APPROVED MAY 04 2015

SOIL & FORESTRY SERVICES
OF THE CAROLINAS, PA

www.soilandforestryservices.com

A proposed design for an Accepted Septic System using gravity distribution for a 3 bedroom single family residence at Lot #48 in Autumn Grove Subdivision, Iredell County, North Carolina.

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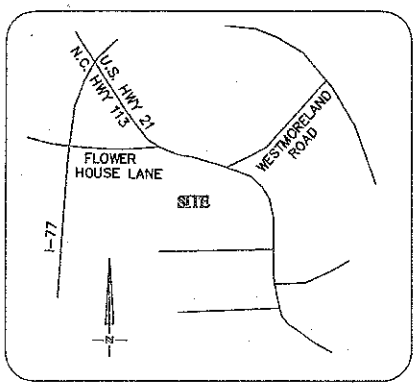
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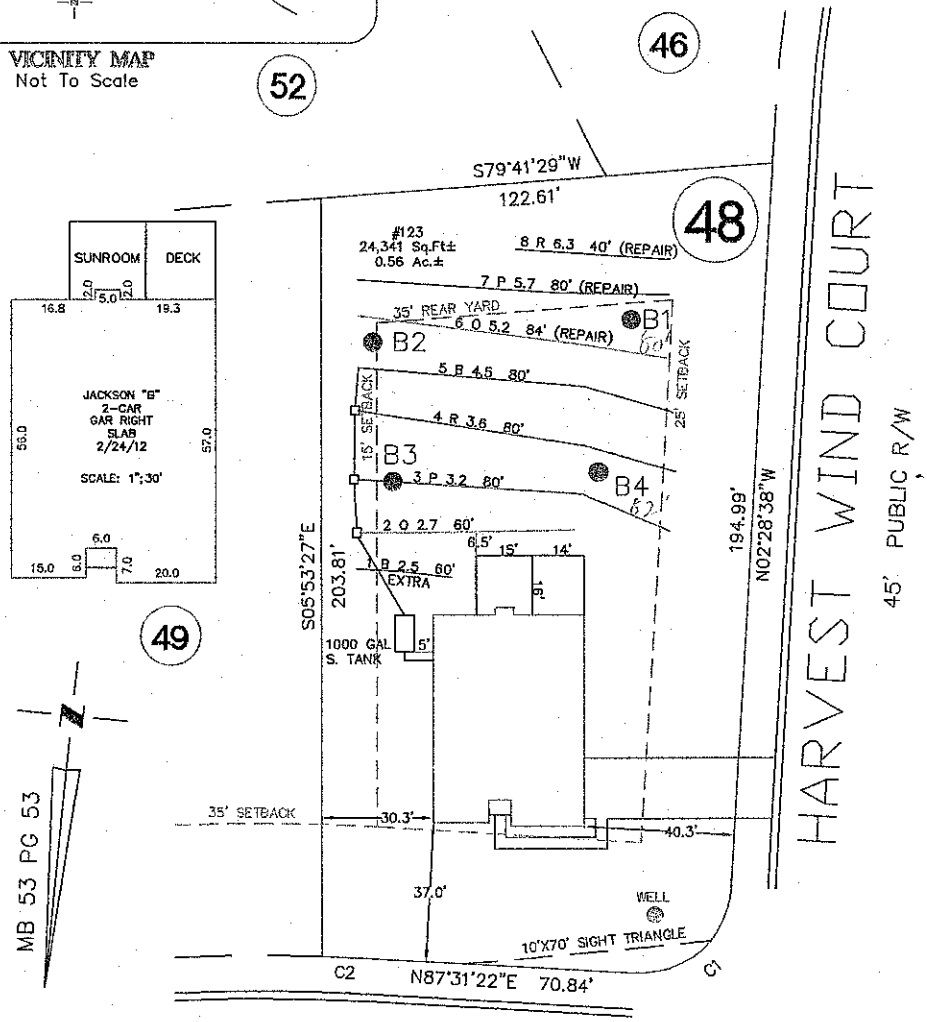
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April 15, 2015
Project #: 15-1022
Design By: Soil & Forestry Services of the Carolinas, PA



VICINITY MAP
Not To Scale

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EARLY FROST LANE

45' PUBLIC R/W

NOTE:
ALL LOTS ARE SUBJECT TO A 10' UTILITY AND DRAINAGE EASEMENT. 10 FEET ON EACH SIDE OF THE PROPERTY LINE.

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

CURVE TABLE				
CURVE	BEARING	CHORD	LENGTH	RADIUS
C1	S42°31'22"W	35.36	39.28	25.00
C2	N86°46'59"E	13.49	13.49	522.50

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

PROPERTY OF: ESSEX HOMES

MAP BOOK 53 PAGE 53 DEED REFERENCE

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

DRAWN BY: ERG | DATE: APRIL 1, 2015

ACCEPTED SYSTEM
FOR WASTEWATER TREATMENT

Owner/Applicant: Essex Homes

Address: 120 Cromer Road
Lexington, SC 29073
Phone: 803 223-4003
County: Iredell
Location: AUTUMN GROVE LOT #48

Source of Wastewater Flow: 3 Bedroom Single Family Residence
Estimated Gallons Per Day Flow: 360
System Flow: 0

Design Specifications

Drainfield Size: 300
Loading Rate (gpd/ft.^{2}): 0.3
Depth of Gravel in Trench: n/a
Gravel Size: n/a
Trench Depth: 24
Trench Width: 36 in.
Septic Tank Size: 1000
Pump Tank Size: 1000

Estimated Supply Line Length: 0
Supply Line Diameter: n/a
Supply Line Volume: 0.00
Dosing Volume: 0.00
Supply Manifold: N/A
Supply Manifold Length: N/A
Supply Manifold Volume: N/A

Recommended Float Controls:

Recommended Control Panel:

Pressure Head: 0
Friction Head: 0.00
Elevation Head: 0.00
Total Dynamic Head: 0.00

Threaded Union: N/A
Gate Valves: N/A

Check Valves: N/A
Anti-Siphon Hole: N/A

AUTUMN GROVE LOT #48

DESIGN FLOW (gpd):	360
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	900
TOTAL LATERAL LENGTH:	300
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	300
SUPPLY LINE LENGTH:	0
TOTAL DYNAMIC HEAD:	0.00
MANIFOLD SIZE:	N/A
DOSING VOLUME:	0.00
PUMP TANK DRAW DOWN*:	0.0
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.*

AUTUMN GROVE LOT #48

Project #: 15-1022

LAYOUT FOR 3 BEDROOM HOME — April 15, 2015

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH	DESIGN LINE LENGTH
TBM		7.5			100.00		
INSTR. 1 HOUSE CNR P. TANK			107.50				
1	BLUE		EXTRA	2.50	105.00	24	0
			SYSTEM				
2	ORANGE			2.70	104.80	60	60
3	PINK			3.20	104.30	85	80
4	RED			3.60	103.90	85	80
5	BLUE			4.50	103.00	86	80
			REPAIR				
6	ORANGE			5.20	102.30	84	80
7	PINK			5.70	101.80	80	80
8	RED			6.30	101.20	40	40
					Total	**544**	**500**

	LINE LENGTH	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DIST
System	300	ACCEPT	0.300	CHAMBER	GRAVITY DROP BOXES
Repair	200	MOD.	0.300	PPBPS	LOW PRESSURE

Notes:
** TBM located top of ground at EIP at corner of lot (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

CALCULATIONS

Location Autumn Grove

Project Number 15-1021

Lot No: LOT 48

No. of Bedrooms	3	
Design Flow	360	$^{gal}/_{day}$
LTAR	0.300	$^{gal}/_{ft^2\ day}$
PPBPS? (YES OR NO)	no	
Supply Line Length	0	ft.
Supply Line Volume	0	gal.
Required Feet of Line	300	ft.
Amount of Line from Layout	300	ft.
Gallons per Minute	0	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Panel Volume	0	gal.
# of Panels	0	
Dosing Volume	0.00	gal.

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

Tank Draw Down	0.0	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	#DIV/0!	minutes
Elevation Head	0	ft.
Pressure Head	0	ft.
Friction Factor	0	ft./100 ft. *(From the interpolater.)*
Friction Head	0.00	ft.
Total Dynamic Head (+15%)	0.00	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

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

Sheet 1 of 1
PROPERTY ID #: 4659155534
COUNTY: IREDELL

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: ESSEX HOMES SOUTHEAST INC — APPLICATION DATE
ADDRESS: 120 CROMER RD LEXINGTON SC 29073 — DATE EVALUATED: 4/13/15
PROPOSED FACILITY: RESIDENCE — PROPOSED DESIGN FLOW (.1949): 360 — PROPERTY SIZE: .56
LOCATION OF SITE: AUTUMN GROVE #48 — 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
B1	L/7%	0-3	R/B CL WFSBK	FR SS SP	N/A	48+	N/A	N/A	S .3
		3-45	R C WMSBK	FR SS SP					
		45-48	R CL WMSBK	FR SS SP					
2	L/8%	0-7	R/B CL WMABK	FR SS SP	N/A	48+	N/A	N/A	S .3
		7-48	R C WMS/ABK	FR SS SP					
3	L/5%	0-5	R/B CL WMABK	FR SS SP	N/A	48+	N/A	N/A	S .3
		5-40	R C WMA/SBK	FR SS SP few V 18-36					
4	L/	0-4	R CL WMABK	FR SS SP	N/A	48+	N/A	N/A	S .3
		4-48	R C WMS/ABK	FR SS SP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	300	200
System Type(s)	ACCEPTED	PPBPS
Site LTAR	.3	.3

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

APPROVED MAY 04 2015

COMMENTS: