

Soil and Site Evaluation Report

April 29, 2025

By: Humphrey Soil Perx, LLC

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A soil and site evaluation were conducted on portions of an 87-acre tract in Pitt County, North Carolina (Parcel ID: 2915) located at 3032 Hudsons Crossroads Rd (Figure 1). The evaluation was conducted at the request of Mr. Landreth. The purpose of the site evaluation was to determine if there was a sufficient area of suitable soil to accommodate a repair/replacement drainfield for an existing 3-bedroom home. An auger was used to create boreholes to assess the morphological characteristics of soil including depth, color, structure, texture, and mineralogy near the homesite. The main limiting factor with regards to installation of a septic system was depth to soil wetness indicators (15A NCAC 18E .0504). The subsoil was predominantly a friable sandy clay loam with suitable structure and mineralogy. An area of suitable soil was observed south of the home and garage/shop in an agricultural field. Boreholes revealed indicators of wetness between 20 and 22 inches below the surface within the identified area (Figure 2). The subsoil was a group III (sandy clay loam) and was deep enough for a shallow, low-profile chamber trench system (20 to 22 inches to wetness indicators) with 6 or more inches of topsoil capping material. A pump tank and pump will be required based on the elevation of the drainfield area in relation to the outlet elevation of the septic tank. The existing tank should be pumped, crushed and filled in with soil. A new septic tank and pump tank (with effluent pump) will be required. The shop/garage has plumbing fixtures, and the wastewater from the shop/garage can be piped to the new septic tank

and utilize the new drainfield. Detailed profile descriptions are shown in Table 1 and the locations of the new septic tank, pump tank, and drainfield trenches are shown in Figure 3. Septic system design specifications are listed in Table 2.

Approvals from various agencies including but not limited to Planning and Zoning and Building Inspections may be required prior to issuance of necessary permits. If there are any questions or concerns, feel free to reach out via email (cph1583@gmail.com) or phone (252-864-4074).

Sincerely,

Charles P. Humphrey Jr.

Humphrey Soil Perx, LLC



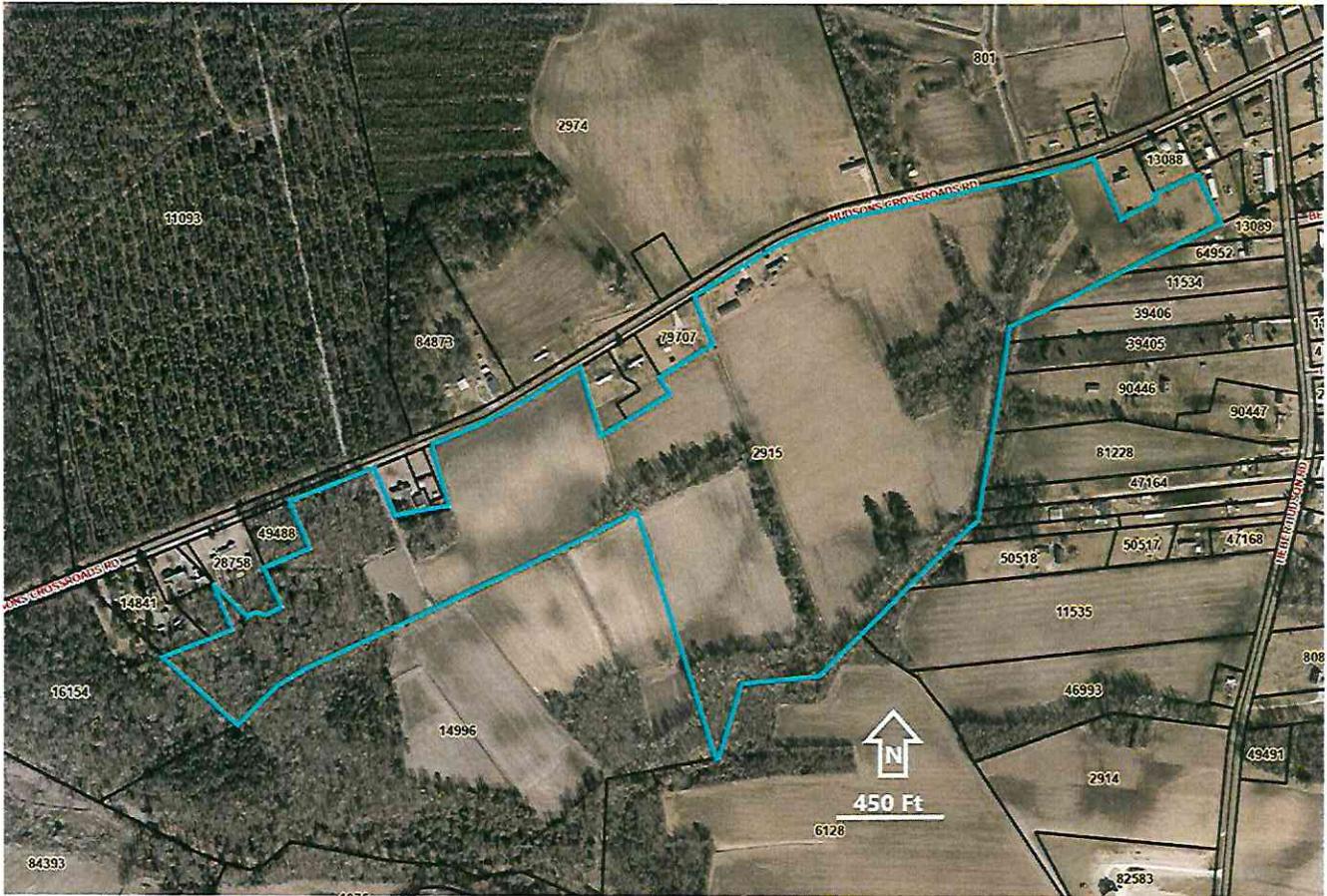


Figure 1. Aerial view of 3032 Hudsons Crossroads (PN: 2915).

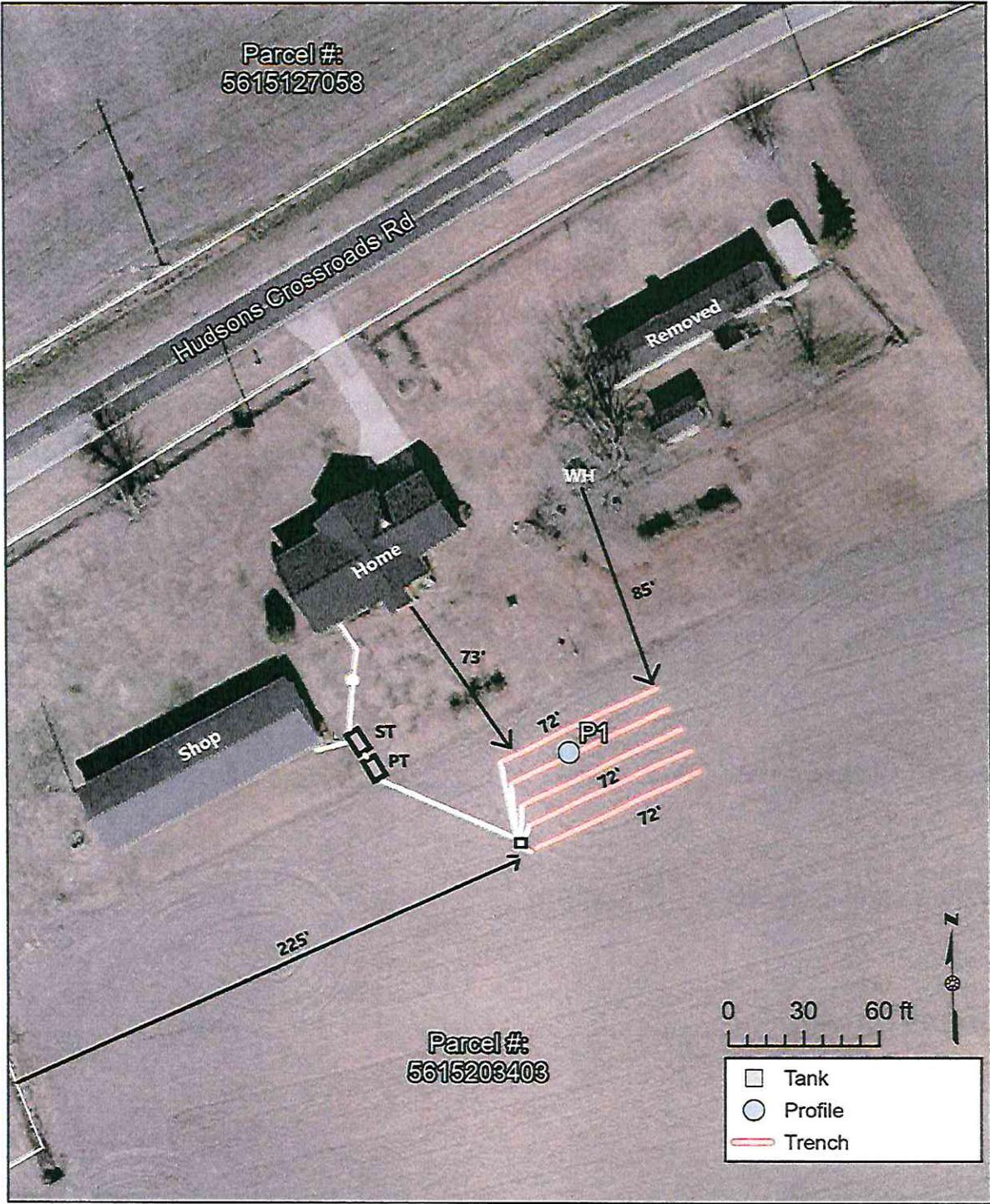


Figure 2. Aerial map showing the location of the

Table 1. Detailed soil profile descriptions within the proposed drainfield area.

Location	Depth (in)	Texture	Color	Structure	Consistence
P-1	0-8	SL	2.5Y 3/3	Granular	NS, NP, Fr
	8-21	SCL	2.5y 5/6	SBK	SS, SP, Fr
	21-24+	SCL	2.5Y 5/6 with 10YR 5/8 and 10YR 7/2 mottles	SBK	SS, SP, Fr
Location	Depth (in)	Texture	Color	Structure	Consistence
P-2	0-9	SL	2.5Y 3/3	SBK	NS, NP, Fr
	9-18	SCL	2.5Y 5/6	SBK	NS, NP, Fr
	18-21	SCL	2.5Y 5/6 with 10YR 5/8 mottles	SBK	Fr, SS, SP
	21-24+	SCL	2.5Y 5/6 with 10YR 5/8 and 10YR 7/2 mottles	SBK	SS, SP, Fr

Table 2. Septic System Design Specifications

Initial System

Number of bedrooms in home: 3

Maximum design flow: 360 gpd

Maximum number of occupants: 6

Septic tank capacity: 1,000 gallons or more

Pump tank capacity: 1,000 gallons or more

Long term acceptance rate: 0.34 gpd/ft²

System type (initial): pump to low profile chamber

Number of trenches: 5

Trench length: 72 ft

Maximum trench depth: 8-9 inches, trenches can have up to ¼ inch fall per 10 feet

Trench media: approved washed stone to be placed between trench sidewall and low-profile chambers to provide support and additional storage capacity. Filter fabric placed over washed stone and chambers prior to adding final soil cover.

Soil cover: 6 inches or more of additional soil cover

Soil cover shaped to shed water and divert runoff away from drainfield

Effluent distribution: pump to distribution box

Pump System Specifications

Total trench length (Ft): 360

Volume in pipe (gallons): 234

Dosing volume (67%) gallons: 160

Supply line (2" PVC) scour velocity (gpm)*: 23

Elevation head difference (Ft): 9

Pressure head at d-box (Ft): 0

Friction head (Ft): 1

Total head (Ft): 10

Need pump that will provide 23 gpm at 10 ft head

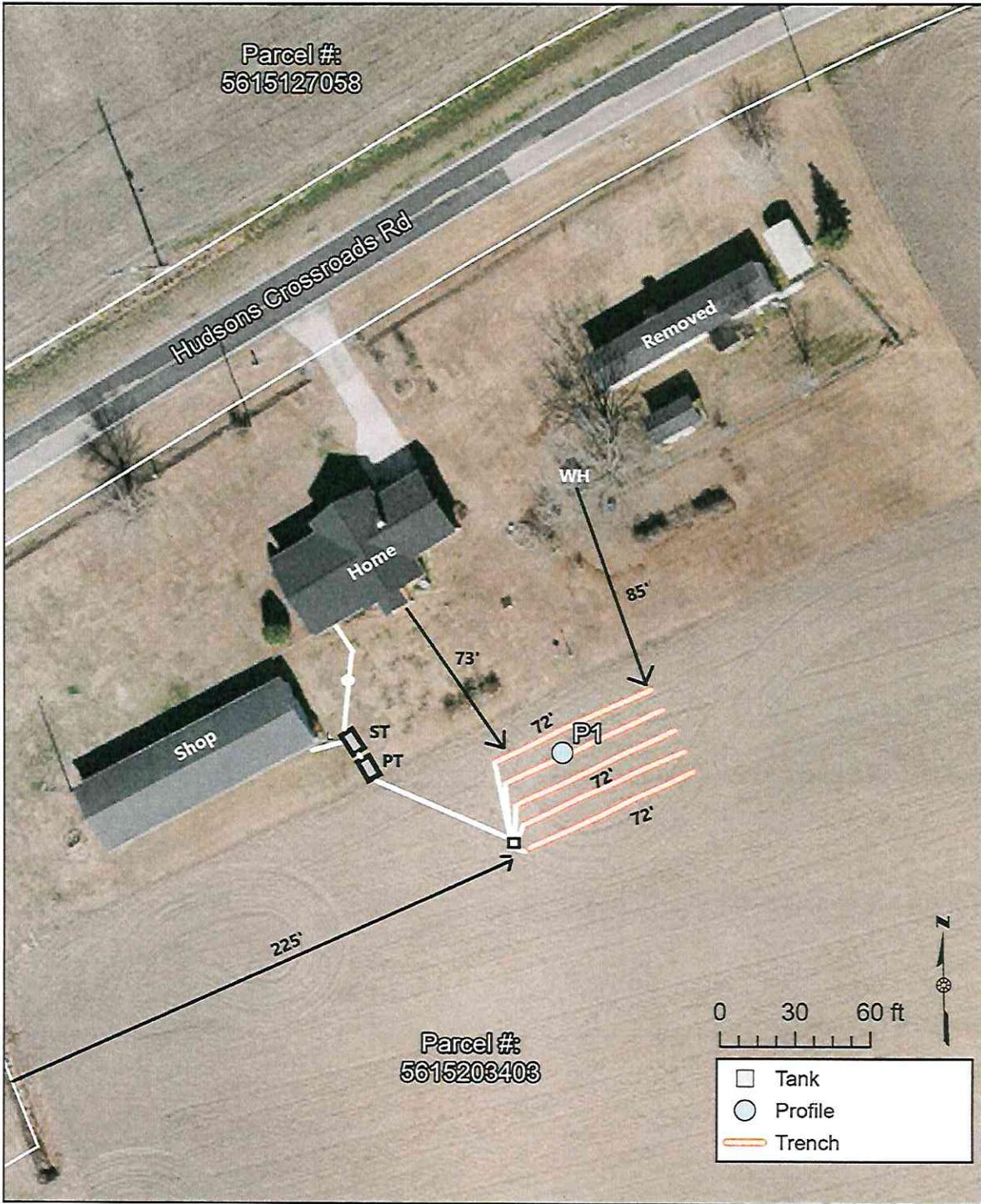


Figure 2. Aerial map showing the location of the

Septic System Operation and Maintenance Plan

- Have septic tank pumped every 3-5 years or as needed based on solids accumulation in the tank
- Wipe grease and food stuff from plates and cookware into garbage can, do not use garbage grinder/disposal (adds grease to septic tank)
- Do not exceed maximum daily flow of septic system
- Don't stockpile laundry and then wash multiple loads in one day- may exceed max daily flow
- Avoid using multiple water fixtures (shower, dishwasher, clothes washer) at the same time
- During high rainfall periods, be extra conservative with water use to allow yard and septic system to dry
- If there is a high-rainfall event (tropical storm, frontal system) anticipated, be pro-active and do laundry and dishes before the rain and then let the yard dry as you conserve water
- Do not dispose of chemicals by dumping container contents down drains or toilet- may negatively affect microbes in septic system
- Do not flush paper towels or feminine hygiene products into septic system
- Maintain a stand of grass over the drainfield (to help prevent erosion and transpire water)
- Divert surface runoff away from septic tank, pump tank and drainfield
- Review your septic permit and know where all of the components (septic tank, supply line, effluent distribution device(s), and drainfield trenches) of your system are located
- Do not drive or park on drainfield, septic tank or pump tank



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**DESIGN PROFESSIONALS LIABILITY COVERAGE
DECLARATIONS**

POLICY NO. 108028868

Travelers Casualty and Surety Company of America
Hartford, Connecticut
(A Stock Insurance Company, herein called the Company)

Important note: This is a claims-made policy. To be covered, a claim must be first made against an insured during the policy period or any applicable extended reporting period.

The limit of liability available to pay settlements or judgments will be reduced by defense expenses. The deductible applies to defense expenses.

This policy is composed of the Declarations, the Professional Liability Coverage, the Professional Liability Terms and Conditions, and any endorsements attached thereto.

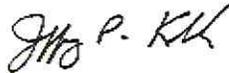
ITEM 1	NAMED INSURED: HUMPHREY SOIL PERX, LLC DBA: Principal Address: 365 LANE FARM RD COVE CITY, NC 28523-9316
ITEM 2	POLICY PERIOD: Inception Date: April 26, 2025 Expiration Date: April 26, 2026 12:01 A.M. standard time both dates at the Principal Address stated in ITEM 1.
ITEM 3	ALL NOTICES PURSUANT TO THE POLICY MUST BE SENT TO THE COMPANY BY EMAIL, FACSIMILE, OR MAIL AS SET FORTH BELOW: Email: BSIclaims@travelers.com Fax: 1-888-460-6622 Mail: Travelers Bond & Specialty Insurance Claim P.O. Box 2989 Hartford, CT 06104-2989 Overnight Mail: Travelers Bond & Specialty Insurance Claim One Tower Square, MN06 Hartford, CT 06183 For questions related to claim reporting or handling, please call 1-800-842-8496.

ITEM 9	FORMS AND ENDORSEMENTS ATTACHED AT ISSUANCE: DPL-1001-1108; DPL-2019-0418; PTC-1001-1108; PTC-19006-0315; PTC-19007-0418; PTC-3033-1214
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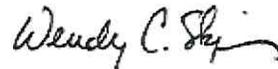
The Declarations, the Professional Liability Terms and Conditions, the Professional Liability Coverage, and any endorsements attached thereto, constitute the entire agreement between the Company and the Insured.

Countersigned By _____

IN WITNESS WHEREOF, the Company has caused this policy to be signed by its authorized officers.



President



Corporate Secretary