


Installation Area Soil Summary Report

GENERAL INFORMATION

Date November 23, 2005 Submitted to Madison County Health Department
Applican Graystone Homes Telephone (703) 680-2588
Address 1202 Orange Road, Culpeper, VA 22701
Owner Same Address Same
Location From Madison, North on Rt. 29, Property is on right one half mile past intersection of Rt. 607 and Rt. 29. 
Tax Map 40-79A & 41-9 Subdivision Carpenter's Ridge
Block/Sec. Lot 4, Site 4-M Installation, Upper 14 Lines: Conventional trench

SOIL INFORMATION SUMMARY

1. Position in landscape satisfactory Yes No

Wooded Piedmont Sideslope

2. Slope 9 %

3. Depth to rock or impervious strata: Max. _____ Min. _____ None

4. Depth to seasonal water table (gray mottling or gray color) No Yes _____ inches

5. Free water present No Yes _____ range in inches

6. Soil percolation rate estimated Yes No
Texture group III
Estimated Rate 75

7. Permeability test performed Yes No

**All applicable regulations as well as the specific soil and site conditions (including the trench sidewalls) were taken into account when the estimated percolation rate was assigned.*

If yes, note type of test performed and attach

Site Approved: Primary drainfield to be placed at 18-24 inch depth at site designated on permit.
If required, reserve drainfield to be placed at 18-24 inches as designated on

Site Disapproved

Reasons for rejection:

1. Position in landscape subject to flooding or periodic saturation.
2. Insufficient depth of suitable soil over hard rock.
3. Insufficient area of acceptable soil for required drainfield, and/or Reserve Area
4. Rates of absorption too slow.
5. Insufficient area of acceptable soil for required drainfield, and/or Reserve Area
6. Proposed system too close to well.
7. Other _____



(attach additional pages if necessary)

The information presented in this submittal package represents the best available information as of the evaluation date noted on the next page of this package. Due to the potential for subsequent events to negatively impact the recommendations made in this package, it is our firm's very strong recommendation to submit this documentation to the local health department for approval as soon as it is received by the client. Failure to do so may render the information contained in this package void. M & M Soil Consultants, Inc., as well as the certifying individual, accepts no liability for subsequent events that occur after the date of the evaluation.

Reserve Area Soil Summary Report

GENERAL INFORMATION

Date November 23, 2005 Submitted to Madison County Health Department
Applicant Graystone Homes Telephone (703) 680-2588
Address 1202 Orange Road, Culpeper, VA 22701
Owner Same Address Same
Location From Madison, North on Rt. 29, Property is on right one half mile past intersection of Rt. 607 and Rt. 29.
Tax Map 40-79A & 41-9 Subdivision Carpenter's Ridge
Block/Sec. Lot 4, Site 4-M Reserve, Lower 6 Lines: Puraflo trench

SOIL INFORMATION SUMMARY

1. Position in landscape satisfactory Yes No

Wooded Piedmont Sideslope

2. Slope 9 %

3. Depth to rock or impervious strata: Max. _____ Min. 42" None (Holes #3 & 4)

4. Depth to seasonal water table (gray mottling or gray color) No Yes _____ inches

5. Free water present No Yes _____ range in inches

6. Soil percolation rate estimated Yes No
Texture group III
Estimated Rate 75

7. Permeability test performed Yes No

**All applicable regulations as well as the specific soil and site conditions (including the trench sidewalls) were taken into account when the estimated percolation rate was assigned.*

If yes, note type of test performed and attach

Site Approved: Primary drainfield to be placed at 18-24 inch depth at site designated on permit.
If required, reserve drainfield to be placed at 18-24 inches as designated on

Site Disapproved

Reasons for rejection:

1. Position in landscape subject to flooding or periodic saturation.
2. Insufficient depth of suitable soil over hard rock.
3. Insufficient area of acceptable soil for required drainfield, and/or Reserve Area
4. Rates of absorption too slow.
5. Insufficient area of acceptable soil for required drainfield, and/or Reserve Area
6. Proposed system too close to well.
7. Other _____



(attach additional pages if necessary)

SOIL PROFILE DESCRIPTION REPORT

Date of Evaluation September 29, 2005

Carpenter's Ridge, Lot 4, Site 4-M

Where the local health department conducts the soil evaluation, the location of profiles holes may be shown on the schematic drawing on the construction permit or the sketch submitted with the application. If soil evaluations are conducted by a private soil scientist, location of profile holes and sketch of the area investigated including all structural features, i.e., sewage disposal systems, wells, etc., within 100 feet of site (See Section 4) and reserve site shall be shown on the reverse side of this page or prepared on a separate page and attached on this form.

See application sketch page See construction permit See sketch attached to this form

Hole	Horizon	Depth (inches)	Description of color, texture, etc.	Texture Group
1	A	0-9	7.5YR 4/4 Loam, Friable	IIB
	Bt	9-31	2.5YR 4/8, 5/8 Heavy Clay Loam, Firm, 2-3 msbk	III
	BC	31-48	2.5YR 4/8, 5/8 with common 5YR 6/6, 7.5YR 6/6, 6/8 (parent) mottles; Light Clay Loam, Firm, dry	III
2	A	0-6	7.5YR 4/3 Loam, Friable	IIB
	Bt	6-27	2.5YR 4/8, 5/8 Heavy Clay Loam, Firm, 3 msbk	III
	BC	27-48+	2.5YR 4/8, 5/8, 5YR 6/8, 6/6 Light Clay Loam, Firm, dry, 1-2 msbk	III
3	A	0-6	7.5YR 4/3 Loam, Friable	IIB
	Bt	6-24	2.5YR 4/6, 4/8 Clay Loam, Firm, 2-3 msbk	III
	BC	24-42	2.5YR 4/6, 4/8, 5YR 5/8, 6/6, 7.5YR 6/6, 6/8 Light Clay Loam, Firm	III
	Cr	42+		
4	A	0-7	7.5YR 4/3 Loam, Friable	IIB
	Bt	7-24	2.5YR 4/8, 5/8 Sandy Clay Loam, Friable to Firm, 2 msbk	IIB
	C	24-42	Multi-colored 5YR 6/6, 7.5YR 6/6, 7/6, 10YR 7/4, 7/6, 2.5Y 4/4, 5/4 Channery Sandy Loam, Friable	IIA
	Cr	42+		
5	A	0-4	10YR 4/3 Loam, Friable	IIB
	BA	4-12	7.5YR 5/6 Heavy Loam, Friable	IIB
	Bt	12-30	2.5YR 4/8, 5/8 Clay Loam, Firm, 2-3 msbk	III
	BC	30-48	2.5YR 4/8, 5/8, 5YR 6/6, 6/8 Light Clay Loam, Firm, dry 1-2 msbk	III



Abbreviated Design Form (*Installation, Upper 14 Lines: Conventional trench*), Lot 4, Site 4-M

Design Basis

A. a. Estimated Percolation Rate (minutes per inch)	75
b. Recommended trench bottom (inches)	18-24
c. Depth to restrictive feature or to limit of evaluation (inches)	48
d. Minimum separation distance required (18 inches for conventional systems)	18
e. Separation distance in inches provided in design (Ac-Ab)	24-30
f. Minimum trench bottom due to slope $[(\% \text{ slope} \cdot 8)/2 + (18)]$ (inches)	18
g. Is the slope greater than 10%? (If no, go to line Ai; if yes, go to line Ah)	No
h. If slope is >10%, does 24 inches to a restriction exist below trench bottom in Ab?	n/a
i. Additional center-to-center spacing required in feet. (If no to Ag, insert 0. If yes to Ag and yes to Ah, insert 0 from 10 to 19% slope, insert 1 from 20 to 29% slope, insert 2 from 30 to 39% slope, insert 3 from 40 to 49% slope. If yes to Ag and no to Ah, insert 1 from 10 to 19% slope, insert 2 from 20 to 29% slope, insert 3 from 30 to 39% slope, insert 4 from 40 to 49% slope.)	0
B. Trench bottom sq. ft. required per bedroom from Table 5.4 using the gravity column	596
C. Number of Bedrooms	4

Area Calculations

D. Length of trench (across slope)	60 feet
Length of available area (across slope)	120 feet
E. Width of trench	3 feet
F. Number of trenches	14
G. Center-to-center spacing	9 feet
H. a. Width required downslope $(G(F-1) + E)$	57 feet
b. Total width of available area (includes area allocated for reserve)	85 feet
I. Total square footage required $(B \cdot C)$	2,384 sq. ft.
J. Square footage in design $(D \cdot E \cdot F)$	2,520 sq. ft.
K. Is a reserve area required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Percent required:	100
Percent available:	106.2



Notes: 106.2% reserve is available with the 6, 60' lines remaining in this area using a Puraflo trench system. To the best of our knowledge and belief, this site complies with all local ordinances such as the CBPA. (Reserve area calculations are shown on a separate abbreviated design form later in this package.)

Abbreviated Design Form (*Reserve, Lower 6 Lines: Puraflo trench*), Lot 4, Site 4-M

A. a. Estimated Percolation Rate (minutes per inch)	75
b. Recommended trench bottom (inches)	18-24
c. Depth to restrictive feature or to limit of evaluation (inches)	42
d. Minimum separation distance required (dependent depth of trench)	12
e. Separation distance in inches provided in design (Ac-Ab)	18-24
f. Percent slope	9
g. Minimum trench bottom due to slope in inches (<10% slope = 10 inches) (>10% slope = [%slope x .01 x trench width in inches] + 10 inch minimum)	12
h. Is the slope greater than 10%? (If no, go to line Ai; if yes, go to line Ah)	No
i. If slope is >10%, does 24 inches to a restriction exist below trench bottom in Ab?	n/a
j. Additional center-to-center spacing required in feet. (If no to Ah, insert 0. If yes to Ah and yes to Ai, insert 0 from 10 to 19% slope, insert 1 from 20 to 29% slope, insert 2 from 30 to 39% slope, insert 3 from 40 to 49% slope. If yes to Ah and no to Ai, insert 1 from 10 to 19% slope, insert 2 from 20 to 29% slope, insert 3 from 30 to 39% slope, insert 4 from 40 to 49% slope.)	0

B. Loading Rate (gpd/sq.ft.) required for <u>3</u> foot wide trenches per Table 2, GMP 112 for the perc rate detailed in Aa.	0.59
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C. Number of Bedrooms	4
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Area Calculations

D. Length of trench (across slope)	60 feet
Length of available area (across slope)	120 feet

E. Width of trench	3 feet
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F. Number of trenches	6
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G. Center-to-center spacing	9 feet
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H. a. Width required downslope (G(F-1) + E)	21 feet
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b. Total width of available area (does not include area allocated for installation)	22 feet
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I. Total square footage required (B*C)	1,016.95 sq. ft.
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J. Square footage in design (D*E*F)	1,080 sq. ft.
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K. Is a reserve area required? Yes No

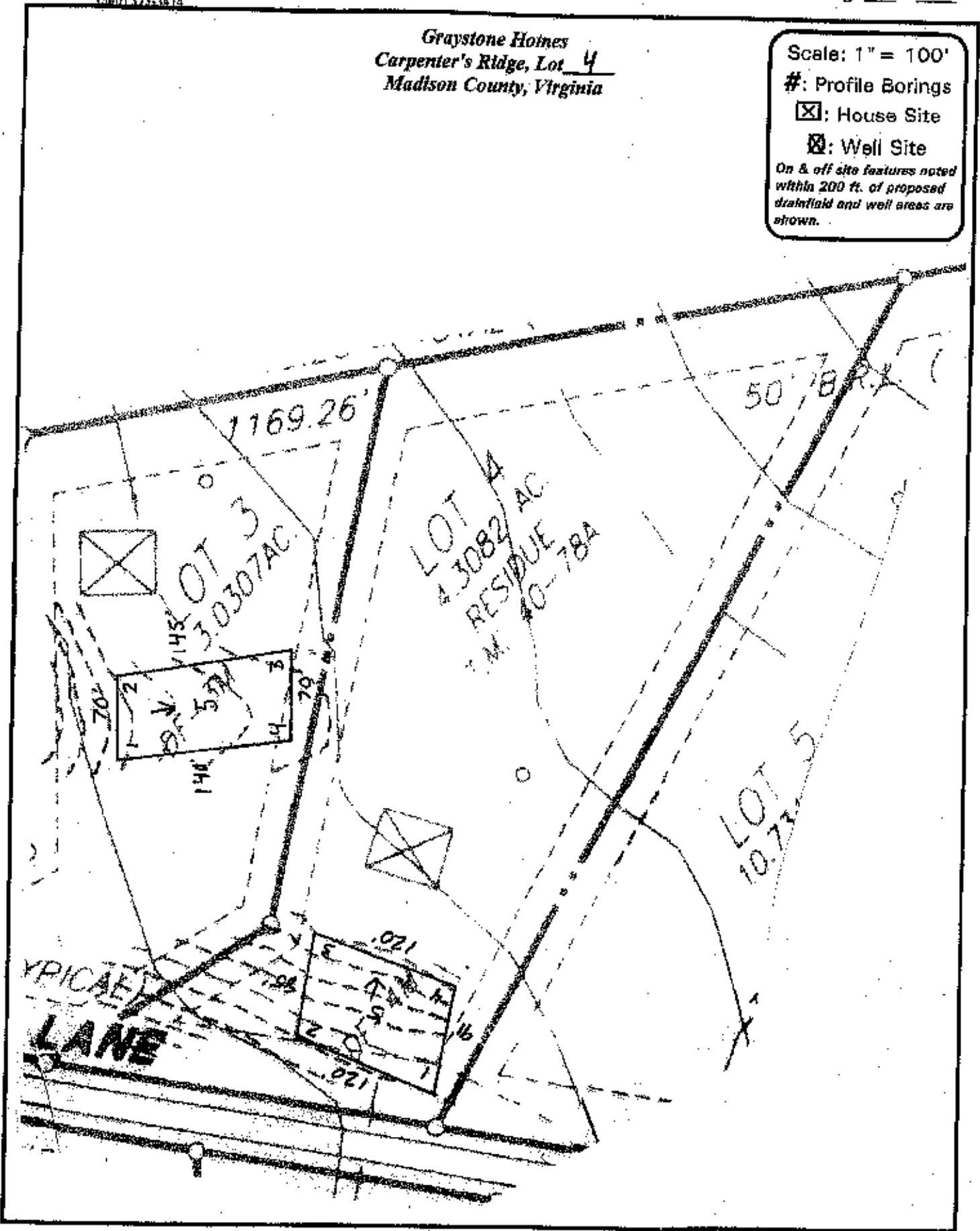
Percent required:	100
Percent available:	106.2



Site Sketch

*Graystone Homes
Carpenter's Ridge, Lot 4
Madison County, Virginia*

Scale: 1" = 100'
#: Profile Borings
☒: House Site
☒: Well Site
On & off site features noted
within 200 ft. of proposed
drainfield and well areas are
shown.



Certification Statement

County: Madison County

Date: November 23, 2005

Property Identification: Tax Map 40-79A & 41-9, Carpenter's Ridge, Lot 4, Site 4-M

Submitted by: Glen E. McClenny

This is to certify according to subsection 32.1-163.5 of the *Code of Virginia* that work submitted for the referenced property is in accordance to and complies with the *Sewage Handling and Disposal Regulations* of the Virginia Department of Health. I recommend a Subdivision Approval be approved.

AOSE


Glen E. McClenny; AOSE 013, CPSS 3401-000049

Date: November 23, 2005

