 Points End Road, Mooresville 28117
Physical Address, City, and Zip

Iredell
County

4624-22-3478
Parcel Identification No. (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

_____ N _____ W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED
Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction/abandonment, you can submit one form.

6a. Well ID#: _____

6b. Total well depth: 330 (ft.)

6c. Borehole diameter: 6 1/4 (in.)

6d. Water level below ground surface: 10' (ft.)

6e. Outer casing length (if known): _____ (ft.)

6f. Inner casing/tubing length (if known): _____ (ft.)

6g. Screen length (if known): _____ (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. For Geoprobe/DPT or Closed-Loop Geothermal Wells having the same well construction/depth, only 1 GW-30 is needed. Indicate TOTAL NUMBER of wells abandoned: _____

7b. Approximate volume of water remaining in well(s): 448 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: Calcium hypo

7d. Amount of disinfectant used: 14 oz

7e. Sealing materials used (check all that apply):

☐ Neat Cement Grout	☒ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☐ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

Bentonite - 5,850 lb (117 Bags)

7g. Provide a brief description of the abandonment procedure:

Cut well casing off 1' Below Grade filled to top with Bentonite

8. Certification:

[signature] 2-28-22
Signature of Certified Well Contractor or Well Owner — Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned.

3246640

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

Project#: 21-0104
December 3rd, 2021

SLATE BUILDING GROUP
Attn: *Brent Zande*
Email: brent.zande@slatebg.com.com

RE: Soil & Site Evaluation for a 4 Bedroom Residence at 130 Points End Drive, CL&T Subdivision, Lot 433, 0.88 ac Parcel, PIN# 4624223478, Mooresville, NC 28117.

Mr. Zande:

At your request Soil & Forestry Services of the Carolinas (S&FS) has performed soil/site evaluations on parcel noted above. The Lot size is noted on the attached survey map & soil evaluation form. The purpose of our work was to identify soil areas with potential to support subsurface wastewater disposal systems and provide design details for Session Law submittal to Iredell County Health Department.

Site Conditions

At the time of our evaluation land cover on the property was mostly open with an existing house, shed, drive, septic and well. Topography within the evaluated area was gently slope near the house site and proposed drainfield area. Property lines and corners were marked at the time of the evaluation by Don Allen Surveying. The surveyor provided an Autocad File of a survey as a basemap. The proposed septic layout was located via Trimble Submeter GPS/tape measures and used to produce the attached *Site Plan*. The proposed house envelope was provided by Slate Building Group.

Methodology

We evaluated soil areas through the use of hand augers. Soil morphological conditions including color, texture, structure, etc. were reviewed in the field with four hand auger locations on the property flagged and located via GPS. All of the hand augers are located in or adjacent to the proposed septic layout. Soil suitability was determined by referencing 15A NCAC 18A.1900 "Laws and Rules for Sewage Treatment and Disposal Systems". *Soil & Site Evaluation Forms* were utilized to record the soil morphological data for each pit. The existing house envelope (to be abandoned) was located via survey. An on-ground layout of system and repair was performed using a laser level. Pin flag locations of the layout were also located by GPS and tape measures. Detailed system & repair information is summarized in the following paragraph for this Lot. The well and existing septic tank is to be abandoned. The existing Conventional Drainfield (2BR) is to be expanded to a 4 bedroom using PPBPS drainlines.

130 Point End Drive (*See Attached Design*)
The existing system was probed and flagged. The conventional lines totaled 130 linear feet. The septic layout for this lot (8' centers) yielded a total of 553 linear feet of line. The primary system expansion is proposed as 134 linear feet of PPBPS drainfield with pressure manifold distribution. Trench depth (LOW SIDE) is specified at 30 inches. The available repair totals 419 linear feet of PPBPS (50% Reduction) drainfield with low pressure distribution. The repair will require TS-II Pretreatment to reduce the horizontal setback to Lake Norman. Trench depth (LOW SIDE) is specified at 30 inches.

Session Law Requirements

An LSS Evaluation may be submitted in conjunction with a complete application to the LHD. The application shall include all information described in 15A NCAC 18A .1937(d) and be accompanied by a signed and dated statement from the applicant (owner or owner's legal representative) that reads as follows:

"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 Date

Print Name BRENT LANDE SLATE BUILDING GROUP LLC
Signature _____ 12-8-21

The LSS Evaluation shall include a statement bearing the LSS seal and signature that reads as follows:

"The LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c)."

Disclaimer
This report reflects the findings of S&FS, PA. *This LSS Evaluation is being submitted pursuant to and meets the requirements of SL 2018-114 Section 11.(c).* Any site modifications or necessary well relocation that impacts the proposed septic areas/Site Plan on 130 Points End Drive, Mooresville, NC 28117 may nullify this design. System design requirements and site requirements shall be adhered to for installation and Operations Permits to be issued by the local Health Department. If you have questions regarding these requirements a Pre-Construction meeting should be scheduled to discuss. Please contact S&FS if you have any questions regarding this report or the attached information. S&FS also offers septic system inspection, wetland delineation and forestry services.

Sincerely,

S. Ashley Rollans, LSS
Attachment: *Septic Design*

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

Attached is a proposed design for an Hybrid (Existing 2BR Conv. & 2BR PPBPS Expansion) Septic System with PressureManifold distribution for a 4 bedroom single family residence at 130 Points End Dr., CL&L Lot 433, (PIN #:4624223478), Mooresville NC, 28117.

Contents: **Page**

Information for the Installer---------- 1

Design Information
- Design Specifications---------- 2-3
- Layout Specifications---------- 4
- System Tapsheet---------- 5
- Pressure Manifold Diagram---------- 6

Site Plan/System Plan---------- 7

Calculations---------- 8

Profile Descriptions---------- 9

Zoning Permit & Receipt---------- 10-12

Application---------- 13-14

Agent Authorization Form---------- 15

Green Sheet---------- 16

Original Plat---------- 17

December 1, 2021
Project No. 21-0104
Design By: Soil & Forestry Services of the Carolinas, PA

INFORMATION FOR THE INSTALLER:

- The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.
- Tanks shall be approved by DHHS, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning trenches.
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as a Hybrid (Existing Conv) & PPBPS installation w/Pressure Man.
- Repair is specified as a PPBPS (wTSII PRETR) installation with Low Pressure Dist.
- Rake trench walls, lime sidewalls, install trenches 24" wide and have no more than 1/4" fall in 10 feet.
- **Existing Septic Tank and Well must be properly abandoned.**

PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant:	Slate Building Group
Address:	19701 Bethel Church Road, Suite 201 Cornelius, NC 28031
Phone:	704.997.8253
County:	Iredell
Location:	130 Points End Dr. Mooresville, NC 28117
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Daily Wastewater Production:	480 gpd
System Flow:	26.72

Design Specifications

Drainfield Size (Expansion Only):	134
Loading Rate:	0.3
Depth of Gravel in Trench:	NA (25% reduction)
Gravel Size:	NA (25% reduction)
Trench Depth:	30 in. Repair Trench Depth 30 in.
Trench Width:	36 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	101
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	17.57
Dosing Volume:	167.42
Supply Manifold:	4 in. SCH 80 PVC
Supply Manifold Length:	4 ft. (minimum)
Supply Manifold Volume:	N/A
Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head:	2 ft.
Friction Head:	1.80
Elevation Head:	8.50
Total Dynamic Head:	14.14
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 at Pressure Manifold
Check Valves:	In Tank
Anti-Siphon Hole:	NA
Additional Comments:	Soil suitability was performed by Soil & Forestry Services of the Carolinas, PA.

130 Points End Dr.
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	480
SOIL APPLICATION RATE:	0.3
TOTAL AREA TRENCH BOTTOM:	658
TOTAL LATERAL LENGTH (Expansion):	134
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	134
SUPPLY LINE LENGTH:	101
TOTAL DYNAMIC HEAD:	14.14
MANIFOLD SIZE:	4 in.SCH 80 PVC
DOSING VOLUME:	167.42
PUMP TANK DRAW DOWN*:	8.0
SEPTIC TANK SIZE:	1000
PUMP TANK SIZE:	1000

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

Layout Specifications - 130 Points End Dr.

Project #: 21-0104

LAYOUT FOR 4 BEDROOM HOME

December 1, 2021

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM							
HOUSE					763.00		
PUMP TANK					763.00		
INSTR. 1							
1	***RED***		***(Existing Conv.)***		***766.50***	***100***	***100***
2	***YELLOW***		***(Existing Conv.)***		***766.20***	***30***	***30***
3	***ORANGE***				***765.30***	***70***	***67***
4	***BLUE***				***764.80***	***76***	***67***
5	YELLOW				764.30	96	96
6	PINK				763.80	106	106
7	RED				763.10	90	88
8	ORANGE				762.50	76	76
9	YELLOW				762.10	53	53
					Total	697	683

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DISTRIBUTION	(LOW SIDE) TRENCH DEPTH
**** System*** 2BR Expansion Only	***134***	***0.300***	***MOD. CONV.***	***0.300***	***PPBPS***	***GRAVITY***	
Repair	419	0.300	MOD. CONV.	0.300	PPBPS w/TSII Pretreat.	LOW PRESSURE	

Notes: **All measures in feet

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

**Nitrification lines were located by GPS.

****Repair Requirement is for 2BR Expansion Only.**

PRESSURE MANIFOLD TAPSHEET - 130 POINTS END DRIVE

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	Trench Area	Line LTAR	#Panels
1	***RED/YELL*** *Existing*	*766.5/766.2*	130	SCH 40 3/4	12.5	390	0.20	
3	***ORANGE***	***765.30***	67	SCH 40 1/2	7.11	201	0.22	15
4	***BLUE***	***764.80***	67	SCH 40 1/2	7.11	201	0.22	15

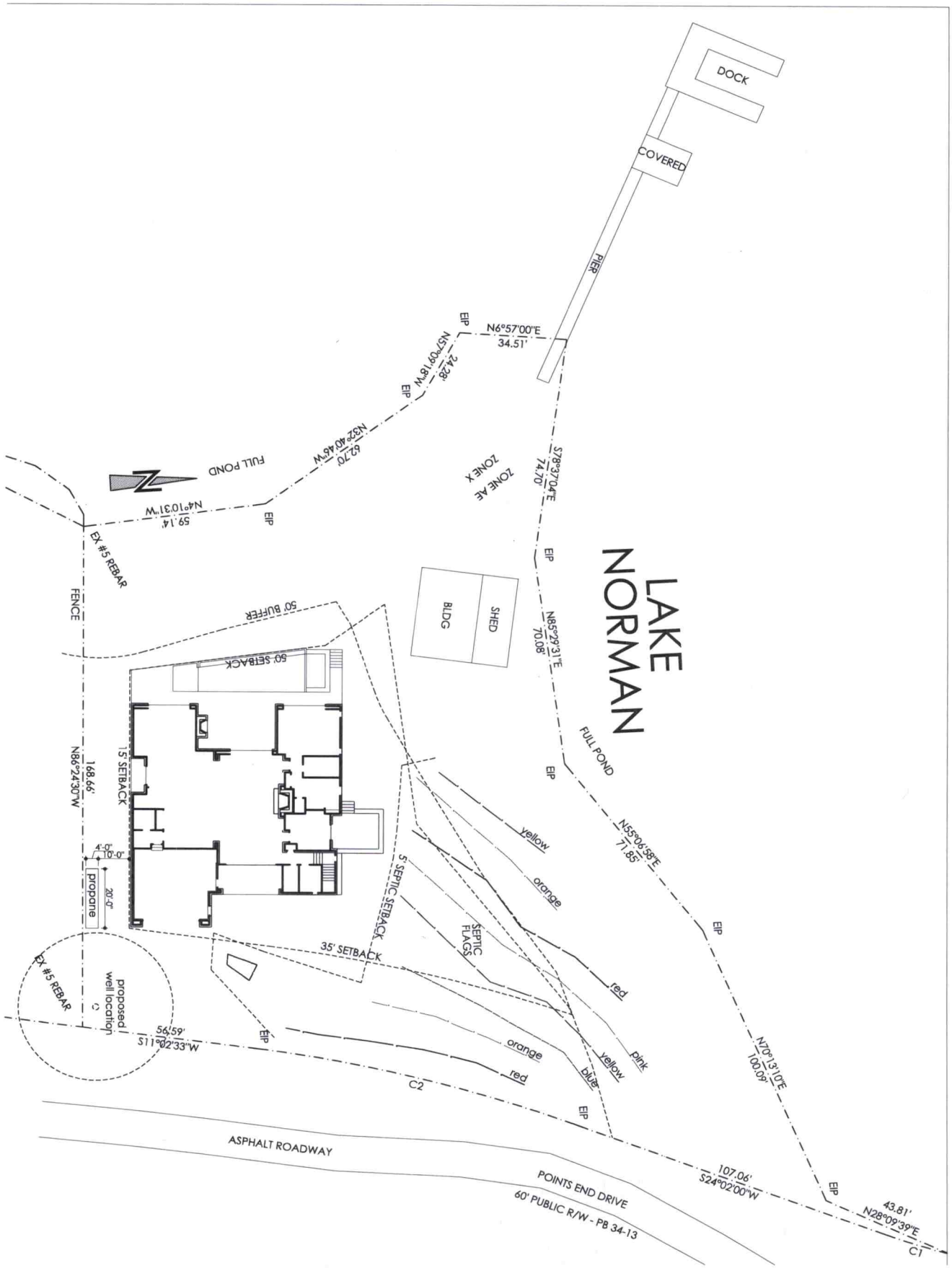
total	**feet =**	**264**	**gal/min =**	**26.72**
		Des. Flow	**480**
		Pump Run=	**6.27**
		soil LTAR	**0.3**
		LTAR +5%	**0.315**
		LTAR with ACCEPTED	**0.4**
		LTAR with ACCEPTED + 5%	**0.42**

CALCULATIONS

Location	130 Points End Dr.	
Project Number	21-0104	
Lot No:	433	
No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.300	$^{gpd/ft^2}$
25% RED.? (YES OR NO)	YES	
Supply Line Length	101	ft.
Supply Line Volume	17.574	gal.
Req'd Feet of Line (Expansion)	134	ft.
Amount of Line from Layout	134	ft.
Gallons per Minute	26.72	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Lateral Line Volume (Existing)	84.89	gal.
Dosing Volume (Existing)	59.42	gal.
	Note:	*Dosing Volume based on 70% of lateral line volume*
Panel Dosing Volume	108	
Total Dosing Volume	167.42	
Tank Draw Down	8.0	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	6.27	minutes
Elevation Head	8.5	ft.
Pressure Head	2	ft.
Friction Factor	1.78	ft./100 ft. *(From the interpolater.)*
Friction Head	1.80	ft.
Total Dynamic Head (+15%)	14.14	ft.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
	-1.28
30	1.78
	-1.76
35	2.37
	-2.25
40	3.03
43.07	3.48
45	3.77
48.14	4.28
50	4.58
57.11	5.89
60	6.42



S

site plan

Ayyad Residence
130 Points End Road
Mooresville, NC

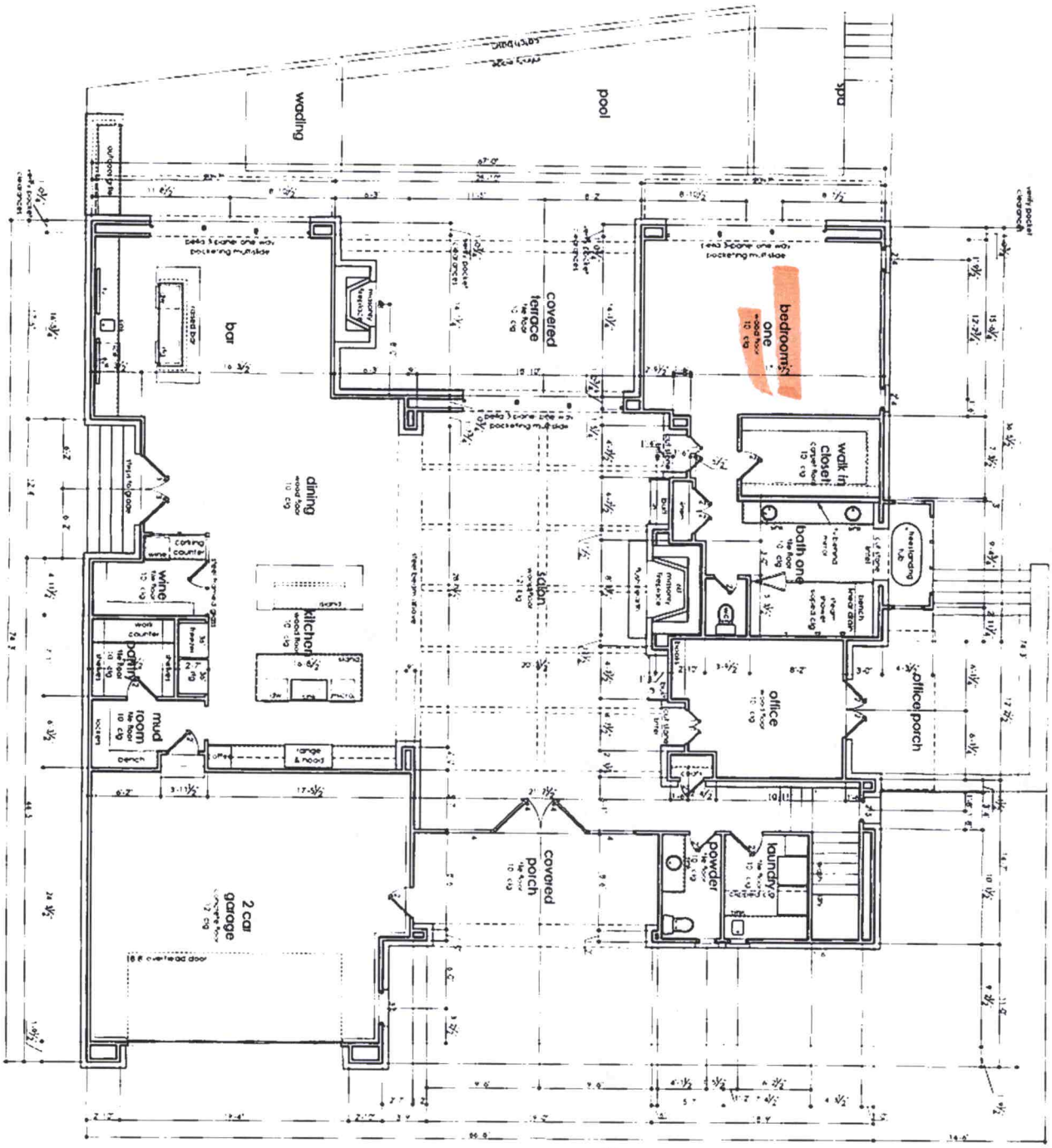
SLATE BUILDING GROUP

IDEA FACTORY
www.ideafactorydesign.com

Acknowledgement of
Plans Submittal ONLY!

Date 1-24-22

Date 1/24/22



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4

main plan
9.29.21

Ayyad Residence
130 Points End Road
Mooresville, NC

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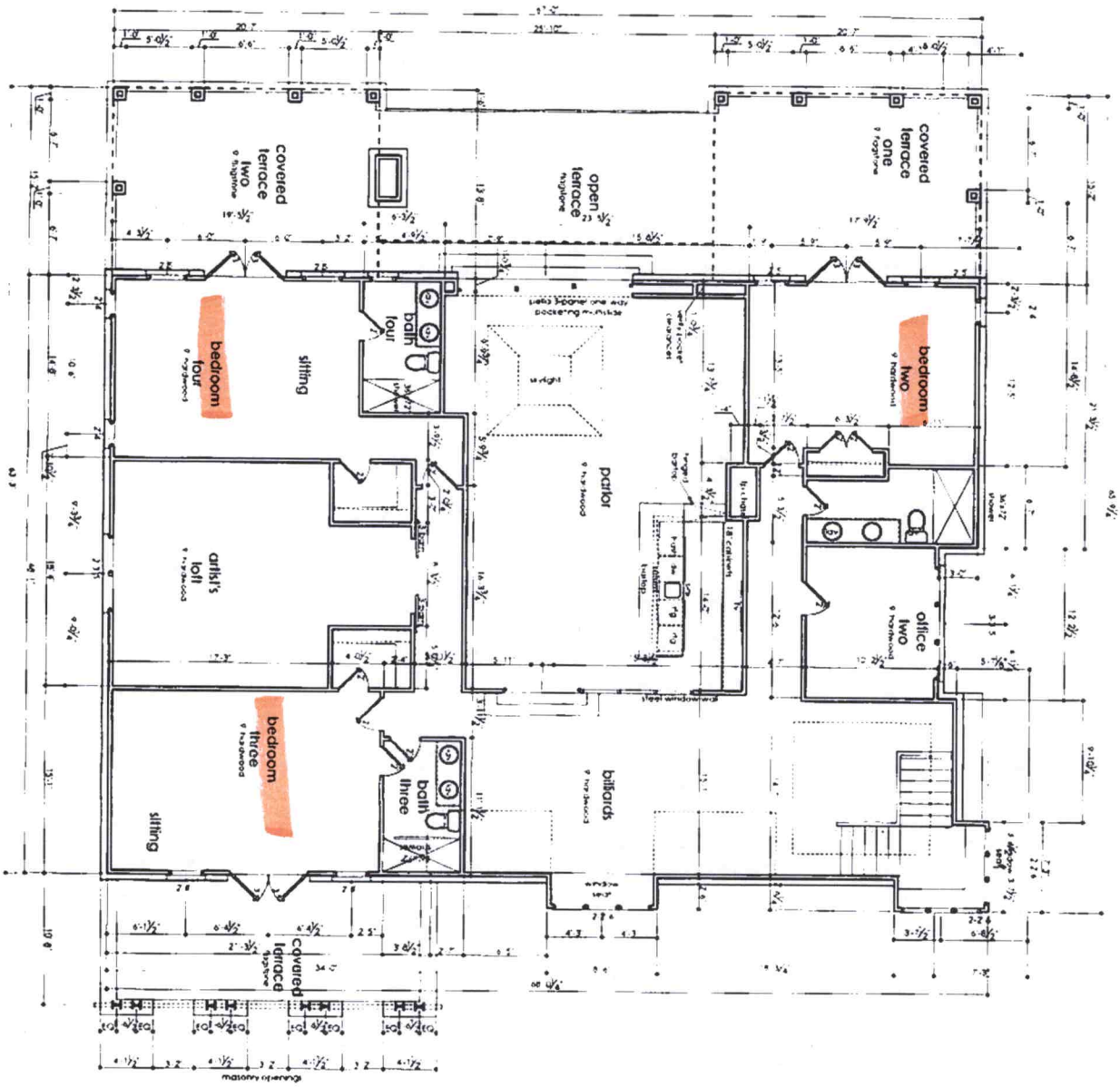
www.dedicationdesign.com

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Date 1-24-22

Date 1/27/22



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6

upper plan
9.29.21

Ayyad Residence
130 Points End Road
Mooresville, NC

SLATE | BUILDING GROUP

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RECEIVED JAN 1 3 2022

BD

S.L.

IREDELL COUNTY DEPARTMENT of ENVIRONMENTAL HEALTH

APPLICATION FORM AP- 324640 $500.00

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
Place an (X) *beside whichever is submitted if applicable* (X) Custom Site Plan, scaled no more than 1 inch = 60 feet

Applicant Information: (PRINT CLEARLY)

Applicant Name: Slate Building Group Address: 19701 Bethel Church Rd, Suite 201 Cornelius Zip: 28031
Applicant Email: _____ Phone: 704.997.8253 Alt. Phone: _____
Owner Name: William G. Ayyad Address: P.O. Box 5243, Mooresville NC Zip: 28117
Owner Email: _____ Phone: _____ Alt. Phone: _____

Property Information:

Street Address: 130 Points End Drive, Mooresville NC 28117
Subdivision Name: CLOT Section/Phase: _____ Lot Number: 433
Driving Directions: Brawley School Rd, Points End Drive

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: _____
Maximum Number of Bedrooms: 4
Maximum Number of Occupants: 8
(✓) Swimming Pool
( ) Other Addition/Structure: _____
Non-Residential Site Development: Type of Business: _____
Square Footage of Building: _____ Max. Number of Employees: _____ Max. Number of Seats/Beds/Other: _____

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: _____ 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: Unknown
( ) 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 (X) No Is any non-domestic sewage (i.e. industrial) to be generated?
( ) Yes (X) 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.

X **Signature:** _____ 12-8-2021
Property owner or owner's legal representative signature (SIGNATURE REQUIRED) DATE

324640

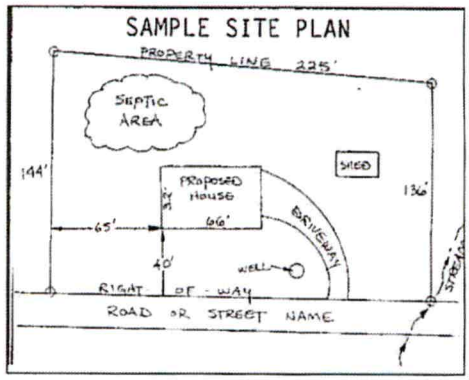
IREDELL COUNTY DEPARTMENT of ENVIRONMENTAL HEALTH

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

See Attached

* **Signature:** _____

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

12-8-2021
DATE

324640

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, Hunter Ayyad, am the legal owner(s) of the property located at 130 Points End Dr. Mooresville NC 28115, identified as

PIN (Parcel Identification Number)_____, located in Iredell County, North Carolina.

I do hereby authorize (**print legal representative/company name**) Brent Zande, Slate Building Group, LLC 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.

Hunter Ayyad
Signature of Owner(s)

12/2/21
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

3246640

ENVIRONMENTAL HEALTH REQUIREMENTS for SEPTIC and WELL PERMITS

The following items must be completed *PRIOR* to the *SUBMITTAL* of any Environmental Health Application. Incomplete applications will be returned to the applicant and cannot be processed or placed on the work list.

*** Initial all lines below to indicate you have submitted each form and completed every site requirement ***

S.A.R. **Complete all Environmental Health forms**:

S.A.R. Application
S.A.R. Site Plan with dimensions of proposed structure, addition, pool etc.
S.A.R. Documentation to Authorize Owner Agent (if the property owner is not the applicant)
S.A.R. Copy of Zoning Permit when applicable
S.A.R. Sign this sheet after you have completed all items

S.A.R. **Lot must be cleared of heavy undergrowth.** In order to evaluate the lot, the footprint of the proposed structure must be visible. Adequate area for the septic drain field and repair area must be sufficiently cleared of heavy undergrowth, with **50 feet of visibility** in all directions. Inspectors must be able to evaluate the property, shoot laser level elevations, layout the drain field, do soils work, etc. **If the lot is not cleared sufficiently, then a $100 site revisit fee will be charged and the evaluation will be put on HOLD until the requirement is met.**

S.A.R **Clearly mark all property corners by locating existing iron or concrete markers**. Flag all property lines every 25 feet if adjacent corners are not visible when standing on any given corner. Property lines must be flagged by a licensed NC surveyor & easily identified **prior to application submittal** (exception may apply for septic repair evaluations only).
'Mow lines' and/or fence lines do NOT constitute marked lines. **If the property lines are not properly marked when the lot is ready to be evaluated, then the application will be put on HOLD and a $100 site re-visit fee charged**.

S.A.R. **Stake or flag the footprint of the proposed structure, addition, pool etc. to match the site plan submitted.** The proposed structure, etc. **must be staked** out on the property as per the site plan.

S.A.R If an **Authorization to Construct (AC) is desired**, submit a recorded copy of the plat for newly created or subdivided lot(s) and a LEGIBLE copy of the basic floor plan no larger than 8 ½" x 14" for each floor of the structure including decks, porches, etc. **The overall dimensions must be clearly noted & the rooms labeled.**

Any site not meeting the above requirements when staff arrives for the evaluation will result in a $100 site revisit fee being charged and the request being placed on HOLD. This will delay the processing of the application.
Once work by Environmental Health staff begins, the up-front fees paid toward securing any health department permit are non-refundable. Refunds for work not started, due to a customer changing their mind or plans, are subject to an administrative fee of $50 to defray a portion of the costs of processing the refund.

Backhoe pits are required for all applications that require a soils evaluation.
DO NOT DIG PITS UNTIL THE EH SPECIALIST HAS AUTHORIZED AND SCHEDULED YOUR EVALUATION TIME.

- **All utilities shall be marked before pits are dug. Call NC 811 for this service.**
- **The applicant/agent is responsible for securing these services**
- **Backhoe pits are to be dug at the locations and depths determined by the Environmental Health Specialist or a NC Licensed Soil Scientist. A minimum of four pits must be dug.**
- **The EH specialist will contact you when your application is ready to be processed for pit scheduling.**
- **Your backhoe operator must be on site during the EH Specialist's evaluation to prevent your operator from having to return to the property for additional work.**

By signing below I am acknowledging the above specifications have been met and the site is READY to be evaluated AND I understand the backhoe pit requirement and will secure those services (if applicable).

Signature _____ **Date** 1-3-22

Questions? Contact the Environmental Health Offices below:

Statesville Office
349 North Center Street (2nd Floor Building Standards)
Statesville, NC 28677-4063
Phone: (704)878-5305 ext. 3456

Mooresville Office
610 East Center Avenue (2nd Floor Govt. Center South)
Mooresville, NC 28115-2548
Phone: (704)660-3625