

**Bureau of Environmental Health**  
8930 Stanford Boulevard, Columbia, MD 21045  
Main: 410-313-2640 | Fax: 410-313-2648  
TDD 410-313-2323 | Toll Free 1-866-313-6300  
[www.hchealth.org](http://www.hchealth.org)  
Facebook: [www.facebook.com/hocohealth](http://www.facebook.com/hocohealth)

Maura J. Rossman, M.D., Health Officer

RECEIPT DATE: 11/14/17

**ONSITE SEWAGE DISPOSAL SYSTEM**

P 562334

APPROVAL DATE: 10/25/18 *(RM)*

**PERMIT: CONSTRUCTION**

A

PROPERTY ADDRESS: 14671 Viburnum Drive

SUBDIVISION: Kalmia Farms, Section II

LOT: 20

TAX ID: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

EMAIL: \_\_\_\_\_

CONTRACTOR ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_

PROPERTY OWNER: Johnathan and Rosanne Calure

EMAIL: \_\_\_\_\_

OWNER ADDRESS: 5227 Sweet Meadow Lane

PHONE: 410-598-4165

SEPTIC TANK SIZE (GALLONS): 2000

TANK MANUFACTURER: MBI

PUMP MODEL: \_\_\_\_\_

PUMP SIZE \_\_\_\_\_

PUMP TANK CAPACITY: 2000

DISTRIBUTION SYSTEM: ☒ GRAVITY ☐ PRESSURE DOSED

BEDROOMS: 8

APPLICATION RATE: 0.8

TRENCHES:	LINEAR FEET REQUIRED: <u>178.5</u>	INLET DEPTH: <u>3</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>8</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>13</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>3</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	<u>3x60' trenches (RM)</u>	

ISSUED BY: Hank Oswald

ISSUE DATE: 11/14/17

EXPIRATION DATE: 11/14/18

NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION

NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING

NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.

NOTE: WATERTIGHT TANKS REQUIRED

NOTE: ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRAIENT FROM ANY WATER WELL

NOTE: MANHOLE RISERS REQUIRED ON ALL SEPTIC TANKS AND PUMP CHAMBERS

NOTE: AN ELECTRICAL PERMIT IS REQUIRED FOR INSTALLATION OF ANY ELECTRICAL COMPONENTS OF THE SYSTEM

☒ ELECTRICAL PERMIT ISSUED

E 17005047

NOTE: MDE RECOMMENDS SEPTIC TANKS, BAT, AND OTHER PRETREATMENT UNITS BE PUMPED AT A FREQUENCY ADEQUATE TO ENSURE THAT SOLIDS ARE NOT DISCHARGED TO THE DISPOSAL AREA

**NEITHER THE HOWARD COUNTY COUNCIL NOR THE HEALTH DEPARTMENT IS RESPONSIBLE FOR THE SUCCESSFUL OPERATION OF ANY SYSTEM.**

**PERMITTEE RESPONSIBLE FOR OBTAINING FINAL APPROVAL ON THIS PERMIT.**

**CALL 410-313-1771 TO SCHEDULE INSPECTIONS.**

NOT TO SCALE

See Separate sheet  
for As-Built

9/25/18 On site for pump + alarm test. Alarm sounds pump pumps effluent to D-box. 1-day storage above the alarm float in the tank. Septic system for the old house must be abandoned. (SC)  
10/25/18 Ex. Septic tank pumped /collyered. Onsite for verification. Ex. well capped. Will be used for irrigation. Letter submitted by homeowners. (Kut)

ROAD NAME

PRE-CONSTRUCTION:

11/17/17 OK to set tanks as per plan. SDA not staked. Tanks were staked checked w/ laser level off 18". Will need to be adjusted when staked. Call for inspection (Kut)

11/20/17 Set D-box @ start of dip trench. Install 3x6' double on concrete. Concrete does not match plan 12" difference in tanks ends. Pump tank set. One load of #2 stone delivered. OK.

INSTALLATION. 11/29/17-site visit. Contractor on site but not working on septic install. Both tanks were in the ground and partially backfilled, got measurements for As-built, OK to continue. (RR)

12/8/17 2" Force Main installed per plan. No D-box set. Stone onsite. Very clean stone, marble from midland early. Upper trench installed. Area checked. OK to continue (Kut)

12/11/17 T2 + T3 complete. T2 covered + T3 left open for inspection. 3' wide. 2.5' to stone. (SC) 12/12/17 D-box installed, connected to fin. + trenches. Need house sewer line and pump + alarm. (SC) 3/14/18 Sewer house connections complete. Need pump + alarm. (SC)

FINAL INSPECTOR

K. Wally

DATE OF APPROVAL

10/20/18

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	3'	8'
NUMBER OF TRENCHES		3
TOTAL LENGTH		180'
ABSORPTION AREA		540' + SIDEWALL
DISTRIBUTION BOX LEVEL		YES
DISTRIBUTION BOX BAFFLE		ELBOW
DISTRIBUTION BOX PORT		YES

SEPTIC TANK DATA

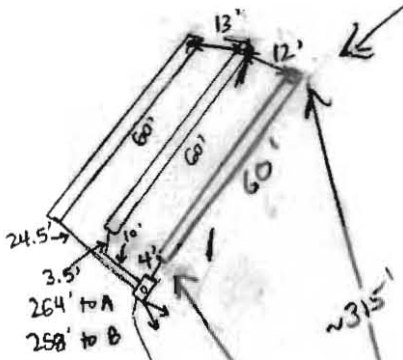
SEPTIC TANK I LEVEL	yes
MANUFACTURER	Mayer Bros
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	2.5' to 3'
BAFFLES	YES
BAFFLE FILTER	NO
MANHOLE LOC	front + back
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	YES
DATE ON LID	—

PUMP/SEPTIC TANK LEVEL

SEPTIC TANK LEVEL	yes
MANUFACTURER	Mayer Bros
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	2.5' to 3'
BAFFLES	NO
BAFFLE FILTER	NO
MANHOLE LOC	front + back
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	NO
DATE ON LID	—

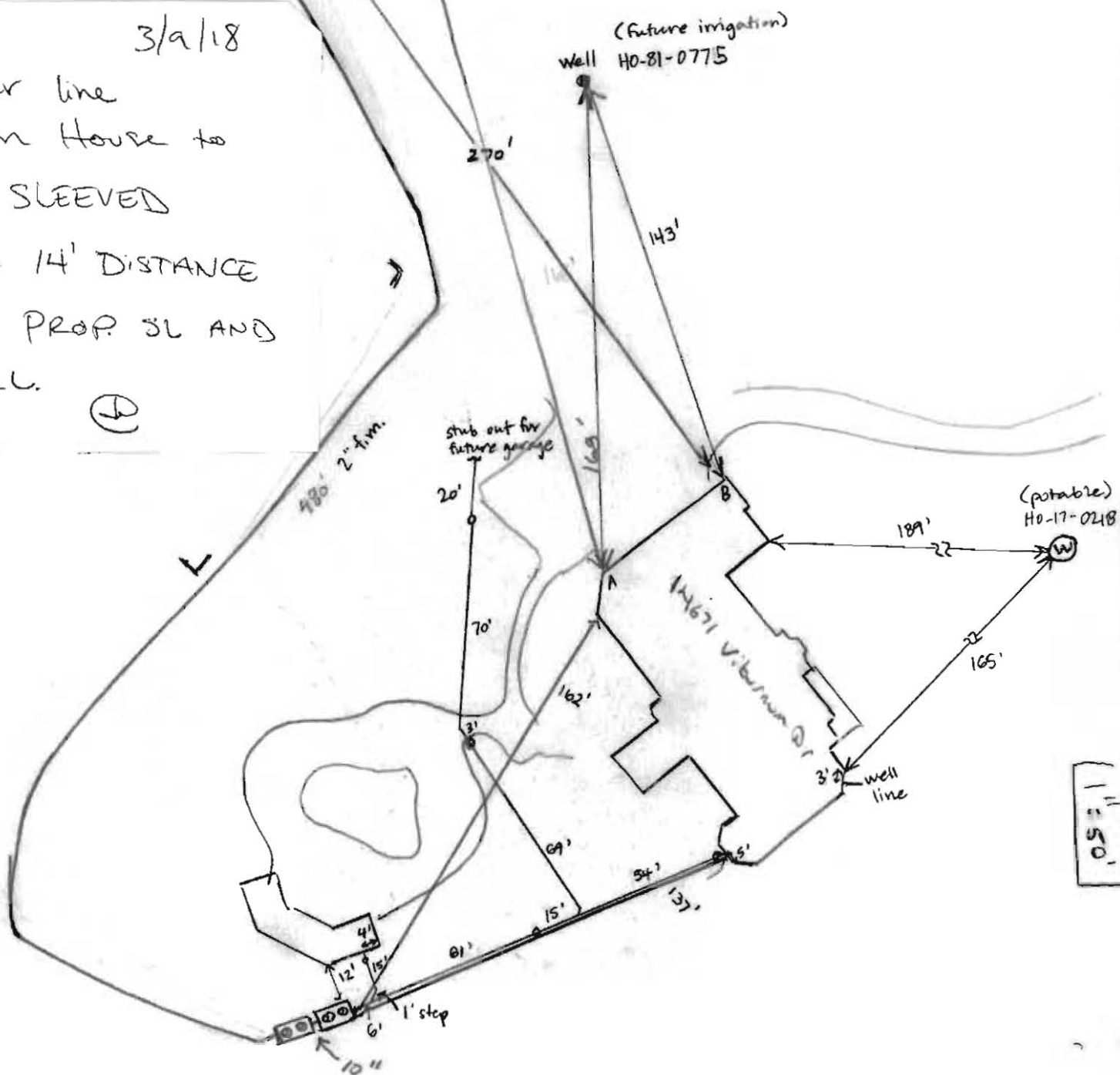
Pump: Gould's S11 HH

Top trench not talled out of Area  
 due to contours, and large trees.  
 > 100' from ex. well.



3/9/18

Water line  
 From House to  
 Pool SLEEVED  
 UNTIL 14' DISTANCE  
 BTWN PROP SL AND  
 EX W.L.



# ***LDE, INC.***

*Planning ♦ Engineering ♦ Surveying*

January 28, 2017  
Mr. Hank Oswald, LEHS  
Well & Septic Program  
Bureau of Environmental Health  
Howard County Health Department  
8930 Stanford Boulevard  
Columbia, MD 21045

RE: Kalmia Farms  
Section 2, Lot 20  
Replacement Dwelling

Dear Mr. Oswald,

Please find three (3) copies of the Onsite Sewage Disposal System design Plan for the above referenced project. An overview of the project is as follows:

1. An existing two story dwelling is presently located on the property. The existing septic system was determined to have capacity for 5 bedrooms.
2. The owners plan construction of a new three story dwelling, replacing the existing residence, and a pool/spa area.
3. The existing dwelling will remain occupied during construction of the replacement dwelling and utilize the existing well and septic system. The planned detached three car garage, near the rear of the existing dwelling will not be constructed during this period.
4. Upon completion of the new dwelling and pool/spa, the existing dwelling will be razed and the existing septic system will be abandoned.
5. After abandonment of the existing septic system, the new septic system will be installed. Preliminary review of the architectural plans by Robert Bricked determined that the new system must be sized for a minimum of six bedrooms.
6. The owners have not decided if the detached three car garage will be constructed or the type of bathroom facilities at this time. If a Powder Room is planned in the garage, a wye connection to the planned system has been provided. The planned system should be adequate and not require expansion.

Should you have any questions, please contact our office.

Very truly yours,



Bruce D Burton, PE  
LDE, Inc.

*Historic Carriage House*  
7520 Main Street ♦ Suite 203 ♦ Sykesville, MD ♦ 21784  
410-795-6391 ♦ 410-795-9540 FAX



## Oswald, Hank

---

**From:** Oswald, Hank  
**Sent:** Wednesday, February 22, 2017 9:45 AM  
**To:** bb121658@gmail.com  
**Subject:** RE: Septic Plan\_14671 Viburnum\_Kalmia Farm\_Lot2

Hi Bruce:

A couple of questions regarding the OSDS design plan for 14671 Viburnum Drive?

- 1.) The EP05 pump should be sufficient but how do you arrive at 20 gpm on the pump curve? If the total dynamic head is 25 then the pump will yield approximately 33 gpm according to the curve.
- 2.) Is the garage septic line a force main or 4 inch pvc?

There needs to be a clean-out shown every 70 feet on the line. Also, the septic line located underneath the driveway needs to be sleeved.

I could redline the plan to show to indicate a 4 inch line, cleanouts and a sleeve so this plan can be used for the future garage and pool house.

Let me know.

Thanks,

Hank

---

**From:** Oswald, Hank  
**Sent:** Thursday, February 02, 2017 10:34 AM  
**To:** [bb121658@gmail.com](mailto:bb121658@gmail.com)  
**Subject:** Septic Plan\_14671 Viburnum\_Kalmia Farm\_Lot2

Hi Bruce:

Please see attached letter and supporting docs pertaining to the OSDS plan for 14671 Viburnum Drive.

Please contact me with any questions.

Respectfully,

Hank

Hank Oswald, L.E.H.S.  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
410.313.1786 (Office)  
410.313.2648 (Fax)

## Oswald, Hank

---

**From:** Oswald, Hank  
**Sent:** Thursday, February 02, 2017 10:34 AM  
**To:** bb121658@gmail.com  
**Subject:** Septic Plan\_14671 Viburnum\_Kalmia Farm\_Lot2  
**Attachments:** Septic Layout\_14671 Viburnum.pdf; Graph.pdf; OSDS Plan\_14671 Viburnum Dr..pdf; Septic Specs\_14671 Viburnum.pdf

Hi Bruce:

Please see attached letter and supporting docs pertaining to the OSDS plan for 14671 Viburnum Drive.

Please contact me with any questions.

Respectfully,

Hank

Hank Oswald, L.E.H.S.  
Howard County Health Department  
Bureau of Environmental Health  
Well & Septic Program  
8930 Stanford Boulevard  
Columbia, MD 21045  
410.313.1786 (Office)  
410.313.2648 (Fax)



## Bureau of Environmental Health

8930 Stanford Boulevard, Columbia, MD 21045

Main: 410-313-2640 | Fax: 410-313-2648

TDD 410-313-2323 | Toll Free 1-866-313-6300

[www.hchealth.org](http://www.hchealth.org)

Facebook: [www.facebook.com/hocohealth](https://www.facebook.com/hocohealth)

Twitter: HowardCoHealthDep

Maura J. Rossman, M.D., Health Officer

---

February 2, 2017

LDE Inc.  
7520 Main Street  
Sykesville, MD 21784

*Sent via email to: [bb121658@gmail.com](mailto:bb121658@gmail.com)*

**RE: 14671 Viburnum Dr.  
Septic Plan  
Kalmia Farm, Section 2, Lot 20**

Hi Bruce:

This letter is in response to the Septic Plan submitted for 14671 Viburnum Dr. (Kalmia Farm, Section 2, lot 20). Upon review of the plan, a couple of items need to be added or changed on the plan.

Please revise the plan to include the following:

- 1.) Change trench design calculations to match septic specs (see attachment).
- 2.) Place initial and first replacement system at top of SDA (see attachment).
- 3.) If TDH = 25.74, then GPM = 33. This # is based on graph provided on plan. (see attachment).
- 4.) Pump will be EP05
- 5.) Runtime =  $150/33 = 4.54$  minutes

At building permit stage, floor plans for the house and pool house will be required. Should you have any questions, please don't hesitate to ask.

Respectfully,

*Hank Oswald*

Hank Oswald, L.E.H.S  
Bureau of Environmental Health  
Well & Septic Program

**LDE INC.**  
Historic Carriage House  
7520 Main Street  
Suite 203  
Sykesville, MD 21784

# LETTER OF TRANSMITTAL

2737

TO HOWARD COUNTY HEALTH DEPARTMENT  
8930 STANFORD BLVD.  
COLUMBIA, MD 21045

DATE	1/29/17	JOB NO.	15-004
ATTENTION	HANK OSWALD		
RE	KALMIA FARMS		
	LOT 20		
	ONSITE SEPTIC PLAN		

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via DIRECT SUBMITTAL the following items:

- ☐ Shop drawings ☒ Prints ☐ Plans ☐ Samples ☐ Specifications  
☒ Copy of letter ☐ Change order ☐

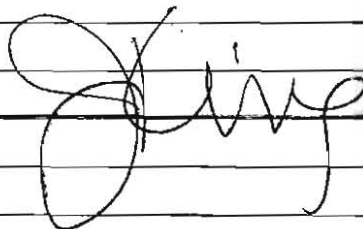
COPIES	DATE	NO.	DESCRIPTION
3		2	ONSITE SEPTIC PLAN
1		1	LETTER

THESE ARE TRANSMITTED as checked below:

- ☒ For approval ☐ Approved as submitted ☐ Resubmit \_\_\_\_\_ copies for approval  
☒ For your use ☐ Approved as noted ☐ Submit \_\_\_\_\_ copies for distribution  
☒ As requested ☐ Returned for corrections ☐ Return \_\_\_\_\_ corrected prints  
☐ For review and comment ☐ \_\_\_\_\_  
☐ FOR BIDS DUE \_\_\_\_\_ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS \_\_\_\_\_

REC. BY:



COPY TO MUELLER HOMES

SIGNED:

BRUCE D BURTON

# ***LDE, INC.***

*Planning ♦ Engineering ♦ Surveying*

February 14, 2017

Mr. Hank Oswald, LEHS  
Well & Septic Program  
Bureau of Environmental Health  
Howard County Health Department  
8930 Stanford Boulevard  
Columbia, MD 21045

RE: Kalmia Farms  
Section 2, Lot 20  
Replacement Dwelling / #B17000327

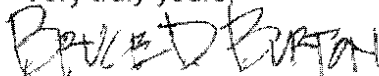
Dear Mr. Oswald,

Please find three (3) copies of the Onsite Sewage Disposal System design Plan for the above referenced project. In response to your comments of February 2, 2017 and review of the proposed architectural plans, we offer the following:

1. Trench calculations and design have been revised to accommodate 8 bedrooms.
2. Trench layout has been adjusted to accommodate the initial, first and second replacement systems.
3. The design head has increased due to the repositioning of the distribution box. Since the design flow has increased, the force main has increased in size to 2". This will place the pump discharge within the median output range. The discharge rate is a function of a quantity dose over a prescribed time.
4. Pump will remain EP05.
5. Pump run time has been revised to 8 minutes.

Should you have any questions, please contact our office.

Very truly yours,



Bruce D Burton, PE  
LDE, Inc.

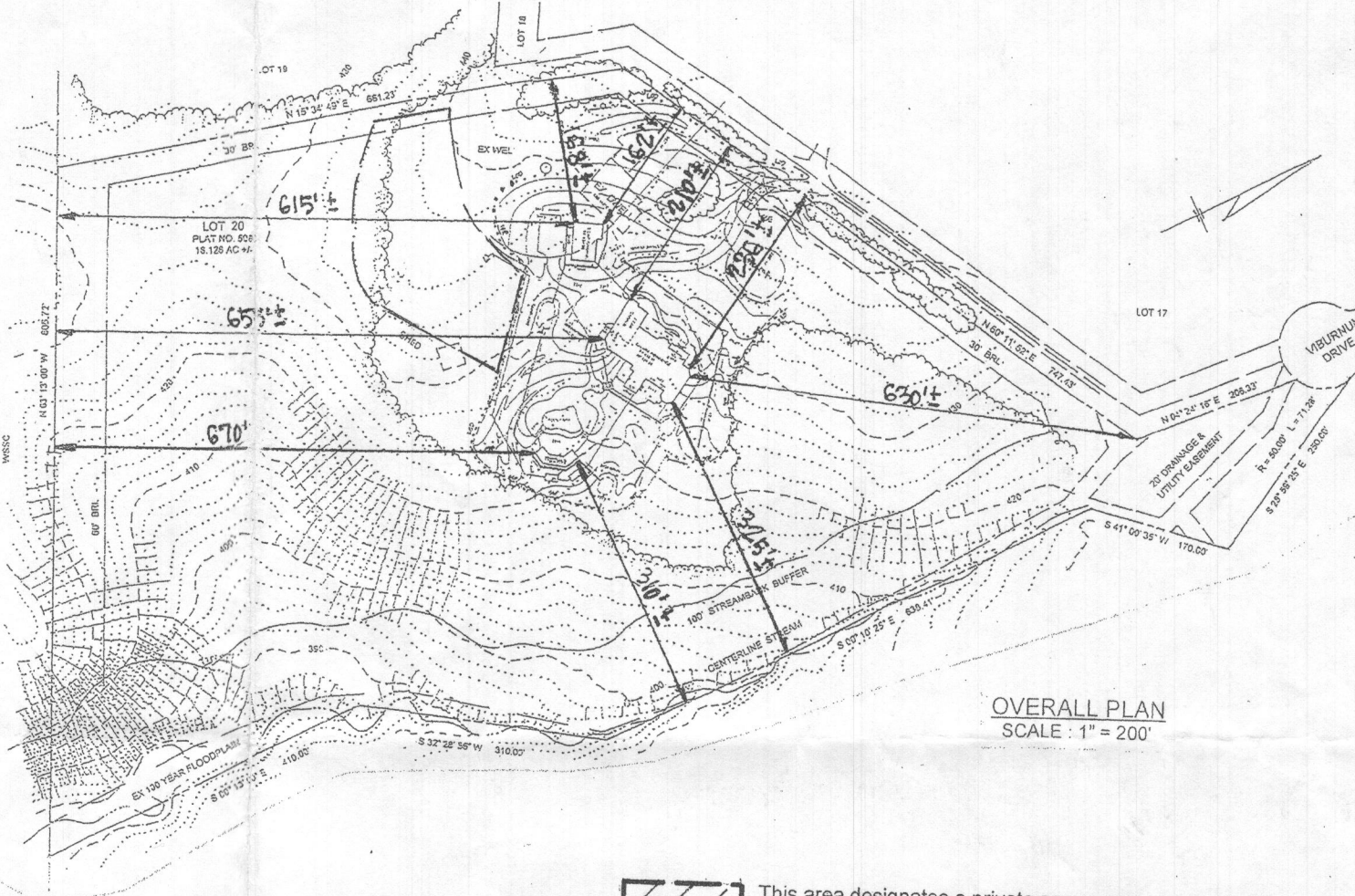
Cc: Mueller Homes

*Historic Carriage House*  
7520 Main Street ♦ Suite 203 ♦ Sykesville, MD ♦ 21784  
410-795-6391 ♦ 410-795-9540 FAX

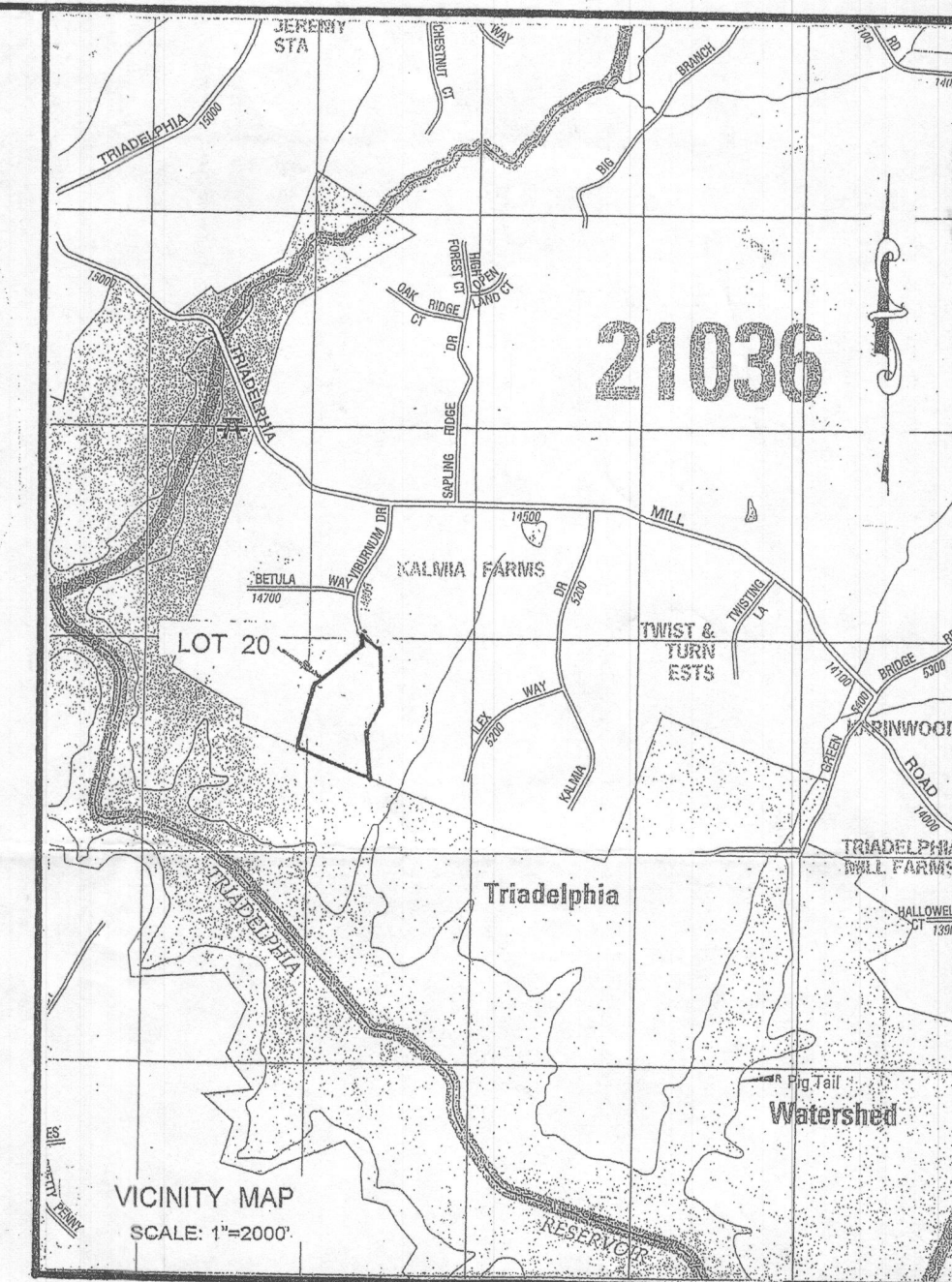


# SEPTIC SYSTEM NOTES

- Any change to the locations or depths to any components must be approved by the Engineer and the Howard County Health Department prior to installation. A revised site plan may be required.
- The maximum earth cover over the tank is 3 feet. Greater earth cover will require a heavy load bearing tank.
- Electrical work for the installation must be performed by a licensed electrician.
- The well (tag #81-0775) has been field located and is accurately shown.
- All wells and septic systems located within 100' of the property boundaries and 200' down gradient of any wells and/or septic systems have been shown.
- The existing septic tank and distribution box shall remain to service the existing dwelling. Upon issuance of a permit to raze the existing dwelling the existing tank and box shall be abandoned in accordance with Howard County Health Department abandonment procedures and the contractor shall file an abandonment report.



This area designates a private sewage easement of at least 10,000 square feet for each residence as required by the Maryland Department of the Environment for individual sewage disposal. Improvements of any nature in this easement are restricted. This easement shall become null and void upon connection to a public sewerage system. The County Health Officer shall have the authority to grant adjustments to the private sewage easement. Recordation of a revised sewage easement shall not be necessary.



## GENERAL NOTES

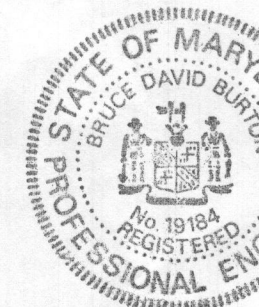
- Existing Zoning: RR-DEO per 10/06/13 Comprehensive Zoning Plan.
- Plat Reference: #5085
- Total Area of Lot: 18.126 Acres±.
- The lot shown hereon complies with the minimum lot area and ownership width as required by the Maryland Department of the Environment.
- All existing wells and septic systems within 100 feet of the lot which may affect this proposal have been shown.
- The topography shown is derived from the Howard County
- The well this lot has been drilled and field located HO-81-0775.
- Any changes to the Private Sewage Easement shall require a Revised Percolation Certification Plat.
- The Howard County Health Department previously approved the Sewage Disposal Area shown on this plan with the Percolation Certification Plan Dated May 25, 2016.
- See Architectural Plans for building dimensions and design details. Prior to stakeout for construction, it shall be the Builder/Developers responsibility to provide LDE, Inc. with the most recent set of house plans. The house footprint shown on this plan was provided by the builder on August 15, 2016.
- The Contractor or Developer shall notify the Department of Public Works/ Bureau of Engineering/ Construction Inspection Division at 410.313.1881 at least (5) five working days prior to start of work.
- The Contractor or Developer shall notify "Miss Utility" at 1.800.257.7777 at least forty-eight (48) hours prior to any excavation work being done.
- Limit of Disturbance: 156,900 square feet.
- Any damage to Public "Rights of Ways" or paved public roads shall be repaired immediately at the Contractors expense in accordance with the Howard County Standards and Specifications.
- Deviation from these plans and specifications without prior written consent of the Engineer may cause the work to be unacceptable.
- The dimensioned distances shall govern if scaled distances on the plan are found to be in disagreement.
- This lot is exempt from the requirements for Forest Conservation in accordance with Section 16.1202.b.1.vi of the Howard County Code for Forest Conservation with filing of a Declaration of Intent.
- Stormwater Management for this lot is provided with the approval of the Environmental Concept Plan.

Approved Septic System Plan  
Howard County Health Department  
Hank Oswald 3/1/17  
Signature Date

## NOTE

THE EXISTING DWELLING SHOWN ON THIS PLAN WILL BE TEMPORARILY OCCUPIED DURING CONSTRUCTION OF THE REPLACEMENT DWELLING IN CONFORMANCE FROM THE DEPARTMENT OF PLANNING AND ZONING.

OWNER: JONATHAN CALURE  
ROSANNE CALURE  
5227 SWEET MEADOW LANE  
CLARKSVILLE, MD 21029  
410.598.4165  
BUILDER: MUELLER HOMES  
7520 MAIN STREET  
SUITE 201  
SYKESVILLE, MD 21784  
410.549.4444

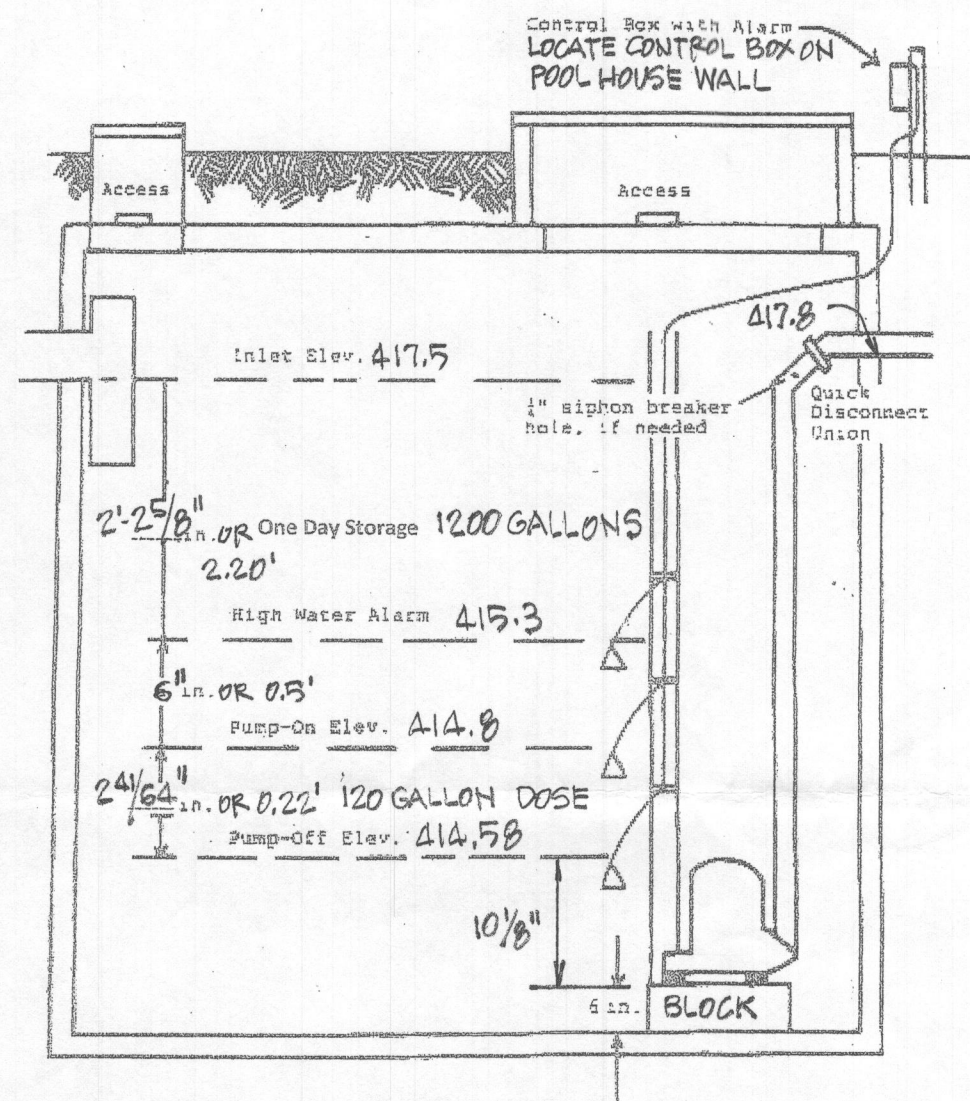


HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRATION DATE: 6/30/17.  
BRUCE D. BURTON DATE

**LDE Inc.**  
Engineers • Surveyors • Planners  
Historic Carriage House • 7520 Main Street • Suite 203 • Sykesville, Maryland • 21784  
(410) 795-6391 • (410) 795-6392 • FAX (410) 795-9540 • www.Landsurveyor.md.com

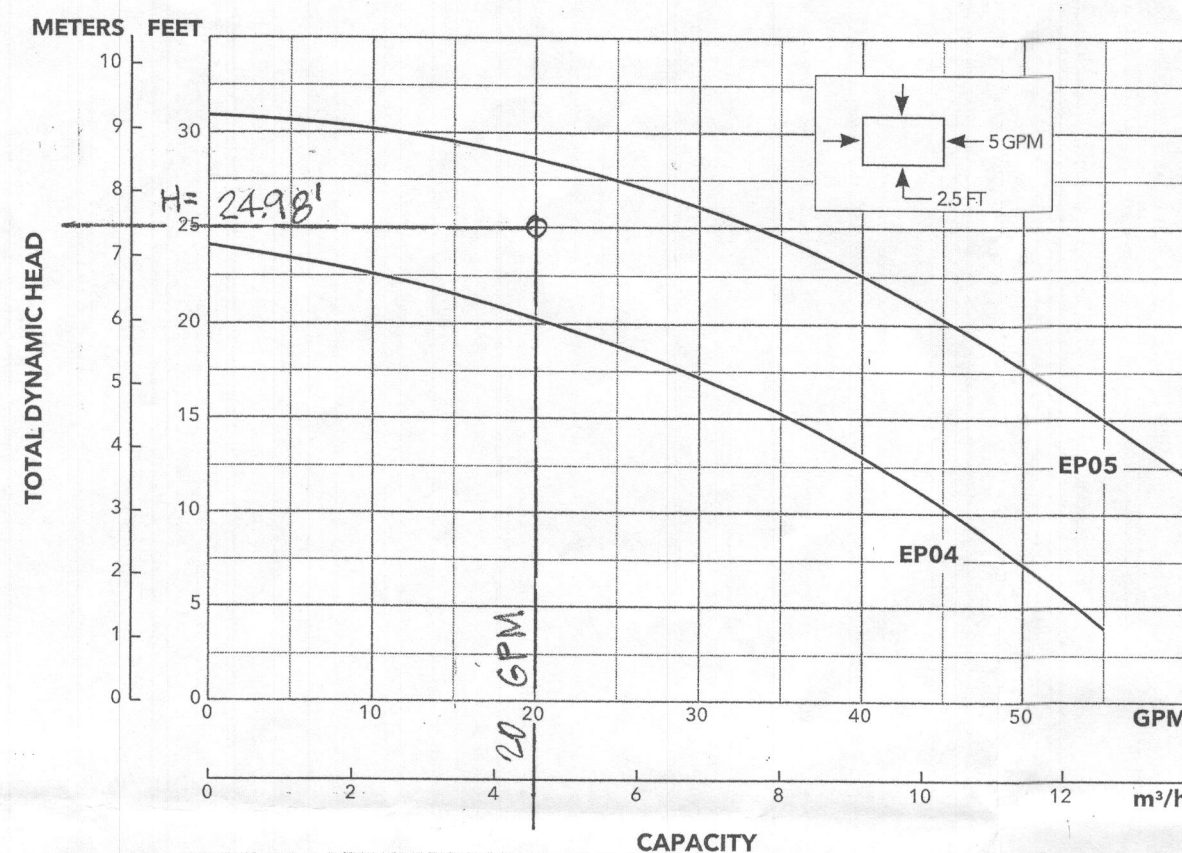
ONSITE SEWAGE DISPOSAL  
SYSTEM DESIGN PLAN  
KALMIA FARM  
SECTION 2  
LOT 20  
REPLACEMENT DWELLING  
(B 17000327)  
TAX MAP 27 GRID 16 PARCEL 22  
TAX ACCOUNT #05-391989  
5TH ELECTION DISTRICT HOWARD COUNTY, MD  
DATE: 2/20/17 SCALE: AS SHOWN  
SHEET 1 OF 2





It is recommended that a gate valve for controlling discharge head and/or to shut off flows back into the pump chamber be installed after the disconnect union.

TYPICAL PUMP CHAMBER DETAIL



PUMP SYSTEM DESIGN

- DESIGN VOLUME : 1200 GPD
- 8 BEDROOMS x 150 GPD/BR
- FORCE MAIN SIZE: 2" HDPE
- TOTAL DESIGN HEAD: 24.98'
  - STATIC HEAD: 21.92'
    - EL @ BOX 436.5 - EL @ PUMP/OFF 414.58
    - EL @ BOX 436.5 - EL @ PUMP/OFF 414.58
    - EL @ BOX 436.5 - EL @ PUMP/OFF 414.58
  - FRICITION HEAD : 3.06'
    - PIPE LENGTH: 405'
    - EQUIV. PIPE LENGTH: 8.0'
      - 2 - 2" 45° HB: 4.0' EACH
    - TOTAL PIPE LENGTH : 413.0'
    - TRY PUMP RATE @ 20 GPM
      - 4.13 x 0.74 = 3.06'
- TRIAL PUMP SIZE :
  - FLOW x TDH x SPEC. GRAVITY
    - 3960 x 0.4 EFFICIENCY
    - 20 GPM x 24.98' x 1 = 0.315 HP
    - 3960 x 0.4
  - USE COULDS MODEL EP 05 OR EQUIVALENT
- DOSE VOLUME : 120 GALLONS/DOSE (10 DOSES/ DAY)
- PUMP RATE : 20 GPM
- RUN TIME FOR PUMP : 6.0 MINUTES
- 120 GALLON DOSE ÷ 20 GPM

TRENCH DESIGN CALCULATIONS

- DESIGN FLOW : 1200 GPD
- 8 BEDROOMS x 150 GPD/BR
- APPLICATION RATE : 0.8 GPD/ SQ FT
- EFFECTIVE AREA BEGINNING DEPTH : 3.0'
- BOTTOM MAXIMUM DEPTH : 8.0'
- REQUIRED DRAINFIELD AREA : 1500 SQ FT
- 1200 GPD ÷ 0.8 GPD/ SQ FT
- WIDTH OF TRENCH : 3'
  - W+2 x 100 = 3+2 x 100
  - W+1+2D 3+1+2(5.0)
- LINEAR LENGTH OF TRENCH : (2) 90' MINIMUM
- 1500 SQ FT x 0.357 ÷ 3.0' = 178.5 LF
- MINIMUM TRENCH SPACING : USE 13' MIN.
- 2D + W = 2(5.0) + 3' = 13' MIN. EDGE TO EDGE

NOTE: TRENCH DESIGN MAY BE MODIFIED AT INSTALLATION BASED ON SITE CONDITIONS

SEWAGE SYSTEM DESIGN DATA

- INVERT @ FOUNDATION OF HOUSE: 421.5 +/-
- 2000 GALLON SEPTIC TANK
  - 8 BEDROOMS
  - FINISHED GRADE @ TANK: 421.0 +/-
  - INVERT IN: 418.5 +/-
  - INVERT OUT: 418.2 +/-
- 2000 GPM PUMP TANK
  - FINISHED GRADE @ TANK: 421.0 +/-
  - INVERT IN: 417.5 +/-
  - INVERT OUT: 417.8 +/-
- DISTRIBUTION BOX w/ 2 OUTLETS:
  - FINISHED GRADE @ BOX: 439.5 +/-
  - INVERT IN (2" 90° TURNDOWN): 436.5 +/-
  - INVERT OUT: 436.3 +/-
- TRENCH #1:
  - 3' WIDE x 90' LENGTH x 5' STONE DEPTH:
  - FINISHED GRADE OVER: 439.7 +/-
  - INVERT: 436.7 +/-
  - BOTTOM: 431.7 +/-
- TRENCH #2:
  - 3' WIDE x 90' LENGTH x 5' STONE DEPTH:
  - FINISHED GRADE OVER: 438.3 +/-
  - INVERT: 435.3 +/-
  - BOTTOM: 430.3 +/-

NOTE: 1. TRENCH DESIGN MAY BE REVISED AT TIME OF INSTALLATION BASED ON SITE CONDITIONS

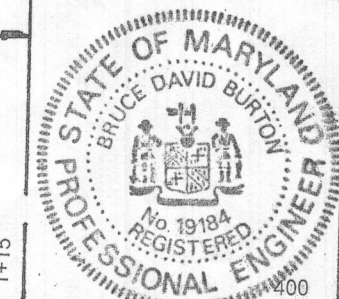
OWNER: JONATHAN CALURE  
ROSANNE CALURE  
5227 SWEET MEADOW LANE  
CLARKSVILLE, MD 21029  
410.598.4165

BUILDER: MUELLER HOMES  
7520 MAIN STREET  
SUITE 201  
SYKESVILLE, MD 21784  
410.549.4444

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRATION DATE: 6/30/17.

BRUCE D. BURTON

DATE



6364 Rose Road  
Elkridge, Maryland 21025  
Tel. 410.795.1424  
Fax. 410.795.1428  
www.mayerbrosgroup.com

2,000 GALLON SEPTIC TANK  
2-Compartment  
Stock Item (Approx. 19,900 lbs)

Draw. No. 2000-02 No Scale Aug. 11, 2008

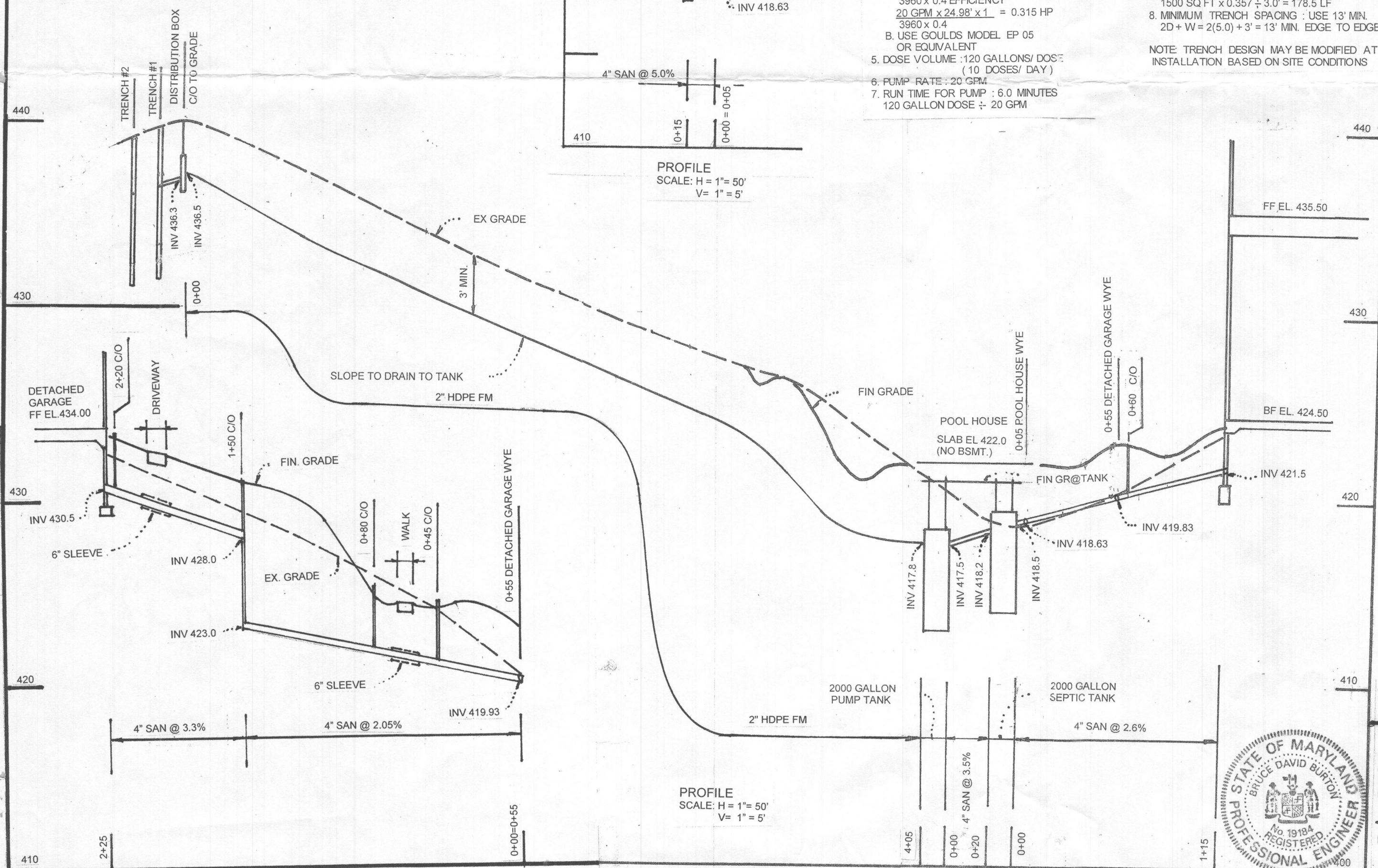


6364 Rose Road  
Elkridge, Maryland 21025  
Tel. 410.795.1424  
Fax. 410.795.1428  
www.mayerbrosgroup.com

2,000 GALLON SEPTIC TANK  
1-Compartment  
Stock Item (Approx. 19,900 lbs)

Draw. No. 2000-02 No Scale Aug. 11, 2008

WEIGHT = 19,000 lbs.



PROFILE  
SCALE: H = 1" = 50'  
V = 1" = 5'

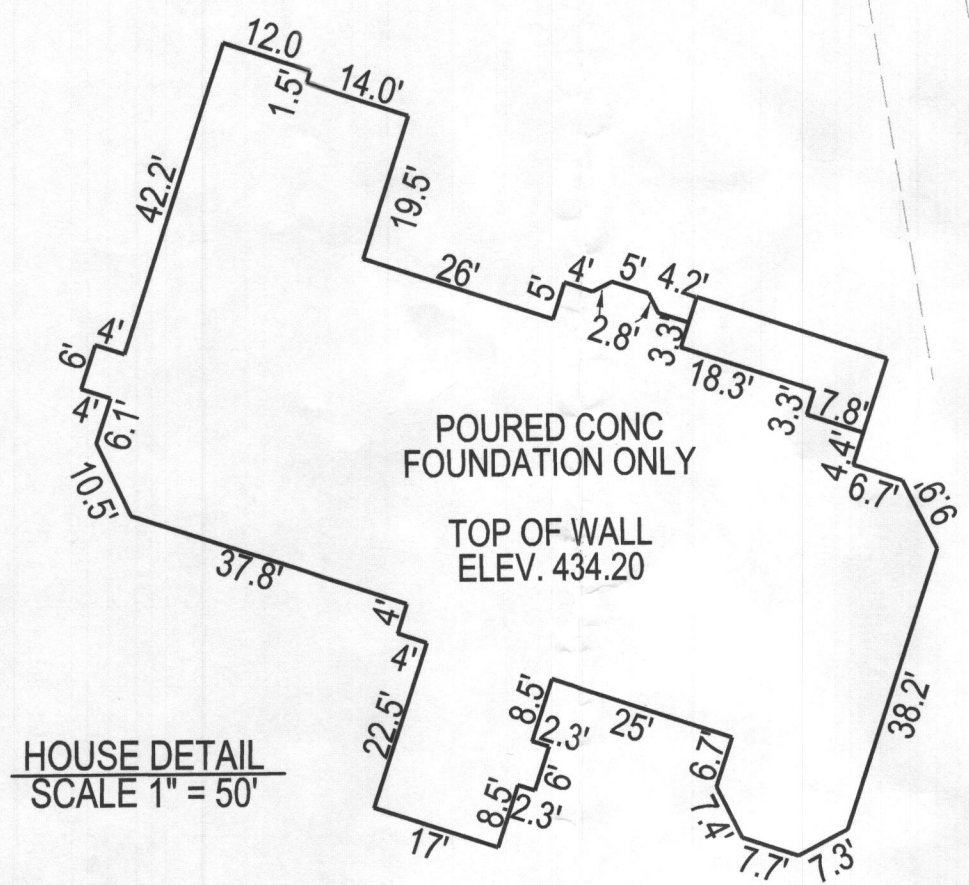
LDE Inc.

Engineers • Surveyors • Planners  
Historic Carriage House • 7520 Main Street • Suite 203 • Sykesville, Maryland • 21784  
(410)795-6391 • (410)795-6392 • FAX (410)795-9540 • www.Landsurveyormd.com

ONSITE SEWAGE DISPOSAL  
SYSTEM DESIGN PLAN  
KALMIA FARM  
SECTION 2

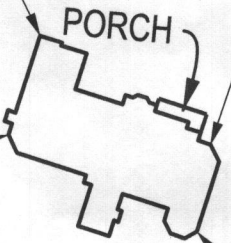
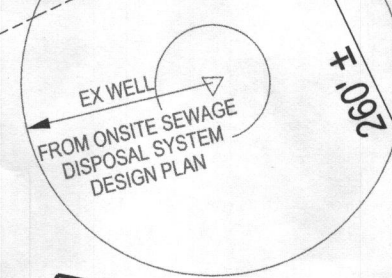
LOT 20  
REPLACEMENT DWELLING  
(B 17000327)  
TAX MAP 27 GRID 16 PARCEL 22  
TAX ACCOUNT #05-391989  
5TH ELECTION DISTRICT HOWARD COUNTY, MD  
DATE: 2/2017 SCALE: AS SHOWN  
SHEET 2 OF 2





HOUSE DETAIL  
SCALE 1" = 50'

LOT 19



Wall check 'OK'  
RJB 11/14/17

LOT 20  
18.126 Acs

B.R.L. 30'

20' WIDE DRAINAGE  
AND UTILITY EASEMENT  
PLAT No. 5085

N 41°00'35" E 170.00'

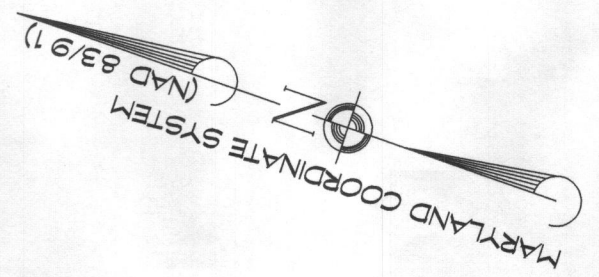
R: 50.00'  
A: 71.28'

VIBURNUM DR.  
TO TRIADPHIA MILL RD

W.S.S.C.  
127/118, 171/91, 193/510

100 YR FLOODPLAIN AND  
DRAINAGE EASEMENT  
WIDTH VARIES  
PLAT No. 5085

PLAN  
SCALE 1" = 200'



FOUNDATION CERTIFICATION  
LOT 20  
SECTION 2

KALMIA FARMS

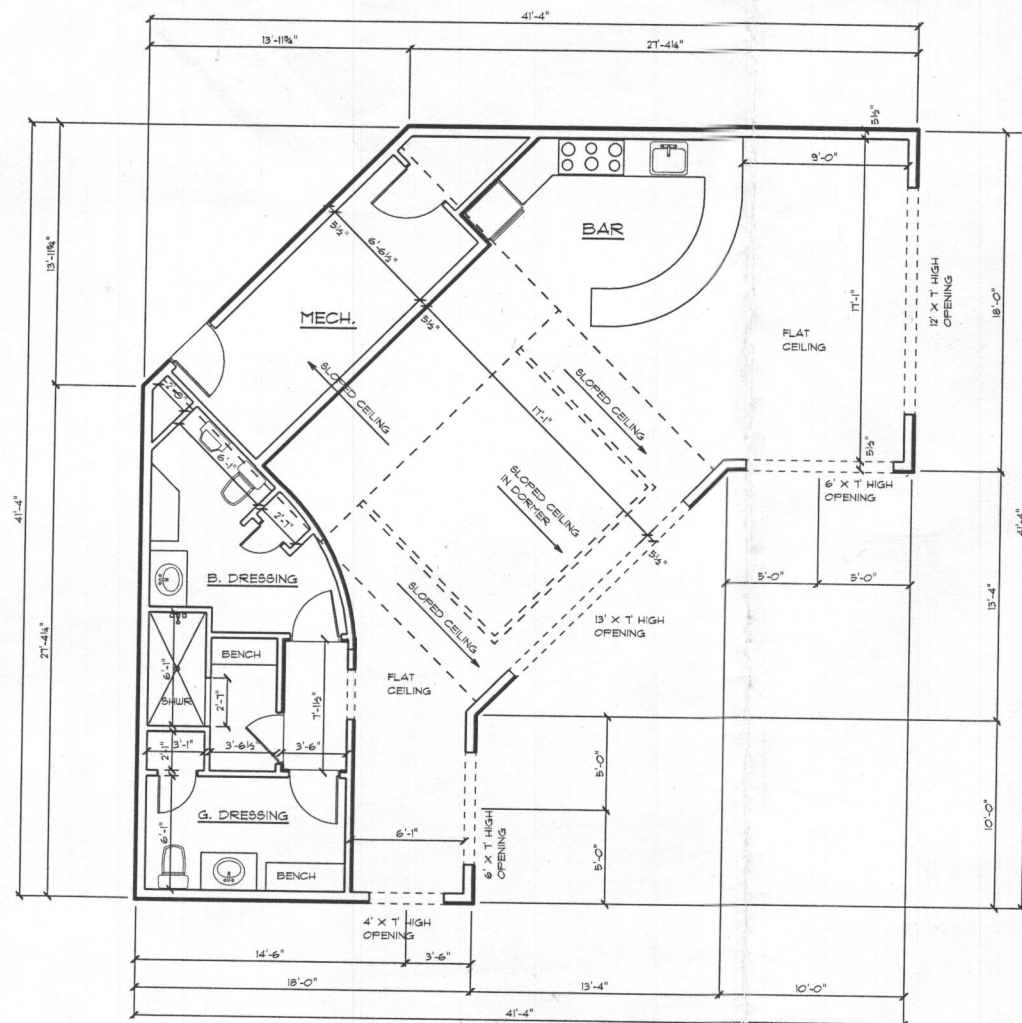
5TH ELECTION DISTRICT \* HOWARD COUNTY, MD  
TAX MAP 27 \* ZONE R

Date * Revision * By			Date:
	439 East Main Street Westminster, MD 21157-5539 (410) 848-1790 FAX (410) 848-1791		Drawing No.: 2017115
	Scale: 100' 50' 100'	Surveyed By: CLSI	Drawn By: JLW
		Computed By: CLSI	Checked By: DEM
		County File No.:	

SEE SHEET 1 OF 8 FOR  
GENERAL NOTES  
PLAT No. 5085

CAD Drawing File Name:

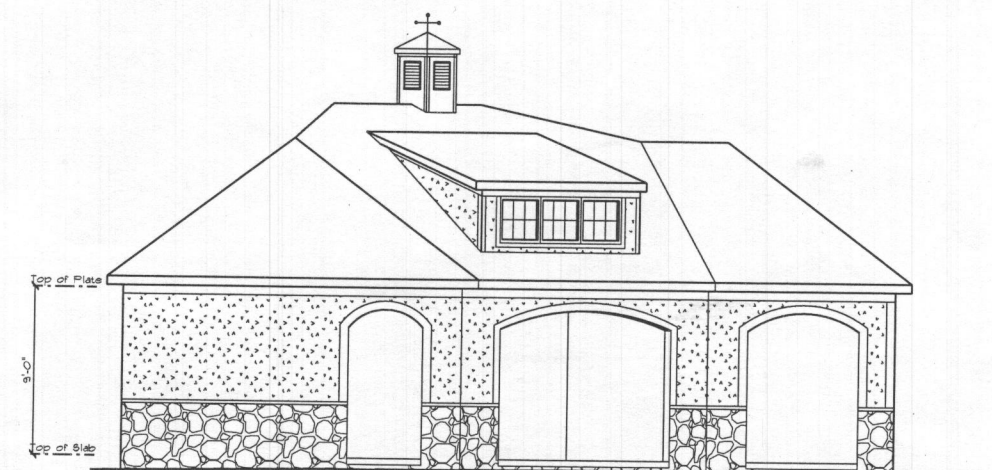




NOTE: EXTERIOR GARAGE WALLS MEET REQUIREMENTS FOR CONTINUOUSLY SHEATHED WALL BRACING, SEE SHEET WB-2 FOR CALCULATIONS.

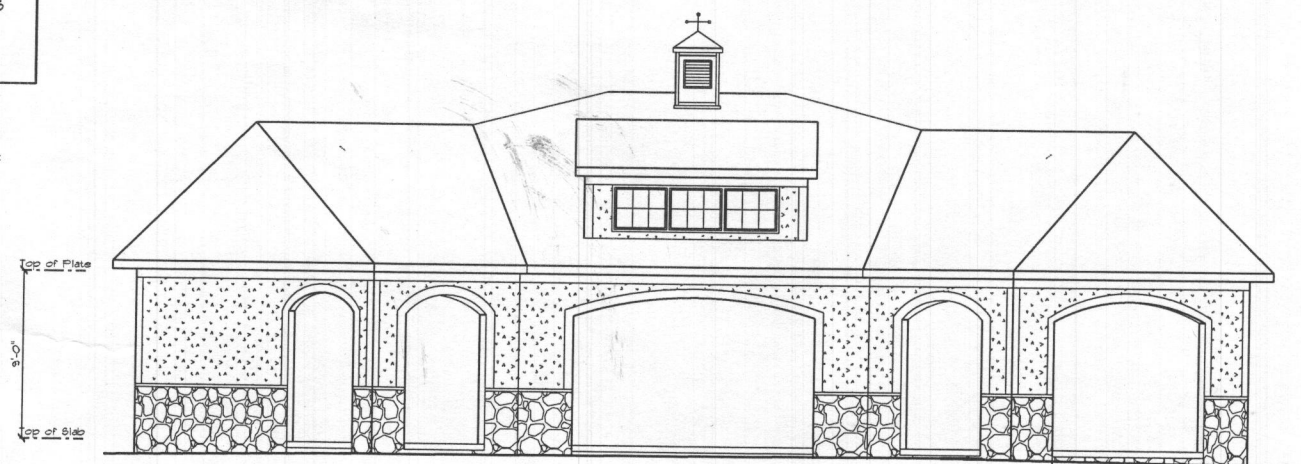
**POOLHOUSE FLOOR PLAN**

SCALE: 1/4" = 1'-0"



**POOLHOUSE FRONT ELEVATION**

SCALE: 1/4" = 1'-0"



**POOLHOUSE DIAGONAL ELEVATION**

SCALE: 1/4" = 1'-0"