IREDELL COUNTY HEALTH DEPARTMENT

Statesville Office (704) 878-5305 | Mooresville Office (704) 660-3625 | PERMIT # 225829

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

PIN # 4659156524.000

APPLICANT/OWNER: Essex Homes Southeast INC. APPLICANT ADDRESS: 120 Cromer Rd. Lexington, SC 29073

SITE ADDRESS: 119 Early Frost Lane - Mroul PHONE: (803) 223-4003 ALT. PHONE

SITE DIRECTIONS: Go Right to 115 (Turns into 21). Go North to Clear Springs Rd left on Clear Springs L on autumn grove (pass right on early frost) SAP CONTROLLED: ☒ YES ☐ NO

SUBDIVISION: Autumn Grove SECTION: 2 LOT # 49 LOT AREA: 0.51 acres DESIGN FLOW: 480GPD L.T.A.R.: 0.3

Septic Tank	1000 (gal)	STB	160	Date	7/17/17	☒ New System	☐ Repair	☐ Expansion	System Type: I II III (IV) V VI	☒ Residence	No. Bedrooms 4
Pump Tank	1000 (gal)	PT	319	Date	9/19/17	System Description: LP-PPBPS				☐ Business	No. Persons 8
Pump Make	Zoeller	Model	N-98 (½ HP)	Serial #		Repair System Description: LP-PPBPS				☐ Other	No. Employees
# Nitrification Fields	1	# Lines	7	Linear Ft	268	Maintenance Agreement Required:	☒ YES	☐ NO		☒ Slab	☐ Crawl Space
Trench Width	36"	Trench Bottom Depth(Low side)	36	Gravel Depth	—		☐ GRAVITY	☒ PRESSURE		☐ Basement w/plumbing	☐ Basement w/o plumbing

Water Supply: ☒ Private ☐ Public ☐ Community

Comments / Conditions: This is a saprolite controlled system. Make sure that the new well is installed at least 100 feet from the septic.

SET 2' PH 12-8-17
CHECKED BREAKERS RA

INITIAL SITE SKETCH

See Plan from Soil & Forestry Services

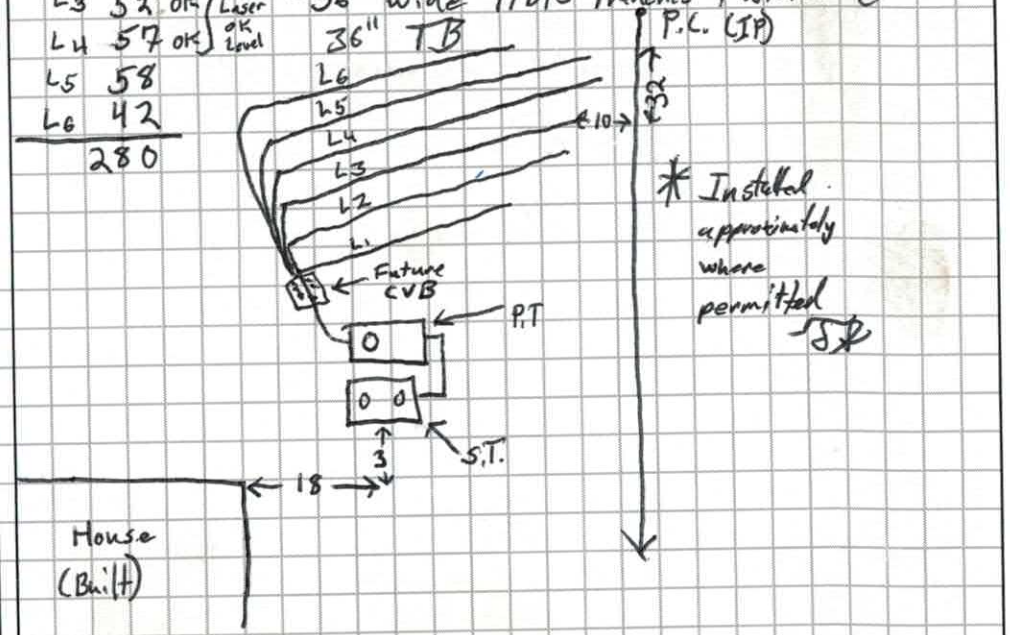
Wendell Overbey
NC Licensed Soil Scientist June 19, 2017

AS BUILT SKETCH

11/16/17: Gamewell mid-seam conc tank w/ a PL-68 Effluent filter.

L1	32'	OK	Laser OK Level
L2	34'	OK	
L3	52'	OK	
L4	57	OK	
L5	58		
L6	42		
	280		

Top seam Pump tank
-36" wide PPBPS trenches installed @ 36" TB



* Installed approximately where permitted SR

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**

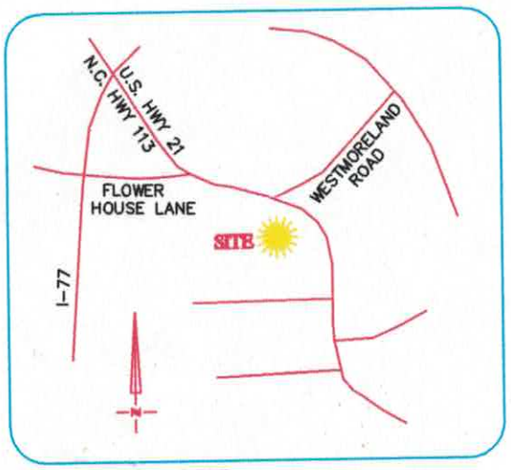
☐ IMPROVEMENT PERMIT *with plat valid without expiration.* ☒ IMPROVEMENT PERMIT *with site plan valid for 60 mos.* ☒ AUTHORIZATION TO CONSTRUCT *valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.*

Owner / Applicant Signature: Date: 7/17/17 Installed by: Sid Gaskins / Mike Powell

IMPROVEMENT PERMIT by: Mohamed Dumarieh Date: 7/13/2017 OPERATION PERMIT by: Date: 12/11/

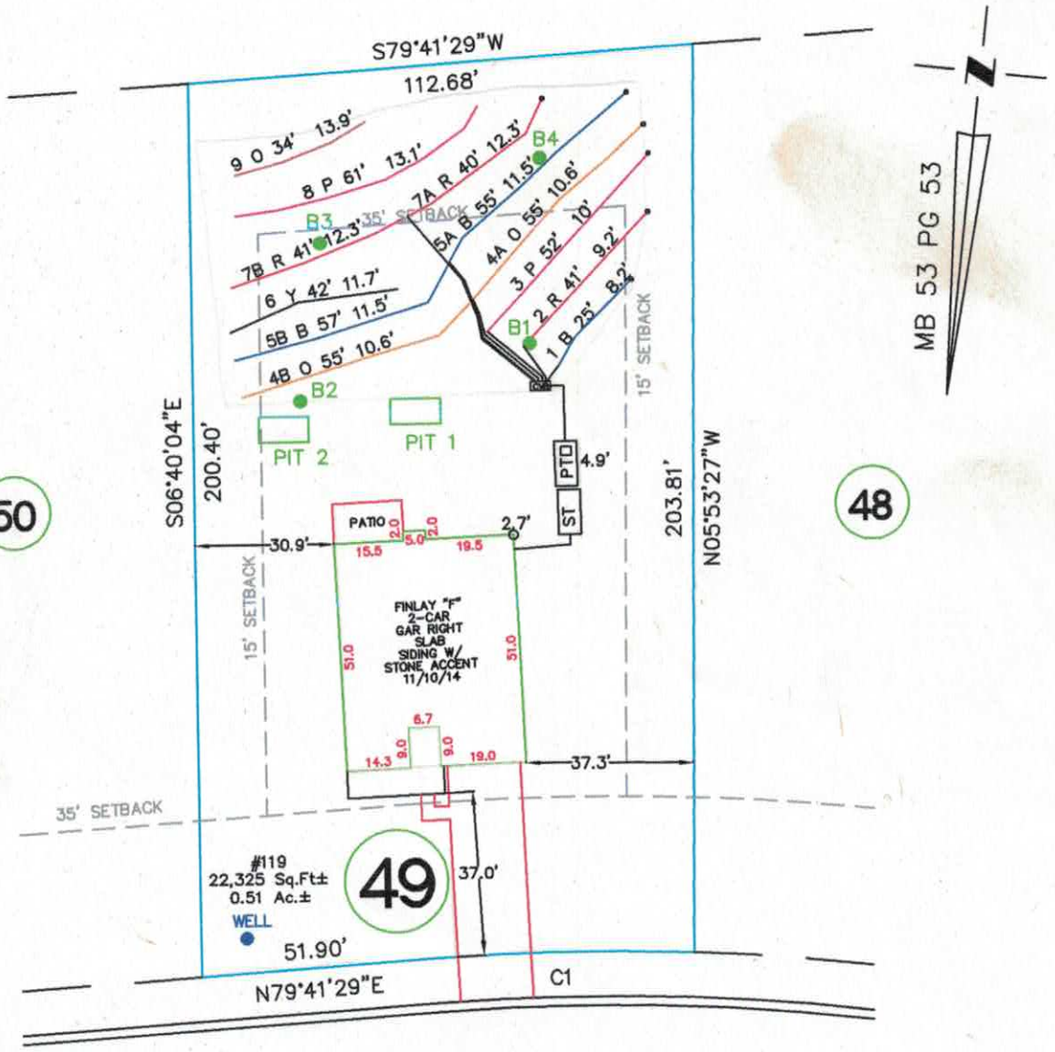
AUTHORIZATION TO CONSTRUCT by: Mohamed Dumarieh Date: 7/13/2017 Existing System Inspected by: Date:

APPROVED JUL 14 2017
M.A.Q.



VICINITY MAP
Not To Scale

CURVE TABLE				
CURVE	BEARING	CHORD	LENGTH	RADIUS
C1	N82°52'03"E	57.89	57.92	522.50



EARLY FROST LANE

45' PUBLIC R/W

NOTE:
1. BUILDER ASSUMES RESPONSIBILITY FOR GRADING LOT AND/OR DESIGNING STEPS, PORCHES, DECKS, ETC. AS NECESSARY TO PREVENT ENCROACHMENT INTO SETBACKS.
2. HOUSE DIMENSIONS AND OPTIONS SHOULD BE VERIFIED WITH CONTRACTOR PRIOR TO CONSTRUCTION.
3. SETBACKS/ EASEMENTS SHOULD BE VERIFIED WITH DEVELOPER AND LOCAL OFFICIALS PRIOR TO CONSTRUCTION.
4. THIS IS A CONCEPTUAL DRAWING AND CONTENTS SHOWN HEREON ARE SUBJECT TO CHANGE UPON FINAL CONSTRUCTION.
THIS PROPERTY MAY BE SUBJECT TO ANY AND ALL APPLICABLE DEED RESTRICTIONS, EASEMENTS, RIGHT-OF-WAY, UTILITIES AND RESTRICTIVE COVENANTS WHICH MAY BE OF RECORD OR IMPLIED

THIS DRAWING DOES NOT REFLECT AS-BUILT INFORMATION

PRELIMINARY PLAT
NOT FOR RECORDATION, CONVEYANCES, OR SALES.

40 0 40
SCALE: 1" = 40'

HOUSE LOCATION PLOT PLAN

FOR

LOT 49, AUTUMN GROVE SUBDIVISION, PHASE 2

Barringer Township, Iredell County, North Carolina

PROPERTY OF: ESSEX HOMES

MAP BOOK 53 PAGE 53 DEED REFERENCE

DRAWN BY: ERG DATE: JANUARY 30, 2017

EASTOVER
LAND SURVEYING COMPANY, P.A.
LAND SURVEYORS - PLANNERS (C-1833)
10430 PARK ROAD, SUITE #300
CHARLOTTE, NORTH CAROLINA 28210
PHONE (704) 927-8080
FAX (704) 889-0105

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

June 19, 2017

Iredell County Environmental Health
610 E Center Avenue
Mooresville, NC 28115

Re: Lot 49 Autumn Grove

To Whom It May Concern:

Attached please find a new expedited review packet for lot 49 of Autumn Grove subdivision. S&FS formerly submitted an expedited review submittal that resulted in issuance of IP and CA permits. Upon site review, after permit issuance, County personnel determined fill material had been added to portions of the proposed drain field. Thomas Shuck formally revoked the prior permit and required new pits dug within fill areas. S&FS had 2 pits dug in fill areas (descriptions attached). Mr. Shuck also requested a new layout of proposed drain lines be performed. We have performed the requested layout and prepared a new site plan/design. Based on the recent layout we are proposing LPP distribution instead of gravity as previously permitted. In addition, our current layout keeps proposed trenches out of the fill areas.

Attached please find a new expedited review submittal. With the zoning permit still valid, that permit is not included with this submittal.

Thank you,

Wendell Overby
NC Licensed Soil Scientist

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

Attached is a proposed design for a PPBPS Septic System with LPP distribution for a 4 bedroom single family residence at Lot # 49 in AUTUMN GROVE Subdivision, Iredell County, North Carolina.

Contents:

	Page
Information for the Installer	1
Design Information	
Design Specifications	2-3
Layout Specifications	4
System Flow	5
Site Plan/System Plan	6
Calculations	7
Profile Descriptions	8-9
Iredell County Expedited Review Checklist	10
Iredell County Improvements Permit Application	11
Iredell County Site Plan Application	12
Environmental Health Requirements for Septic Permits	13
Agent Authorization Letter	14

Owner: Essex Homes SE. 120 Cromer Road Lexington, SC 29073 (803) 223-4003

June 17, 2017

Design By: Soil & Forestry Services of the Carolinas, PA

LICENSED SOIL SCIENTIST
JAMES WENDELL OVERBY
1218
STATE OF NORTH CAROLINA

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 DEHNR, and certification supplied by the manufacturer.
- 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.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- 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.
- Proposed foundation is slab
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as a PPBPS installation.
- Repair is specified as a PPBPS installation.
- Backfill 4 - 6" of material (County Approved) over panels, rake trench walls, lime side-walls, install trenches 36" wide and have no more than 1/4" fall in 10 feet.
- Iredell County has approval to move tanks, etc.

PPBPS SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant:	ESSEX HOMES SE
Address:	120 Cromer Road Lexington, SC 29073
Phone:	803 223-4003
County:	Iredell
Location:	AUTUMN GROVE LOT# 49
Source of Wastewater Flow:	4 Bedroom Single Family Residence
Estimated Gallons Per Day Flow:	480
System Flow:	25.36

Design Specifications

Drainfield Size:	268
Loading Rate (gpd/ft.^{2}):	0.3
Depth of Gravel in Trench:	NA (PPBPS)
Gravel Size:	NA (PPBPS)
Trench Depth:	36 in.
Trench Width:	36 in.
Septic Tank Size:	1000
Pump Tank Size:	1000
Estimated Supply Line Length:	15
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	2.61
Dosing Volume:	149.17
Supply Manifold:	N/A
Supply Manifold Length:	N/A
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:	1.27
Friction Head:	0.19
Elevation Head:	0.00
Total Dynamic Head:	2.52
Threaded Union:	1 in tank
Gate Valves:	1 in tank 1 per lateral
Check Valves:	1 in tank
Anti-Siphon Hole:	yes

AUTUMN GROVE LOT# 49

PPBPS

DESIGN FLOW (gpd):	480
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	536
TOTAL LATERAL LENGTH:	268
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	267
SUPPLY LINE LENGTH:	15
TOTAL DYNAMIC HEAD:	2.52
MANIFOLD SIZE:	N/A
DOSING VOLUME:	149.17
PUMP TANK DRAW DOWN*:	7.1
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.*

APPROVED JUL 14 2017
M.A.D.

AUTUMN GROVE LOT# 49

LAYOUT FOR 4 BEDROOM HOME

June 17, 2017

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		2.70			100.00		
INSTR. 1			102.70				
HOUSE CNR				2.70	100.00		
P. TANK				4.90	97.80		
1	*BLUE*			*8.20*	94.50	*25*	*25*
2	*RED*			*9.20*	93.50	*41*	*41*
3	*PINK*			*10.00*	92.70	*52*	*52*
4A	*ORANGE*			*10.60*	92.10	*110*	*55*
4B	ORANGE						55
5A	*BLUE*			*11.50*	91.20	*113*	*55*
5B	BLUE						57
6	YELO			11.70	91.00	42	42
7A	*RED*			*12.30*	90.40	*83*	*40*
7B	RED						41
8	PINK			13.10	89.60	61	61
9	ORANGE			13.90	88.80	34	34
					Total	561	558

	LINE LENGTH	LTAR GPD/FT2	SYSTEM TYPE	TRENCH SYSTEM	DISTRIBUTION
** System*	*268*	*0.3*	*MOD.*	*PPBPS*	*lOW PRESSURE*
Repair	290	0.275	MOD.	PPBPS	LOW PRESSURE

Notes:

** TBM located back right house stake (see site plan)

**TBM is assumed to be 100'

**All measures in feet

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

**BS, HI, and FS indicate rod readings

APPROVED JUL 14 2017
M.A.D.

AUTUMN GROVE LOT 49

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	*BLUE*	94.5	*25*	0.156	0.41	50	6
2	*RED*	93.5	*41*	0.156	0.41	82	9
3	*PINK*	92.7	*52*	0.156	0.41	104	12
4A	*ORANGE*	92.1	*55*	0.156	0.41	110	13
5A	*BLUE*	91.2	*55*	0.156	0.41	110	13
7A	*RED*	90.4	*40*	0.156	0.41	80	2
							62
	total	**feet =**	**268**	**gal/min =**	**25.356923**		
			Des. Flow	**480**			
			Pump Run=	**N/A**			
			soil LTAR	**0.3**			
			LTAR +5%	**0.315**			
			LTAR with mod.	**0.6**			
			LTAR with mod.. + 5%	**0.63**			

.156 equals 5/32 inch hole

CALCULATIONS

Location AUTUMN GROVE

Project Number

Lot No: 49

No. of Bedrooms	4	
Design Flow	480	$^{gal}/_{day}$
LTAR	0.300	$^{gal}/_{ft^2\ day}$
PPBPS? (YES OR NO)	YES	
Supply Line Length	15	ft.
Supply Line Volume	2.61	gal.
Required Feet of Line	266.6667	ft.
Amount of Line from Layout	268	ft.
Gallons per Minute	25.55	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Panel Volume	3.6	gal.
# of Panels	62	
Dosing Volume	150.29	gal.

Note: Dosing Volume based on 67% of # of panels times 3.6 gal/panel

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

Tank Draw Down	7.16	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	5.88	minutes
Elevation Head	0	ft.
Pressure Head	2	ft.
Friction Factor	1.27	ft./100 ft. *(From the interpolater.)*
Friction Head	0.19	ft.
Total Dynamic Head (+15%)	2.52	ft.

PROPERTY ID #: 4659156524
COUNTY: IREDELL

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

OWNER: ESSEX HOMES SE
APPLICATION DATE 4/3/17
ADDRESS: 120 CROMER ROAD LEXINGTON SC 29073
DATE EVALUATED: 2/27/17
PROPOSED FACILITY: RESIDENCE
PROPOSED DESIGN FLOW (.1949): 480
PROPERTY SIZE: .51
LOCATION OF SITE: 119 EARLY FROST LANE
PROPERTY RECORDED: YES
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
B 1	L/9%	0-6	BR CL WFSBK	FR SS SP	N/A	48	N/A	N/A	.3
		6-28	R C WMSBK	FR SS SP					
		28-48	BR CL WFSBK	FR SS SP C SAP					
B 2	L/12%	0-5	RB C WMSBK	FR SS P	N/A	48	N/A	N/A	.3
		5-38	R C WMSBK	FR SS SP					
		38-48	RCL WFSBK	FR SS SP					
B 3	0%	0-12	RB C WMSBK	FR SS P	N/A	43	PS	N/A	.275-.3
		12-28	BR C WMSBK	FR SS SP F-C SAP					
		28-43	RB CL WFSBK	FR SS SP C SAP					
		43-48	VAR L MASS	FR SS SP					
B 4	12%	0-4	B L WFGR	FR SS SP	N/A	48	N/A	N/A	.3
		4-28	RC WMSBK	FR SS SP					
		28-48	R CL WFSBK	FR SS SP F-C SAP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	290	290
System Type(s)	PPBPS	PPBPS
Site LTAR	.275	.275

OTHER FACTORS (.1946): PS
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: RULLMAN/OVERBY
OTHER(S) PRESENT:

COMMENTS:

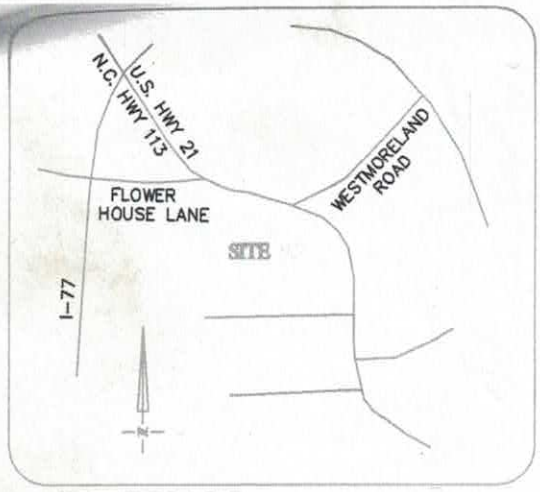
SOIL/SITE EVALUATION

(Continuation Sheet)

PROPERTY ID #: 4659156524
DATE OF EVALUATION: 6/13/17
COUNTY: IREDELL

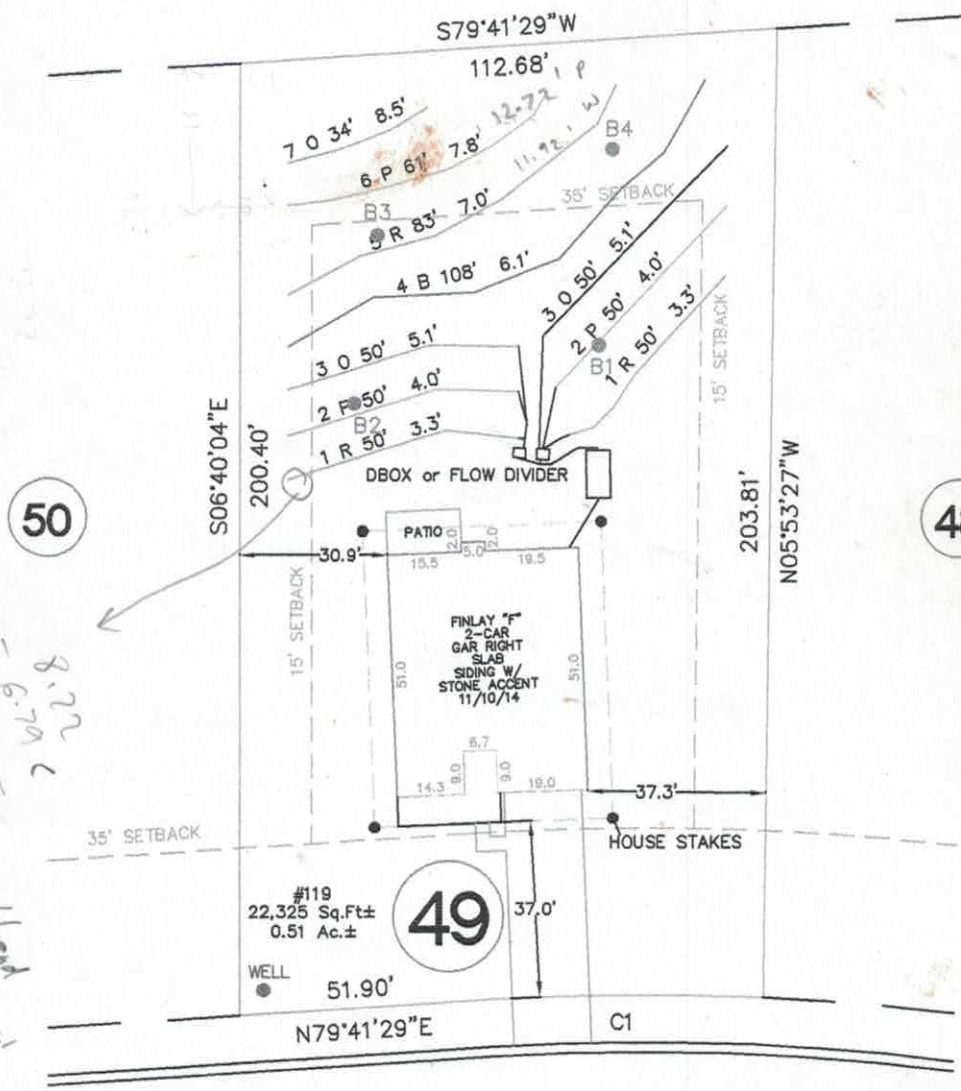
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			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
P1	L/10	0-28	FILL		N/A	(54-28) 26"	PS		PS .3
		28-42	RC WMS	FI SS SP					
		42-54	BR C WFS	FR SS SP SAP f					
		54-84	VAR L/SL MASS	VFR SS SP					
P2	L/10	0-32	FILL		N/A	(66-32) 34"	PS		PS .3
		32-50	RC WMS	FI SS SP					
		50-66	BR CL WFS	FR SS SP SAP c					
		66-96	VAR L MASS	VFR SS SP					

COMMENTS:



VICINITY MAP

CURVE TABLE				
CURVE	BEARING	CHORD	LENGTH	RADIUS
C1	N82°52'03"E	57.89	57.92	522.50



EARLY FROST LANE

45' PUBLIC R/W

APPROVED APR 17 2017

NOTE:
1. BUILDER ASSUMES RESPONSIBILITY FOR GRADING LOT AND/OR DESIGNING STEPS, PORCHES, DECKS, ETC. AS NECESSARY TO PREVENT ENCROACHMENT INTO SETBACKS.
2. HOUSE DIMENSIONS AND OPTIONS SHOULD BE VERIFIED WITH CONTRACTOR PRIOR TO CONSTRUCTION.
3. SETBACKS/ EASEMENTS SHOULD BE VERIFIED WITH DEVELOPER AND LOCAL

THIS DRAWING DOES NOT

Sheet 1 of 1
PROPERTY ID #: 4659156524
COUNTY: IREDELL

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

OWNER: ESSEX HOMES SE
ADDRESS: 120 CROMER ROAD LEXINGTON SC 29073
PROPOSED FACILITY: RESIDENCE
PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE: 119 EARLY FROST LANE
APPLICATION DATE 4/3/17
DATE EVALUATED: 2/27/17
PROPERTY SIZE: .51
PROPERTY RECORDED: YES

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/9%	0-6	BR CL WFSBK	FR SS SP	N/A	48	N/A	N/A	.3 ✓
		6-28	RC WMSBK	FR SS SP					
		28-48	BR CL WFSBK	FR SS SP C SAP					
		23"-48							
2	L/12%	0-5	RB C WMSBK	FR SS P	N/A	48	N/A	N/A	.3
		5-38	RC WMSBK	FR SS SP					
		38-48	RCL WFSBK	FR SS SP					
3	0%	0-12	RB C WMSBK	FR SS P	N/A	43	PS	N/A	.275-.3 ✓
		12-28	BR C WMSBK	FR SS SP f-c SAP					
		22-42 CL 28-43	RB CL WFSBK	FR SS SP C SAP					
		43-48	VAR L MASS	FR SS SP					
		42-48 SAP							
4	12%	0-4	B L WFGR	FR SS SP	N/A	48	N/A	N/A	.3
		4-28	RC WMSBK	FR SS SP					
		28-48	R CL WFSBK	FR SS SP f-c SAP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	290	290
System Type(s)	PPBPS	PPBPS
Site LTAR	.275	.275

OTHER FACTORS (.1946): PS
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: ROLLINS
OTHER(S) PRESENT: Tom Shack 4-13-17 (Holes 1+3)

COMMENTS: Grade away terrace at bottom of repair area

LICENSED SOIL SCIENTIST JAMES WENDELL OVERBY STATE OF NORTH CAROLINA 1218

APPROVED APR 17 2017

Updated February 2014

DHHS

ON-SITE WASTEWATER SECTION

Sheet 1 of 1
PROPERTY ID #: 4659156524.000
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

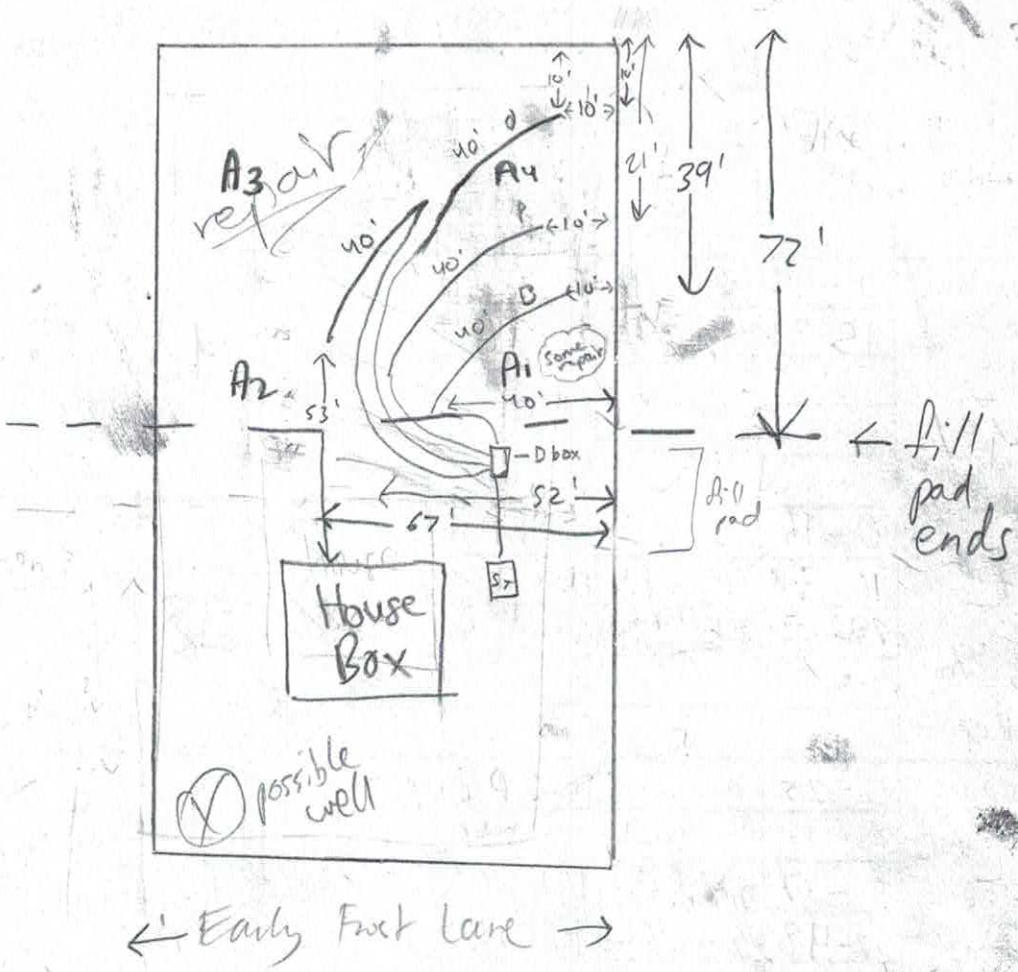
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ADDRESS: 120 Cromer Rd Lexington, SC 29073 DATE EVALUATED: 5/31/2017
PROPOSED FACILITY: 2 Bd House PROPOSED DESIGN FLOW (.1949): 240 GPD PROPERTY SIZE: 0.51 Acres
LOCATION OF SITE: 119 Early Frost Lane Mooresville, NC 28115 PROPERTY RECORDED: 1/13/2017
WATER SUPPLY: ☒ Private ☐ Public ☐ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

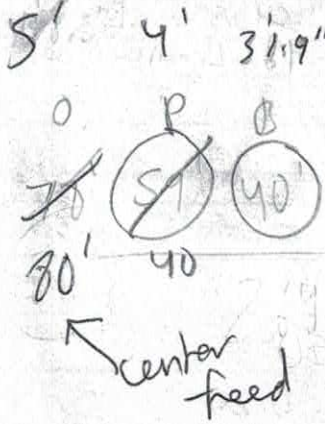
PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	Initial L 4%	0 – 15	Blocky C	Fi S SP Serp	—	48	Some sap inclusions @ 20" – 48"	—	0.25 PS
		15 – 48	WB Blocky C (SC)	FR SS SP Serp					
2	L 5% Repair	0 – 16	Blocky C	Fi S P Serp	—	28	Sap (Loam) 27" – 33"	—	(Sap) Pits needed
		16 – 28	WB Blocky CL (SC)	FR SS SP Serp					
		28 – 48	Sap (Loam) massive	VFR Serp					
3	Repair L 3%	0 – 25	Blocky C	Fi S P Serp	—	48	(SL) Sap 35" – 37"	—	0.25 PS
		25 – 35	WB Blocky CL	FR SS SP Serp					
		35 – 37	Sap (SL) massive	VFR Serp					
		37 – 48	WB Blocky CL	FR SS SP Serp					
4	Initial L 5%	0 – 17	Blocky C	Fi S P Serp	—	24	Loam Sap 24" – 48"	—	Pits needed (Sap)
		17 – 24	WB Blocky CL	FR SS SP Serp					
		24 – 48	(Sap) (Loam) massive	VFR Serp					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	160 linear feet	160 linear feet
System Type(s)	50% reduction	50% reduction
Site LTAR	0.25	0.25

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

COMMENTS:


A3
A4
A2
A1
40'
40'
40'
40'
10'
10'
10'
10'
16'
21'
39'
72'
53'
40'
D box
52'
67'
fill pad ends
fill rod
House Box
possible well
Early Fast Lane


5'
4'
3'1.9"
0
P
B
40'
80'
40
center feed

RECEIVED JUN 1 9 2017

IREDELL COUNTY HEALTH DEPARTMENT *ENVIRONMENTAL HEALTH DIVISION*

(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)

225829

1. APPLICATION FOR: ✓ **Improvement Permit** ✓ **Authorization To Construct** ___ **Existing System Inspection**

Paid $850.00

2. 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 check ( ) beside whichever is submitted if applicable ✓ **Custom Site Plan, Scaled no more than 1 Inch = 60 Feet**

3. Applicant Information:

Applicant Name	Mailing Address	Home Phone #	Alternate Phone #
ESSEX HOMES SE	120 CRUMER RD LEXINGTON SC 29073		(803) 223-4003
Owner Name	**Mailing Address**	**Home Phone #**	**Alternate Phone #**
SAME			

4. Property Information:

Street Address	Subdivision Name	Section/Phase and Lot Number
119 EARLY FROST LANE	AUTUMN GROVE	LOT 49

Driving Directions: FROM E CENTER DRIVE GO NORTH TO BROAD STREET. GO RIGHT TO 115 (TURNS INTO 21). GO NORTH TO CLOAK SPRINGS RD. LEFT ON CLOAK SPRINGS, LEFT ON AUTUMN GROVE LN, RIGHT ON EARLY FROST.

5. RESIDENTIAL Site Development Information: *(Check or Complete ALL that apply)*

(✓) New, Single Family Residence
( ) New, Multi-Family Residence
( ) Expansion of Existing Septic System
( ) Repair To Failing Septic System due to _____
( ) Other _____

Maximum Number of Bedrooms 4
Maximum Number of Occupants 8
If Expansion, Current Number of Bedrooms ___

( ) Crawl Space Foundation?
(✓) Concrete Slab Foundation?
( ) Basement w/Plumbing?
( ) Basement w/out Plumbing?

IF Non-Residential Site Development:
Type of Business _____
Square Footage of Building _____
Maximum Number of Employees _____
Maximum Number of Seats _____

6. Proposed Water Supply:

(✓) New Well ( ) Existing Well ( ) Community Well ( ) City Water ( ) Other Public Water

7. Desired Septic System Type: *(You may rank in order of preference, if any)* ( ) EXISTING SYSTEM installed _____ *Year*

( ) Alternative ( ) Conventional ( ) Innovative (✓) Modified Conventional ( ) Other _____

8. Please Answer The Following ( ) Yes (✓) No Does the site contain any jurisdictional wetlands?
To The Best of Your Ability: ( ) Yes (✓) No Is any non-domestic sewage (i.e. industry) 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.

9. Signature: W Cly — 6-19-17

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

IREDELL COUNTY HEALTH DEPARTMENT

ENVIRONMENTAL HEALTH DIVISION

PAGE 1: *APPLICATION FORM*

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

Applicant Information:

Applicant Name: Essex Homes **Address:** 13000 S. Tryon St. F-L 205 **Phone:** 704-301-3220

Owner Name: Same **Address:** " " **Phone:** " "

Property Information:

Street Address: 119 Early Frost Lane

Subdivision Name: Autumn Grove **Section/Phase:** 2 **Lot Number:** 49

Driving Directions: I-77 to Exit 42, East toward Mooresville, Right onto Clear Springs

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

(√) New Single Family Residence
( ) New Multi-Family Residence
( ) Accessory Building
( ) Bedroom(s) Addition

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

( ) Crawl Space Foundation
(√) Concrete Slab Foundation
( ) Basement with Plumbing
( ) Basement without Plumbing

Non-Residential Site Development:
Type of Business: _____
Square Footage of Building: _____
Maximum Number of Employee: _____
Maximum Number of Seats/Beds/Other: _____

Water Supply:

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

4/24/17
DATE

AUTHORIZATION TO ACT AS AGENT FOR OWNER

Any application/document/permit requiring a signature must be signed by the property owner or their authorized agent. This form shall be provided by the owner to allow specified individuals to act as agents for the owner. This form allows the specified individuals to sign or receive any application/document/permit on behalf of the owner. This form allows the authorized agent to make decisions on behalf of the owner pertaining to modifications of permits in the field. It is the responsibility of the owner to assure that any/all permit conditions specified on permits issued by this Division are followed.

I, ESSEX Homes, am the legal owner of the property located at AUTUMN GROVE Lot, identified as PIN[Parcel Identification Number] _____, located in Iredell County, North Carolina. 119 Early Frost Lane

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

1. Improvement Permit (IP)/ Authorization to Construct (AC).
2. Application for soil-site evaluation (new/repair).
3. Application/permit for water well/well abandonment.
4. Application for existing system.
5. Application for Improvement Permit (IP)/ Authorization to Construct (AC).

I agree to abide by any and all decisions and/or conditions between the agent acting on my behalf and the Iredell County Department of Public Health, Environmental Health Division. This form must be fully executed before the individual's specified above will be recognized as the authorized agent.

Signature of Owner — 4/24/17 — Date — Derek Burns

Signature of Witness — 4/24/17 — Date

AUTHORIZATION TO ACT AS AGENT FOR OWNER

Any application/document/permit requiring a signature must be signed by the property owner or their authorized agent. This form shall be provided by the owner to allow specified individuals to act as agents for the owner. This form allows the specified individuals to sign or receive any application/document/permit on behalf of the owner. This form allows the authorized agent to make decisions on behalf of the owner pertaining to modifications of permits in the field. It is the responsibility of the owner to assure that any/all permit conditions specified on permits issued by this Division are followed.

I, Essex Homes, am the legal owner of the property located at Autumn Grove Lot 49, identified as PIN(Parcel Identification Number) 4659156524, located in Iredell County, North Carolina.

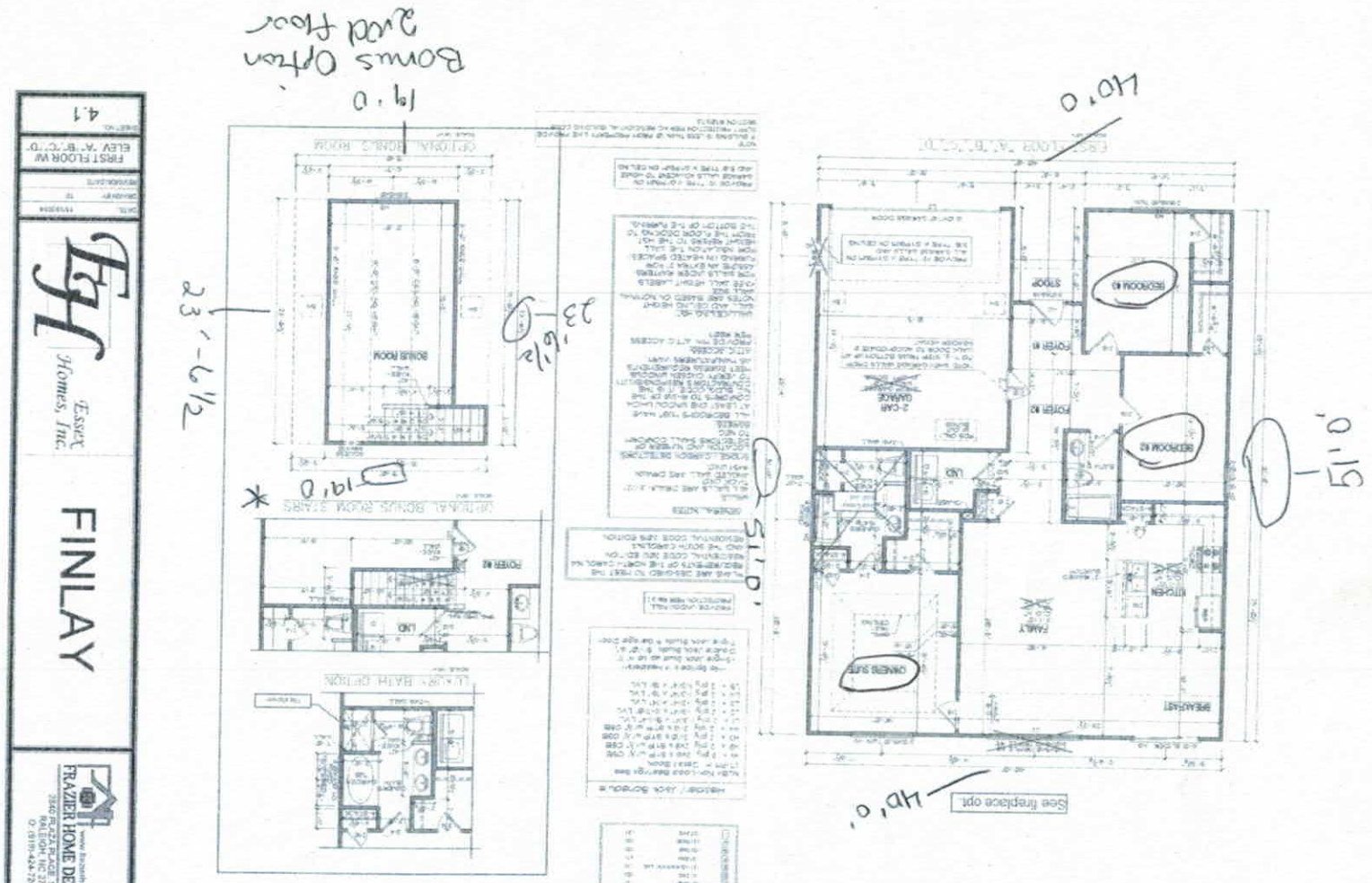
I do hereby authorize (print authorized agent/company name) Soil & Forestry Services, _____, _____, _____, _____, to act as an agent on my behalf in applying for/signing/obtaining any of the documents described below.

1. Improvement Permit (IP)/ Authorization to Construct (AC).
2. Application for soil-site evaluation (new/repair).
3. Application/permit for water well/well abandonment.
4. Application for existing system.
5. Application for Improvement Permit (IP)/ Authorization to Construct (AC).

I agree to abide by any and all decisions and/or conditions between the agent acting on my behalf and the Iredell County Department of Public Health, Environmental Health Division. This form must be fully executed before the individual's specified above will be recognized as the authorized agent.

Signature of Owner — Date: 11/10/16 — Darek Burns

Signature of Witness — Date: 11/18/16



Acknowledgement of Plans Submittal ONLY!

Lot 49

Date 11/24/17

Date 7/14/2017

IREDELL COUNTY HEALTH DEPARTMENT *ENVIRONMENTAL HEALTH DIVISION*:

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 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…**

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

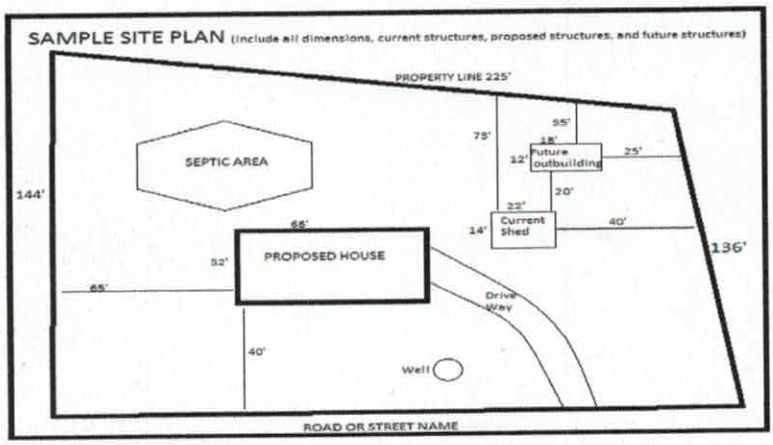
X Front and side setbacks from property line… **X Preferred driveway location and configuration, preferred well location…**

X Area you prefer your septic system to be placed… **X North arrow, or other sufficient indicator of direction…**

Circle N/A on the following if appropriate:

X 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

Signature: W Cly

REQUIRED **property owner or owner's legal representative signature.**

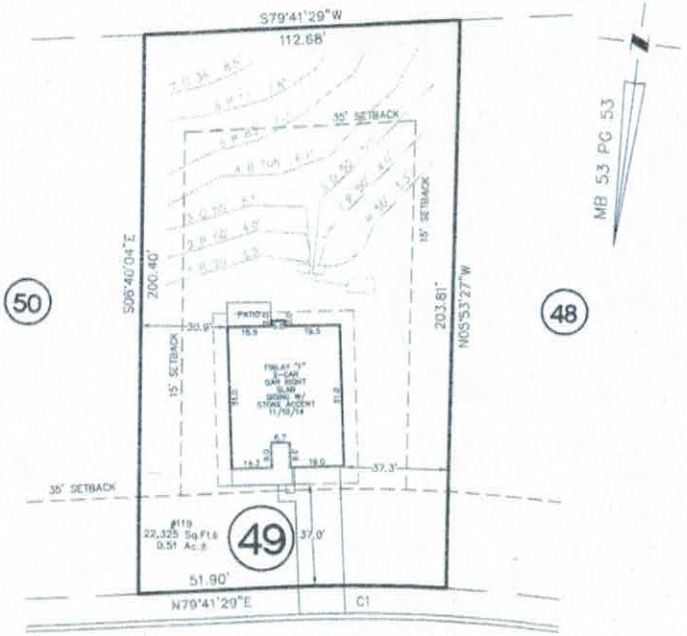
6-19-17

DATE



VICINITY MAP
Not To Scale

CURVE TABLE				
CURVE	BEARING	CHORD	LENGTH	RADIUS
C1	N82°32'03"E	57.89	57.92	522.50



EARLY FROST LANE

45' PUBLIC R/W

NOTE:
1. BUILDER ASSUMES RESPONSIBILITY FOR GRADING LOT AND/OR DESIGNING STEPS, PORCHES, DECKS, ETC. AS NECESSARY TO PREVENT ENCROACHMENT INTO SETBACKS.
2. HOUSE DIMENSIONS AND OPTIONS SHOULD BE VERIFIED WITH CONTRACTOR PRIOR TO CONSTRUCTION.
3. SETBACKS / EASEMENTS SHOULD BE VERIFIED WITH DEVELOPER AND LOCAL OFFICIALS PRIOR TO CONSTRUCTION.
4. THIS IS A CONCEPTUAL DRAWING AND CONTENTS SHOWN HEREON ARE SUBJECT TO CHANGE UPON FINAL CONSTRUCTION.
THIS PROPERTY MAY BE SUBJECT TO ANY AND ALL APPLICABLE DEED RESTRICTIONS, EASEMENTS, RIGHT-OF-WAY, UTILITIES AND RESTRICTIVE COVENANTS WHICH MAY BE OF RECORD OR IMPLIED

THIS DRAWING DOES NOT REFLECT AS-BUILT INFORMATION

PRELIMINARY PLAT
NOT FOR RECORDATION, CONVEYANCES, OR SALES.

40 0 40
SCALE: 1" = 40'

EASTOVER
LAND SURVEYING COMPANY, P.A.
LAND SURVEYORS – PLANNERS (C-1833)
10430 PARK ROAD, SUITE #300
CHARLOTTE, NORTH CAROLINA 28210
PHONE (704) 927-8080
FAX (704) 889-0105

HOUSE LOCATION PLOT PLAN

FOR

LOT 49, AUTUMN GROVE SUBDIVISION, PHASE 2
Barringer Township, Iredell County, North Carolina

PROPERTY OF: ESSEX HOMES

MAP BOOK 53 PAGE 53 DEED REFERENCE

DRAWN BY: ERG | DATE: JANUARY 30, 2017

Stan Pressley 4/24/17

IREDELL COUNTY

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

APPLICATION NUMBER
225829
Issue Date: 03/22/2017

ZONING PERMIT

Open Space

Parcel Number	Street Address	Jurisdiction
4659156524.000	119 EARLY FROST LANE, MOORESVILLE, NC	IREDELL COUNTY

Owner Information	Applicant Information
Owner: ESSEX HOMES SOUTHEAST INC	Applicant: SOIL AND FORESTRY SERV
Address: 120 CROMER RD LEXINGTON, SC 29073	Address: P. O. BOX 832 MOORESVILLE, NC 28115
Phone:	Phone: 704-239-2001

Use Requested	Zone Code
SFD	RA

Lot Acreage	F Setback	B Setback	L Setback	R Setback	Watershed	Flood Zone
.510	35.00	35.00	15.00	15.00	PACL	X

Remarks:

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.

Applicant: W Cly Date: 4/3/17

Permit Number	97259	TOTAL FEES:	$ 77.25