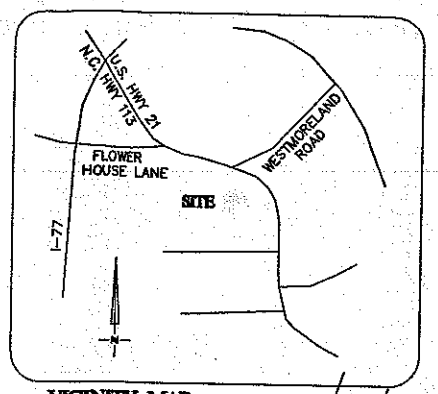


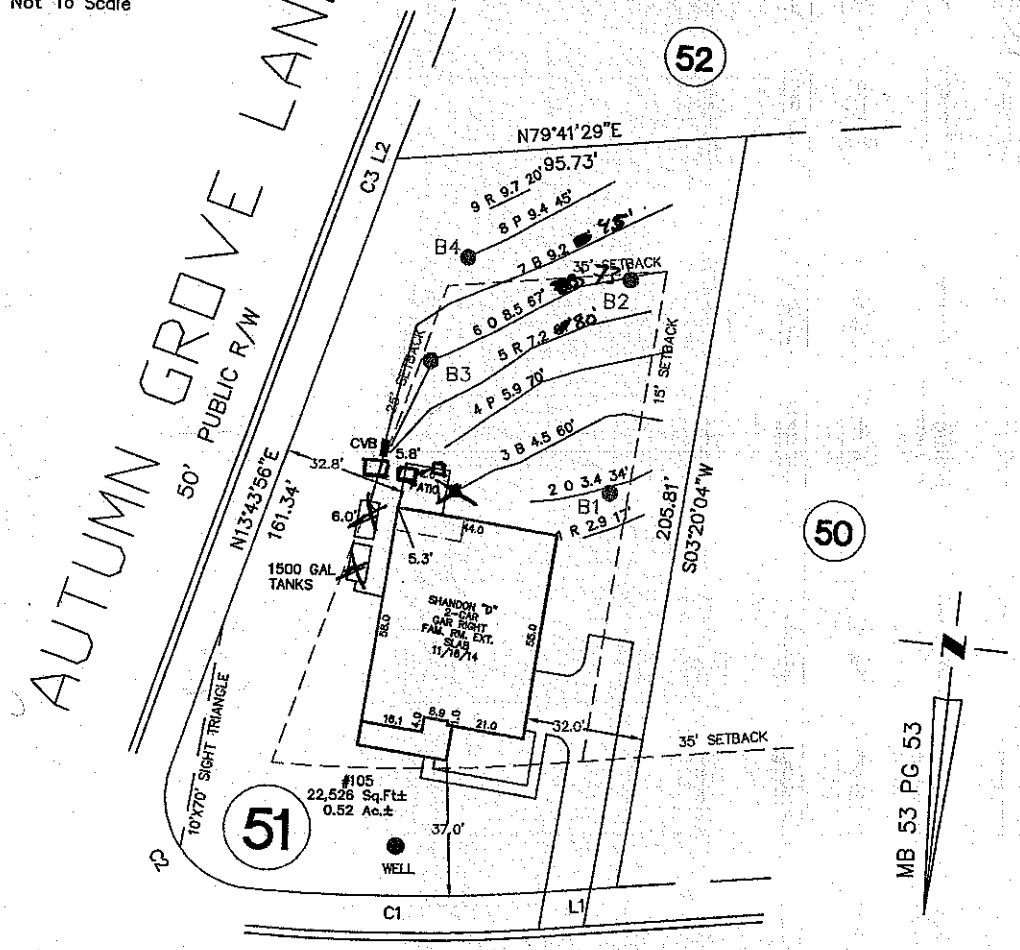
VICINITY MAP
Not To Scale

LINE TABLE		
LINE	LENGTH	BEARING
L1	23.10	S79°41'29"W
L2	0.74	N14°26'28"E

CURVE TABLE				
CURVE	BEARING	CHORD	LENGTH	RADIUS
C1	S84°17'13"W	76.51	76.59	477.50
C2	N38°41'34"W	39.63	45.75	25.00
C3	N14°05'12"E	12.06	12.08	975.00

REVISIONS

REV. #	DATE	COMMENT
REV. 1	4/10/15	ADDED 12X12 PATIO



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 51, 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: APRIL 8, 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 #51

Source of Wastewater Flow: 3 Bedroom Single Family Residence
Estimated Gallons Per Day Flow: 360
System Flow: 19.02

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: 30
Trench Width: 36 in.
Septic Tank Size: 1000
Pump Tank Size: 1000

Estimated Supply Line Length: 15
Supply Line Diameter: 2"sch40
Supply Line Volume: 2.61
Dosing Volume: 111.88
Supply Manifold:
Supply Manifold Length:
Supply Manifold Volume:

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
Friction Head: 0.19
Elevation Head: 3.0
Total Dynamic Head: 5.22

Threaded Union: In tank
Gate Valves: 1 in tank
3 in CVB
Check Valves: 1 in tank
Anti-Siphon Hole: N/A

AUTUMN GROVE LOT #51

DESIGN FLOW (gpd):	360
SOIL APPLICATION RATE (gpd/ft.^{2}):	0.3
TOTAL AREA TRENCH BOTTOM:	402
TOTAL LATERAL LENGTH:	201
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	200
SUPPLY LINE LENGTH:	15
TOTAL DYNAMIC HEAD:	5.22
MANIFOLD SIZE:	N/A
DOSING VOLUME:	111.88
PUMP TANK DRAW DOWN*:	5.3
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 #51

Project #: 15-1023

LAYOUT FOR 3 BEDROOM HOME — May 4, 2015

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH
TBM		5.3			100.00	
INSTR. 1			105.30			
HOUSE CNR		5.3			100.00	
P. TANK		6			99.30	
			REPAIR			
1	RED			2.90	102.40	17
2	ORANGE			3.40	101.90	34
3	BLUE			4.50	100.80	60
4	PINK			5.90	99.40	70
			SYSTEM			
5	RED			7.20	98.10	67
6	ORANGE			8.50	96.80	67
7	BLUE			9.20	96.10	67
			REPAIR			
8	PINK		EXTRA	9.40	95.90	45
9	RED			9.70	95.60	20

	LINE LENGTH	SYSTEM TYPE	SOIL LTAR GPD/FT2	TRENCH SYSTEM	DIST
System	201	MOD.	0.300	PPBPS	LOW PRESSURE
Repair	201	MOD.	0.300	PPBPS	LOW PRESSURE

Notes:
** TBM located top of ground at back left house corner
**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

LP PPBPS TAPSHEET -AUTUMN GROVE LOT #51

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
5	RED	98.1	67	0.156	0.41	201	15
6	ORANGE	96.8	67	0.156	0.41	201	15
7	BLUE	96.1	67	0.156	0.41	201	15
							46
	total	**feet =**	**201**	**gal/min =**	**19.02**		

Des. Flow	**360**
Pump Run=	**5.88**
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

LP PPBPS TAPSHEET -AUTUMN GROVE LOT #51

REPAIR

Line #	Color	Elevation	Length	Hole Size	Flow/hole	Trench Area	Number of Panels
1	RED	102.4	17	0.156	0.41	51	4
2	ORANGE	101.9	34	0.156	0.41	102	8
3	BLUE	100.8	60	0.156	0.41	180	14
4	PINK	99.4	70	0.156	0.41	210	16
9	RED	95.6	20	0.156	0.41	60	5
							46
	total	**feet =**	**201**	**gal/min =**	**19.017692**		
			Des. Flow	**360**			
			Pump Run=	**5.88**			
			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 15-1023

Lot No: 51

No. of Bedrooms	3	
Design Flow	360	$^{gal}/_{day}$
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	200	ft.
Amount of Line from Layout	201	ft.
Gallons per Minute	19.02	$^{gal}/_{min}$
Required Septic Tank Capacity	1000	gal.
Minimum Standard Tank Size	1000	
Panel Volume	3.6	gal.
# of Panels	46	
Dosing Volume	111.88	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	5.3	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	5.88	minutes
Elevation Head	3	ft.
Pressure Head	2	ft.
Friction Factor	1.27	ft./100 ft. *(From the interpolater.)*
Friction Head	0.19	ft.
Friction Head +15%	0.22	
Total Dynamic Head	5.22	ft.

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

Sheet 1 of 1
PROPERTY ID #: 4659158661
COUNTY: IREDELL

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

9

OWNER: ESSEX HOMES SOUTHEAST INC
ADDRESS: 120 CROMER ROAD LEXINGTON, SC 29073
PROPOSED FACILITY: RES
PROPOSED DESIGN FLOW (.1949): 480
LOCATION OF SITE: AUTUMN GROVE LOT 51
WATER SUPPLY: ☒ Private ☐ Public ☒ Well ☐ Spring Other
EVALUATION METHOD: ☒ Auger Boring ☐ Pit ☐ Cut
TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

APPLICATION DATE
DATE EVALUATED: 4/21/15
PROPERTY SIZE: 0.52
PROPERTY RECORDED: YES

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/6%	0-3	DB SL WF GR	VFR NS NP	N/A	48"	N/A	N/A	S .3
		3-7	YB SCL WMSBK	FR SS SP					
		7-34	R C WMSBK	FR SS SP					
		34-48	R CL WMSBK	VFR SS SP					
B2	L/14%	0-6	R/B CL WMSBK	FR S SP	N/A	48"	N/A	N/A	S .3
		6-38	R C MMABK	FR SS SP					
		38-48	R CL WMSBK	VFR SS SP					
B3	L/12%	0-7	R/B C WFSBK	FR SS SP	N/A	48"	N/A	N/A	S .3
		7-26	R C WMABK	FR SS SP					
		26-48	R CL WMSBK	VFR SS SP					
B4	L/3%	0-3	R/B CL WMSBK	FR SS SP	N/A	48"	N/A	N/A	S .3
		3-36	R C WMABK	FR SS SP					
		36-48	R CL WMSBK	FR SS SP					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	270	270
System Type(s)	PPBPS	PPBPS
Site LTAR	0.3	0.3

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

COMMENTS:

SOIL/SITE EVALUATION

(Continuation Sheet)

Sheet ___ of ___

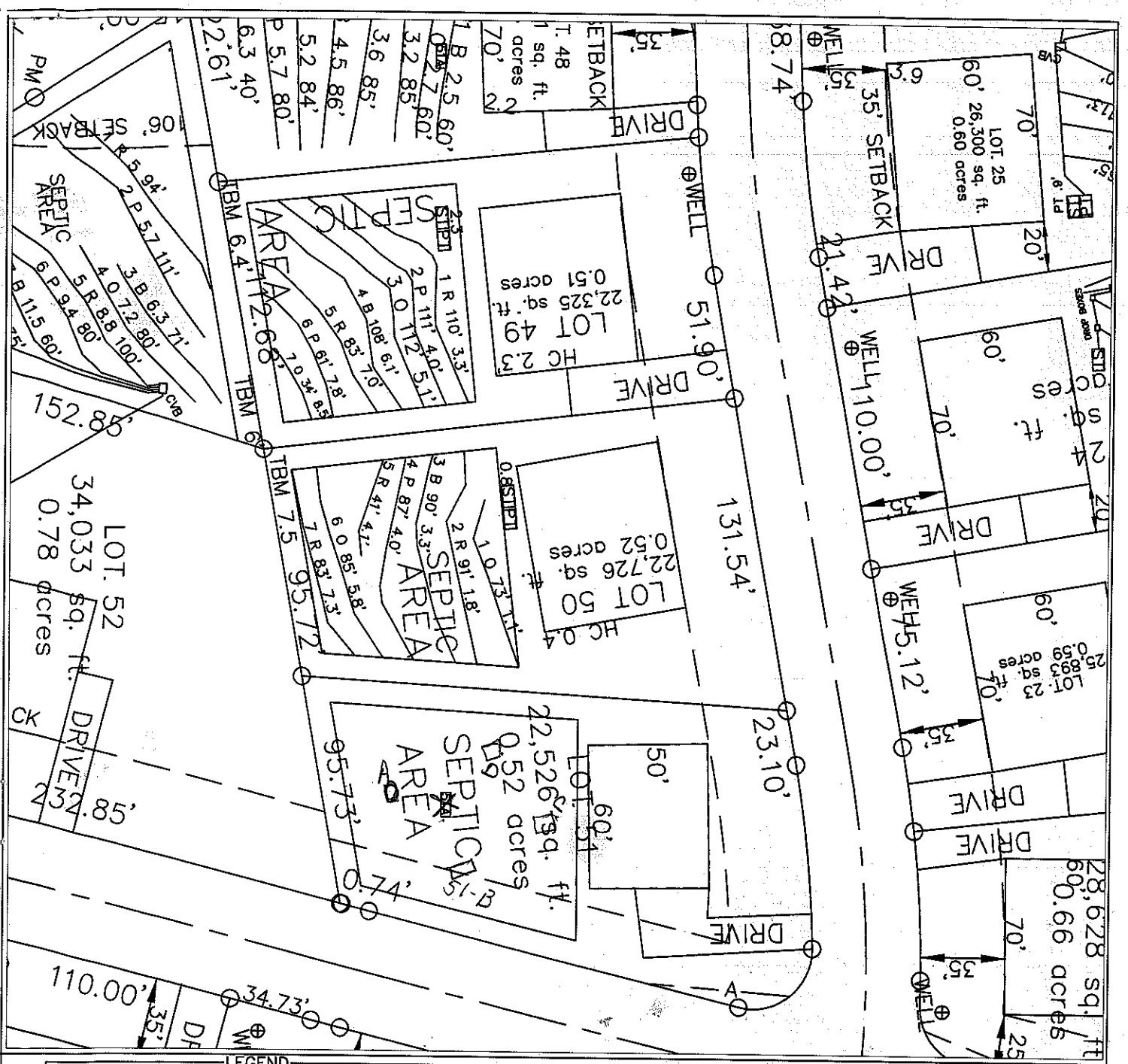
DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH

51

PROPERTY ID #: _____
DATE OF EVALUATION: _____
COUNTY: _____

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	OTHER PROFILE FACTORS .1943 SOIL DEPTH	OTHER PROFILE FACTORS .1956 SAPRO CLASS	OTHER PROFILE FACTORS .1944 RESTR HORIZ	PROFILE CLASS & LTAR
P	SS	0-28	RC MFSBk	SS, SP, Fr SEXP	–	43	PS	–	PS
S1A	0-5%	28-43	RCL WFSBk	SS, SP, Fr SEXP	common sap common RCL				
		43-64	Ver. SL Sap Mas	SS, SP, Fr SEXP					.3
S1	14%	0-25	mo f sbk C	fr SS SP	Red				
B		25-55	wk sbk cl	fr SS SP	Red	C-sap			.3
		55-60	L sap	fr SS sap					
C		0-27	RC SBk	fri SSSP/Sap-	common sap				
		27-54	RCL WSBk	fri SSSP/Sap-	many SAP +felspar	54	–	–	.3
D		0-9	mo f sbk scl	fr SS SP	Red/Br				
		9-31	mo sbk C	fr SS SP	red				
		31-50	wk sbk cl	fr SS SP	Red	f-sap			.3

COMMENTS: _____



LEGEND

House Box.

System lines.

Repair lines.

GRAPHIC SCALE
1" = 60'

60 0 60 120

FOR PRELIMINARY PLANNING PURPOSES ONLY. ALL LOTS WILL REQUIRE FINAL APPROVAL BY THE COUNTY HEALTH DEPARTMENT ON A LOT BY LOT BASIS. THIS MAP SHOULD BY USED AS A GENERAL GUIDE, SOME ADJUSTMENTS WILL BE NECESSARY IN THE FIELD DUE TO SOIL VARIABILITY AND COMPLEX TOPOGRAPHIC FEATURES. THIS MAP ONLY REFLECTS EXISTING SOIL SUITABILITY FOR ON-SITE SEPTIC TANK SYSTEMS.

PLEASE REFER TO ATTACHED SOIL REPORT FOR ADDITIONAL SITE SPECIFIC INFORMATION

ROLLANS SOIL & ENVIRONMENTAL SERVICES
470 NORTH BROAD STREET SUITE D
MOORESVILLE, NC 28115
PHONE: (704) 658-1723
FAX: (704) 658-1724

BRADY FREEMAN, B.S.
MOBILE: (704) 746-6497
EMAIL: BFREE2980YAHOO.COM

ASHLEY ROLLANS, NC LICENSED SOIL SCIENTIST
MOBILE: (704) 746-5946
EMAIL: ROLLANS@WINDSTREAM.NET

MAP TITLE: SITE PLAN & DRAINFIELD AREAS

PROJECT NAME: E&J DEVELOPMENT/AUTUMN GROVE SUBDIVISION

LOCATION/DATE: HWY 21/115 IREDELL COUNTY, NORTH CAROLINA AUGUST 2007

JOB #: 01-1043
FILE: C:\JOBS\01-1043
PROJECT MGR.: C.B.F.
FIELD WORK: C.B.F., A.L.P. & M.D.B.
DRAWN BY: C.B.F. & M.D.B.