

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)

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

RECEIPT DATE: 8.1.22 **ONSITE SEWAGE DISPOSAL SYSTEM** P 572115  
 APPROVAL DATE: 1/11/23 **PERMIT: CONSTRUCTION** A \_\_\_\_\_  
 PROPERTY ADDRESS: 12451 Kondrup Dr.  
 SUBDIVISION: Beaufort Estates LOT: 20 TAX ID: \_\_\_\_\_  
 CONTRACTOR: Freedom Septic EMAIL: \_\_\_\_\_  
 CONTRACTOR ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_  
 PROPERTY OWNER: C2M LLC EMAIL: \_\_\_\_\_  
 OWNER ADDRESS: 12466 Kondrup Dr PHONE: \_\_\_\_\_  
 SEPTIC TANK SIZE (GALLONS): 2,000 TANK MANUFACTURER: Babylon Vault  
 PUMP MODEL: WE03L PUMP SIZE: 1/3 PUMP TANK CAPACITY: 2,000

DISTRIBUTION SYSTEM:  GRAVITY  PRESSURE DOSED BEDROOMS: 6 APPLICATION RATE: 0.8

TRENCHES:	LINEAR FEET REQUIRED:	<u>169.50</u> ' INLET DEPTH:	<u>2</u> '
	TRENCH WIDTH:	<u>3</u> ' MAXIMUM BOTTOM DEPTH:	<u>8</u> '
	MINIMUM SPACE BETWEEN TRENCHES:	<u>10</u> ' EFFECTIVE AREA BEGINNING DEPTH:	<u>4.5</u> '

LOCATION: PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND TANK LOCATIONS MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.

NOTES: Install 3 trenches @ 56.5'

ISSUED BY: H. Oswald ISSUE DATE: 8.15.22 EXPIRATION DATE: 8.15.23

- 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 DOWNGRAIDENT 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 \_\_\_\_\_
- 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

**TRENCH/DRAINFIELD DATA**

WIDTH	INLET	BOTTOM
3'	2'	8'
NUMBER OF TRENCHES		3
TOTAL LENGTH		171 F
ABSORPTION AREA		513 SF + 35' SIDE WALL
DISTRIBUTION BOX LEVEL		PUMP
DISTRIBUTION BOX BAFFLE		90 TURN
DISTRIBUTION BOX PORT		YES

**SEPTIC TANK DATA**

SEPTIC TANK 1 LEVEL	YES
MANUFACTURER	BABYLON
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	2'
BAFFLES	YES
BAFFLE FILTER	-
MANHOLE LOC	FRONT/BACK
6" PORT LOC	-
WATERTIGHT TEST	-
SLOTTED	YES
DATE ON LID	06/24/2022
PUMP/SEPTIC TANK LEVEL	YES
MANUFACTURER	BABYLON
CAPACITY	2000 GAL
SEAM LOC	TOP
TANK LID DEPTH	2.5'
BAFFLES	-
BAFFLE FILTER	-
MANHOLE LOC	FRONT/BACK
6" PORT LOC	-
WATERTIGHT TEST	-
SLOTTED	-
DATE ON LID	06/03/2022

See separate sheet  
for As-Built

ROAD NAME

**PRE-CONSTRUCTION:**

08/16/2022 CONFIRMED 3x 57' TRS ON CONTOUR. TANK LOC'S

STARTED

**INSTALLATION:**

08/16/2022 SI AND TANK SET FOR 08/17/2022 FORCE MAIN INSTALLED; TRS COMPLETE. REINSPECTION FOR P/A.

1/11/2023 onsite for p/a test. Both pump and alarm functioning. System complete

FINAL INSPECTOR

K. W. [Signature]

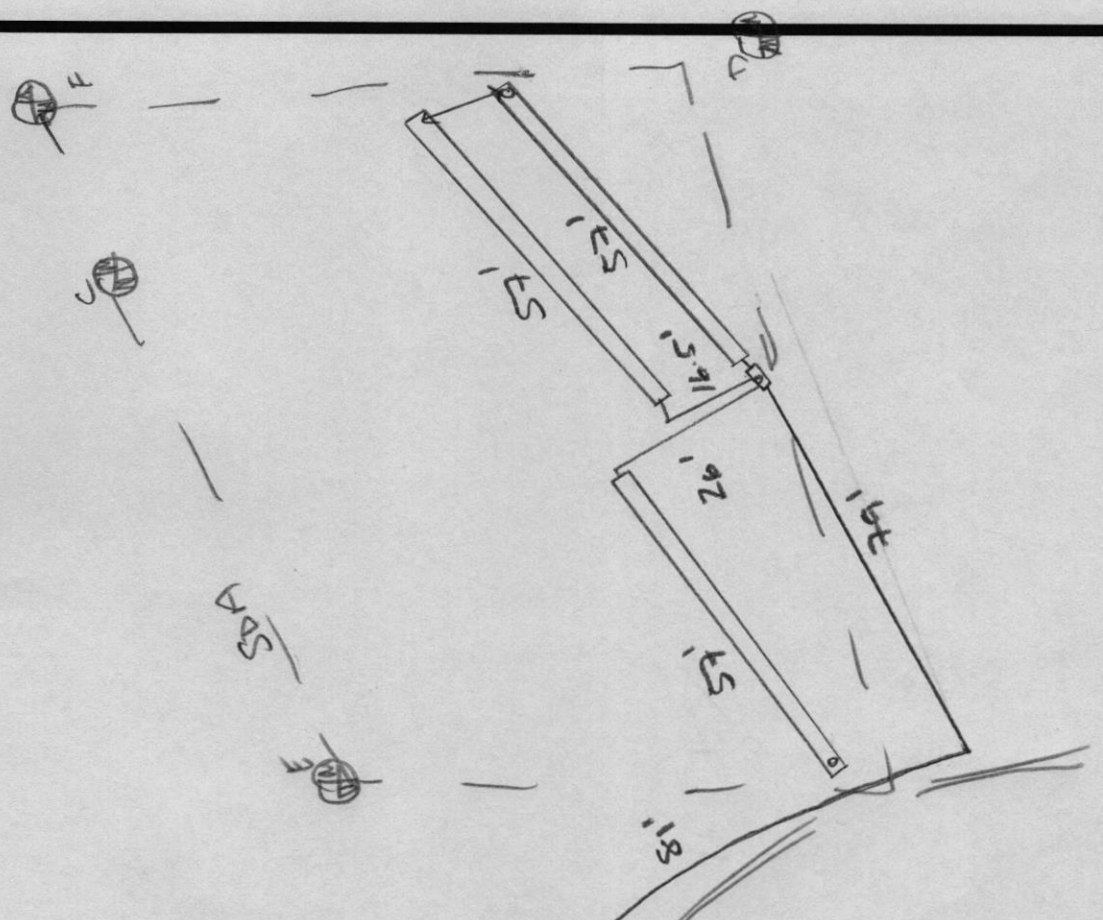
DATE OF APPROVAL

1/11/2023

12451 KOLDRUP DRIVE

NOT TO SCALE

1:30



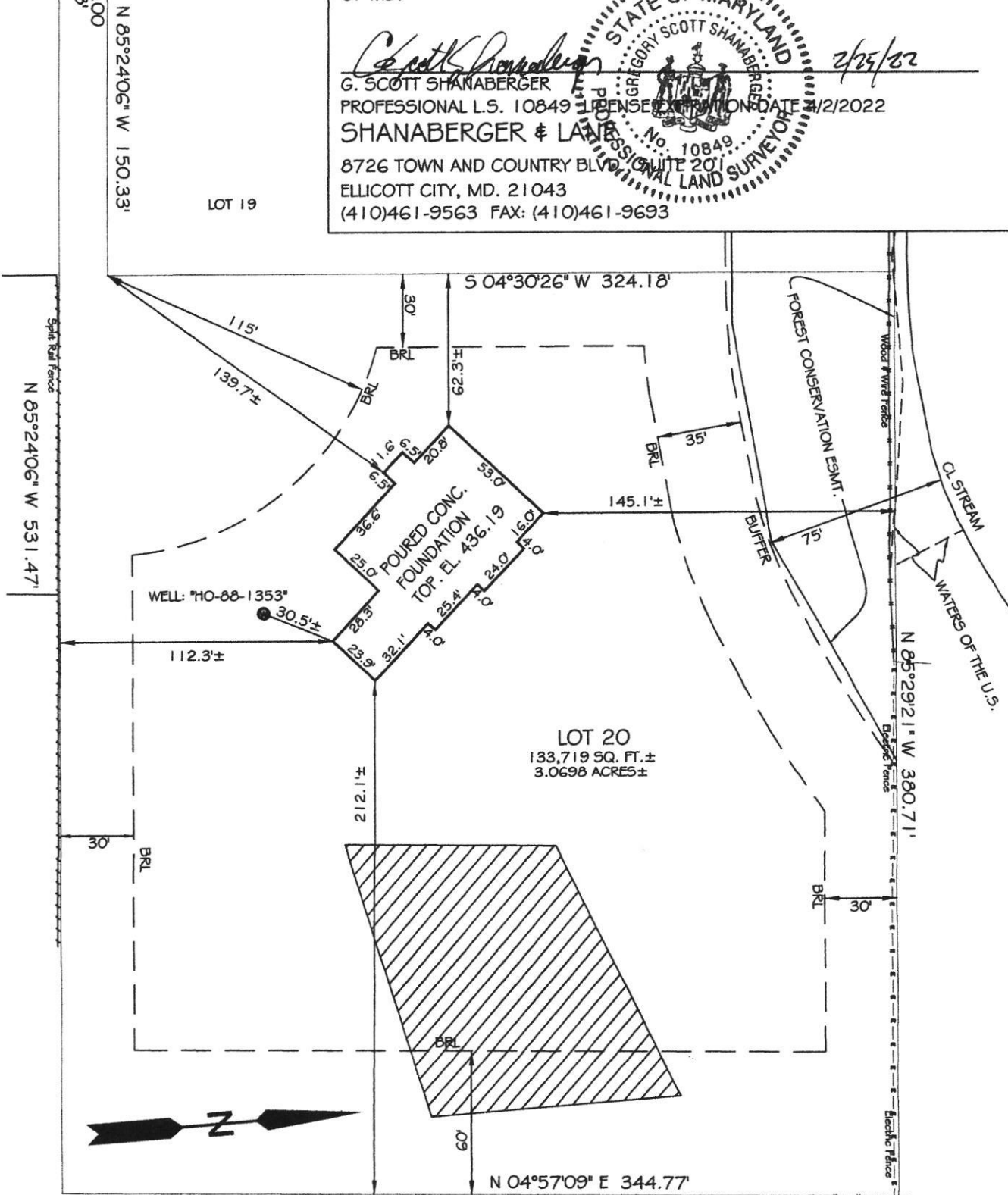
KONDRUP DR.  
50' PUBLIC RAW  
S 13°26'47" W L=17.65'  
R=100.00  
L=2.58'

SURVEY PROCEDURES AND FROM AVAILABLE RECORD INFORMATION. THIS DRAWING IS NOT TO BE USED FOR THE ESTABLISHMENT OF PROPERTY LINES, LOCATION OF FENCES, GARAGES, BUILDINGS, OR OTHER FUTURE IMPROVEMENTS. IT WAS PREPARED UNDER MY DIRECT SUPERVISION AND REVIEW IN ACCORDANCE WITH SEC. 09.13.06.06. OF THE ANNOTATED CODE OF MD.

*Gregory Scott Shanaberger*  
G. SCOTT SHANABERGER  
PROFESSIONAL L.S. 10849 LICENSE EXPIRATION DATE 4/2/2022  
SHANABERGER & LANE  
No. 10849  
8726 TOWN AND COUNTRY BLVD., SUITE 201  
ELLCOTT CITY, MD. 21043  
(410)461-9563 FAX: (410)461-9693



2/25/22



FOUNDATION LOCATION DRAWING  
12451 KONDRUP DRIVE  
LOT 20 BEAUFORT ESTATES SEC. I  
PLAT NUMBER 13702 TITLE DEED: LIBER 6763, FOLIO 421  
5th ELECTION DISTRICT HOWARD COUNTY, MD.  
TAX MAP 45, GRID 6, PARCEL 14  
SCALE: 1" = 60' DATE: FEBRUARY 25, 2022

Wood & Wire Fence  
*Well check okay  
8.15.22  
-HO.*

SHANABERGER & LANE  
8726 TOWN & COUNTRY BLVD., SUITE 101  
ELLCOTT CITY, MD. 21043  
410-461-9563  
410-461-9693 FAX  
home@shanlane.com

## Oswald, Hank

---

**From:** Oswald, Hank  
**Sent:** Wednesday, October 6, 2021 2:31 PM  
**To:** 'Zach Sill'  
**Subject:** OSDS Plan\_12451 Kondrup Drive\_Lot 20  
**Attachments:** perc cert plat.pdf; well info.pdf

Hi Zach:

The OSDS Plan for 12451 Kondrup Drive Lot 20 has been reviewed with the following comments:

- 1.) Label each perc test hole with the appropriate letter from the perc test plat (see attached)
- 2.) Add well tag# to plan.
- 3.) Add well location note; the onsite well with tag # has been field located by \_\_\_\_ on \_\_\_\_.
- 4.) Ensure SDA is 25 feet from adjacent steep slope.
- 5.) Required length of trench is 168.75 (not 170.45). You can provide more trench if you'd like.
- 6.) Pump chamber must be able to accommodate 900 gallons plus one dose above the high water alarm.
- 7.) Per septic specs, avoid hole #F as much as possible. Move lower trench to other side.

Thanks,

Hank

Hank Oswald, L.E.H.S.  
Howard County Health Department  
Well & Septic Program  
410.313.1786  
hoswald@howardcountymd.gov

## Oswald, Hank

---

**From:** Zach Sill <zach@sillengineering.com>  
**Sent:** Wednesday, April 6, 2022 12:28 PM  
**To:** Oswald, Hank  
**Cc:** Leah Lawrence  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive  
**Attachments:** Kondrup\_OSDS\_21-024.pdf

[Note: This email originated from outside of the organization. Please only click on links or attachments if you know the sender.]

Hello Hank,

Please see the attached revised OSDS. We will be dropping paper copies off this afternoon.

Thanks,

Zachary Sill  
Civil Drafter  
Erosion & Sediment Control No. RPC016242



**SILL ENGINEERING GROUP, LLC**  
**SEG LAND SURVEYING, LLC**

16005 Frederick Road, 2nd Floor  
Woodbine, MD 21797  
Office: 443-325-5076 ext. 107 | Fax: 410-696-2022  
Website: [www.sillengineering.com](http://www.sillengineering.com)

**From:** Oswald, Hank <hoswald@howardcountymd.gov>  
**Sent:** Monday, April 04, 2022 9:40 AM  
**To:** Paul Sill <paul@sillengineering.com>  
**Cc:** Zach Sill <zach@sillengineering.com>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

Thanks!

**From:** Paul Sill <paul@sillengineering.com>  
**Sent:** Monday, April 4, 2022 9:38 AM  
**To:** Oswald, Hank <hoswald@howardcountymd.gov>  
**Cc:** Zach Sill <zach@sillengineering.com>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

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Morning Hank,

We're putting the final touches on it today. I should have it to you by tomorrow.

Thanks,

Paul M. Sill, PE, LEED AP



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Website: [www.sillengineering.com](http://www.sillengineering.com)

Please consider the environment before printing this email.

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Monday, April 04, 2022 9:33 AM  
**To:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

Hi Paul:

Good morning. Did you send in a new plan?

Thanks,

Hank

**From:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Sent:** Wednesday, March 30, 2022 10:21 AM  
**To:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

[Note: This email originated from outside of the organization. Please only click on links or attachments if you know the sender.]

Okay, thanks.

We have a new layout ready and are working on the profile today; I hope to have you a plan to review by the end of the week.

Thanks,

Paul M. Sill, PE, LEED AP



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Website: [www.sillengineering.com](http://www.sillengineering.com)

Please consider the environment before printing this email.

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Wednesday, March 30, 2022 9:17 AM  
**To:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

Hi Paul:

Yes, the tanks will need to be outside the 100 foot well radius.

Thanks,

Hank

**From:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Sent:** Thursday, March 24, 2022 3:01 PM  
**To:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

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Scratch that, he just said he was wrong about that, so we're still good. The tanks have to be outside the 100' well radius, correct?

Paul M. Sill, PE, LEED AP



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Please consider the environment before printing this email.

**From:** Paul Sill  
**Sent:** Thursday, March 24, 2022 2:44 PM  
**To:** Hank Oswald ([hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)) <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

Ugh, the builder has already done the internal plumbing work and poured the basement slab. If we change the SHC connection to the house it is a major deal. Is there a way around this 50' setback? Should I talk with Jeff about this?

Paul M. Sill, PE, LEED AP



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Please consider the environment before printing this email.

**From:** Paul Sill  
**Sent:** Tuesday, March 22, 2022 1:52 PM  
**To:** Hank Oswald ([hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)) <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

Hey Hank,

I can't find the setback for a gravity SHC to a well in the reg's; can you point me to it? I only see one to a force main. Is there any way to reduce the setback? i.e. sleeving?

Thanks,

Paul M. Sill, PE, LEED AP



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 Website: [www.sillengineering.com](http://www.sillengineering.com)

Please consider the environment before printing this email.

**From:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Sent:** Tuesday, March 22, 2022 1:42 PM  
**To:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Subject:** FW: OSDS Plan\_12451 Kondrup Drive

Zachary Sill  
 Civil Drafter  
 Erosion & Sediment Control No. RPC016242



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 Website: [www.sillengineering.com](http://www.sillengineering.com)

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Wednesday, March 16, 2022 12:14 PM

**To:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** FW: OSDS Plan\_12451 Kondrup Drive

Hi Zach:

I was just reminded that the SHC (gravity) cannot be within 50 feet of the well.

Hank

**From:** Oswald, Hank  
**Sent:** Wednesday, March 16, 2022 11:37 AM  
**To:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Cc:** Lori Aronow <[lori@sillengineering.com](mailto:lori@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

Hi Zach:

The revised OSDS Plan for 12451 Kondrup Drive has been reviewed with the following comments:

1. The SHC from the house to the first cleanout is less than 1%.  $435.07$  (Inv. Elev @ 5 ft from house) –  $434.58$  (1<sup>st</sup> cleanout) =  $0.49 / 49 \text{ ft} + 5 \text{ ft} = 0.91\%$
2.  $436.19$  (FF elevation) –  $435.07$  (Inv. Elev @ 5 ft from house) =  $1.12$  How will this work when the floor is 1 foot?
3. The plan doesn't show the SHC sleeved underneath the driveway on the first page and on the profile.
4. The existing well should be labeled with the tag # next to it.

Thanks,

Hank

**From:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Sent:** Friday, March 11, 2022 2:55 PM  
**To:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Cc:** Lori Aronow <[lori@sillengineering.com](mailto:lori@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

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Hello Hank,

We dropped this off on Friday last week. I'm just looking to check in on the review.

Thanks,

Zachary Sill  
Civil Drafter  
Erosion & Sediment Control No. RPC016242



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Website: [www.sillengineering.com](http://www.sillengineering.com)

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>

**Sent:** Friday, March 04, 2022 9:13 AM

**To:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>

**Cc:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>; Lori Aronow <[lori@sillengineering.com](mailto:lori@sillengineering.com)>

**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

I couldn't find a record either. According to GIS, the well is in the rear of the property (8270 Res Rd).



**From:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Sent:** Thursday, March 3, 2022 2:10 PM  
**To:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Cc:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>; Lori Aronow <[lori@sillengineering.com](mailto:lori@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

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Hey Hank,

Please see the attached. I placed two replacement well locations on the plan along with addressing your other comments. I was unable to find any records for parcel 37 to the east, would you happen to have anything? We will plan to drop off hard copies tomorrow if everything looks good.

Thank you,

Zachary Sill  
Civil Drafter  
Erosion & Sediment Control No. RPC016242



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**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Monday, February 28, 2022 7:44 AM  
**To:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Cc:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

Zach – Trench layout looks good. Thanks.

**From:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Sent:** Friday, February 25, 2022 4:06 PM  
**To:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Cc:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

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Hank,

Please see the attached trench layout. I needed to revise I3. Sorry for the mix up.

Thanks,

Zachary Sill  
Civil Drafter



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Website: [www.sillengineering.com](http://www.sillengineering.com)

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Friday, February 25, 2022 2:01 PM  
**To:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

That's good. I don't see the attachment for the trench layout or did I overlook it?

**From:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Sent:** Friday, February 25, 2022 1:57 PM  
**To:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

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Yep, 1% minimum and all three trench systems have been reworked to hold a 10' separation.

Paul M. Sill, PE, LEED AP



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Website: [www.sillengineering.com](http://www.sillengineering.com)

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**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Friday, February 25, 2022 1:53 PM  
**To:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

I don't have the file with me. Are you able to get at least 1 % fall? Trench layout?

**From:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Sent:** Friday, February 25, 2022 1:28 PM  
**To:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>

**Cc:** Zach Sill <zach@sillengineering.com>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

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Well, they did pretty darn good: 2 hundredths high. GP FF = 437.50 Top of Wall = 436.19 Joist system = 1.33' New FF = 437.52

We'll call the pipe to be sleeved below the driveway. Are you good with the layout?

Paul M. Sill, PE, LEED AP



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Website: [www.sillengineering.com](http://www.sillengineering.com)

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**From:** Oswald, Hank <hoswald@howardcountymd.gov>  
**Sent:** Thursday, February 24, 2022 1:55 PM  
**To:** Paul Sill <paul@sillengineering.com>  
**Cc:** Zach Sill <zach@sillengineering.com>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

lol. I was wondering how far along they were with the build. Thanks for looking into the replacement well site(s). I will wait to hear back.

**From:** Paul Sill <paul@sillengineering.com>  
**Sent:** Thursday, February 24, 2022 1:44 PM  
**To:** Oswald, Hank <hoswald@howardcountymd.gov>  
**Cc:** Zach Sill <zach@sillengineering.com>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

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Well, they've already poured the walls, lol, so in the next day or two we'll know their elevation and can confirm.

Let me check on the replacement well locations.

I'll be in touch as soon as I get the wall check.

Paul M. Sill, PE, LEED AP



**SILL ENGINEERING GROUP, LLC  
SEG LAND SURVEYING, LLC**

16005 Frederick Road, 2nd Floor  
Woodbine, MD 21797 | Cell: 443-878-4314  
Office: 443-325-5076 ext. 102 | Fax: 410-696-2022  
Website: [www.sillengineering.com](http://www.sillengineering.com)

Please consider the environment before printing this email.

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Thursday, February 24, 2022 1:23 PM  
**To:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

I'm concerned if the house elevation drops, we won't make appropriate fall. Also, the SHC must be sleeved underneath the driveway. Is there room to show one or two replacement well sites? I overlooked these items on my review.

**From:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Sent:** Thursday, February 24, 2022 11:19 AM  
**To:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

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See below in blue, and let me know what you think about the alignment (neither are optimum, that well really threw a wrench into this one).

Paul M. Sill, PE, LEED AP



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Website: [www.sillengineering.com](http://www.sillengineering.com)

Please consider the environment before printing this email.

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Thursday, February 24, 2022 10:00 AM  
**To:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

Hi Paul:

Comment #3 - Is there a reason why the SHC is coming out of that part of the house/underneath the garage? Yes, it's the cover as the SHC crosses the swale to the right of the house; there is none if we kept the pipe crossing the swale at

the rear of the house, and we've already sank the tanks as much as possible. The connection is coming out of the house at that corner, which is the first floor of the house, not under the garage slab. We had discussions with the builder how best to make this work at that was the result. See the first floor plan attached. Could you move the invert to the back side of the house and place the tanks at the bottom of the SDA (away from the swale and steep slopes) and run the FM around and back up to the top of the SDA? That seems like a lot of extra run (~200' versus ~400') and maintenance complications to run it that way. The septic tank is currently ~100 feet from the driveway across flat ground, putting it at the bottom of the SDA would put it ~150 away and down steeper slopes.

Comment # 4 – We like to stick to the static head calculation that comes from the Sand Mound Manual. Ok, I see that. I hate to say it, but I've always done it this way. Lol We'll start using the pump off elevation.

Would you also add the invert elevation out of the house to the septic profile view? Yep, I noticed that too and asked Zach to include it.

Hank

**From:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Sent:** Wednesday, February 23, 2022 4:10 PM  
**To:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Cc:** Zach Sill <[zach@sillengineering.com](mailto:zach@sillengineering.com)>  
**Subject:** RE: OSDS Plan\_12451 Kondrup Drive

[Note: This email originated from outside of the organization. Please only click on links or attachments if you know the sender.]

Hey Hank,  
See below in blue.

Thanks,

Paul M. Sill, PE, LEED AP



**SILL ENGINEERING GROUP, LLC**  
**SEG LAND SURVEYING, LLC**  
16005 Frederick Road, 2nd Floor  
Woodbine, MD 21797 | Cell: 443-878-4314  
Office: 443-325-5076 ext. 102 | Fax: 410-696-2022  
Website: [www.sillengineering.com](http://www.sillengineering.com)

Please consider the environment before printing this email.

**From:** Oswald, Hank <[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)>  
**Sent:** Wednesday, February 23, 2022 3:40 PM  
**To:** Paul Sill <[paul@sillengineering.com](mailto:paul@sillengineering.com)>  
**Subject:** OSDS Plan\_12451 Kondrup Drive

Hi Paul:

The OSDS Plan for *12451 Kondrup Drive* has been reviewed with the following comments:

- 1.) Trench spacing = 2 (d) + w = 2 (3.5) + 3 = 10 feet (spacing is measured edge to edge) Will correct.
- 2.) Label perc test holes and provide elevations for each. Will add.

- 3.) SHC fall to tank may not be less than 1 % (ideally 2 – 5 %). We had a tough time with the cover and fall; we'll get it to 1%, but I don't think I can get to 2%.
- 4.) Static Head = highest point in system - pump off elevation =  $437.07 - 431.18 = 5.89$  I've always used the tank bottom plus 6". That is the lowest point of the pump suction (actually a couple inches higher because of the pump legs, but we ignore that). I think this should stay as we've shown.
- 5.) The GPM will likely reach 65 on the curve at 11 TDH. On the pump curve we've always shown the intersection of the design GPM and TDH, not the maximum GPM at the TDH. Should we change that? If so, do we need to recalc for 65gpm?

Let me know if you have any questions.

Thanks,

Hank

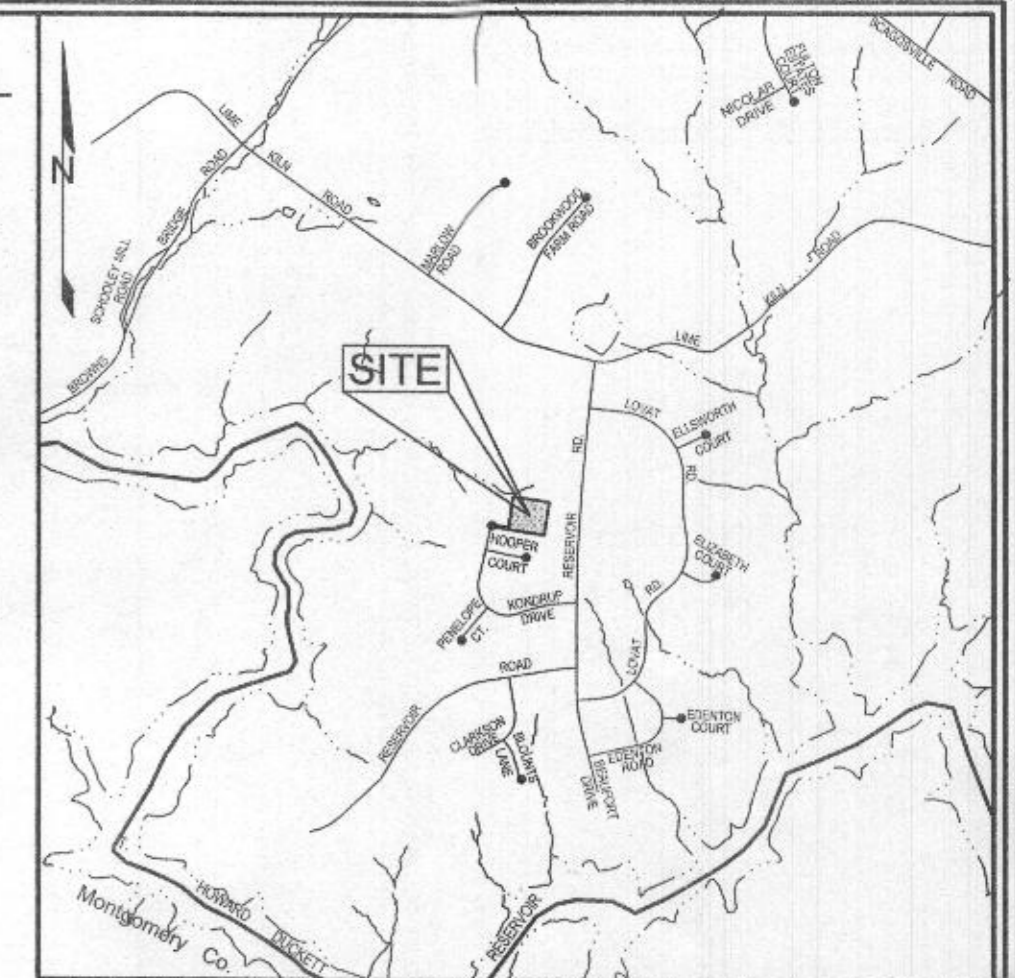
Hank Oswald, L.E.H.S.  
Howard County Health Department  
Well & Septic Program  
410.313.1786  
[hoswald@howardcountymd.gov](mailto:hoswald@howardcountymd.gov)

SOILS LEGEND			
SYMBOL	NAME / DESCRIPTION	GROUP	'K' FACTOR
MmC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	0.28
GgB	GLENELG LOAM, 2 TO 8 PERCENT SLOPES	B	0.24
GnB	GLENVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C	0.43

NOTES:  
 1) SOIL INFORMATION HAS BEEN TAKEN FROM THE UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, WEB SOIL SURVEY.  
 2) HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR 'K' GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

**LEGEND**

- EXISTING CONTOUR (GIS)
- EXISTING CONTOUR (Field Run)
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- DIRECTION OF FLOW
- EXISTING TREELINE
- PROPOSED TREELINE
- SOIL BOUNDARY
- INITIAL SYSTEM: TRENCH NUMBER
- FIRST REPLACEMENT SYSTEM: TRENCH NUMBER
- SECOND REPLACEMENT SYSTEM: TRENCH NUMBER
- EXISTING PERCOLATION TEST: PASSED
- FUTURE WELL LOCATION



VICINITY MAP  
SCALE: 1"=2000'

**GENERAL NOTES**

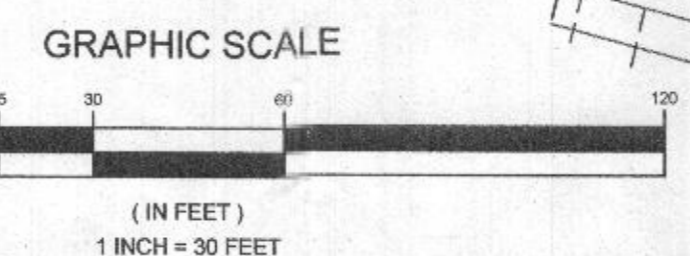
1. SUBJECT PROPERTY ZONED RR-DEO PER 10/06/13 COMPREHENSIVE ZONING PLAN.
2. TOTAL AREA OF LOT = 3.0698 AC ±
3. PRIVATE WATER AND PRIVATE SEWER WILL BE USED WITHIN THIS SITE.
4. THIS AREA DESIGNATES A PRIVATE SEWAGE AREA, OF AT LEAST 10,000 SF AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL (COMAR 26.04.03). IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE AREAS 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 AREA. RECORDATION OF A MODIFIED SEWAGE AREA SHALL NOT BE NECESSARY.
5. ALL EXISTING WELLS, SEPTIC SYSTEMS AND SEWAGE DISPOSAL AREAS WITHIN 100 FEET OF THE PROPERTY BOUNDARIES AND ALL EXISTING AND PROPOSED WELLS THAT ARE LOCATED WITHIN 200 FEET DOWN-GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS AND SEWAGE DISPOSAL AREAS HAVE BEEN FIELD LOCATED.
6. THE ONSITE WELL WITH TAG # H0-88-1353 HAS BEEN FIELD LOCATED BY SHANABERGER & LANE IN MAY OF 2021.
7. DEED REFERENCE: LIBER 6763, FOLIO 421
8. PROPERTY ADDRESS: 12451 KONDURUP DRIVE, FULTON MARYLAND 20759
9. THE BOUNDARY SHOWN HEREON IS BASED ON A FIELD RUN SURVEY PERFORMED BY SHANABERGER & LANE IN MAY 2021.
10. THE TOPOGRAPHY SHOWN HEREON IS AT TWO FOOT INTERVALS AND IS BASED ON A FIELD RUN TOPOGRAPHY SURVEY PREPARED BY SHANABERGER & LANE IN MAY 2021. OFFSITE TOPOGRAPHY IS BASED ON HOWARD COUNTY AERIAL TOPOGRAPHY FLOWN IN 2004.
11. THE SOILS SHOWN HAVE BEEN TAKEN FROM THE NRCS WEB SOIL SURVEY WEBSITE.
12. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO HISTORIC STRUCTURES OR CEMETERIES WITHIN THE PROJECT BOUNDARY.
13. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-251-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
14. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP, WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
15. ENVIRONMENT FEATURES HAVE BEEN SHOWN PER F-99-29
16. EXISTING UTILITIES ARE LOCATED BY THE USE OF ANY OR ALL OF THE FOLLOWING: ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER PLANS AND OTHER AVAILABLE RECORDED DRAWINGS. APPROXIMATE LOCATION OF THE EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
17. FOREST CONSERVATION OBLIGATIONS HAVE BEEN ADDRESSED ON F-99-29
18. DRIVEWAY(S) SHALL BE PROVIDED PRIOR TO ISSUANCE OF AN USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING REQUIREMENTS:
  - WIDTH - 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE)
  - SURFACE - SIX (6) INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MINIMUM)
  - GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND 45-FOOT TURNING RADIUS
  - STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25-LOADING)
  - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
  - MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
  - DRIVEWAY ENTRANCES TO BE PER HOWARD COUNTY STANDARD DETAIL R-6.05 FOR DRIVEWAY LOTS.
19. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS, UNLESS ALTERNATIVE COMPLIANCE HAVE BEEN APPROVED OR ACTIVITIES HAVE BEEN DETERMINED ESSENTIAL BY THE DEPARTMENT OF PLANNING AND ZONING.

Approved Septic System Plan  
 Howard County Health Department  
 Hank Oswald 4/1/22  
 Signature Date

SHEET INDEX	
SHEET NO.	DESCRIPTION
1	ONSITE SEWAGE DISPOSAL PLAN
2	ONSITE SEWAGE DISPOSAL PLAN PROFILE & DETAIL

**SEPTIC SYSTEM TRENCH DESIGN SPECIFICATIONS**

- INITIAL SYSTEM:**
  - APPLICATION RATE: 0.8
  - EFFECTIVE AREA BEGINNING DEPTH: 4.5'
  - BOTTOM MAXIMUM DEPTH: 8.0'
- FIRST REPLACEMENT SYSTEM:**
  - APPLICATION RATE: 0.8
  - EFFECTIVE AREA BEGINNING DEPTH: 4.5'
  - BOTTOM MAXIMUM DEPTH: 8.0'
- DESIGN FLOW:**
  - 6 BEDROOMS AT 150 GPD
  - 6x150 GPD = 900 GPD
- SQUARE FOOTAGE OF DRAIN FIELD REQUIRED:**
  - DESIGN FLOW (900 GPD) / APPLICATION RATE (0.8) =
  - 1,125.00 SF
- SIDEWALL REDUCTION CREDIT:**
  - TRENCH WIDTH (W) = 3.0'
  - TRENCH EFFECTIVE DEPTH (D) = 3.5'
  - (W+2) / (W+1+2D) X 100 = 45%
- LINEAR LENGTH OF TRENCH REQUIRED:**
  - DRAIN FIELD SQUARE FOOTAGE (1,125.00) X SIDEWALL REDUCTION CREDIT (45.45%) / TRENCH WIDTH (3.0') =
  - 168.75'
- LINEAR LENGTH OF TRENCH PROVIDED = 169.50'**
  - THREE TRENCHES 56.5 LF EACH
- EXISTING GRADE:**
  - TRENCH 11: 439.4
  - INVERT: TRENCH 11: 437.4
  - EXISTING GRADE: TRENCH 12: 438.2
  - INVERT: TRENCH 12: 436.2
  - EXISTING GRADE: TRENCH 13: 437.5
  - INVERT: TRENCH 13: 435.5
- FIRST REPLACEMENT SYSTEM:**
  - APPLICATION RATE: 0.8
  - EFFECTIVE AREA BEGINNING DEPTH: 4.5'
  - BOTTOM MAXIMUM DEPTH: 8.0'
- DESIGN FLOW:**
  - 6 BEDROOMS AT 150 GPD
  - 6x150 GPD = 900 GPD
- SQUARE FOOTAGE OF DRAIN FIELD REQUIRED:**
  - DESIGN FLOW (900 GPD) / APPLICATION RATE (0.8) =
  - 1,125.00 SF
- SIDEWALL REDUCTION CREDIT:**
  - TRENCH WIDTH (W) = 3.0'
  - TRENCH EFFECTIVE DEPTH (D) = 3.5'
  - (W+2) / (W+1+2D) X 100 = 45%
- LINEAR LENGTH OF TRENCH REQUIRED:**
  - DRAIN FIELD SQUARE FOOTAGE (1,125.00) X SIDEWALL REDUCTION CREDIT (45.45%) / TRENCH WIDTH (3.0') =
  - 168.75'
- LINEAR LENGTH OF TRENCH PROVIDED = 169.50'**
  - THREE TRENCHES 56.5 LF EACH
- EXISTING GRADE:**
  - TRENCH 2RS: R1: 433.0
  - INVERT: TRENCH 2RS: R1: 431.0
  - EXISTING GRADE: TRENCH 2RS: R2: 431.5
  - INVERT: TRENCH 2RS: R2: 429.5
  - EXISTING GRADE: TRENCH 2RS: R3: 430.0
  - INVERT: TRENCH 2RS: R3: 428.0



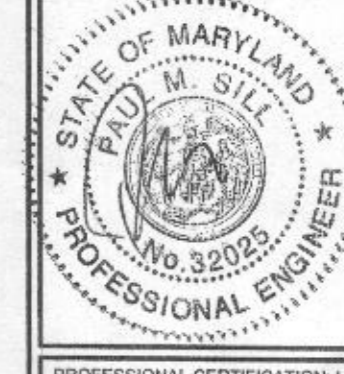
**OWNER**  
 C2M LLC  
 12466 KONDURUP DRIVE  
 FULTON, MARYLAND 20759

**DEVELOPER**  
 CAIRN CUSTOM HOMES  
 10548 GORMAN ROAD,  
 LAUREL, MARYLAND 20723

**ONSITE SEWAGE DISPOSAL PLAN  
 BEAUFORT ESTATES, LOT 20**

12451 KONDURUP DRIVE

TAX MAP 45 CRD 8 5TH ELECTION DISTRICT PARCEL 14 HOWARD COUNTY, MARYLAND



**SILL ENGINEERING GROUP, LLC**  
 16005 Frederick Road, 2nd Floor  
 Woodbine, Maryland 21797  
 Phone: 443.325.5076  
 Fax: 410.696.2022  
 Email: info@sillengineering.com  
 Civil Engineering for Land Development

DESIGN BY: PS  
 DRAWN BY: SZS  
 CHECKED BY: PS  
 SCALE: AS SHOWN  
 DATE: APRIL 6, 2022  
 PROJECT #: 21-024  
 SHEET #: 1 of 2

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 32025, EXPIRATION DATE JUNE 30, 2023