NC DEPARTMENT OF HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • Deputy Secretary for Health
SUSAN KANSAGRA • Assistant Secretary for Public Health
Division of Public Health

Application for Services

This application, in conjunction with the common form established in G.S. 130A-335(a3) and (a5), is optional for local health departments to be used for applications submitted in accordance with G.S. 130A-335(a2), (a3), and (a5).
[hereinafter, G.S. 130A-335(a3) and (a5) permits referred to as (a2) Improvement Permit and (a2) Construction Authorization]

Applying for:

☑ (a2) Improvement Permit ☑ (a2) Construction Authorization ☐ (a2) Repair/Construction Authorization

Please check one of the following:

☑ New Construction ☐ Expansion ☐ System Relocation ☐ Change of Use ☐ Repair

☑ 5 Year Expiration Requested (site plan provided)

☐ Non-Expiring Permit Requested (plat provided, as defined in G.S. 130A-334(7a) Lot 33

Property Owner Name: Clayton Properties Group

Property Owner Mailing Address: 2521 Schieffelin Rd., Suite 116, Apex, NC 27502

Property Owner Phone Number: 919-548-9381

Property Owner Email Address: MBURBANO2MUNGO.COM

Applicant Name: Same

Applicant Mailing Address: _____

Applicant Phone Number: _____

Applicant Email Address: _____

Does the property include, or is subject to, any of the following:

☐ Yes ☑ No Previously identified jurisdictional wetlands

☐ Yes ☑ No Existing or proposed easements, rights-of-way, encroachments, or other areas subject to legal restrictions

☐ Yes ☑ No Approval by other public agencies

A site plan or plat is required, **OR** the site sketch submitted from the LSS/AOWE, must include the following:

(A) existing and proposed facilities, structures, appurtenances, and wastewater systems
(B) proposed wastewater system showing setbacks to property line(s) or other fixed reference point(s)
(C) existing and proposed vehicular traffic areas
(D) existing and proposed water supplies, wells, springs, and water lines; and
(E) surface water, drainage features, and all existing and proposed artificial drainage, as applicable.

Requesting DHHS review: ☐ Yes ☑ No

I understand that the documentation and fees, as required in G.S. 130A-335(a2), (a3), (a5), and (a6), attached to this application are to be used to issue an Improvement Permit and/or Construction Authorization pursuant to G.S. 130A-335(a2),(a3), and (a5). I understand that authorized county and state officials are granted right of entry to the property indicated on this application to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that if the information in the application for an Improvements Permit and/or Construction Authorization is falsified, changed, or the site is altered, then the Improvement Permit and Construction Authorization shall become invalid.

Applicant Signature: _____ Date: _____

Owner's Signature: _____ Date: _____

Permit/File #: _____

NC DEPARTMENT OF
HEALTH AND HUMAN SERVICES

ROY COOPER • Governor
KODY H. KINSLEY • Secretary
MARK BENTON • Chief Deputy Secretary for Health
SUSAN KANSAGRA • Assistant Secretary for Public Health
Division of Public Health

Submittal Includes: ☐ **(a2) Improvement Permit** ☐ **(a2) Construction Authorization** ☐ **Fee $**_____

IMPROVEMENT PERMIT FOR G.S. 130A-335(a2)

County: Harnett

PIN/Lot Identifier: 0681-44-5984

Issued To: Clayton Properties Group, 2521 Schieffelin Rd., Suite 116, Apex, NC 27502

Property Location: 366 Bunker Hill Place, Angier

Subdivision (if applicable) Cambridge Reserve Lot #: 33 Block: _____ Section: _____

LSS Report Provided: Yes ■ No ☐

If yes, name and license number of LSS: John Kase #1323

New ■ Expansion ☐ System Relocation ☐ Change of Use ☐

Facility Type: Single Family Residence

Number of bedrooms: 4 Number of Occupants: <8 Other: _____

Design Wastewater Strength: ■ Domestic ☐ High Strength ☐ Industrial Process Wastewater

Proposed Design Daily Flow: 480 GPD Proposed LTAR (Initial): 0.35 Proposed LTAR (Repair): 0.35

Proposed Wastewater System Type*: IIIb-Pump to 25% reduction Accepted System (Initial) Pump Required: ■ Yes ☐ No ☐ May be required

Proposed Wastewater System Type*: IIIb-Pump to 25% reduction Accepted System (Repair) Pump Required: ■ Yes ☐ No ☐ May be required

**Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII*

Effluent Standard: ■ DSE ☐ HSE ☐ NSF/ANSI 40 ☐ TS-I ☐ TS-II ☐ RCW

Saprolite System (Initial): ☐ Yes ■ No Saprolite System (Repair): ☐ Yes ■ No

Fill System (Initial): ☐ Yes ■ No If yes, specify: ☐ New ☐ Existing (when adding more than 6 inches of fill to system area provide a fill plan)

Fill System (Repair): ☐ Yes ■ No If yes, specify: ☐ New ☐ Existing (when adding more than 6 inches of fill to system area provide a fill plan)

Usable Depth to LC (Initial)[x]: 33 Usable Depth to LC (Repair)[x]: 48 ***[x] Limiting Condition***

Max. Trench Depth (Initial)[‡]: 18 Max. Trench Depth (Repair)[‡]: 18 ***[‡] Measured on the downhill side of the trench***

Artificial Drainage Required: ☐ Yes ■ No If yes, please specify details: _____

Type of Water Supply: ☐ Private well ☐ Public well ☐ Shared well ■ Municipal Supply ☐ Spring ☐ Other: _____

Drainfield location meets requirements of Rule .0508: Yes ■ No ☐ Drainfield location meets requirements of Rule .0601: Yes ■ No ☐

Permit valid for: ■ Five years [site plan submitted pursuant to GS 130A-334(13a)] ☐ No expiration [plat submitted pursuant to GS 130A-334(7a)]

Permit conditions:

Install as per detail sheet and map. Do not disturb, compact, rut or cut any soil within the septic drainfield area. Ensure 6 inches approved fill cover is maintained over system after installation.

Licensed Soil Scientist Print Name: John Kase

Licensed Soil Scientist Signature: _____ Date: 3/3/2025

LICENSED SOIL SCIENTIST JOHN J. KASE 1329 STATE OF NORTH CAROLINA

The LSS evaluation is being submitted pursuant to and meets the requirements of G.S. 130A-335(a2).

See attached site sketch

NC DEPARTMENT OF
HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: _____

This Section for Local Health Department Use Only

Initial submittal received: _____ by _____
Date *Initials*

G.S. 130A-335(a3) states the following:

When an applicant for an Improvement Permit submits to a local health department an Improvement Permit application, the permit fee charged by the local health department, the common form developed by the Department, and a soil evaluation pursuant to subsection (a2) of this section, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Improvement Permit includes all of the required components. If the local health department determines that the Improvement Permit is incomplete, the local health department shall notify the applicant of the components needed to complete the Improvement Permit. The applicant may submit additional information to the local health department to cure the deficiencies in the Improvement Permit. The local health department shall make a final determination as to whether the Improvement Permit is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The Department shall develop a common form for use as the Improvement Permit.

The review for completeness of this Improvement Permit was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

☐ Incomplete (If box is checked, information in this section is required.)

The following items are missing:

_____

_____

Copies of this were sent to the LSS and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

☐ Complete

State Authorized Agent: _____ Date: _____

This Improvement Permit is issued pursuant to G.S. 130A-335 (a2) and (a3) using the signed and sealed LSS/LG evaluation(s) attached here. The issuance of this permit in no way guarantees the issuance of other permits. The permit holder is responsible for checking with appropriate governing bodies in meeting their requirements. *This permit is subject to revocation if the site plan, plat, or the intended use changes.* The Improvement Permit shall not be affected by a change in ownership of the site. This permit is subject to compliance with the provisions of 15A NCAC 18E and to the conditions of this permit.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to evaluations, submittals, or actions from a licensed soil scientist or licensed geologist pursuant to GS 130A-335(a2).

Improvement Permit Expiration Date: _____

See attached site sketch

NC DEPARTMENT OF
HEALTH AND
HUMAN SERVICES
Division of Public Health

Permit/File #: _____

Re-submittal of Improvement Permit

LHD USE ONLY: This IP resubmittal received: _____ by _____
Date *Initials*

The following items are being resubmitted pursuant to G.S. 130A-335(a3) for issuance of the Improvement Permit:

_____

_____

_____

_____

I, _____ hereby attest that the information required to be included with this re-submittal
Licensed Soil Scientist (Print Name)
is accurate and complete to the best of my knowledge and that the proposed Improvement Permit meets all applicable federal, State, and local laws, regulations, rules, and ordinances.

_____ _____
Signature of Licensed Soil Scientist *Date*

The section below is for Local Health Department use after submittal of items noted as missing above.

LHD Follow-up Completeness Review of Improvement Permit

The review for completeness of this Improvement Permit re-submittal was conducted in accordance with G.S. 130A-335(a3). This Improvement Permit is determined to be:

☐ Incomplete (If box is checked, information in this section is required.)

The following items are missing:

_____

_____

Copies of this were sent to the LSS and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

☐ Complete

State Authorized Agent: _____ Date: _____

NC DEPARTMENT OF HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: _____

CONSTRUCTION AUTHORIZATION FOR G.S. 130A-335(a2)

County: Harnett

Pre-Construction Conference Required: Yes ☐ No ■

PIN/Lot Identifier: 0681-44-5984

Issued To: Clayton Properties Group, 2521 Schieffelin Rd., Suite 116, Apex, NC 27502

Property Location: 366 Bunker Hill Place, Angier Lot 33

AOWE/PE Plans/Evaluations Provided: Yes ■ No ☐ If yes, name and license number of AOWE/PE: John Kase #10060E

Facility Type: Single Family Residence

Number of bedrooms: 4 Number of Occupants: <8 Other: _____

■ New ☐ Expansion ☐ Repair ☐ System Relocation ☐ Change of Use

Basement? ☐ Yes ■ No Basement Fixtures? ☐ Yes ■ No

Crawl Space? ■ Yes ☐ No Slab Foundation? ■ Yes ☐ No

Type of Wastewater System* IIIb- Pump to 25% Reduction Accepted System (Initial) IIIb-Pump to 25% Reduction Accepted System (Repair)

**Please include system classification for proposed wastewater system types in accordance with Rule .1301 Table XXXII*

Design Daily Flow: 480 GPD Wastewater Strength: ■ Domestic ☐ High Strength ☐ Industrial Process WW

Session Law 2014-120 Section 53, Engineering Design Utilizing Low-flow Fixtures and Low-flow Technologies? ☐ Yes ■ No
(if yes, please provide engineering documentation)

Effluent Standard: ■ DSE ☐ HSE ☐ NSF/ANSI 40 ☐ TS-I ☐ TS-II ☐ RCW

Type of Water Supply: ☐ Private well ☐ Public well ☐ Shared well ■ Municipal Supply ☐ Spring ☐ Other: _____

Installation Requirements/Conditions

Septic Tank Size: 1000 gallons Total Trench/Bed Length: 350 feet Trench/Bed Spacing: 9 feet on center

Trench/Bed Width: 36 inches LTAR: 0.35 gpd/ft² Usable Depth to LC (Initial)[x]: 33 [x]***Limiting condition***

Soil Cover: 6 inches Slope Corrected Maximum Trench/Bed Depth[‡]: 18 inches [‡] ***Measured on the downhill side of the trench***

Pump Tank Size (if applicable): 1000 gallons Requires more than 1 pump? ☐ Yes ■ No

Pump Requirements: 18.4 ft. TDH vs. 27.4 GPM Grease Trap Size (if applicable): _____ gallons

Distribution Method: ☐ Serial ☐ D-Box or Parallel ■ Pressure Manifold(s) ☐ LPP ☐ Other: _____

Artificial Drainage Required: Yes ☐ No ■ If yes, please specify details: _____

Legal Agreements *(If the answer is "Yes" to any type of legal agreements, please attach a copy of the agreement.)*

Multi-party Agreement Required [.0204(g)]: ☐ Yes ■ No Declaration of Restrictive Covenants: ☐ Yes ■ No

Easement, Right-of-Way, or Encroachment Agreement Required [.0301(b)]: ☐ Yes ■ No

Management Entity Required: ☐ Yes ■ No Minimum O&M Requirements: Owner to maintain wastewater system in accordance with rule .1301

Permit conditions:

Install as per detail sheet and map. Do not disturb, compact, rut or cut any soil within the septic drainfield area.

Ensure 6 inches approved soil fill cover over system after installation and maintained.

No changes may be made to the septic system design without approval of the AOWE.

The requirements of 15A NCAC 18E are incorporated by reference into this permit and shall be met. Systems shall be installed in accordance with the attached site sketch. *This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes.* The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of 15A NCAC 18E, or 15A NCAC 18A .1900, as applicable, and to the conditions of this permit.

AOWE/PE Print Name: John Kase

AOWE/PE Signature: _____ Date: 3/3/2025

NC ONSITE WASTEWATER EVALUATOR
Certification Number
10060E

This AOWE/PE submittal is pursuant to and meets the requirements of G.S. 130A-335(a2) and (a5)

See attached site sketch

NC DEPARTMENT OF
HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: _____

This Section for Local Health Department Use Only

Initial submittal received: _____ by _____
Date *Initials*

G.S. 130A-335(a5) states the following:

When an applicant for a Construction Authorization, or an Improvement Permit and Construction Authorization together, submits a Construction Authorization, or an Improvement Permit and Construction Authorization application together, the permit fee charged by the local health department, the common form developed by the Department, and any necessary signed and sealed plans or evaluations conducted by a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator, the local health department shall, within five business days of receiving the application, conduct a completeness review of the submittal. A determination of completeness means that the Construction Authorization or Improvement Permit and Construction Authorization includes all of the required components. If the local health department determines that the Construction Authorization or Improvement Permit and Construction Authorization is incomplete, the local health department shall notify the applicant of the components needed to complete the Construction Authorization or Improvement Permit and Construction Authorization. The applicant may submit additional information to the local health department to cure the deficiencies in the Construction Authorization or Improvement Permit and Construction Authorization. The local health department shall make a final determination as to whether the Construction Authorization or Improvement Permit and Construction Authorization is complete within five business days after the local health department receives the additional information from the applicant. If the local health department fails to act within any period set out in this subsection, the applicant may treat the failure to act as a determination of completeness. The applicant may apply for the building permit for the project upon the decision of completeness of the Construction Authorization or Improvement Permit and Construction Authorization by the local health department or if the local health department fails to act within five business days. The Authorized On-Site Wastewater Evaluator or licensed engineer submitting the evaluation pursuant to this subsection may request that the local health department revoke or suspend the Construction Authorization or Improvement Permit and Construction Authorization for cause. Upon written request of the Authorized On-Site Wastewater Evaluator or licensed engineer, the local health department shall suspend or revoke the Construction Authorization or Improvement Permit and Construction Authorization pursuant to G.S. 130A-23. The Department shall develop a common form for use as the Construction Authorization.

The review for completeness of this Construction Authorization was conducted in accordance with G.S. 130A-335(a5). This Construction Authorization is determined to be:

☐ Incomplete (If box is checked, information in this section is required.)

The following items are missing: _____

_____

Copies of this were sent to the AOWE/PE and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

☐ Complete

State Authorized Agent: _____ Date of Issuance: _____

This Construction Authorization is issued pursuant to G.S. 130A-335(a2) and (a5) using the signed and sealed plans or evaluations attached here. This Construction Authorization is subject to revocation if the site plan, plat, or the intended use changes. The Construction Authorization shall not be affected by a change in ownership of the site. This Construction Authorization is subject to compliance with the provisions of the Laws and Rules for Sewage Treatment and Disposal and to the conditions of this permit.

The Department, the Department's authorized agents, and the local health departments shall be discharged and released from any liabilities, duties, and responsibilities imposed by statute or in common law from any claim arising out of or attributed to plans, evaluations, preconstruction conference findings, submittals, or actions from a person licensed pursuant to Chapter 89C of the General Statutes as a licensed engineer or a person certified pursuant to Article 5 of Chapter 90A of the General Statutes as an Authorized On-Site Wastewater Evaluator in GS 130A-335(a2), (a5), and (a7). The Department, the Department's authorized agents, and the local health departments shall be responsible and bear liability for their actions and evaluations and other obligations under State law or rule, including the issuance of the operations permit pursuant to GS 130A-337.

Construction Authorization Expiration Date: _____

See attached site sketch

NC DEPARTMENT OF
HEALTH AND HUMAN SERVICES
Division of Public Health

Permit/File #: _____

Re-submittal of Construction Authorization

LHD USE ONLY: This CA resubmittal received: _____ by _____
Date *Initials*

The following items are being resubmitted pursuant to G.S. 130A-335(a5) for issuance of the Construction Authorization:

_____

_____

_____

_____

I, _____ hereby attest that the information required to be included with this re-submittal
Authorized Onsite Wastewater Evaluator (Print Name)
is accurate and complete to the best of my knowledge and that the proposed Construction Authorization meets all applicable federal, State, and local laws, regulations, rules, and ordinances.

_____ _____
Signature of Authorized On-Site Wastewater Evaluator *Date*

The section below is for Local Health Department use after submittal of items noted as missing above.

LHD Follow-up Completeness Review of Construction Authorization

The review for completeness of this Construction Authorization re-submittal was conducted in accordance with G.S. 130A-335(a5). This Construction Authorization is determined to be:

☐ Incomplete (If box is checked, information in this section is required.)

The following items are missing:

_____

_____

Copies of this were sent to the AOWE/PE and the Applicant on _____
Date

State Authorized Agent: _____ Date: _____

☐ Complete

State Authorized Agent: _____ Date: _____

NC DEPARTMENT OF
HEALTH AND
HUMAN SERVICES
Division of Public Health

Permit/File #: _____

ADDENDUM TO G.S. 130A-335(a2) SUBMITTAL

County: Harnett

PIN/Lot Identifier: 0681-44-5984

Issued To: Clayton Properties Group, 2521 Schieffelin Rd., Suite 116, Apex, NC 27502

Additional Improvement Permit Conditions:

See attached detail sheet.

Additional Construction Authorization Conditions:

See attached detail sheet.

Southeastern Soil & Environmental Associates, Inc.

P.O. Box 9321
Fayetteville, NC 28311
Phone/Fax (910) 822-4540
Email mike@southeasternsoil.com

March 3, 2025

Mr. Mateo Burbano
Clayton Properties Group
2521 Schieffelin Rd., Suite 116, Apex, NC 27502

Re: Soil/site evaluation for subsurface waste disposal (GS 130A-335(A2)/SL 2022-11), 366 Bunker Hill Place, Angier, NC 27501, Lot 33, Cambridge Reserve Subdivision, Harnett County, North Carolina

Dear Mr. Burbano,

A soil/site evaluation has been conducted on the aforementioned property at your request. The purpose of the investigation was to determine if soils were suitable or provisionally suitable for a subsurface waste disposal system (conventional, accepted and innovative) to serve a proposed single-family residence (4-bedroom home). All ratings and determinations were made in accordance with "Laws and Rules for Wastewater Treatment and Dispersal Systems, 15A NCAC 18E". **This LSS evaluation is being submitted to meet the requirements of GS 130A-335(a2)/SL 2022-11.**

The soil evaluation was completed on February 21, 2025. Hand auger borings were advanced under moist soil conditions. The site essentially lies on a linear slope landscape (7% slope). Soil borings conducted in most of this area consisted of 20 or more inches of sandy loam underlain by clay loam and clay soils to 48 or more inches below the soil surface. Soil wetness and/or parent material (greater than 50%) was not observed shallower than 44 inches below the soil surface (initial and repair system). All other soil characteristics were suitable to at least 48 inches.

Based on soil borings and site conditions, the site would be designated Suitable for a pump to accepted subsurface waste disposal drainfield (0.35 gal/day/ft2 LTAR; initial system). There is enough suitable soil area to allow for a pump to accepted subsurface septic system repair (0.35 gal/day/ft2). A map showing the approximate location of the site and proposed septic layout accompanies this report. **[Note: No grading, rutting or other soil disturbance can occur in or near the proposed septic area. Any grading can alter the findings of this report and render the site unusable. As such, we recommend the builder protect the proposed septic areas with rope, flagging, fencing, etc.]**

Design Summary

- Initial System: Pump to pressure manifold with 25% Reduction Trenches (350', see septic layout)
- 480 gal/day flow rate (4BR)

- 18" maximum trench depth (initial system)
- 0.35 gpd/ft2 LTAR
- Pump to produce 27.4 gpm at 18.4 TDH
- Pump dose 150 gallons (7.5" drawdown-pending final pump tank gallons/inch)
- 1000-gallon septic and pump tank **(each certified watertight)**
- Repair System: Pump to pressure manifold with 25% Reduction Trenches (350', see septic layout)
- 18" maximum trench depth (initial system)
- 0.35 gpd/ft2 LTAR
- No grading, rutting or filling in septic areas
- No vertical cuts (greater than 2') within 15' of septic lines/areas
- Keep tanks and drainlines 10' from property lines
- Keep supply line 5 or more feet from property lines
- **Install in dry soil conditions**
- Maintain natural contours when clearing the lots
- Direct gutter water away from septic system

During site construction, it is important not to impact and suitable or provisionally suitable soil areas with activities such as excavation or filling. Only the vegetation should be removed in the areas of the proposed septic drainfields to prevent any disturbance of naturally occurring soil. We recommend all lot clearing activity be delayed until the local health department issues a permit.

To the extent possible, we have identified the soil types that will impact the flow of wastewater on this site and have provided a professional opinion as to the best septic system layout. This report does not guarantee that the proposed septic system will properly function for any specific length of time.

Sincerely,

John Kase
NC Licensed Soil Scientist #1323
NC Authorized Wastewater Evaluator #10060E
NC REHS #1785

SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOC., INC.

PROPOSED SUBSURFACE WASTE DISPOSAL SYSTEM DETAIL SHEET

SUBDIVISION: Cambridge Reserve **LOT** 33

INITIAL SYSTEM: Accepted 25% Reduction **REPAIR:** Accepted 25% Reduction

DISTRIBUTION: Pressure Manifold **DISTRIBUTION** Pressure Manifold

BENCHMARK: **100.0** **LOCATION** Water Meter 16.4

NO. BEDROOMS: 4 **LTAR** 0.35 gpd/ft^2

SEPTIC TANK SIZE 1000 Gallons **PUMP TANK SIZE** 1000 Gallons

	LINE	FLAG COLOR	ELEVATION(FT)	LENGTH(FT)
Initial	2	Pink	112	70'
	3	White	111.6	70'
	4	Yellow	110.9	70'
	5	Blue	110.1	70'
	6	Pink	109.5	70'
				Total 350'
Repair	7	White	108.9	88'
	8	Yellow	108.3	88'
	9	Blue	107.6	88'
	10	White	107	88'
				Total 350'

BY John Kase **DATE** 2/21/2025

TYPICAL PROFILE

0-24	SL GR	VFR/NS/NP
24-38	CL SBK	FR/S/P
38-48	C SBK	FR/S/P

THERE SHALL BE NO GRADING, CUTTING, LOGGING OR OTHER SOIL DISTURBANCE IN SEPTIC AREA

HEALTH DEPARTMENT USE ONLY.

DESIGNS DO NOT GURANTEE FUNCTIONALITY

PRELIMINARY PLOT PLAN FOR

MUNGO HOMES

LOT 33, CAMBRIDGE SUBDIVISION

366 BUNKER HILL PLACE

REF: P.B. 2025, PG.7

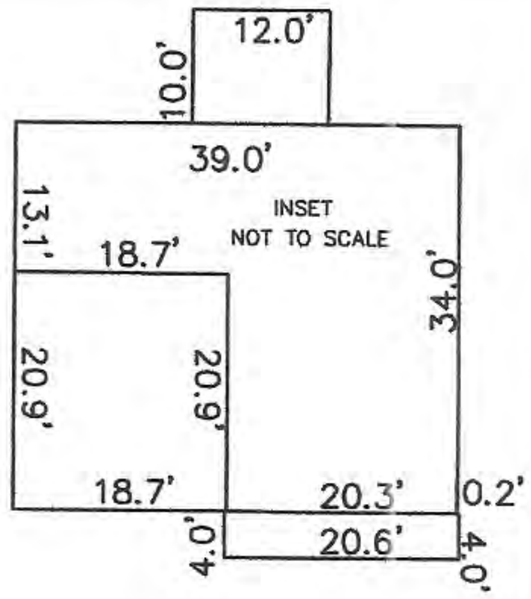
NEILL'S CREEK TOWNSHIP

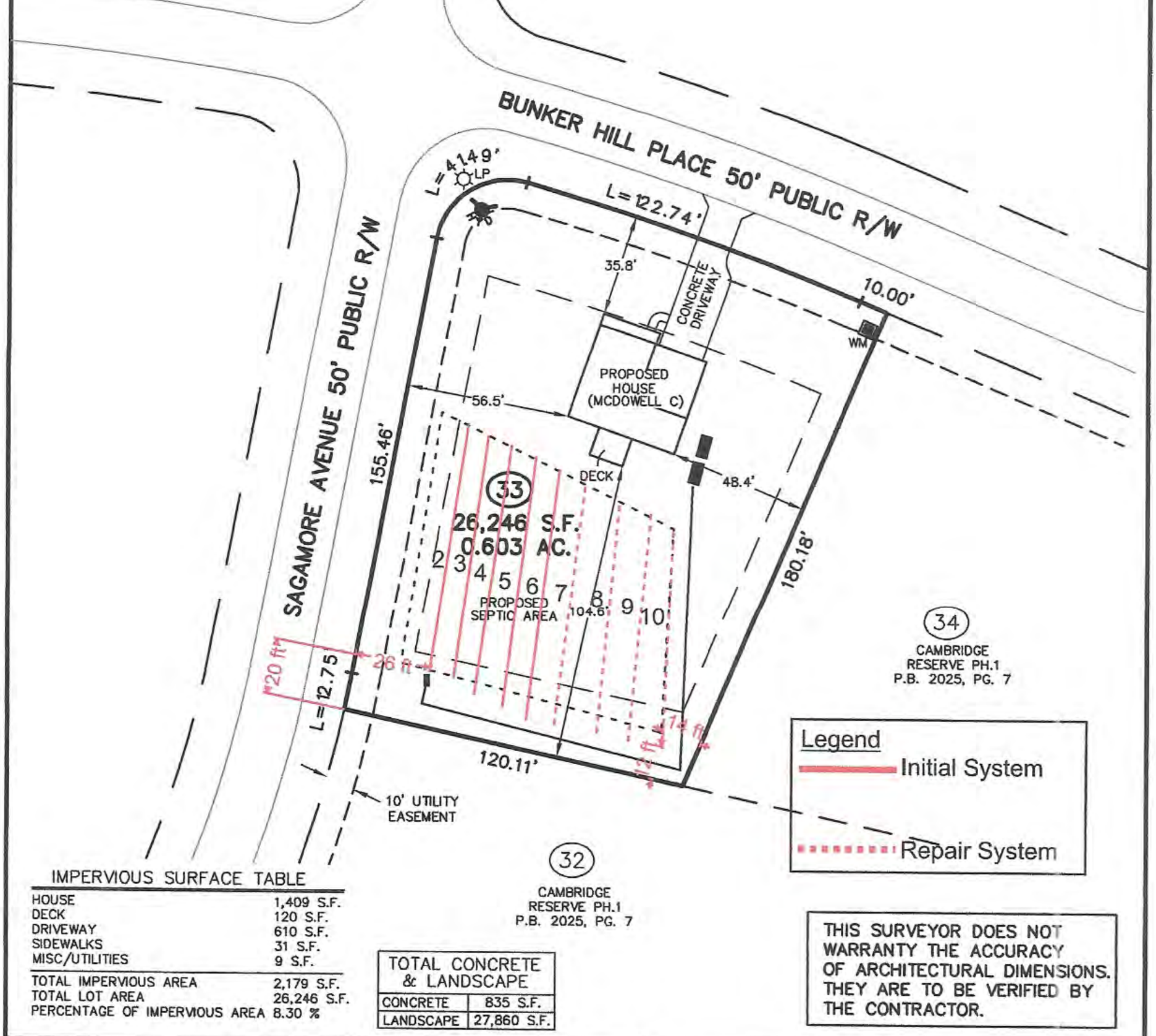
HARNETT COUNTY, NORTH CAROLINA

FEBRUARY 12, 2025

ZONED RA-30

SCALE 1"=50'



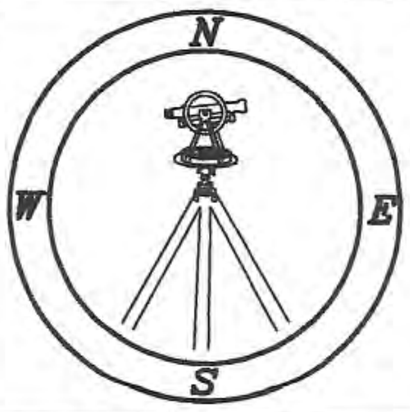


IMPERVIOUS SURFACE TABLE

HOUSE	1,409 S.F.
DECK	120 S.F.
DRIVEWAY	610 S.F.
SIDEWALKS	31 S.F.
MISC/UTILITIES	9 S.F.
TOTAL IMPERVIOUS AREA	2,179 S.F.
TOTAL LOT AREA	26,246 S.F.
PERCENTAGE OF IMPERVIOUS AREA	8.30 %

TOTAL CONCRETE & LANDSCAPE	
CONCRETE	835 S.F.
LANDSCAPE	27,860 S.F.

THIS SURVEYOR DOES NOT WARRANTY THE ACCURACY OF ARCHITECTURAL DIMENSIONS. THEY ARE TO BE VERIFIED BY THE CONTRACTOR.



CMP

Professional Land Surveyors
C-1525

333 S. White Street
Post Office Box 1253
Wake Forest, N.C. 27588
(919)556-3148

NOTES:
-THIS PLAN DOES NOT REFLECT AN ACTUAL SURVEY. IT IS A PRELIMINARY PLAN AND SHOULD BE USED FOR ITS INTENDED PURPOSE ONLY.
-NOT FOR RECORDATION, CONVEYANCES, OR SALES.

SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOCIATES, INC.
RESIDENTIAL PRESSURE MANIFOLD DESIGN

Permit # 336 Bunker Hill Place

# of BDR: 4 **Daily Flow:** 480 **gal/day** **L.T.A.R.:** 0.3500 **gal/day/sq.ft**

Septic Tank: 1000 **gals** **Pump Tank:** 1000 **gals** **Sq. Foot:** 350 **System Type:** Accepted

Number of Taps: 5 **Length of Trenches:** 350 **ft(See Tap Chart for Details)**

Depth of Trenches: 18 **in** **Manifold Length:** 48 **in**

Manifold Diameter: 4in sch 80pvc **Tap Configuration: 6 in spacing** 1 **side(s) of manifold**

Supply Line: length: 250 **ft** **Diameter:** 2 **in sch 40pvc**

Friction Loss + Fitting Loss: 5.65 **ft(supply line length + 70' for fittings in pump tank)**

Design Head: 2 **ft** **Elevation Head:** 4.70 **ft**

Total Head: 18.35 **ft** **Pump to Deliver:** 27.40 **gals/min at** 18.35 **ft head**

Dosing Volume: 150 **gals,**

Drawdown: 150 **gals divided by** 20 **gals/in =** 7.5 **inches**

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats to be determined by type of pump tank used. A septic tank filter is required.

TAP CHART

Benchmark 16.4 is = 100.00 set at water meter **Design Head:** 2

Pump tank elev. 8.5 107.90 **Pump elev.** 102.90 **Manifold elev.** 113.60

line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	# of Panels (PPBPS)
2	Pink	3.80	112.60	70	1/2in SCH 80	5.48	96.00	210	0.4571	
3	White	4.40	112.00	70	1/2in SCH 80	5.48	96.00	210	0.4571	
4	Yellow	5.50	110.90	70	1/2in SCH 80	5.48	96.00	210	0.4571	
5	Blue	6.30	110.10	70	1/2in SCH 80	5.48	96.00	210	0.4571	
6	Pink	6.90	109.50	70	1/2in SCH 80	5.48	96.00	210	0.4571	
			116.40			0	0.00	0	#DIV/0!	
			116.40			0	0.00	0	#DIV/0!	
			116.40			0	0.00	0	#DIV/0!	
			116.40			0	0.00	0	#DIV/0!	
			116.40			0	0.00	0	#DIV/0!	
			Total Feet =	**350**	**gal/min =**	**27.40**		**LTAR =**	**0.3500**	
			Feet Required =	**343**	**Velocity =**	**2.62**		(ltar + 5%)	0.3675	
				Des. Flow	480			(ltar w/25% red)	0.4667	
Total # of Panels (PPBPS)				**Pump Run=**	17.52			(ltar + 5%)	0.4900	
% of Dose Vol.	66			**Tank Gal/IN**	20					
Dose Volume	150			**Elev. Head**	10.70					
Dose Pump Time	5.48									
Drawdown in Inches	7.5									

Comments:

SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOCIATES, INC.
PRESSURE MANIFOLD DESIGN - REPAIR SYSTEM

# of BDR: 4 **Daily Flow:** 480 gal/day **L.T.A.R.:** 0.3500 gal/day/sq.ft

Septic Tank: 1000 gals **Pump Tank:** 1000 gals **Sq. Foot:** 1056 **System Type:** Accepted

Number of Taps: 4 **Length of Trenches:** 352 ft(See Tap Chart for Details)

Depth of Trenches: 18 in **Manifold Length:** 42 in

Manifold Diameter: 4in sch 80pvc **Tap Configuration: 6 in spacing** 1 side(s) of manifold

Supply Line: length: 250 ft **Diameter:** 2 in sch 40pvc

Friction Loss + Fitting Loss: 3.74 ft(supply line length + 70' for fittings in pump tank)

Design Head: 2 ft **Elevation Head:** 7.00 ft

Total Head: 12.74 ft **Pump to Deliver:** 21.92 gals/min at 12.74 ft head

Dosing Volume: 151 gals,

Drawdown: 151 gals divided by 20 gals/in = 7.6 inches

Simplex Control Panel required; elapsed time meter and cycle counter required; Floats to be determined by type of pump tank used. A septic tank filter is required.

TAP CHART

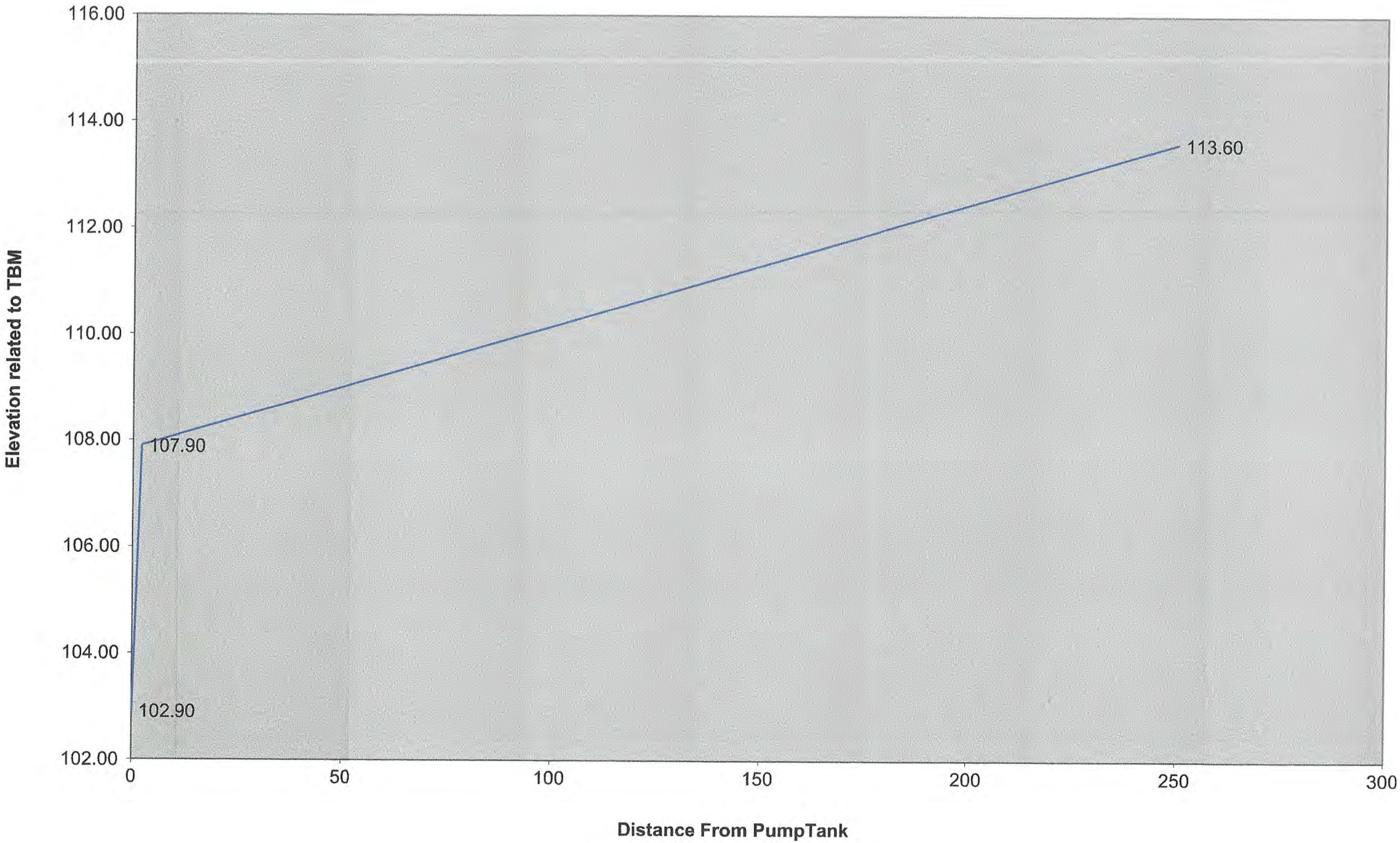
Benchmark 16.4 is = 100.00 set at

Pump tank elev. 8.5 107.90 **Pump elev.** 102.90

line	color	rod read	Elevation	length	hole size	flow/tap	gal/day	trench area	LINE LTAR	# of Panels (PPBPS)
							Design Head:	2		
							Manifold elev.	109.90		
7	White	7.50	108.90	88	1/2in SCH 80	5.48	120.00	264	0.4545	
8	Yellow	8.10	108.30	88	1/2in SCH 80	5.48	120.00	264	0.4545	
9	Blue	8.80	107.60	88	1/2in SCH 80	5.48	120.00	264	0.4545	
10	White	9.40	107.00	88	1/2in SCH 80	5.48	120.00	264	0.4545	
			116.40			0	0.00	0	#DIV/0!	
			116.40			0	0.00	0	#DIV/0!	
			116.40			0	0.00	0	#DIV/0!	
			116.40			0	0.00	0	#DIV/0!	
			116.40			0	0.00	0	#DIV/0!	
			116.40			0	0.00	0	#DIV/0!	
			Total Feet =	352	**gal/min =**	21.92		**LTAR =**	**0.3500**	
			Feet Required =	343	**Velocity =**	2.10		**(ltar + 5%)**	0.3675	
				Des. Flow	480			**(ltar w/25% red)**	0.4667	
Total # of Panels (PPBPS)				**Pump Run=**	21.90			**(ltar + 5%)**	0.4900	
% of Dose Vol.		66		**Tank Gal/IN**	20					
Dose Volume		151		**Elev. Head**	7.00					
Dose Pump Time		6.89								
Drawdown in Inches		7.6								

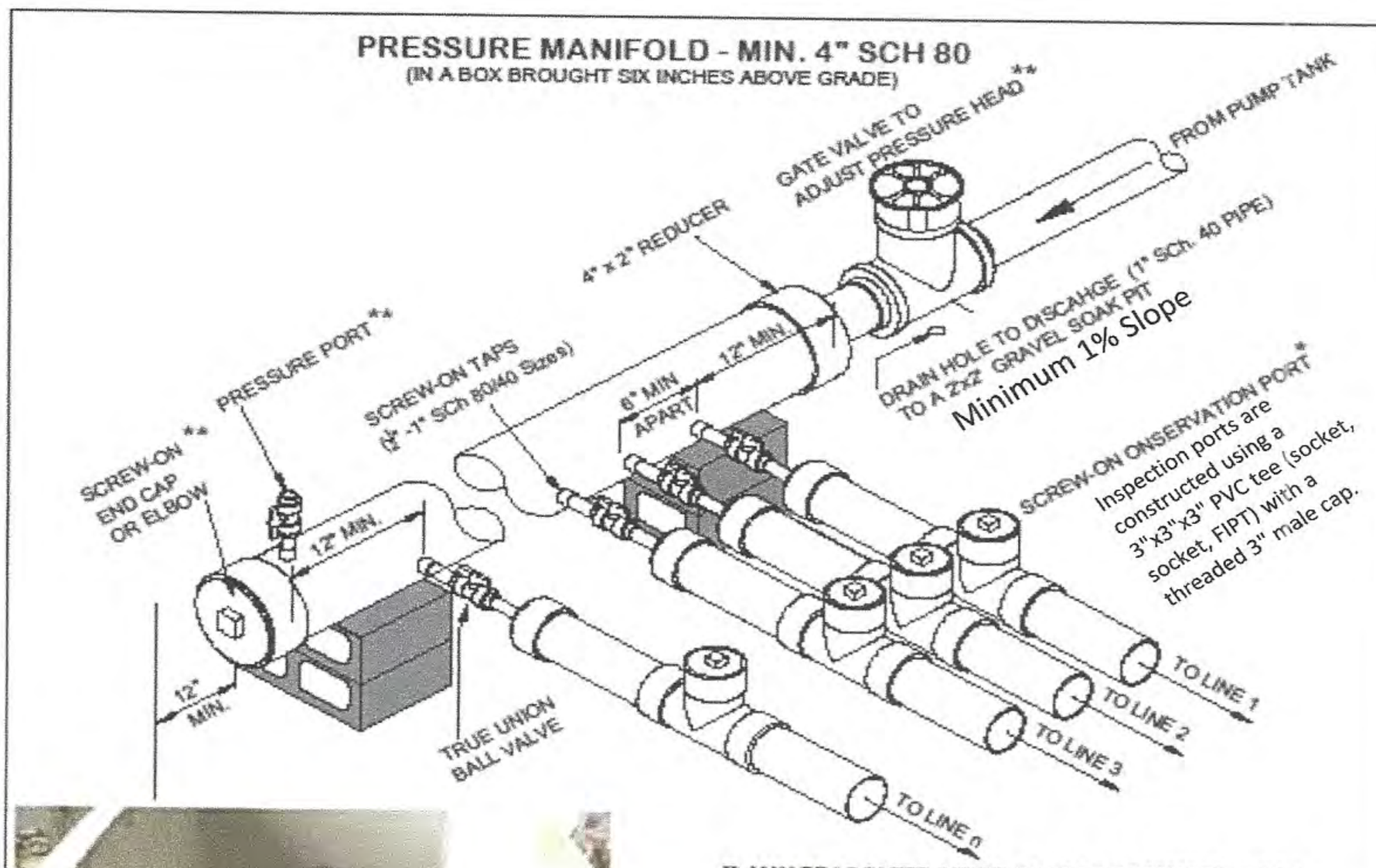
Comments:

Hydraulic Profile



PM Draw

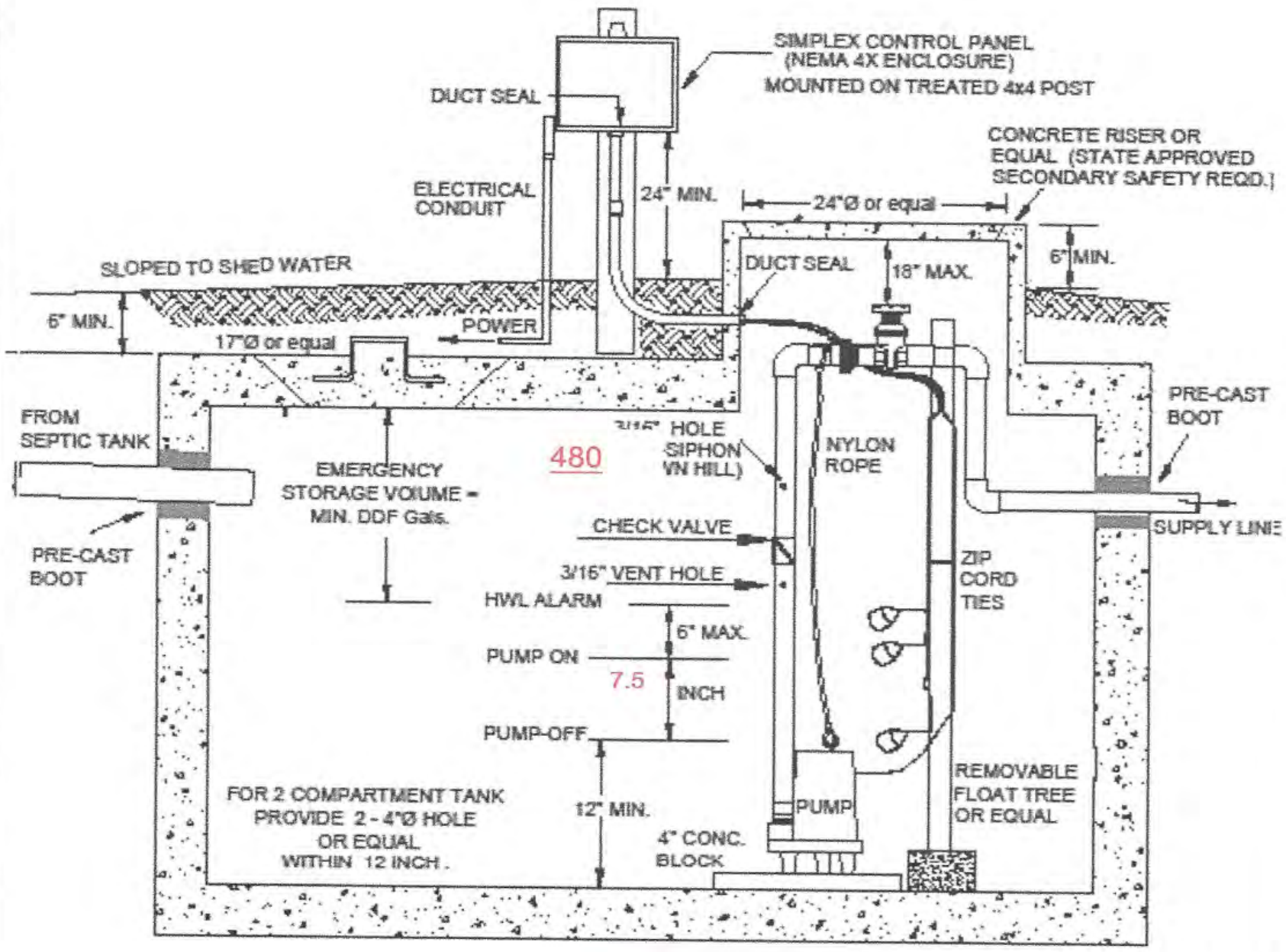
	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6	Line 7	Line 8	Line 9	Line 10
Taps	1/2in SCH 80	1/2in SCH 80	1/2in SCH 80	1/2in SCH 80	1/2in SCH 80					
Flow	5.48	5.48	5.48	5.48	5.48	0	0	0	0	0



** MAY BE LOCATED INSIDE OR OUTSIDE MANIFOLD BOX. WHEN LOCATED OUTSDIE VALVE BOX IS REQUIRED.

* MAY BE INISDE BOX OR IF OUTSIDE, BRING 6" ABOVE GRADE

LINE #	TAPS	LENGTH
2	1/2in SCH 80	70
3	1/2in SCH 80	70
4	1/2in SCH 80	70
5	1/2in SCH 80	70
6	1/2in SCH 80	70

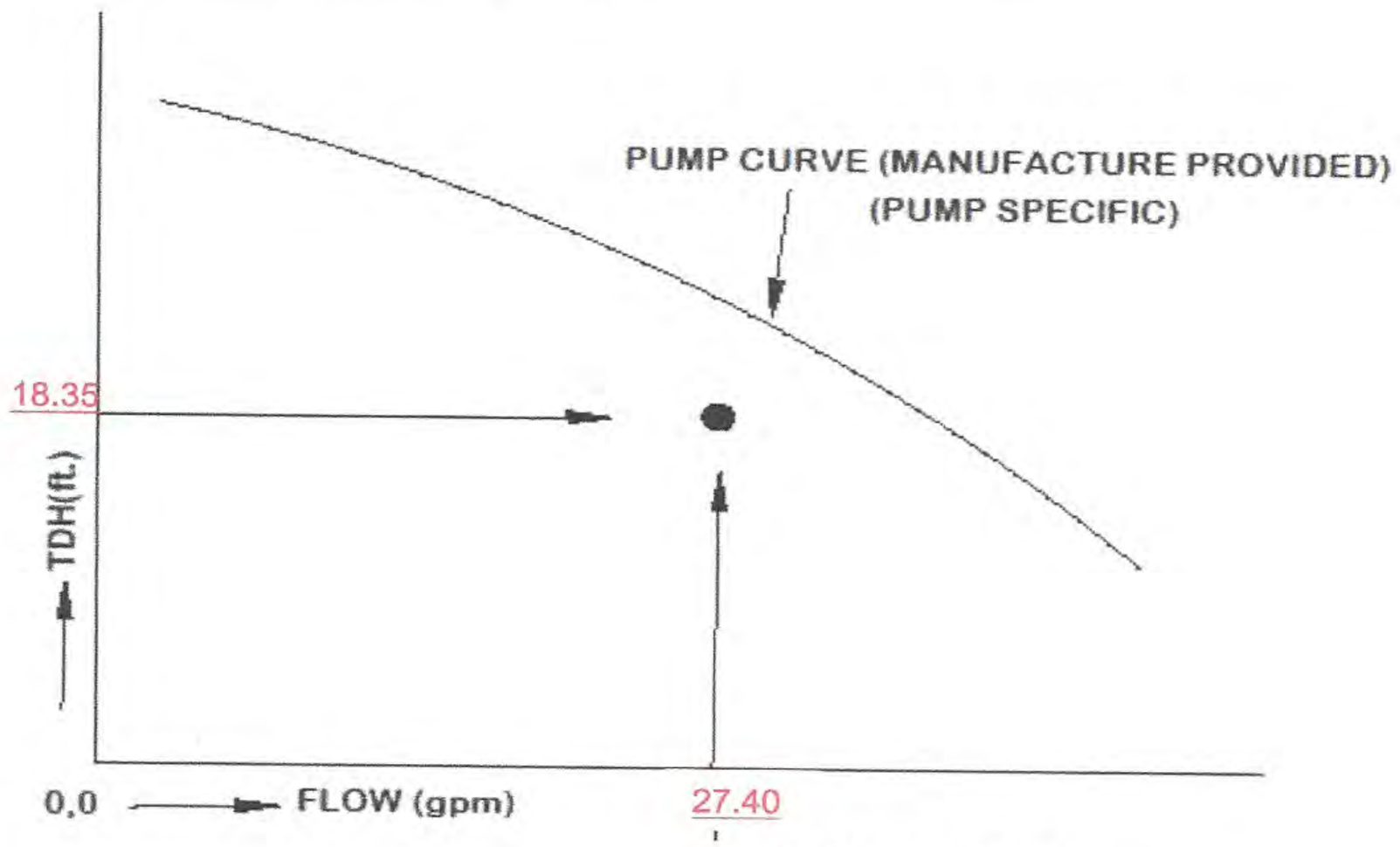


1000 GALLON (Min.)

STATE APPROVED PUMP TANK WITH A PT NUMBER
(TRAFFIC RATED TANK REQUIRED FOR > 3' BURIAL)

PUMP CURVE AND SPECIFICATIONS

Pump and Control Panel Specification Required:
Pump:
Pump to be UL or equal listed
TDH and Pumping rate calcs & curve
Dose volume
3 floats system in a float tree or bracket of non-corrosive material
Highwater alarm within 6" from "on" float
Off float at min. 12" from bottom of tank or to submerge pump
(Manufacture may certify/specify pumps suitability taller than 12" if unsubmerged)
Supply Line Profile when variation in ground profile of more than 5'
Effluent Pump should handle min. 1/2 "solids"
Gate valve, true union disconnect and connection inside tank reachable within 18" from riser top



Control Panel Specifications:
Installed within 2 ft. and
min. 16" above final grade to bottom of panel box
HOA switch provided
NEMA 4X box
Cycle counter & elapsed time meter
Alarm (audible/visible)
Separate circuits for alarm and pumps
High voltage protection
Pump Pull Rope/chain (non-corrosive)
All duct sealed, no splices or junction boxes inside tanks
3/16th inch hole between Check valve (in vertical pipe) and pump

SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOCIATES, INC.	SOIL/SITE EVALUATION SHEET									Sheet #:	1
OWNER/APP. NAME:	Clayton Properties Group					SUBDIV./LOT#	Cambridge Reserve Lot 33				
LOCATION OF SITE:	366 Bunker Hill Place, Angier										
COUNTY:	Harnett	PROPERTY ID #:	0681-44-5984				DATE EVALUATED:				2/21/2025
PROPOSED FACILITY	SFR	PROPOSED DESIGN FLOW (.0400):		480 gpd			PROPERTY SIZE	0.6 acres			
WATER SUPPLY:	Public		WATER SUPPLY SETBACK:				10'				
TYPE OF WASTEWATER:		Domestic				EVALUATION METHOD:		Auger			

PROFILE #	.0502 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY .0503 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY .0503 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .0504 SOIL WETNESS/ COLOR	OTHER PROFILE FACTORS .0505 SOIL DEPTH	OTHER PROFILE FACTORS .0506 SAPRO CLASS	OTHER PROFILE FACTORS .0507 RESTR HORIZ	.0509 PROFILE CLASS & LTAR
1	L 7% .0502(d) SLOPE CORRECTION 2.5	0-10 10-16 16-33 33	SL/GR CL/SBKw C/SBKm CL Saprolite	VFR/NS/NP FR/S/P FI/S/P	 SWC Not Observed	33	U	Not Observed	S-0.275
2	L 7% .0502(d) SLOPE CORRECTION 2.5"	0-24 24-39 39-45 45-48	SL/GR CL/SBKw C/SBKm C/SBKm	VFR/NS/NP FR/S/P FR/S/P FR/S/P	 10YR7/2	48	N.O.	N.O.	S-0.35
3	L 7% .0502(d) SLOPE CORRECTION 2.5"	0-26 26-38 38-48	SL/GR CL/SBKw C/SBKw	VFR/NS/NP FR/S/P FR/S/P	 SWC Not Observed	48	N.O.	N.O.	S -0.35
4	L 7% .0502(d) SLOPE CORRECTION 2.5"	0-34 34-44 44-48	SL/GR CL/SBKw C/SBKw	VFR/NS/NP FR/S/P FR/S/P	 SWC Not Observed	48	N.O.	N.O.	0.35

DESCRIPTION:	INITIAL SYSTEM	REPAIR SYSTEM	SITE CLASSIFICATION (.0509):	Suitable
Available Space	Suitable	Suitable	EVALUATED BY:	John Kase
System Type(s):	25% Reduction	25% Reduction	OTHER(S) PRESENT:	
Site LTAR:	0.350	0.350		
Maximum Trench	18"	18"		
Saprolite System:	No	No		
Comments:	Trench bottoms depth measure on downslope side of trench..			

SOUTHEASTERN SOIL & ENVIRONMENTAL ASSOCIATES, INC.	SOIL/SITE EVALUATION SHEET	Project #:	0
		Sheet #:	2

OWNER/APP. NAME:	Clayton Properties Group			SUBDIV./LOT#	Cambridge Reserve Lot 33	
LOCATION OF SITE :	366 Bunker Hill Place, Angier					
COUNTY:	Harnett	PROPERTY ID #:	0681-44-5984		DATE EVALUATED:	2/21/2025
PROPOSED FACILITY:	SFR	PROPOSED DESIGN FLOW (.400):		480 gpd	PROPERTY SIZE	0.6
WATER SUPPLY:	Public		WATER SUPPLY SETBACK:		10'	
TYPE OF WASTEWATER:		Domestic		EVALUATION METHOD:		Auger

PROFILE #	.502 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.503)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.503 STRUCTURE/ TEXTURE	.503 CONSISTENCE/ MINERALOGY	.504 SOIL WETNESS/ COLOR	.505 SOIL DEPTH	.506 SAPRO CLASS	.0507 RESTR HORIZ	
5	L 7% .0502(d) SLOPE CORRECTION 2.5"	0-28	SL/GR	VFR/NS/NP		48	S	N.O.	S-0.35
		28-38	CL/SBKw	FR/S/P					
		38-44	C/SBKw	FR/S/P					
		44	C/SBKw	FR/S/P	10YR 78/2				
	.0502(d) SLOPE CORRECTION								
	.0502(d) SLOPE CORRECTION								
	.0502(d) SLOPE CORRECTION								

Comments:

Standard Abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL LTAR	SAPROLITE	LPP LTAR	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope)	I	S (Sand)	0.8 - 1.2	0.6 - 0.8	0.4 - 0.6	SEXP (Slightly Expansive	G (Single Grain)
CV (Convex Slope)		LS (Loamy Sand)		0.5 - 0.7		EXP (Expansive)	M (Massive)
D (Drainage Way)							GR (Granular)
FP (Flood Plain)	II	SL (Sandy Loam)	0.6 - 0.8	0.4 - 0.6	0.3 - 0.4	**MOIST**	SBK (Subangular Blocky)
FS (Foot Slope)		L (Loam)		0.2 - 0.4		VFR (Very Friable)	WSBK (Weak Subangular Blocky)
H (Head Slope)						FR (Friable)	ABK (Angular Blocky)
L (Linear Slope)	III	SiL (Silt Loam)	0.3 - 0.6	0.1 - 0.3	0.15 - 0.3	FI (Firm)	PL (Platy)
N (Nose Slope)		SCL (Sandy Clay Loam)		0.05 - 0.15*		EFI (Extremely Firm)	PR (Prismatic)
R (Ridge/Summit)		CL (Clay Loam)		N/A			MA-RCF (Massive Rock Controlled Fabric)
S (Shoulder Slope)		SiCL (Silty Clay Loam)				**WET**	AR (Auger Refusal)
T (Terrace)		Si (Silt)				NS (Non-Stick)	
TS (Toe Slope)						SS (Slightly Sticky)	**OTHER**
	IV	SC (Sandy Clay)	0.1 - 0.4	N/A	0.05 - 0.2	S (Sticky)	NO (Not Observed)
		SiC (Silty Clay)				VS (Very Sticky)	
		C (Clay)				NP (Non-plastic)	
						SP (Slightly Plastic)	
	O (Organic)		N/A	N/A	N/A	P (Plastic)	
						VP (Very Plastic)	

NOTES:	
SAPROLITE*	*Sandy clay loam saprolite can only be used with advanced pretreatment in accordance with 15A NCAC 18E .1200.
HORIZON DEPTH	In inches below natural soil surface
DEPTH OF FILL	In inches from land surface
RESTRICTIVE HORIZON	Thickness and depth from land surface
SAPROLITE	S (suitable) or U (unsuitable)
SOIL WETNESS	Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation
CLASSIFICATION	S (Suitable) or U (Unsuitable)
Long-term Acceptance Rate (LTAR): gal/day/ft2	

PRELIMINARY PLOT PLAN FOR

MUNGO HOMES

LOT 33, CAMBRIDGE SUBDIVISION

366 BUNKER HILL PLACE

REF: P.B. 2025, PG.7

NEILL'S CREEK TOWNSHIP

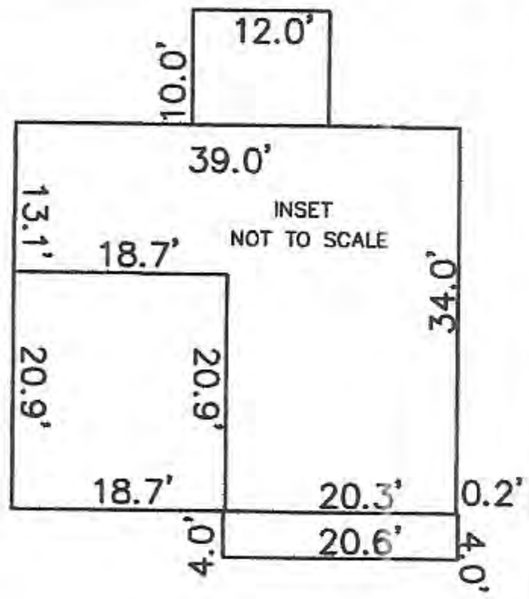
HARNETT COUNTY, NORTH CAROLINA

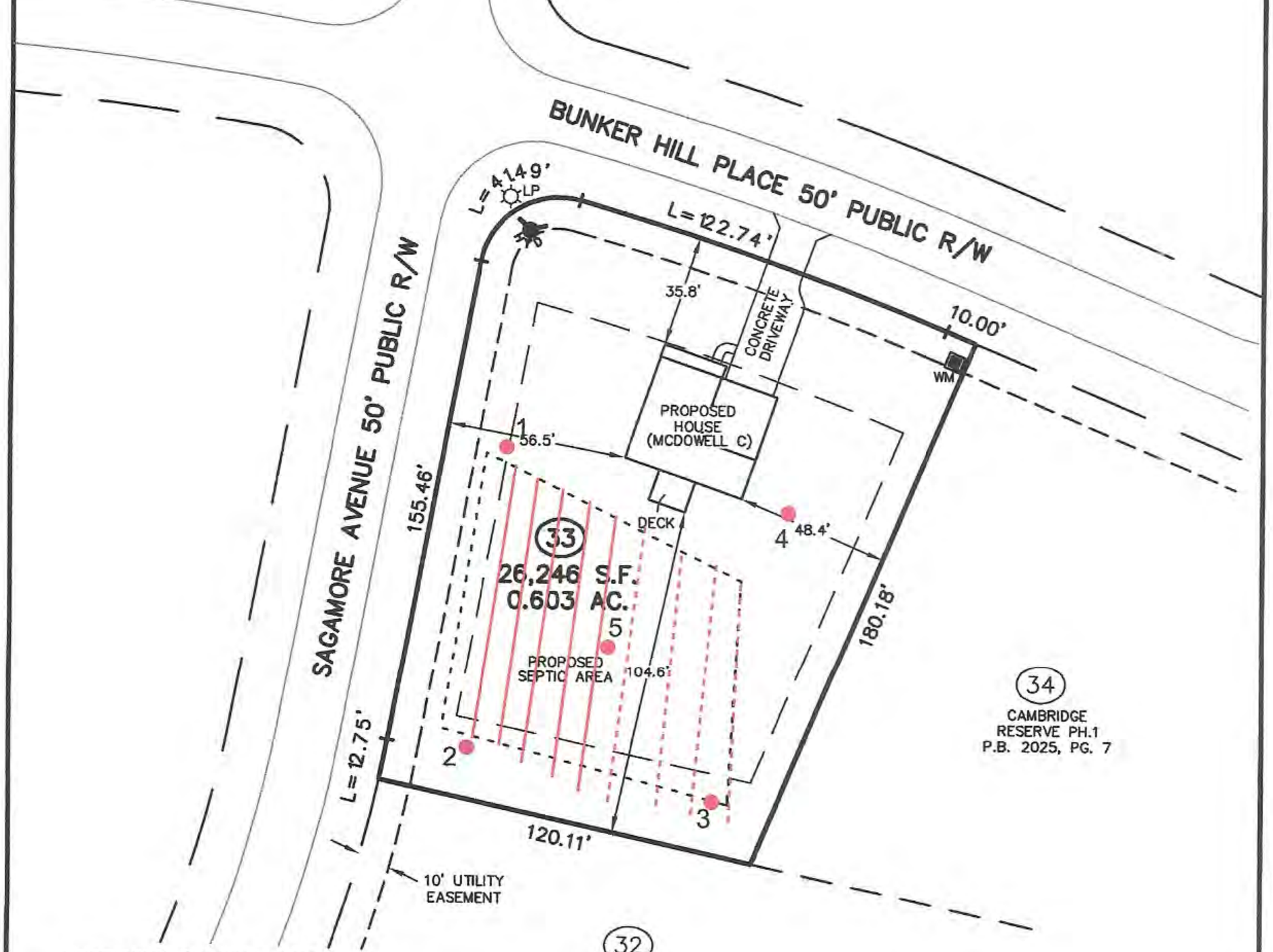
FEBRUARY 12, 2025

ZONED RA-30

50 25 0 50 100

SCALE 1"=50'



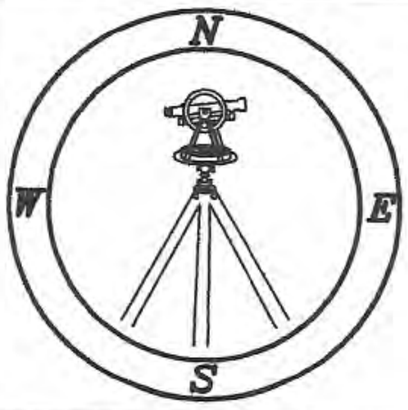


IMPERVIOUS SURFACE TABLE

HOUSE	1,409 S.F.
DECK	120 S.F.
DRIVEWAY	610 S.F.
SIDEWALKS	31 S.F.
MISC/UTILITIES	9 S.F.
TOTAL IMPERVIOUS AREA	2,179 S.F.
TOTAL LOT AREA	26,246 S.F.
PERCENTAGE OF IMPERVIOUS AREA	8.30 %

TOTAL CONCRETE & LANDSCAPE	
CONCRETE	835 S.F.
LANDSCAPE	27,860 S.F.

THIS SURVEYOR DOES NOT WARRANTY THE ACCURACY OF ARCHITECTURAL DIMENSIONS. THEY ARE TO BE VERIFIED BY THE CONTRACTOR.



CMP

Professional Land Surveyors
C-1525

333 S. White Street
Post Office Box 1253
Wake Forest, N.C. 27588
(919)556-3148

NOTES:
-THIS PLAN DOES NOT REFLECT AN ACTUAL SURVEY. IT IS A PRELIMINARY PLAN AND SHOULD BE USED FOR ITS INTENDED PURPOSE ONLY.
-NOT FOR RECORDATION, CONVEYANCES, OR SALES.