



**North Carolina Onsite Wastewater Contractor Inspector Certification Board
Authorized Onsite Wastewater Evaluator Permit Option for Non-Engineered Systems
Notice of Intent (NOI) to Construct**

New Expansion Repair Relocation Relocation of Repair Area

Owner or Legal Representative Information:
 Name: Jim Moore
 Mailing address: 461 Cedar Rock Trl City: Fuquay-Varina State: NC Zip: 27526
 Phone: 910-922-7010 Email: jim@pineygrovestorage.com

Authorized Onsite Wastewater Evaluator Information:
 Name: Hal Owen Certification #: 10036E
 Mailing address: PO Box 400 City: Lillington State: NC Zip: 27546
 Phone: 910-893-8743 Email: hal@halowensoil.com

Site Location Information:
 Site address: 11132 US 401 N, Fuquay-Varina, NC
 Tax parcel identification number or subdivision lot, block number of property: _____
PIN 0655-53-1330.000 County: Harnett

System Information:
 Wastewater System Type: IIIbg
 Daily Design Flow: 300
 Sapro-lite System: Yes No Subsurface Operator Required: Yes No
 Water Supply Type: Private Well Public Water Supply Spring Other: _____

Facility Type:
 Residential # Bedrooms _____ Maximum # of Occupants _____
 Business Type of Business and Basis for Flow: Storage Facility 25 employee X 12gal/empl
 Public Assembly Type of Public Assembly and Basis for Flow: _____

Required Attachments:
 Plat or Site Plan
 Evaluation of Soil and Site Features by Licensed Soil Scientist

Attest: On this the 11 day of March, 2024 by signature below I hereby attest that the information required to be included with this NOI to Construct is accurate and complete to the best of my knowledge. Furthermore, I hereby attest that I have adhered to the laws and rules governing onsite wastewater systems in the state of North Carolina.
 This NOI shall expire on 11 day of March, 2029
 Signature of Authorized Onsite Wastewater Evaluator: *Hal Owen*
 Signature of Owner or Legal Representative: _____

Disclosure: The owner may apply for a building permit for the project upon submitting a complete NOI to Construct and the fee required (if any) to the local health department. An onsite wastewater system authorized by an authorized onsite wastewater evaluator shall be transferable to a new owner with the consent of the authorized onsite wastewater evaluator.

Local Health Department Receipt Acknowledgement:
 Signature of Local Health Department Representative: _____ Date: _____

HAL OWEN & ASSOCIATES, INC.

SOIL & ENVIRONMENTAL SCIENTISTS

P.O. Box 400, Lillington NC 27546-0400
Phone (910) 893-8743 / Fax (910) 893-3594
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1 April 2024

Jim Moore
Baucom Business Plaza, LLC
461 Cedar Rock Trail
Fuquay Varina, NC 27526-7397

Reference: AOWE Evaluation
Baucom Business Park
11132 US 401 N Fuquay-Varina, Harnett Co., NC
PIN 0655-53-1330.000

Dear Mr. Moore,

A soil and site evaluation has been conducted for the referenced property for the purpose of permitting a subsurface wastewater system. This evaluation was prepared based on information provided by the applicant to include the basis for design flow, proposed structure location(s), and property boundaries. Any false, inaccurate, or incomplete information provided by the applicant, owner, or legal representatives may result in denial or revocation of applications, approvals, or permits.

This AOWE/LSS Evaluation is being submitted pursuant to and meets the requirements of G.S.130A-336.2. This evaluation includes a signed and sealed soil and site evaluation, specifications, plans, and reports for the site layout and construction of a proposed onsite wastewater system by an Authorized On-Site Wastewater Evaluator (AOWE). The evaluation of soil conditions and site features is provided in accordance with G.S. 130A-335(e), the Rules for "Wastewater Treatment and Dispersal Systems", 15A NCAC 18E, and local septic regulations (if any). This report represents my professional opinion as a Licensed Soil Scientist and Authorized Onsite Wastewater Evaluator.

This AOWE Evaluation is intended to file a Notice of Intent to construct a wastewater system with the Local Health Department and shall expire in five years.

Sincerely,



Hal Owen
Senior Licensed Soil Scientist
Authorized Onsite Wastewater Evaluator



Steven Boor
Soil Associates III



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TERMS AND CONDITIONS

This evaluation is not a permit to develop. The owner and subcontractors will need to abide by all state and local rules and regulations pertaining to planning, zoning, and land use development.

Notice of Intent to Construct – Prior to commencing or assisting in the construction, siting, relocation, or repair of a wastewater system, a complete Notice of Intent (NOI) to Construct a wastewater system using an AOWE must be submitted to the Local Health Department (LHD). The owner may apply for a building permit for the project upon submitting a complete NOI and the required fee.

Plan Alterations – If there are any changes in the site plan that can impact the wastewater system, such as moving the house or driveway, site alterations, or if the applicant chooses to change the design daily flow prior to wastewater system construction, a new NOI shall be submitted to the LHD. The applicant shall request in writing that the PE or AOWE invalidate the prior NOI with a signed and sealed letter sent to the applicant and LHD.

Site Alterations – The applicant shall be responsible for preventing modifications or alterations of the site for the wastewater system and the system repair area before, during, and after any construction activities for the facility, unless approved by the AOWE.

On-Site Wastewater System Contractor – The AOWE shall assist the owner in the selection of a certified on-site wastewater system contractor who shall be under contractual obligation to the owner and have sufficient errors and omissions, liability, or other insurance for the system constructed.

Inspections, Construction Observations, and Reports – The AOWE shall make periodic visits to the site to observe the progress and quality of the construction of the wastewater system.

Authorization to Operate (ATO) – Upon determining that the wastewater system has been properly installed and is capable of being operated in accordance with the conditions of the permit, the AOWE shall provide the owner with a report that includes inspection reports, a written operation and management program, any special reports, and an Authorization to Operate. The owner shall sign confirming acceptance and receipt of the report, and then provide a copy to the LHD who will issue the certificate of occupancy for the facility.

Operation and Management – The owner shall be responsible for continued adherence to the operations and management program established by the AOWE. This permit shall in no way be taken as a guarantee or implied warranty that the septic system will function satisfactorily for any given period of time.

Change in System Ownership. – An authorized wastewater system shall be transferrable to a new owner with the consent of the AOWE. The new owner and the AOWE shall enter a contract for the wastewater system.

Revocation – The AOWE permit is subject to revocation if the site plan, plat, or the intended use changes. This permit is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit.

Repair of Malfunctioning Systems. – The owner may apply for an Improvement Permit and a Construction Authorization from the LHD or obtain a NOI from an AOWE to repair a malfunctioning wastewater system.

PROPOSED USE

The proposed business park will contain a storage facility(S1), commercial building (CB1), and flex building (FB1) [see site plan]. Wastewater from the three facilities will be combined into one wastewater system. Per the applicant, the commercial building may have 10 employees, the storage building 2 employees, and the flex building 5 employees. The design daily flow was calculated based on no more than 25 employees total for a design daily flow of 300 gallons per day (12 gallons per employee per 8 hour shift).

WATER SUPPLY

Public water supplies will be utilized.

EXISTING SITE CONDITIONS

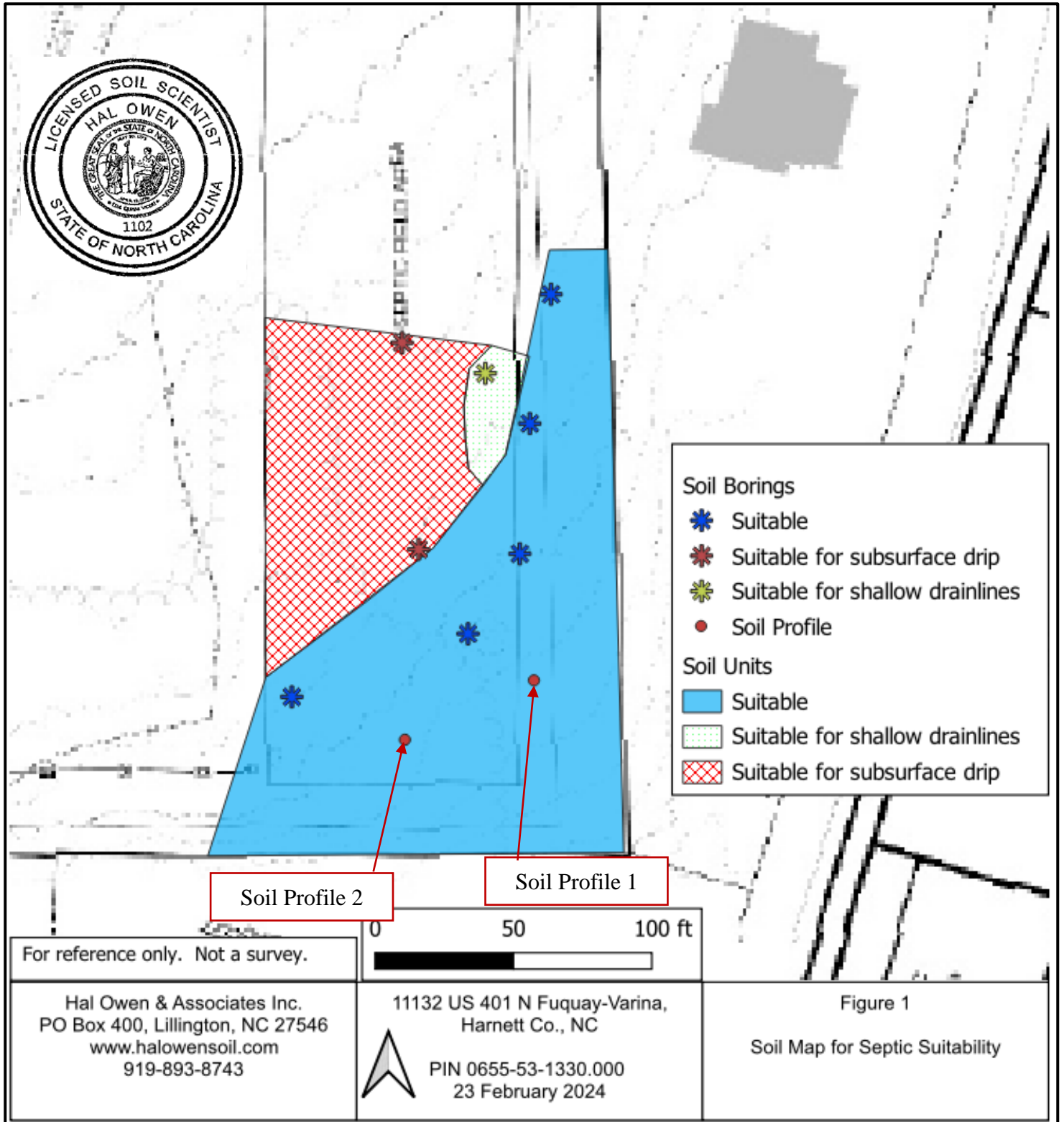
At the time of the investigation, the site had been cleared, lot corners were staked, and the new building footprint was not marked. No existing wells were observed within 50 feet of the proposed septic system and repair area. A wetland area is indicated on the site plan which will be crossed by the septic supply line. Installation of the septic supply line shall not impact regulated waters (including wetlands).

SOIL AND SITE INVESTIGATION

The soils were evaluated under moist soil conditions through the advancing of auger borings. This evaluation included observations of topography and landscape position, soil morphology (texture, structure, clay mineralogy, organics), soil wetness, soil depth, and restrictive horizons. Descriptions of the soil borings located within the investigated portions of the site are provided in the attached Soil/Site Evaluation form.

Soils in the proposed system area were observed to rate as suitable for subsurface sewage waste disposal systems. (Figure 1). The subsoils were observed to be firm sandy clay loams and extended to greater than 48 inches below ground surface. Evidence of a soil wetness condition was observed at 42 inches below surface or deeper. These soils appear adequate to support long-term acceptance rates of 0.4 gal/day/ft² for conventional drainlines.

FIGURE 1 SOIL MAP FOR SEPTIC SUITABILITY



SOIL/SITE EVALUATION FORM FOR ON-SITE WASTEWATER SYSTEM

OWNER NAME: Jim Moore OWNER ADDRESS: _____
 PROPOSED FACILITY: Business PROPOSED DESIGN FLOW: 300 PROPERTY SIZE: 17.9
 LOCATION OF SITE: 11132 US 401 N, Fuquay-Varina, NC PIN: 0655-53-1330.000
 WASTEWATER TYPE: Domestic COUNTY: Harnett
 WATER SUPPLY: Public Water WATER SUPPLY SETBACK: 10
 EVALUATION METHOD: AUGER BORING PIT CUT
 EVALUATED BY: Hal Owen, LSS 1102 and Steven Boor DATE EVALUATED: 2/22/24

	INITIAL SYSTEM	REPAIR SYSTEM
AVAILABLE SPACE	563 ft ² trench bottom	563 ft ² trench bottom
SYSTEM TYPE	Accepted (25% reduction) System	Accepted (25% reduction) System
SITE LTAR	0.40 gpd/ft ²	0.40 gpd/ft ²
MAX TRENCH DEPTH	24 inches (measured on downhill side)	21 inches (measured on downhill side)
SITE CLASSIFICATION	Suitable	OTHER FACTORS _____
COMMENTS	_____	

PROFILE 1

HORIZON DEPTH	COLOR	CONSISTENCE	TEXTURE	STRUCTURE	MINERALOGY	OTHER PROFILE FACTORS	
0-6	10YR 4/4	VFR	SL	GR	SEXP	LANDSCAPE POSITION	LS
6-36	10YR 6/6	FR	SL	GR	SEXP	SOIL WETNESS DEPTH	>48"
36-48	7.5YR 5/6	FR	SCL	SBK	SEXP	SOIL WETNESS COLOR	
						SOIL DEPTH	48"
						SAPROLITE CLASS	NA
						RESTRICTIVE HORIZON	NA
						SLOPE %	6
PROFILE CLASSIFICATION			Suitable	LTAR gpd/ft ²	0.5	SLOPE CORRECTION (IN)	2.2
COMMENT							

PROFILE 2

HORIZON DEPTH	COLOR	CONSISTENCE	TEXTURE	STRUCTURE	MINERALOGY	OTHER PROFILE FACTORS	
0-4	10YR 5/3	VFR	SL	GR	SEXP	LANDSCAPE POSITION	LS
4-12	2.5Y 6/4	VFR	SL	GR	SEXP	SOIL WETNESS DEPTH	42"
12-19	2.5Y 6/8	FR	SL	GR	SEXP	SOIL WETNESS COLOR	2.5Y 7/2
19-34	10YR 6/8	FR	SCL	SBK	SEXP	SOIL DEPTH	48"
34-48	10YR 6/8	FI	SCL	SBK	SEXP	SAPROLITE CLASS	NA
						RESTRICTIVE HORIZON	NA
						SLOPE %	7
PROFILE CLASSIFICATION			Suitable	LTAR gpd/ft ²	0.4	SLOPE CORRECTION (IN)	2.5
COMMENT							

LEGEND OF ABBREVIATIONS FOR SITE EVALUATION FORM

<p><u>LANDSCAPE POSITION</u> CC - Concave Slope CV - Convex Slope DS - Debris Slump D - Depression DW - Drainage Way FP - Flood Plain FS - Foot Slope H - Head Slope L - Linear Slope N - Nose Slope R - Ridge S - Shoulder Slope T - Terrace TS - Toe Slope</p>	<p><u>TEXTURE GROUP</u></p> <p>I</p>	<p><u>TEXTURE CLASS</u></p> <p>S - Sand LS - Loamy Sand</p>	<p><u>LTAR</u> (gal/day/sqft)</p> <p>1.2-0.8</p>
	<p>II</p>	<p>SL - Sandy Loam L - Loam</p>	<p>0.8 – 0.6</p>
	<p>III</p>	<p>SCL - Sandy Clay Loam CL - Clay Loam SiL - Silt Loam Si - Silt SiCL - Silt Clay Loam</p>	<p>0.6 – 0.3</p>
	<p>IV</p>	<p>SC - Sandy Clay C - Clay SiC - Silty Clay</p>	<p>0.4 – 0.1</p>
		<p>O - Organic</p>	<p>none</p>
<p><u>STRUCTURE</u> G - Single Grain M - Massive CR - Crumb GR - Granular SBK - Subangular Blocky ABK - Angular Blocky PL - Platy PR - Prismatic</p>	<p><u>MOIST CONSISTENCE</u> VFR - Very Friable FR - Friable FI - Firm VFI - Very Firm EFI - Extremely Firm</p>	<p><u>WET CONSISTENCE</u> NS - Non Stick SS - Slightly Sticky MS - Moderately Stick VS - Very Sticky NP - Non Plastic SP - Slightly Plastic MP - Moderately Plastic VP - Very Plastic</p>	
<p><u>MOTTLES</u></p> <p>f - few 1 - fine F - Faint c - common 2 - medium D - Distinct m - many 3 - coarse P - Prominent</p>			

Give Horizon Depth in inches below natural soil surface and Fill Depth in inches above land surface.
 Depth to Soil Wetness: inches below land surface to free water or to soil colors with chroma 2 or less.
 Classification: S – Suitable U – Unsuitable

SEPTIC SYSTEM DESIGN

See section *Wastewater Treatment System Plans* and Figure 2 for a diagram of the septic system layout and design specifications.

A 1000 gallon (at minimum) septic tank and an approved septic effluent filter is required. A pump tank (1000 gallon at minimum) is required to convey effluent to the nitrification field. The pump tank may be eliminated if gravity distribution can be demonstrated.

The supply line from the pump tank to the dispersal field will be conveyed across a designated wetland area and shall be installed as required by NCAC 18E .0601(o) or (p). An air release valve must be installed at the peak of the supply line near the property line.

The initial septic system is proposed as a pump driven system to 189 linear feet of Accepted Status drainlines utilizing a 25% reduction in total drainline length (Figure 2). A long-term acceptance rate (LTAR) of 0.4 gal/day/ft² was used to design the dispersal field. A pressure manifold will be used to deliver effluent in parallel distribution to three 63-ft long drainlines. The drainlines should be installed on contour 18 inches below surface, as measured on the low side. Maximum trench bottom depths shall not exceed 24 inches.

The repair septic system is proposed as a pump driven system to 188 linear feet of Accepted Status drainlines utilizing a 25% reduction in total drainline length (Figure 2). A long-term acceptance rate (LTAR) of 0.4 gal/day/ft² was used to design the nitrification field. A pressure manifold will be used to deliver effluent in parallel distribution to two 94-ft long drainlines. The drainlines should be installed on contour 18 inches below surface, as measured on the low side. Maximum trench bottom depths shall not exceed 21 inches.

SEPTIC AREA PREPARATION

It is important that you do not disturb the septic areas during site construction. A staked line or protective fence should be placed around the system areas prior to construction to eliminate any potential damage to the soil or the layout of the system. Septic areas should not be used for staging construction materials or subjected to vehicular traffic. Do not cut, grade, fill, install utilities, or otherwise alter the designated septic areas.

Care should be taken when clearing vegetation from the septic area. Work should only occur when the soil is at the appropriate moisture content to limit the impact to the soil structure in the soil treatment area. Do not scrape the ground inside the drainfield. **Any clearing or preparation of the septic areas shall be done without removal, disturbance, or compaction of the soil.**

PERMIT CONDITIONS

General Conditions:

The requirements of 15A NCAC 18E are incorporated by reference into this permit and shall be met.

System shall be installed in accordance with the attached *Wastewater Treatment System Plans*.

Any changes to the site plan or intended use must be approved by Hal Owen & Associates. Permit modification and resubmittal to the LHD may be necessary to ensure regulatory compliance.

Conformance to all regulatory setbacks shall be maintained. Local regulations (such as well or riparian buffer ordinances) may require more stringent setbacks.

Minimum soil cover of six inches shall be established over nitrification field. Soil cover above the original grade shall be placed at a uniform depth over the entire nitrification and shall extend laterally five feet beyond the nitrification trench. Site shall be graded to shed water away from field and a vegetative cover established to prevent erosion.

The nitrification field and repair area shall not be subject to vehicular traffic. Vehicular traffic can damage soils, pipes, and valve boxes. Do not use septic areas for parking.

Do not allow underground utilities, water lines, or sprinkler systems to be installed in the septic areas. Damage to the septic areas could result in the septic permit being revoked.

The wastewater system shall not be covered until inspected by Hal Owen & Associates and shall not be placed into use until an Authorization to Operate is issued.

Specific Conditions:

- The septic and pump tanks must be watertight. The installer shall either provide documentation that the tank has been leak tested by the manufacturer or be prepared to run leak testing (hydrostatic or vacuum testing in the ready- to-use-state) at the site.
- To ensure a watertight joint, the inlet and outlet of all tanks shall be equipped with an approved pipe penetration boot.
- Access risers shall be installed on the tanks and extend above finished grade.
- The supply line from the pump tank to the dispersal field will be conveyed across a designated wetland area and may be installed as an aerial crossing or subsurface by using directional bore. The supply line shall be installed as required by NCAC 18E .0601.
- **No wetland impacts are permitted.** Access to the dispersal field for installation and maintenance shall be via upland areas on the site; or if crossing the wetland with equipment, then temporary mats shall be used to minimize soil disturbance.

WASTEWATER TREATMENT SYSTEM PLANS

PROJECT INFORMATION

Wastewater System	New	.0403 Eng Low Flow	No
Wastewater Strength	Domestic		
Effluent Standard	DSE		
Water Supply	Public Water		
Facility Type	Business		
Design Wastewater Flow	300	gpd	gal/unit 12
Basis for Flow	25	employees	max occupancy 25
Basement	No	Fixtures in basement?	No
Crawl Space	No	Slab Foundation	Yes

PROPERTY INFORMATION

County	Harnett
Site Address	11132 US 401 N, Fuquay-Varina, NC
S/D Name and Lot#	
PIN	0655-53-1330.000
County PID	
Size (Acre)	17.9

APPLICANT INFORMATION

Name	Jim Moore
Mailing Address	461 Cedar Rock Trl
	Fuquay-Varina, NC 27526
Telephone Number	910-922-7010
E-mail Address	jim@pineygrovestorage.com

CONSULTANT INFORMATION

Company Name	Hal Owen & Associates, Inc.
Mailing Address	PO Box 400, Lillington, NC 27546
Telephone Number	910-893-8743 Fax: 910-893-3594
E-mail Address	hal@halowensoil.com
Licensed Soil Scientist	Hal Owen, LSS #1102 and AOWE# 10036E
System Designer	Krissina Newcomb

Septic System Design Specifications

Proposed Design Daily Flow	<u>300</u> gpd	Drainfield Meets Requirements:
Septic Tank Size (minimum)	<u>1000</u> gallons	.0508 Available Space <u>Yes</u>
Pump Tank Size (minimum)	<u>1000</u> gallons, if required	.0601 Setbacks <u>Yes</u>

Initial System

*See Detailed Design Parameters

System Type	<u>Illbg -Pump to Other non-conventional systems</u>		
Pump Required	<u>Yes</u>	<u>17.6</u> ft TDH at	<u>21.3</u> GPM
Trenches:	<u>Accepted (25% reduction) System</u>		
Design LTAR	<u>0.40</u> gal/day/ft ²	Saprolite System	<u>No</u>
Total Trench/ Bed Length	<u>189</u> feet	Fill System	<u>No</u>
Trench Spacing	<u>9</u> ft on center		
Usable soil depth to LC	<u>42</u> inches	Soil Cover	<u>6</u> inches
Maximum Trench Depth	<u>24</u> inches, measured on downhill side of trench		
Artificial Drainage Required	<u>No</u>		

Repair System

System Type:	<u>Illbg -Pump to Other non-conventional systems</u>		
Trenches:	<u>Accepted (25% reduction) System</u>		
Design LTAR	<u>0.40</u> gal/day/ft ²	Saprolite System	<u>No</u>
Total Trench/ Bed Length	<u>188</u> feet	Fill System	<u>No</u>
Trench Spacing	<u>9</u> ft on center		
Usable soil depth to LC	<u>42</u> inches		
Maximum Trench Depth of	<u>21</u> inches, measured on downhill side of trench		
Pump Required	<u>Yes</u>		

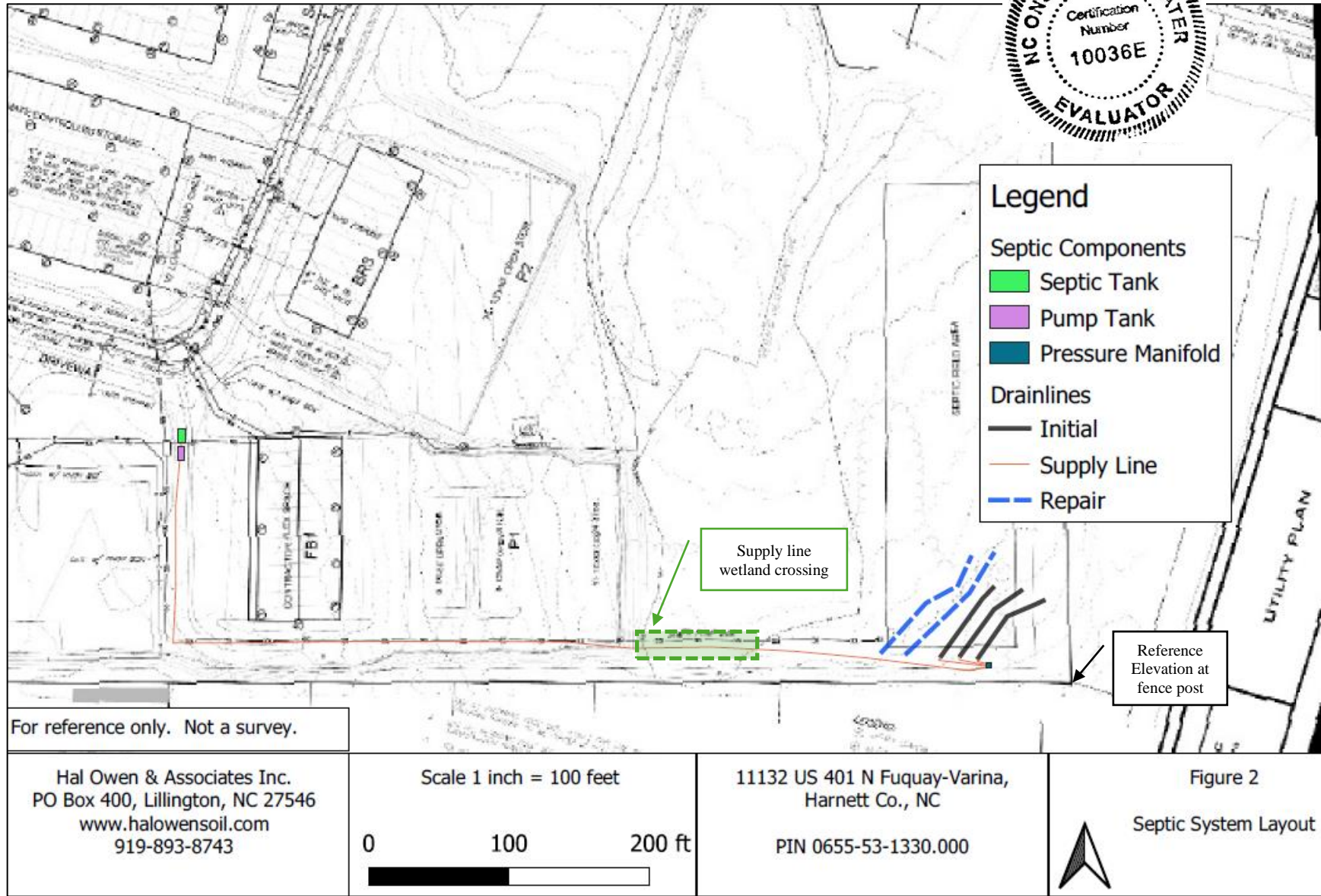
Potential Drainlines flagged at site on 9-ft centers.

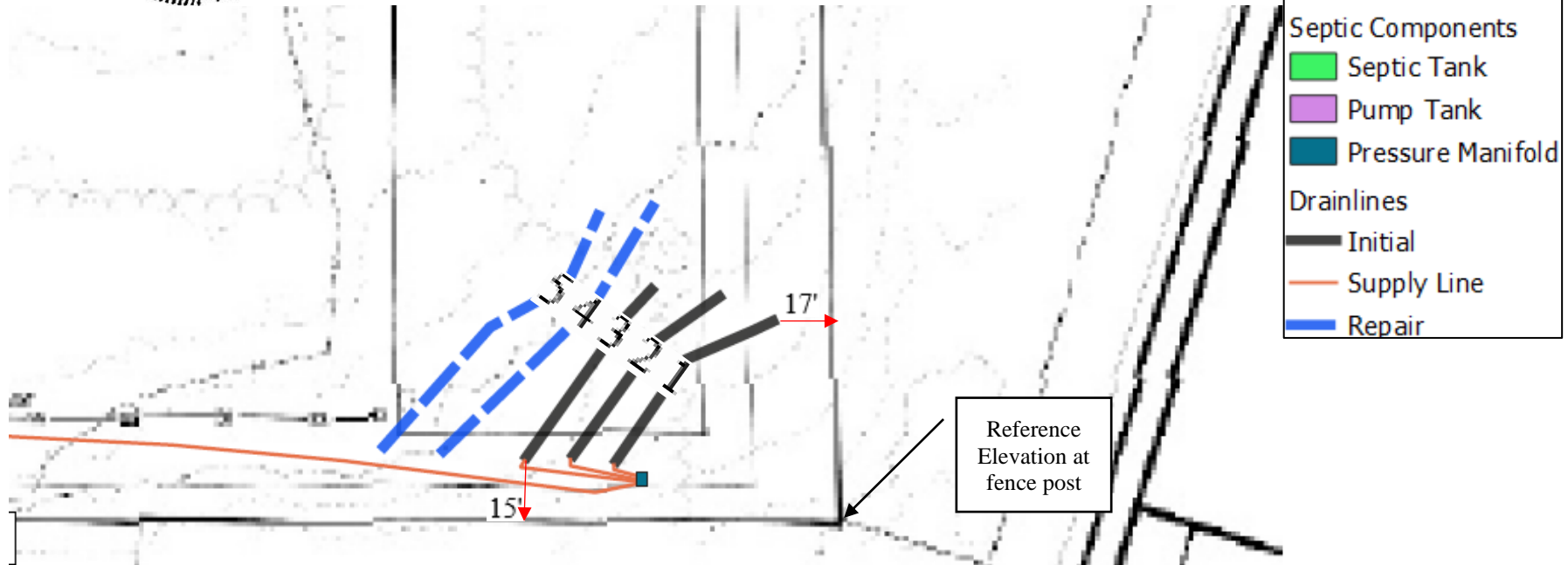
Line #	Color	Relative Elevation (ft)	Drainline Length(ft)	Field Length(ft)
1	R	96.56	63	75
2	B	96.03	63	96
3	Y	95.55	63	114
4	W	94.83	94	149
5	R	94.34	94	142
Septic Tank:		106.69		
Pump Tank:		106.69		
Reference Elev:		100.00	@ fence post SE corner	

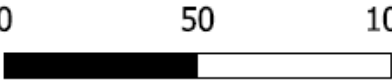

Notes:

- *No grading or removal of soil in initial or repair areas
- *Property lines per owner
- *Trench bottoms shall be level to +/- 1/4" in 10ft
- *All parts of septic system must meet minimum setbacks

Figure 2 Septic System Layout





<p>Scale 1 inch = 50 feet</p>  <p>0 50 100 ft</p>	<p>11132 US 401 N Fuquay-Varina, Harnett Co., NC</p> <p>PIN 0655-53-1330.000</p> <p>23 February 2024</p>	<p>Figure 2</p> <p>Septic System Layout</p> 
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INITIAL SYSTEM SPECIFICATIONS

Pressure Manifold Design Criteria

DESIGN DAILY FLOW 300 gallons/day **SOIL LTAR:** 0.40 gpd/ft²
TANKS (min) Septic Tank: 1000 gallons Pump Tank: 1000 gallons

SUPPLY LINE Length: 730 ft Diameter: 2 " SCH 40 PVC
 Minimum flow (gpm) to maintain 2fps scour velocity: 20.9 gpm
 Supply Pipe Volume 127 gallons
 Peak elevation in supply line 109.77 ft ***Air Release Valve Required**

TRENCHES Drainline Type: Accepted (25% reduction) System
 Maximum Trench Depth of 24 inches, measured on low side of trench
 Trench width: 3 feet Effective Trench Width: 4 ft
 Absorption Area: 563 ft² Minimum Linear Length: 188 ft

MANIFOLD Length (ft): 3 Diameter: 4" sch 80 pvc Elevation: 97.46
 # Taps 3 Tap Configuration: 6in. spacing, 1 side of manifold

TAP CHART

Line	Color	Relative Elevation	Length(ft)	Tap Size/ Schedule	flow/tap gpm	gpd/ft	LTAR (gpd/ft ²)
1	R	96.46	63	1/2"sch 40	7.11	1.587	0.529
2	B	95.93	63	1/2"sch 40	7.11	1.587	0.529
3	Y	95.44	63	1/2"sch 40	7.11	1.587	0.529
Total Drainline:			189	Total Flow:	21.33		

Target LTAR*: 0.53
 LTAR + 5%: 0.560

PUMP CALCULATIONS

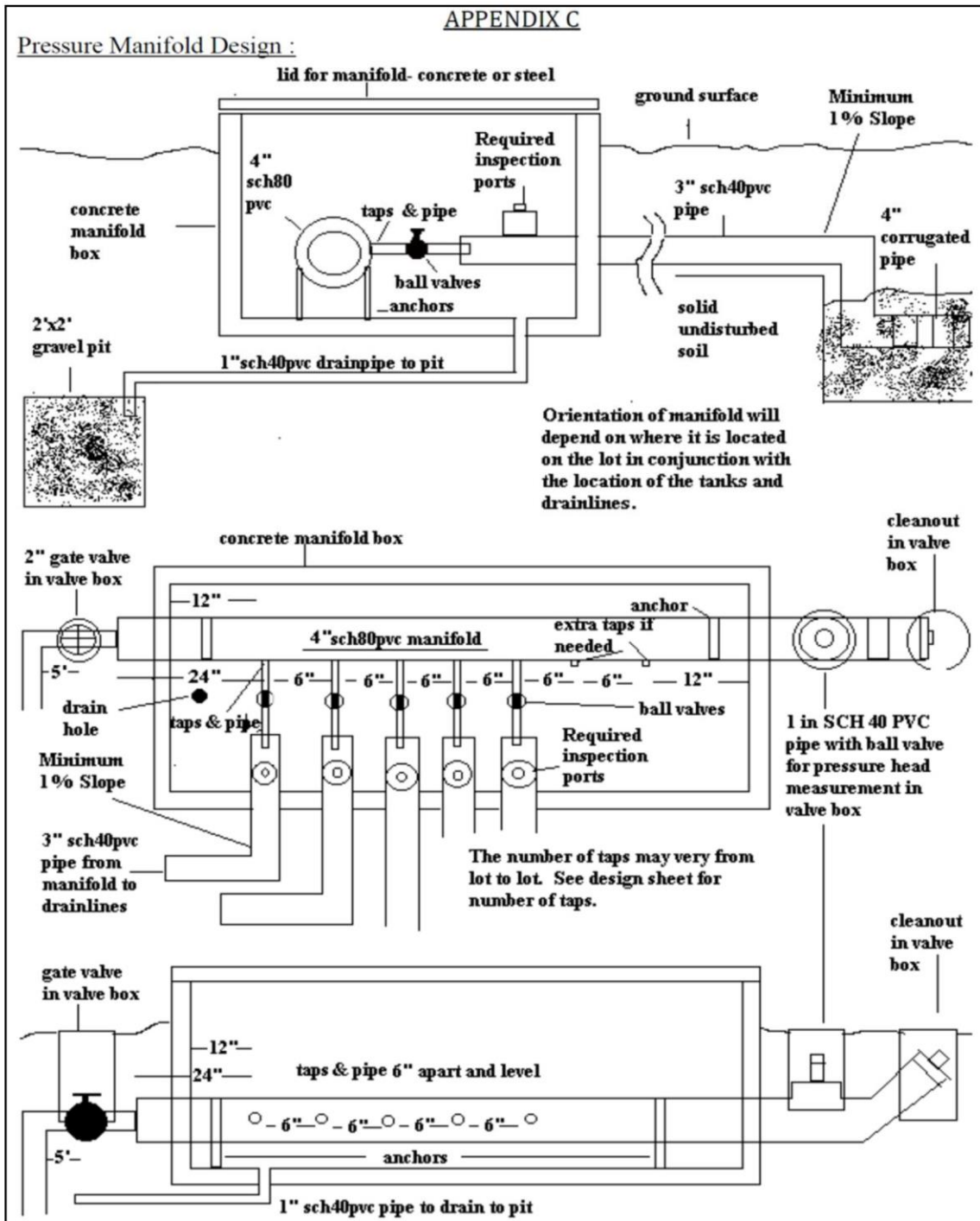
Dose Volume: 92.56 gallons, with Pipe Volume at 75 % *65.3gal/100ft pipe
 Dose Pump Run Time (min): 4.34 Daily Pump Run Time (min): 14.06
 Drawdown (in.): 93 gallons ÷ 20.25 gal/ inch = 4.57 inches
 Pump Tank Elevation (ft): 106.69 Pump Elevation (ft): 101.69
 Friction Head: 7.57 *Hazen Williams Formula (use supply line length+70' for fittings in pump tank)
 Elevation Head: 8.1 Design Head: 2.0 Total Head: 17.65 ft
 Pump to Deliver: 21.3 gpm @ 17.6 ft head

NEMA 4X Simplex Control Panel with elapsed time meter, event counter, audible and visible alarm (w/ silence button), hand-off-automatic (HOA) switch, pump run light, and pump on separate circuits is required. Control panel bottom shall be mounted a minimum of 24 in. above finished grade within 50 ft of pump tank. A septic tank filter is required. Floats to be determined by type of pump tank used.

Possible Septic Tank: Brantley 1000 STB-499 Possible Septic Filter: Polylock PL-122
 Possible Pump Tank: Brantley 1000_PT-237 Vol(gal): 1000 GPI: 20.25
 Possible Pump: _____ pump height (in) = 14
 Possible Control Panel: _____

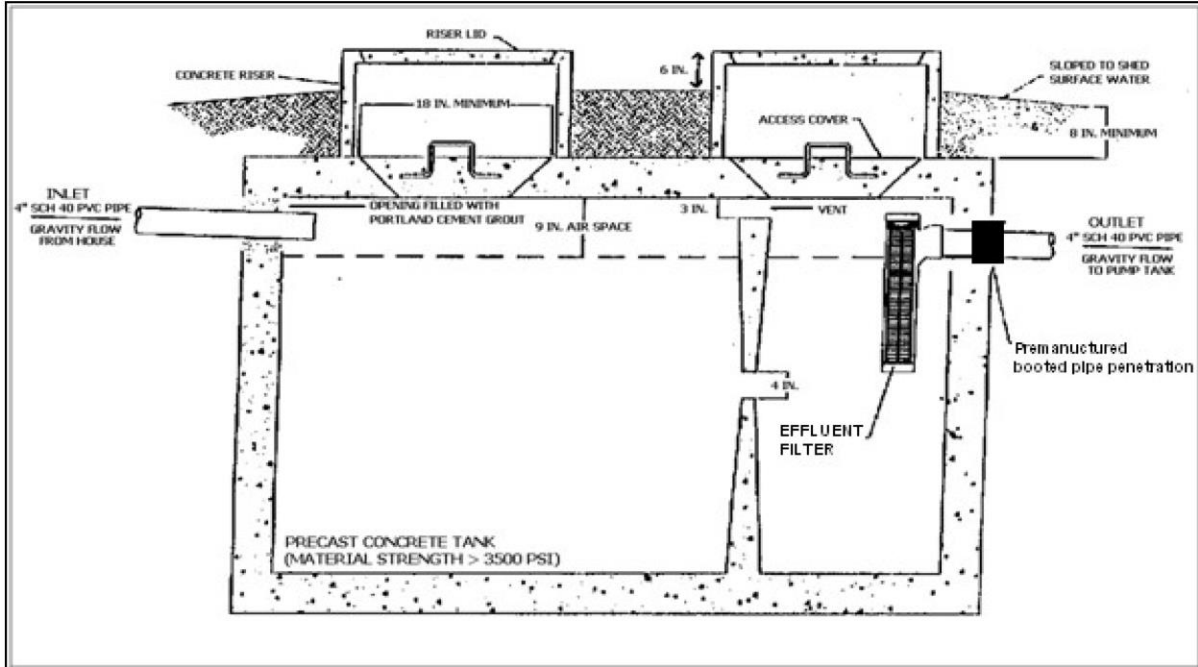
Pressure Manifold Diagram

	1	2	3
Manifold	4" SCH 80 PVC		
tap size	1/2" sch 40	1/2" sch 40	1/2" sch 40
flow (gpm)	7.11	7.11	7.11
length (ft)	63	63	63



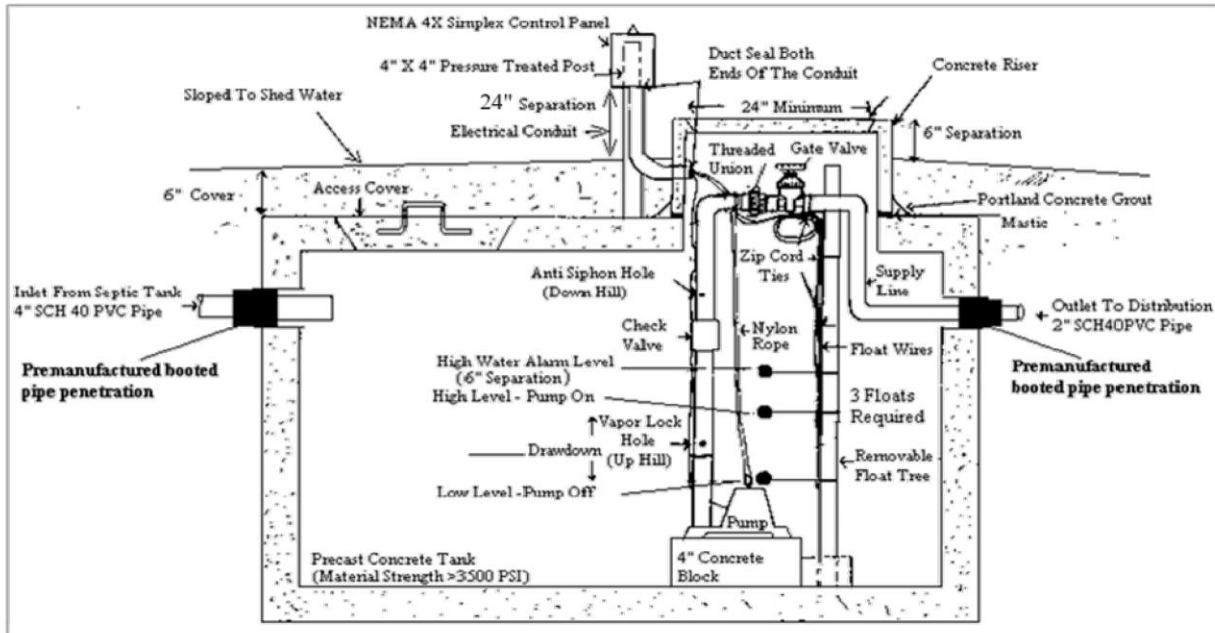
Typical Septic Tank

1000 GALLON SEPTIC TANK, minimum



Typical Pump Tank

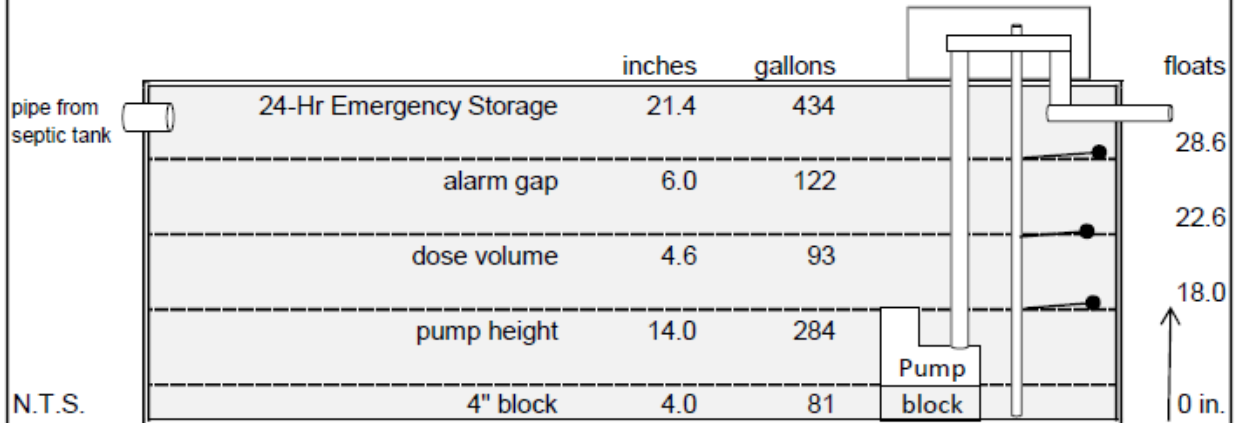
1000 GALLON PUMP TANK, minimum



Pump Tank Calculations:

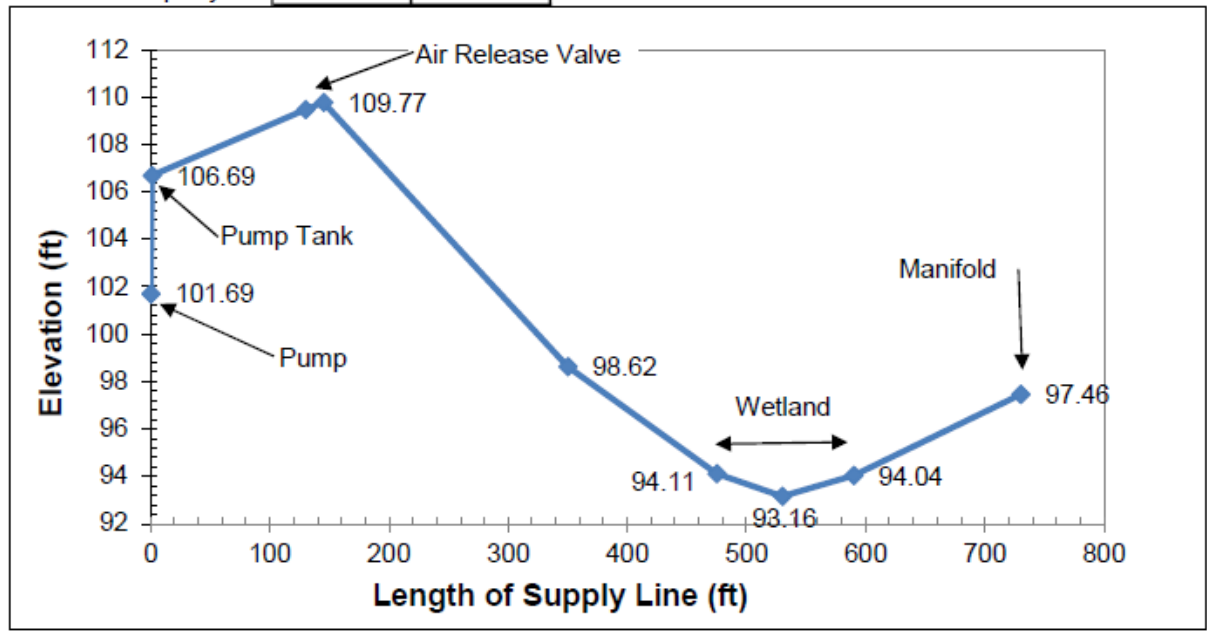
Possible pump tank: Brantley 1000_PT-237
 tank GPI (gal/in): 20.25 calculated
 tank volume (gal): 1000 per manufacturer
 tank height (in): 50.0 per manufacturer

Possible Pump: _____
 height: 14 in
 minimum emergency storage: 300 gal



Supply Line Profile:

	Distance	Elevation
Pump	0	101.69
pump tank	1	106.69
	130	109.46
Property line	145	109.77
wetland edge	475	94.11
	530	93.16
wetland edge	590	94.04
manifold	730	97.46



Repair System Specifications

DESIGN FLOW 300 gal/day **SOIL LTAR:** 0.40 gpd/ft²

TANKS (minimum) Septic Tank: 1000 gallons Pump Tank: 1000 gallons

TRENCHES Drainline Type: Accepted (25% reduction) System

Maximum Trench Depth of 21 inches, measured on low side of trench

Trench width: 3 feet Effective Trench Width: 4 ft

Absorption Area: 563 ft² Minimum Linear Length: 188 ft

PRESSURE MANIFOLD DESIGN CRITERIA

MANIFOLD # Taps 2 Tap Configuration: 6in. spacing, 1 side of manifold

Length (ft): 2.5 Diameter: 4" sch 80 pvc Elevation: 95.75

TAP CHART

Tap #	Line Number	Color	Relative Elevation	Drainline Length(ft)	Tap Size/Schedule	Flow/tap (gpm)	LTAR (gpd/ft ²)
1	4	W	94.75	94	3/4"sch 40	12.50	0.532
2	5	R	94.22	94	3/4"sch 40	12.50	0.532

Total Drainline: 188 Total Flow: 25.00

Target LTAR*: 0.53

LTAR + 5%: 0.560

PUMP CALCULATIONS

Total Flow: 25.00 gpm Design Head (ft): 2.0

Daily Pump Run Time: 12.00 min (Daily Flow/Total Flow)

Dose Volume: 92.07 gallons with Pipe Volume at 75 % (65.3gal/100ft pipe)

Dose Pump Run 3.68 minutes (Dose Volume/Total Flow)

* Target LTAR: Convert LTAR for non-conventional drainline types by dividing by trench length factor

MANIFOLD DIAGRAM:

