

**Soils Study for Reserve Drain Field Site
Revised Tax Map 30-35B
A Boundary Line Adjustment with Tax Map
30-1A
Albemarle County**

SUB202400081

Prepared for:

Rivanna Water and Sewer Authority

695 Moores Creek Lane

Charlottesville, VA 22902

Prepared by:

Steve Gooch Consulting Geologist, Inc.

703 Oliver Creek Road

Troy, Virginia 22974

June 13, 2024

OSE/PE Report for:Construction Permit ☐ Certification Letter ☐ Subdivision Approval ☒**Property Location:**

911 Address: 1706 Buck Mountain Road City: _____

Lot _____ Section _____ Subdivision _____

GPIN or Tax Map # 30-35B (Revised) Health Dept ID # _____

Latitude _____ Longitude _____

Applicant or Client Mailing Address:

Name: Rivanna Water and Sewer Authority

Street: 695 Moores Creek Lane

City: Charlottesville State VA Zip Code 22902

Prepared by:

OSE Name Steve Gooch License # 1940001284

Address 703 Oliver Creek Road

City Troy State VA Zip Code 22974

PE Name: _____ License # _____

Address _____

City _____ State _____ Zip Code _____

Date of Report 6/6/24 Date of Revision #1 _____

OSE/PE Job # _____ Date of Revision #2 _____

Contents/Index of this report (e.g., Site Evaluation Summary, Soil Profile Descriptions, Site Sketch, Abbreviated Design, etc.)

OSE Cover Page	Abbreviated Design Form
Soil Profile Sheet	Plat
Soil Information Summary Sheet	

Certification Statement

I hereby certify that the evaluations and/or designs contained herein were conducted in accordance with the Sewage Handling and Disposal Regulations (12 VAC5-610), the Private Well Regulations (12 VAC5-630) and all other applicable laws, regulations and policies implemented by the Virginia Department of Health. I further certify that I currently possess any professional license required by the laws and regulations of the Commonwealth that have been duly issued by the applicable agency charged with licensure to perform the work contained herein.

☐ The work attached to this cover page has been conducted under an exemption to the practice of engineering, specifically the exemption in Code of Virginia Section 54.1-402.11

I recommend that a (select one): construction permit ☐ certification letter ☐ subdivision approval ☒

be (select one) issued ☒ denied ☐.

OSE/PE Signature Steve Gooch Date 6/6/24

Soil Profile
Reserve Drain Field
 Revised Tax Map 30-35B
 1706 Buck Mountain Road
 Albemarle County

Hole	Depth (in.)	Horizon	Material Description	Soil Texture Group
1	0-17	Bt [^]	Light reddish brown (5YR 5/4) loam, friable	2
	17-21	Ab	Gray (10YR 5/1) loam, friable	2
	21-30	Eb	Light brown (7.5YR 6/4) loam, friable	2
	30-35	Btb	Light reddish brown (2.5YR 6/4) clay loam, friable	3
	35-74	Cb	Yellowish brown (10YR 5/8) sandy loam, friable, 15% weathered schist fragments	2
	74-	R		
2	0-4	A	Gray (10YR 5/1) loam, friable	2
	4-15	E	Light brown (7.5YR 6/4) loam, friable	2
	15-34	Bt	Light reddish brown (2.5YR 6/4) clay loam, friable	3
	34-74	C	Light yellowish brown (10YR 6/4) sandy loam, friable, 25% weathered schist fragments below 67"	2
	74-	R		
3	0-5	A	Gray (10YR 5/1) loam, friable	2
	5-18	E	Light brown (7.5YR 6/4) loam, friable	2
	18-40	Bt	Red (2.5YR 4/6) silty clay loam, firm	3
	40-53	Bt ₂	Red (2.5YR 5/8) clay loam, friable	2
	53-75	C	Light yellowish brown (10YR 6/4) sandy loam, friable, 25% weathered schist fragments below 70"	2
	75-	R		

Appendix 2
Soil Summary Report

GENERAL INFORMATION

Date 11/6/23 Submitted to Albemarle County Health Department
 Applicant Rivanna Water and Sewer Authority Telephone Number (434) 977-2970
 Address 695 Moores Creek Lane Charlottesville, VA 22902-9016
 Owner same Address same
 Location 1706 Buck Mountain Road
 Tax Map 30-35B (Revised) Subdivision _____
 Block/Section _____ Lot _____

SOIL INFORMATION SUMMARY - Reserve Drain Field

1. Position in landscape satisfactory? ☒ Yes ☐ No
 Describe shoulder
2. Slope 15 %
3. Depth to rock or impervious strata: Max. 75" Min. 74" 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 Texture group I II III IV
☐ No Estimated rate 65 min/inch
7. Permeability test performed ☐ Yes
☒ No

If yes, note type of test performed and attach

☒ Site Approved: Drainfield to be placed at 30-68" depth at site designated on permit.

☐ 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 depth of suitable soil to seasonal water table.
4. ☐ Rates of absorption too slow.
5. ☐ Insufficient area of acceptable soil for required drainfield, and/or Reverse Area.
6. ☐ Proposed system too close to well.
7. ☐ Other Specify _____

(attach additional pages if necessary)

Abbreviated Design Form

This form is for use with gravity, pump to gravity, enhanced flow, and low pressure distribution (LPD) sewage system designs and when applying for a certification letter or subdivision approval.

This abbreviated design covers the ☐ primary and reserve area, ☐ only the primary area, ☒ only the reserve area (check one) for Revised Tax Map 30-35B (1706 Buck Mountain Road)

Design Basis

Total length of available area: 85' Total width of available area: 12'

Estimated Perc. Rate: 65 at 30"-68" in. (depth) Number of bedrooms (or GPD): 3

Conveyance Method¹: Pump Distribution method² (specify): Pump

Dispersal system basis^{3c} VDH Loading Rate Guidance Table LGMI required? No (Yes/No)

Effluent quality required: Advanced Secondary (TL 3) (Primary, Secondary, Advanced Secondary)

Square feet per bedroom: 294

Total trench bottom area required: 882

Pad

Linear loading rate – 0.51 gpd/sqft

Area Calculations

Number of pads 2

Length of pad: 40'

Width of pad: 12'

Center to center spacing: n/a

Reserve required? This is reserve

Percent reserve area required: 100

Total width of absorption area required 12' Total trench bottom area provided: 960

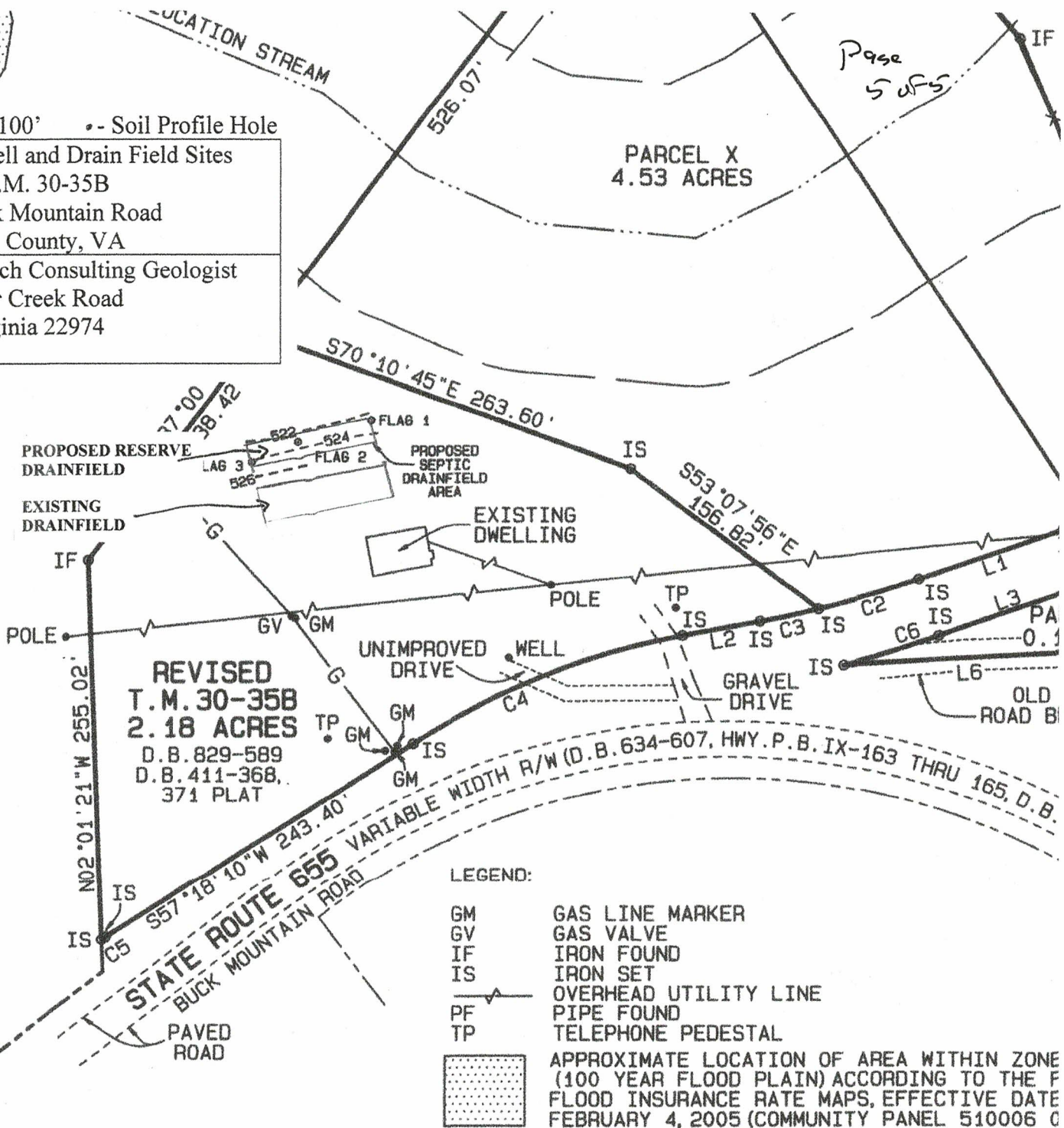
The required width is calculated by multiplying the center-to-center spacing by one less than the number of trenches and adding 1 trench width plus any required reserve area. If the topography is not uniform across the length of the site the trenches will need to flare apart on one end to maintain contour. When this occurs it is necessary to use a center-to-center spacing that accounts for the flair or the installer will not be able to fit the system within the approved area. It is perfectly acceptable to have more area available, especially up and down the slope, than is required.

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Scale 1"= 100' -- Soil Profile Hole

House, Well and Drain Field Sites
Revised T.M. 30-35B
1706 Buck Mountain Road
Albemarle County, VA

Steve Gooch Consulting Geologist
703 Oliver Creek Road
Troy, Virginia 22974



LINE	BEARING	DISTANCE
L1	S70°38'40"W	101.94
L2	S79°40'42"W	52.12
L3	N70°38'40"E	101.94
L4	S27°28'59"W	64.65
L5	N58°17'40"W	55.85
L6	S86°41'39"W	163.39

LINE	DELTA	RADIUS	ARC	TANGENT	CHORD	CHORD BEARING
C1	55°17'10"	122.32	118.03	64.06	113.50	N81°42'45"W
C2	5°44'32"	696.20	69.77	34.92	69.74	S73°30'56"W
C3	3°17'30"	696.20	40.00	20.00	39.99	S78°01'57"W
C4	22°22'32"	497.46	194.27	98.39	193.04	S68°29'26"W
C5	0°36'35"	338.31	3.60	1.80	3.60	S56°59'52"W
C6	5°08'05"	736.20	65.98	33.01	65.96	N73°12'43"E

SCALE: 1"
DATE: NOVEMBER
REVISED: JULY

(TO UPDATE OWNERSHIP)

ROGER W. RAY &
663 BERKMAN
CHARLOTTESVILLE,
TELEPHONE: (434) 291-1111
RAYSURVEY