TABLE A

TEST LOCATION	DEPTH TO MOST RESTRICTIVE HORIZON (inches)	DEPTH TO REFUSAL (inches)
B1	30	60
B2	>72	>72
B3	>72	>72
B4	30	67
B5	>72	>72
B6	>72	>72
B7	24	42
B8	26	43
B9	>72	>72
B10	28	68
B11	>72	>72
B12	>72	>72
B13	>72	>72
B14	>72	>72
B15	38	75
B16	>72	>72
B17	34	73
B18	42	42
B19	38	54
B20	30	54
B21	44	62
B22	30	70
B23	>72	>72
B24	>72	>72
B25	48	48
B26	>72	>72
B27	>72	>72
B28	29	29
B29	>72	>72
B30	>72	>72
B31	>84	>84
B32	>72	>72
B33	>72	>72
B34	>72	>72
B35	>76	>76
B36	74	74
B37	32	32
B38	30	30
B39	>72	>72
B40	>72	>72
B41	44	44
B42	>72	>72
B43	35	75+
B44	20	26
B45	30	36
B46	30	48
B47	>72	>72
B48	30	61
B49	30	64
B50	78	78
B51	>72	>72
B52	36	36
B53	42	42
B54	62	62
B55	31	60
B56	36	36
B57	>72	>72
B58	66	66
K9	33	33
K10	54	54
K11	62	62
K12	>72	>72
K13	>72	>72
K28	>72	>72
K29	39	39

TABLE A (Cont'd)

TEST LOCATION	DEPTH TO MOST RESTRICTIVE HORIZON (inches)	DEPTH TO REFUSAL (inches)
C3A	70	70
C4A	56	56
A3	53	53
A4	44	49
A6	25	47
A7	24	24
A8	24	24
A9	26	30
A10	27	47
A12	55	55
A13	28	30
A16	24	24
A17	23	33
A18	22	24
A19	33	44
A29	66	66
A31	51	51
A32	32	35
A33	32	44
A35	25	32
A37	55	55
A43	60	60
A45	51	51
A46	58	58
C1	51	51
C2	50	50
C3	50	50
C4	33	33
C5	65	65
C6	40	68
C7	61	61
C8	65	65
C9	48	48
C10	55	55
C11	59	59

TABLE A (Cont'd)

TEST LOCATION	DEPTH TO MOST RESTRICTIVE HORIZON (inches)	DEPTH TO REFUSAL (inches)
C12	49	49
C13	30	30
C14	32	32
C15	63	63
C16	>72	>72
C17	35	35
C18	19	19
C19	>72	>72
C20	>72	>72
C21	50	50
C22	58	58
C23	48	48
C24	22	22
C25	48	48
C26	38	40+
C27	50	>72
C28	38	38
C29	21	21
C30	50	50
C31	60	60
C32	40	60
C33	64	64
C34	>72	>72
C35	>72	>72
C36	64	64
C37	61	61
C38	41	41
C39	28	28
C40	>72	>72
C41	>72	>72
C42	50	>72
C43	33	33
C44	66	66
C45	35	35
C46	41	41

TABLE A (Cont'd)

TEST LOCATION	DEPTH TO MOST RESTRICTIVE HORIZON (inches)	DEPTH TO REFUSAL (inches)
C47	47	47
C48	37	37
C49	21	21
C50	22	22
C51	50	50
C52	61	61
C53	35	35
C54	70	70
C55	>72	>72
C56	59	59
C57	64	64
C58	31	31
C59	58	58
C60	>72	>72
C61	20	22
C62	29	29
C63	>72	>72
C64	>72	>72
C65	>72	>72
C66	58	58
C67	57	57
C68	30	30
C69	28	28
C70	>72	>72
C71	38	38
C72	41	41
C73	54	54
C74	>72	>72
C75	>72	>72
C76	>72	>72
C77	>72	>72
C78	>72	>72
C79	>72	>72
C80	50	61
C81	39	39

* Unless otherwise specified, borings not listed in Table A were advanced to a depth of 72 inches.

SYMBOL LEGEND
- ● BORING
- ◉ OBSERVATION PIT
- ▲ CONDUCTIVITY TEST
- GULLY

SOIL INVESTIGATION REPORT
HARMONY OAKS S/D
L.L. 860, 861 & 862, 3rd DISTRICT, 2nd SECTION
CHEROKEE COUNTY, GEORGIA
MAY 26, 2005
REVISED: DECEMBER 7, 2005
REVISED: NOVEMBER 30, 2006

SCALE: 1" = 100'
SHEET 1 OF 1
CHECKED BY: CDP & CTL
DRAWN BY: CDP
REVIEWED BY: CDP & KWH

HORIZON ENVIRONMENTAL, INC.
KEVIN W. HERNDON & CHRIS D. PARKER
BOARD CERTIFIED SOIL CLASSIFIERS
P.O. BOX 759
BRASELTON, GEORGIA 30517
OFFICE (770) 967-7880 FAX (770) 967-7882

SITE SOIL PROPERTIES

SOIL UNIT	PRED. SLOPE GRADIENT %	DEPTH TO BEDROCK (in)	DEPTH TO HIGH WATER TABLE INDICATORS (in)	INSTALLATION ZONES[1] (in)	EXPECTED PERC RATE (min/in)	FLOOD POTENTIAL	DRAIN FIELD TYPE	SUITABILITY CODE
Alluvial Soils	-----	--------	-----	NR	NR	FREQUENT	NONE	F
Cecil	8-15	>72	>72	24-36-48	60-80-60	NONE	CONVENTIONAL	A
Cecil	15-20	>72	>72	24-36-48	80-80-60	NONE	CONVENTIONAL	A
Durham	15-20	>72	>72	24-36-48	80-80-60	NONE	CONVENTIONAL	A
Louisa	8-15	See Table A	See Table A	NR	NR	NONE	DRIP-EMITTER / MODIFIED	H1
Louisa	15-20	See Table A	See Table A	NR	NR	NONE	DRIP-EMITTER	H1
Louisa	20-30	See Table A	See Table A	NR	NR	NONE	DRIP-EMITTER	H2
Louisa	30-35	See Table A	See Table A	NR	NR	NONE	DRIP-EMITTER	H2
Rawlings	8-15	See Table A	See Table A	NR	NR	NONE	DRIP-EMITTER	H1
Rion	15-20	>72	>72	24-36-48	60-45-45	NONE	CONVENTIONAL	A
Rion	20-30	>72	>72	24-36-48	60-45-45	NONE	CONVENTIONAL	A,G
Rion	30-35	>72	>72	24-36-48	NR-45-45	NONE	CONVENTIONAL	A,G
Rion Wet Variant	15-20	>72	50	NR	NR	NONE	DRIP-EMITTER	C
Santuc	8-15	>72	40	NR	NR	NONE	DRIP-EMITTER	C
Santuc	15-20	>72	40	NR	NR	NONE	DRIP-EMITTER	C
Starr	15-20	>72	>72	NR	NR	OCCASIONAL	NONE	D
Starr	20-30	>72	>72	NR	NR	OCCASIONAL	NONE	D
State	15-20	>72	40	NR	NR	OCCASIONAL	NONE	D
Tallapoosa	2-8	60-72	>72	24-36-48	60-45-45	NONE	CONVENTIONAL	A
Tallapoosa	8-15	60-72	>72	24-36-48	60-45-45	NONE	CONVENTIONAL	A
Tallapoosa	15-20	66-72	>72	24-36-48	60-45-45	NONE	CONVENTIONAL	A
Tallapoosa	20-30	66-72	>72	24-36-48	NR-45-45	NONE	CONVENTIONAL	A,G
Tallapoosa	30-35	66-72	>72	24-36-48	NR-45-45	NONE	CONVENTIONAL	A,G
Tallapoosa Shallow Variant	2-8	See Table A	See Table A	NR	NR	NONE	DRIP-EMITTER / MODIFIED	H1
Tallapoosa Shallow Variant	8-15	See Table A	See Table A	NR	NR	NONE	DRIP-EMITTER / MODIFIED	H1
Tallapoosa Shallow Variant	15-20	See Table A	See Table A	NR	NR	NONE	DRIP-EMITTER / MODIFIED	H1
Tallapoosa Shallow Variant	20-30	See Table A	See Table A	NR	NR	NONE	DRIP-EMITTER	H2
Tallapoosa Shallow Variant	30-35	See Table A	See Table A	NR	NR	NONE	DRIP-EMITTER	H2
Tallapoosa Stony	2-8	See Table A	See Table A	24-36-48[W]	60-45-45	NONE	CONVENTIONAL	B
Tallapoosa Stony	8-15	See Table A	See Table A	24-36-48[W]	60-45-45	NONE	CONVENTIONAL	B
Tallapoosa Stony	15-20	See Table A	See Table A	24-36-48[W]	60-45-45	NONE	CONVENTIONAL	B
Tallapoosa Stony	20-30	See Table A	See Table A	24-36-48[W]	NR-45-45	NONE	CONVENTIONAL	B,G
Tallapoosa Stony	30-35	See Table A	See Table A	24-36-48[W]	NR-45-45	NONE	CONVENTIONAL	B,G

NR - Not Recommended S.V. - Shallow Variant W.V. - Wet Variant

Notes: 1) The areas proposed for septic system construction should not be disturbed. If disturbance does occur, this report and the recommendations herein are void and a new soil investigation will be required to reassess the site and it's ability to function for a suitable drain field disposal area.

2) Soil borings were located from property corners using a Trimble PROXRS global positioning system with TSC1 data logger.

3) An installation zone has been given for each soils series. The recommended installation depth is the middle depth listed. Three expected percolation rates are listed, matching with the corresponding depths within the installation zone.

4) Installation zone depth listed does not meet the 24 inch separation requirement from restrictive horizons, and therefore will require aerobic treatment units (ATU's) if installed at this depth.

5) The study area consisted of 29 +/- acres. A total of 236 hand auger borings and/or observation pits were advanced in the study area.

6) Boundary and topographic information provided by Reece Land Surveying. Soil boundaries were drawn based on topographic features observed in the field and as shown on this topographic map. Soil boundaries should be considered zones of transition not absolute. Some areas may require special Level 4 soil investigations after lot design has been established.

SOIL SUITABILITY CODES:

A) These soils have the ability to function as suitable absorption fields given proper system design, installation and maintenance.

B) Due to stony and/or marginal bedrock depths, it is recommended that drain lines are installed first to ensure that the required two-foot separation between trench bottom and the rock layer is maintained.

C) Due to evidence of a perched or seasonal high water table, there is a high probability of failure for conventional septic systems. These soils should, however, have the ability to function for drip-emitter systems with a hydraulic loading rate of 0.08 gpd/sq. ft.

D) Due to drainage and/or flooding potential, these soils should be avoided for septic system construction.

F) There is a very high probability of failure for septic systems.

G) Soils greater than 25 percent may require additional measures including but not limited to the following: engineered site plan, additional drain field area and additional drain field length. Please contact the Cherokee County Health Department to discuss possible requirements.

H1) Due to bedrock limitations, these soils are not considered suitable for conventional septic system construction. Other alternative installations may be acceptable for these soils (example: a shallow conventional gravel system with or without cover (18" trench depth) and an aerobic treatment unit). Due to variable depths to bedrock (see Boring Log) additional testing, including but not limited to percolation tests will be required to assess suitability for each system designed for these areas. Inclusions of other soils with insufficient depth may occur. These areas should function with a shallow trench installation and cover. An 18 inch trench depth with 6 to 12 inches of cover will provide the 12 inches of separation required for an aerobic treatment system (aerobic treatment is required). A curtain drain is also recommended to intercept and redirect any surface or shallow subsurface water away from the drain field. Please discuss alternatives with the Cherokee County Health Department. These soils should, however, also have the ability to function for drip-emitter systems with a hydraulic loading rate of 0.12 gpd/sq. ft. If a modified system is utilized, a design percolation rate of 80 min/inch should be used.

H2) Due to bedrock limitations and slopes greater than 20%, these soils are not considered suitable for shallow trench installation. These soils should, however, have the ability to function for drip-emitter systems with a hydraulic loading rate of 0.12 gpd/sq. ft.

SATURATED HYDRAULIC CONDUCTIVITY TEST RESULTS - PROPOSED HARMONY OAKS S/D

TEST #	SOIL TYPE (SERIES)	TEST DEPTH	Ksat (in/hr)
PT-1A	TALLAPOOSA	30 INCHES	0.97
PT34A	TALLAPOOSA	30 INCHES	0.73
PT-A46	TALLAPOOSA S.V.	30 INCHES	0.69
PT-A45	TALLAPOOSA S.V.	30 INCHES	0.49
PT-A43	TALLAPOOSA STONY	29 INCHES	0.80
PT-A38	TALLAPOOSA	30 INCHES	0.16
PT-A31	TALLAPOOSA S.V.	30 INCHES	0.26
PT-1	TALLAPOOSA	30 INCHES	0.25
PT-2	TALLAPOOSA	30 INCHES	0.47
PT-3	TALLAPOOSA	30 INCHES	0.11
PT-4	TALLAPOOSA STONY	30 INCHES	0.56
PT-5	TALLAPOOSA STONY	29 INCHES	0.07
PT-6	TALLAPOOSA	30 INCHES	0.30
PT-7	TALLAPOOSA	30 INCHES	0.19
PT-8	TALLAPOOSA STONY	30 INCHES	0.33

S.V. = SHALLOW VARIANT

EQUIPMENT USED: Compact Constant Head Permeameter #1301

GEOMETRIC MEAN FOR EACH SOIL SERIES

SOIL SERIES	GEOMETRIC MEAN (Ksat in/hr)
TALLAPOOSA	0.31
TALLAPOOSA STONY	0.31
TALLAPOOSA S.V.	0.45

S.V. = SHALLOW VARIANT

ADJUSTED LOADING RATE (85% REDUCTION OF Ksat)

SOIL SERIES	ADJUSTED LOADING RATE (in/hr)
TALLAPOOSA	0.047
TALLAPOOSA STONY	0.047
TALLAPOOSA S.V.	0.068

S.V. = SHALLOW VARIANT

100 50 100 200 400

100