

**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: 11/2/16      **ONSITE SEWAGE DISPOSAL SYSTEM**      P 559828  
 APPROVAL DATE: 12/15/16 **PERMIT:**      **CONSTRUCTION**      A \_\_\_\_\_  
 PROPERTY ADDRESS: 3109 Longfield Road  
 SUBDIVISION: Wellington      LOT: 24      TAX ID: 05 598687  
 CONTRACTOR: South Carroll Backhoe      EMAIL: scbackhoe@comcast.net  
 CONTRACTOR ADDRESS: 4410 Salem Bottom Road      PHONE: 410-596-3618

CONTRACTOR CERTIFIED FOR BAT INSTALLATION:     MDE       MANUFACTURER:

PROPERTY OWNER: Todd Stup      EMAIL: tstupa@bflooring.com  
 OWNER ADDRESS: 3709 Cherry Valley Drive, Olney, MD 20832      PHONE: 240-401-3316

BAT UNIT MODEL: TNTLP-600      PUMP SIZE: \_\_\_\_\_      PUMP TANK CAPACITY: \_\_\_\_\_

OPERATION & MAINTENANCE AGREEMENT    DATE SIGNED: 11/3/16      DATE RECORDED: 11/3/16

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

|           |   |  |
|-----------|---|--|
| TRENCHES: | LINEAR FEET REQUIRED: <u>130</u>          | INLET DEPTH: <u>4</u>                    |
|           | TRENCH WIDTH: <u>3</u>                    | MAXIMUM BOTTOM DEPTH: <u>8</u>           |
|           | MINIMUM SPACE BETWEEN TRENCHES: <u>11</u> | EFFECTIVE AREA BEGINNING DEPTH: <u>4</u> |

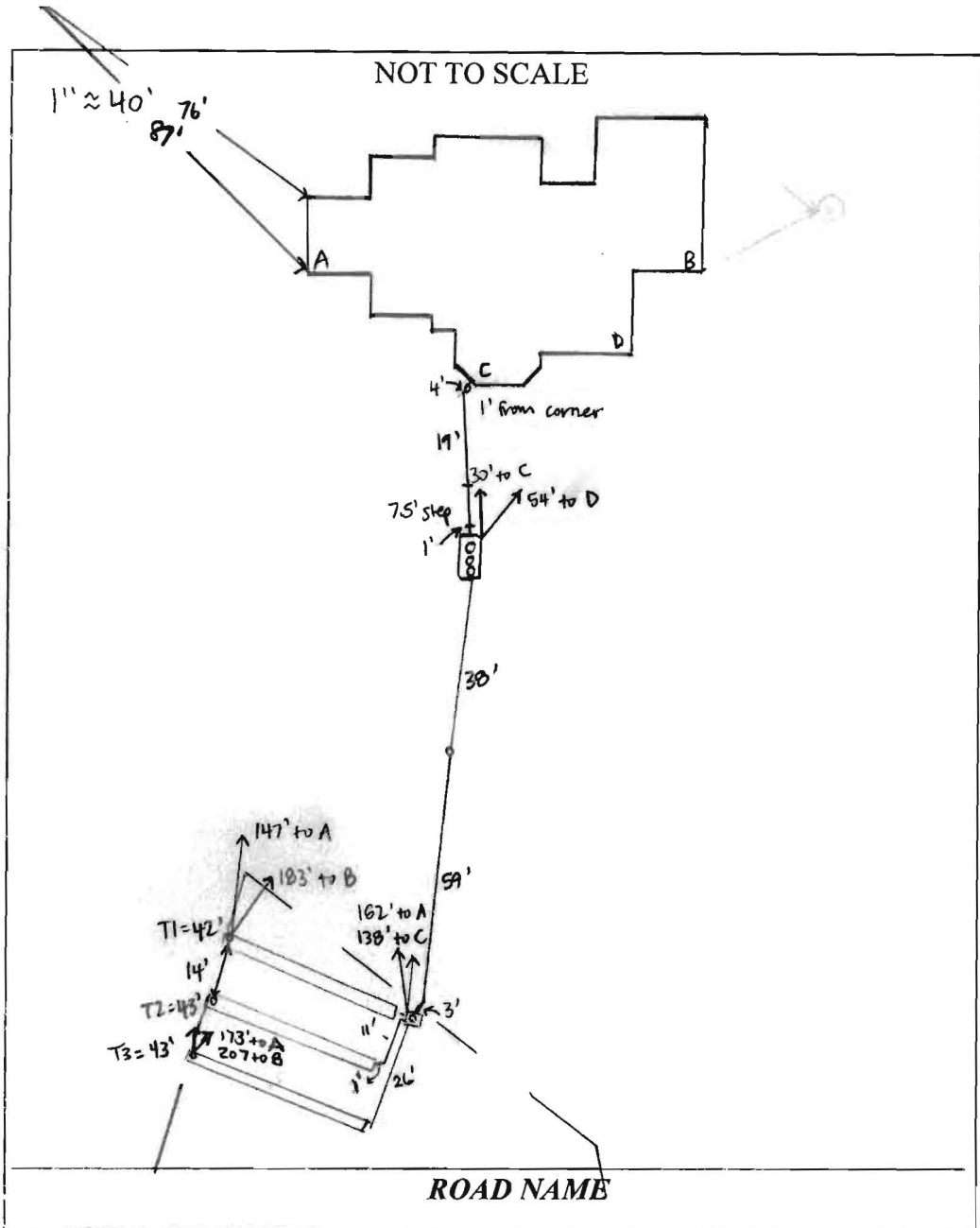
LOCATION: **PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.**

NOTES:

ISSUED BY: Robert Freeman      ISSUE DATE: 11/2/16      EXPIRATION DATE: 11/2/17

- 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: **WATER TIGHT SEPTIC TANKS REQUIRED**
- NOTE: **ALL PARTS OF SEPTIC SYSTEM SHALL BE AT LEAST 100 FEET DOWNGRADIENT 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 16004613
- NOTE: **AN INDIVIDUAL CERTIFIED BY MDE AND THE MANUFACTURER FOR BAT INSTALLATION MUST BE PRESENT AT ALL TIMES DURING BAT INSTALLATION.**
- 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.**



| TRENCH/DRAINFIELD DATA  |                 |        |
|-------------------------|-----------------|--------|
| WIDTH                   | INLET           | BOTTOM |
| 3'                      | 4'              | 8'     |
| NUMBER OF TRENCHES      | 3               |        |
| TOTAL LENGTH            | 128'            |        |
| ABSORPTION AREA         | 384' + Sidewall |        |
| DISTRIBUTION BOX LEVEL  | YES             |        |
| DISTRIBUTION BOX BAFFLE | YES             |        |
| DISTRIBUTION BOX PORT   | YES             |        |

| SEPTIC TANK DATA    |                      |
|---------------------|----------------------|
| SEPTIC TANK I LEVEL | YES                  |
| MANUFACTURER        | BACK RIVER / NORWECO |
| CAPACITY            | 1300 GAL             |
| SEAM LOC            | TOP                  |
| TANK LID DEPTH      | 1-2.5'               |
| BAFFLES             | NO                   |
| BAFFLE FILTER       | NO                   |
| MANHOLE LOC         | FRONT, MID REAR      |
| 6" PORT LOC         | NONE                 |
| WATERTIGHT TEST     | NO                   |
| SLOTTED             | NO                   |
| DATE ON LID         | 10-4-16              |

| PUMP/SEPTIC TANK LEVEL |     |
|------------------------|-----|
| MANUFACTURER           |     |
| CAPACITY               | GAL |
| SEAM LOC               |     |
| TANK LID DEPTH         |     |
| BAFFLES                |     |
| BAFFLE FILTER          |     |
| MANHOLE LOC            |     |
| 6" PORT LOC            |     |
| WATERTIGHT TEST        |     |
| SLOTTED                |     |
| DATE ON LID            |     |

**PRE-CONSTRUCTION:**

11/4/16 Met S. Carroll on site for layout. Tank and SDA corners staked. Dry wells already installed - tank location ~10' away from a dry well. Shot contour and laid out 3' x 43' trenches, D-box in middle. (SC)

**INSTALLATION:** 11/7/16 S. Carroll digging T3. T1 finished + left open. 3' wide, 3.5' to stone, 8' to bottom of T3. S. Carroll using laser to check depths. 11/10/16 Site visit contractor onsite working on D-box and connections to trenches. T3 complete, looks good ok to backfill. Contractor had to call for specialized equipment to dig the line up to the tank and the hole for the tank, he said it was mostly rock. Work to continue on Monday. (RR)

11/14/16 S. Carroll installing line to D-box. D-box baffle cracked at bottom - S. Carroll patched with hydraulic cement. Levelled speed levelers in D-box. (SC)

11/15/16 S. Carroll digging tank hole - all rock. Tank delivery tentatively tomorrow. (SC)

11/16/16 Tank set. S. Carroll digging through rock to find sewer line at house. (SC)

11/17/16 House connection made. Need BAT startup certification. (SC)

12/15/16 on site for Norweco startup - alarm sounds, aerator runs. (SC)

12/15/16 BAT startup certification received. (SC)

FINAL INSPECTOR Sarah Collins DATE OF APPROVAL 12/15/16

# Back River Pre-Cast, LLC

PO BOX 329  
Glyndon, MD 21071  
Phone # 410-833-3394  
Fax # 410-833-4116

## Letter of Certification

This is to certify that the Norweco Singulair TNT 600 GPD Septic Tank installed at 3109 Longfield Rd., Glenwood, MD 21738 November 16, 2016 was installed according to the manufacture's specifications.

Installer: Mark Seal

Property Owner: Todd Stup

Permit #

**THIS CERTIFICATION IS FOR INSTALLATION ONLY. THE 5-YEAR OPERATIONS & MAINTENANCE AGREEMENT FROM DATE OF INSTALLATION WILL ONLY GO INTO EFFECT AFTER BACK RIVER PRE-CAST, LLC RECEIVES FINAL AND FULL PAYMENT FOR THE SYSTEM.**



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MATTHEW GECKLE

Vice-President

## **Freemon, Robert**

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**From:** John Carney <jcarney@bei-civilengineering.com>  
**Sent:** Wednesday, March 16, 2016 9:17 AM  
**To:** Freemon, Robert  
**Subject:** RE: 3109 Longfield Rd.

Robert, apparently the builder has submitted the preliminary house siting as a building permit plan. Normally the building permit plan would be submitted and would contain more information, notes, details etc. Additionally we'd also submit the BAT plan and architectural at that point. I've let the owner know that they are out of sequence. You will see a building permit plan soon that contains all the information that is normally required. Also we'll submit the BAT plan and architectural plans, directly to Health, around the same time. Thanks for the spec sheet. John

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**From:** Freemon, Robert [<mailto:rfreemon@howardcountymd.gov>]  
**Sent:** Wednesday, March 16, 2016 8:37 AM  
**To:** [jcarney@bei-civilengineering.com](mailto:jcarney@bei-civilengineering.com)  
**Subject:** 3109 Longfield Rd.

Hi John,

I have reviewed BP16000706 for 3109 Longfield Rd. and have some comments. Before we can approve the Building Permit a Well needs to be drilled and approved by the Health Dept. To obtain a Well Permit a surveyor needs to stake the proposed Well Box as well as fill out a stake form and have it submitted to the Health Dept. Additionally, BAT Plan will need to be submitted to the Health Dept. along with a Floor Plans.

Comments concerning the plot plan include Drywell 1 (DW-1) needs to be 100<sup>ft</sup> from the well box. I have attached the Spec Sheet and a link to the BAT plan checklist for your reference.

<https://www.howardcountymd.gov/LinkClick.aspx?fileticket=1mQGf8OxK4%3d&portalid=0>

**Robert Freemon**  
**Howard County Health Department**  
**Well and Septic Program**  
**Phone: 410-313-6357**  
**Email: [rfreemon@howardcountymd.gov](mailto:rfreemon@howardcountymd.gov)**

A 47 & 74  
LOT NUMBER: 45

SUBDIVISION: WELLINGTON AREA ONE  
Longfield Road SECT ONE  
DRY WELL OR DRY WELL AND TRENCH

\_\_\_\_\_ sq. ft./bedroom

|           | <u>Septic Tank</u> | <u>Minimum Total Square Feet</u> |
|-----------|--------------------|----------------------------------|
| 3 bedroom | 1000 gallon        | _____                            |
| 4 bedroom | 1250 gallon        | _____                            |
| 5 bedroom | 1500 gallon        | _____                            |

Inlet \_\_\_\_\_ feet below original grade.  
Bottom maximum depth \_\_\_\_\_ feet below original grade.  
Effective area begins at \_\_\_\_\_ feet below original grade.

NOTE: If trench is used to make up absorbent area, run the trench on level ground and leave a 5-foot earth buffer between dry well and trench. No trench is to exceed 100 feet in length. Trench inlet to be same as dry well, with \_\_\_\_\_ feet of stone below distribution pipe.

TRENCHES

180 sq. ft./bedroom

Trench to be 2 wide.  
Inlet 4 feet below original grade.  
Bottom maximum depth 8 feet below original grade.  
Effective area begins at 4 feet below original grade.  
4 feet of stone below distribution pipe.

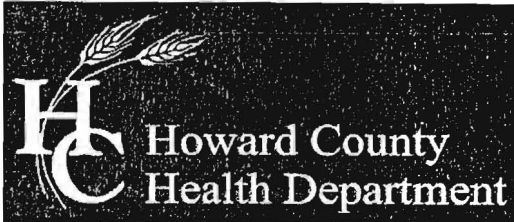
REPAIRS Inlet 4'  
Box 6'

- NOTE:
- (1) No trench to exceed 100 feet in length.
  - (2) If more than one trench used, a distribution box is required.
  - (3) Trenches to be installed on level ground.
  - (4) Call for inspection of trench before gravel is installed.
  - (5) Provide 6" - 8" diameter cleanout and cap to grade or above on septic tank and drywell.
  - (6) If a garbage disposal is used, increase septic tank capacity by 50% and increase absorbent sidewall area by 22%.

LOCATION: 1/26/90. PLACE THE DISTRIBUTION BOX 140 FT  
FROM THE REAR LOT LINE AND 130 FT FROM THE LEFT  
100% SIDE LINE AS SEEN WHEN FACING THE LOT  
FROM LONGFIELD RD. RUN THE TRENCHES  
TOWARD RIGHT SIDE OF LOT. RH

REVISED 10/18/91 MCR

(FUTURE TRENCHES IN BOTH DIRECTIONS)



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

Facebook: www.facebook.com/hocohealth

Twitter: HowardCoHealthDep

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

**OPERATION AND MAINTENANCE AGREEMENT  
FOR AN ON-SITE SEWAGE DISPOSAL SYSTEM  
HAVING AN ADVANCED PRE-TREATMENT SYSTEM**

THIS AGREEMENT is made this 3<sup>RD</sup> day of NOVEMBER, <sup>2016</sup> among TODD STUP, JR & STACIE STUP, hereinafter collectively referred to as "Owner", and the Howard County Health Department hereinafter referred to as the "County".

WHEREAS, Owner is the owner or contract owner of a parcel of land located at 3109 LONGFIELD RD, GLENWOOD MD 21738, in the 4 Election District of Howard County, Maryland, and the deed and subdivision plat of the property is recorded among the Land Records of Howard County, Maryland, Tax Map # 14, Block # AREA 1 LOT 2, Parcel # 239, Deed Reference # 66508-15A and Tax Account # 1-04-349717 ("the Property").

WHEREAS, The Property is suitable for the installation of a conventional on-site sewage disposal system with an advanced pre-treatment system, utilizing best available technology to perform nitrogen reduction, in accordance with the Code of Maryland Regulations 26.04.02.07, effective January 1, 2013. The pre-treatment device being installed is NORWECO 600 GPD. BAT UNIT

NOW, THEREFORE, the parties hereto agree as follows:

A. Owner hereby grants to the County the right to enter upon the Property at any reasonable time with prior notice for access to the system to make periodic inspections and the Owner agrees to provide any information and data in Owner's possession reasonably requested and needed by the County.

B. Owner acknowledges and agrees that neither the County nor any of its agents or employees, either officially or individually, underwrites the operation of any system approved by them.

C. The Owner will devote reasonable care and effort to the operation and maintenance of the system in perpetuity or until a public sewer connection is made so that a system malfunction is not the result of poor maintenance, faulty operation, or neglect.

D. The Owner agrees to enter into a contract reasonably acceptable to the Owner and the County with a private entity to operate and maintain on a regularly scheduled basis an approved advanced pre-treatment system. The owner shall supply a copy of the contract to the County when it is renewed or altered.

E. This agreement shall run with the land and upon Owner's taking title to the Property shall bind the Owner, their heirs, successors, and assigns to the provisions of the agreement as long as the property is in existence and after installation of the system. Owner further agrees that they shall inform in writing any subsequent purchaser or lessee of the Property that the system shall require maintenance or other attention. Upon taking title to the Property, the Owner agrees to cause this agreement to be recorded in the Land Records of Howard County and assure that it becomes part of the Deed for the subject property in order that prospective buyers may be aware of the special conditions affecting this property.

F. This agreement shall not be construed to limit any authority of the County to protect the public health, safety or comfort or to issue any other orders to take any other action which is now or may hereafter be within its authority.

G. This agreement may be voided at any time at the discretion of the County.

H. This agreement contains the entire agreement and understanding between the County and the Owner. There are no additional terms other than as contained in this agreement. This agreement may not be modified, except in writing signed by each of the parties or by their authorized representatives.

I. The laws of the State of Maryland govern the provisions of all transactions pursuant to this agreement.

J. Owner acknowledges and agrees that interior renovations to increase the number of bedrooms or an increase in living space shall not be permitted without approval from the County.

IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.

Bert Stup 11/3/2016  
Howard County Health Department

[Signature] 01/02/2016  
Owner #1 Signature Date

Todd A. Stup, Jr  
Owner #1 Print Name

\_\_\_\_\_  
Buyer #1 Signature Date

\_\_\_\_\_  
Buyer #1 Print Name

Stacie Stup 11/2/16  
Owner #2 Signature Date

Stacie Stup 11/2/16  
Owner #2 Print Name

\_\_\_\_\_  
Buyer #2 Signature Date

\_\_\_\_\_  
Buyer #2 Print Name

Clerk of the Circuit Court for  
Howard County  
Land Records/Licensing

The Thomas Dorsey Building  
9250 Bendix Road  
Columbia, MD 21045  
410-313-5850

3-4

=====  
LR - Agreement Recording Fee *rec'd*  
1x 20.00 20.00

Name: stup  
Ref: 62

=====  
LR - Agreement Surcharge  
1x 40.00 40.00

=====  
SubTotal: 60.00  
Total: 60.00

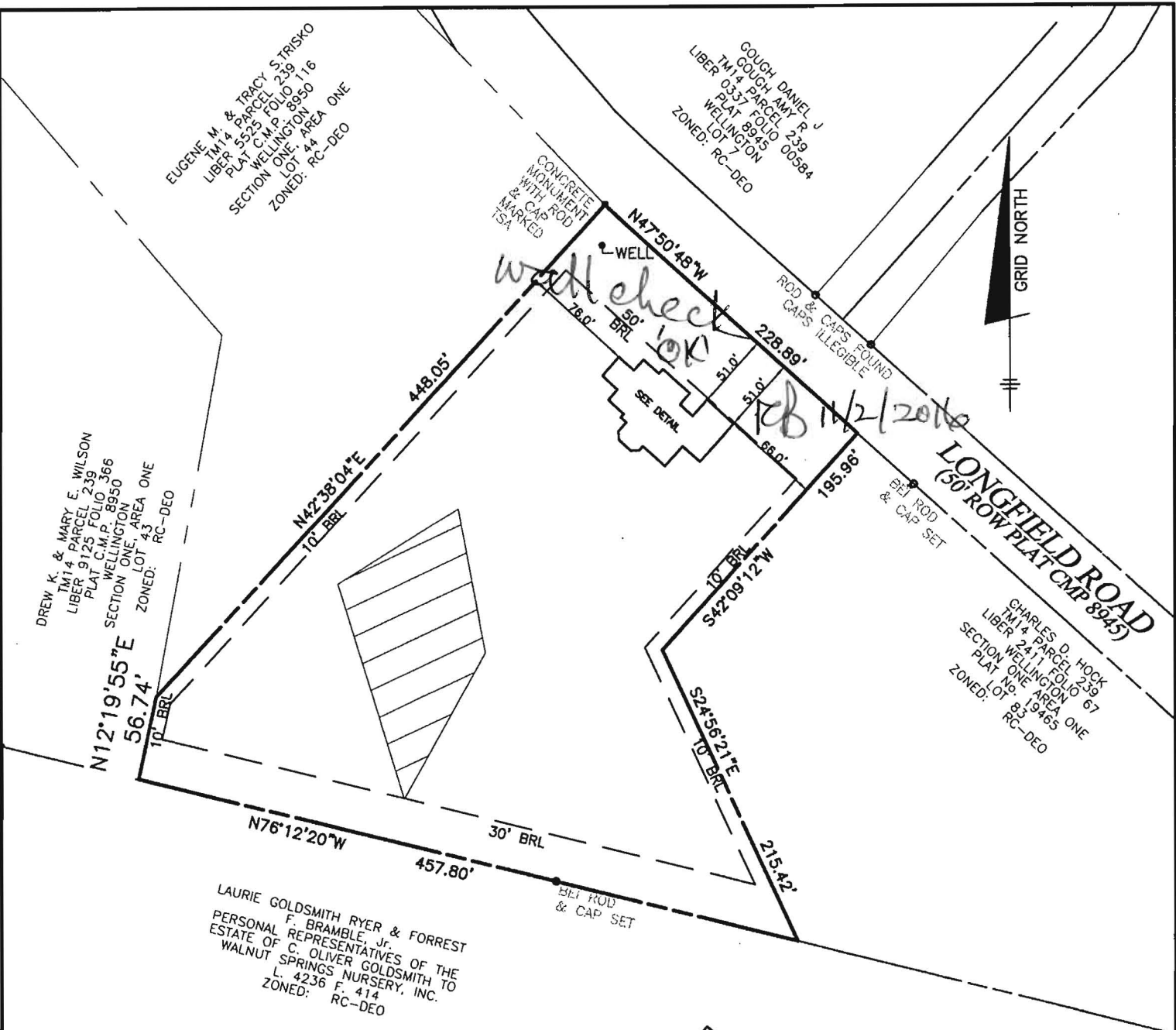
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CRD-Credit 60.00  
Credit Card Confirmation : 09791a

11/03/2016 10:18 CC13-MH  
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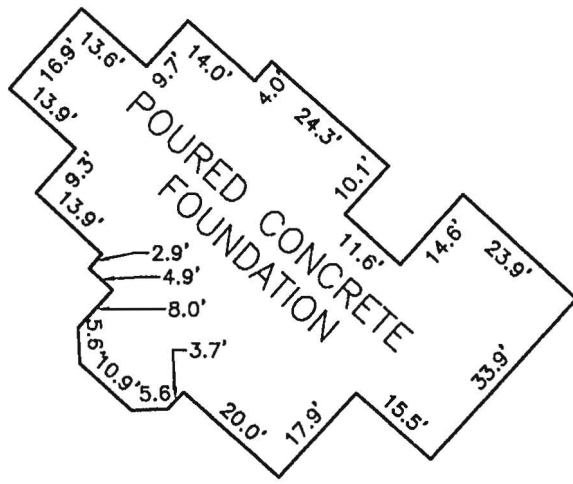
Thank you for visiting us today

RECEIVED  
NOV 03 2016  
HOWARD COUNTY HEALTH DEPT.  
BUREAU OF ENVIRONMENTAL HEALTH

3109 LONGFIELD RD  
GLENWOOD MD



*wall check OK*  
*FB 11/2/2016*



**FOUNDATION DETAIL**  
 SCALE: 1" = 30'

TOP OF FOUNDATION WALL ELEVATION = 571.3'  
 OFFSET DIMENSIONS TO PROPERTY LINES ARE ± 0.1'

**SURVEYOR'S CERTIFICATE**

I HEREBY CERTIFY THAT THESE DOCUMENTS, WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21320, EXPIRATION DATE 1-7-2017 AND TO THE BEST OF MY PROFESSIONAL KNOWLEDGE, INFORMATION AND BELIEF THAT THE DIMENSIONS OF THE BUILDING WALLS SHOWN HEREON ARE CORRECT; THAT THEY ARE BASED ON A FIELD RUN SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC. ON 06/27/2016.

*Donald A. Mason*  
 DONALD A. MASON

PROFESSIONAL LAND SURVEYOR  
 MD REG. No. 21320  
 FOR BENCHMARK ENGINEERING, INC.  
 MD REG. No. 351

FEMA FIRM No. 24027C0045D  
 ZONE: X  
 DATED: 11/06/2013

**BENCHMARK**



ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315  
 ELLICOTT CITY, MARYLAND 21043  
 phone: 410-465-6105 ▲ fax: 410-465-6644  
 www.bel-civilengineering.com

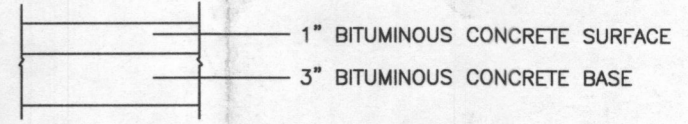
**WALL CHECK**  
**RESUBDIVISION PLAT**  
**WELLINGTON**  
**SECTION ONE, AREA 1**  
**LOTS 82 AND 83**  
**PLAT No. 19465**  
**LOT No. 82**

3109 LONGFIELD ROAD  
 4TH ELECTION DISTRICT

FIELD OBS. BY AS  
 COMP. BY EWF  
 DRAWN BY EWF SCALE: 1" = 100' DATE: 06/27/2016

| SOILS CHART - SOIL SURVEY HOWARD COUNTY, MARYLAND |        |                  |                 |  |         |
|---|--------|------------------|-----------------|--|---------|
| SYMBOL  | HYDRIC | HYDROLOGIC GROUP | ALTERNATE GROUP | NAME                                       | K-VALUE |
| GgB   |        | B                |                 | GLENELG LOAM, 3 TO 8 PERCENT SLOPES        | 0.2     |
| GmB*  | YES    | C                |                 | GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES | 0.37    |
| MaC   |        | B                |                 | MANOR LOAM, 8 TO 15 PERCENT SLOPES         | 0.24    |

TAKEN FROM WEB SOILS SURVEY MAP NO. 10, WOODBINE SE



FULL DEPTH BITUMINOUS CONCRETE  
 NOT TO SCALE

| LEGEND                                    |           |
|---|-----------|
| SOILS CLASSIFICATION                      | GgB       |
| SOILS DELINEATION                         | ---       |
| EXISTING CONTOURS (GIS)                   | ---580--- |
| PROPOSED CONTOURS (GIS)                   | ---570--- |
| EXISTING WOODS LINE                       | ~ ~ ~     |
| PROPOSED WOODS LINE                       | ~ ~ ~     |
| EXISTING SEPTIC FIELD                     |           |
| EXISTING WELL                             | ⊙         |
| PROPOSED WELL BOX                         | ⊙         |
| PASSING PERCOLATION TEST                  | ⊙         |
| PROPOSED STRUCTURE                        | ▭         |
| PROPOSED ESD PRACTICE                     | ▭         |
| LIMIT OF DISTURBANCE/ EFFECTIVE SITE AREA | ---       |

**NOTES**

- THE LOT SHOWN HEREON COMPLIES WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQUARE FEET AS REQUIRED BY THE STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA IS RESTRICTED UNTIL PUBLIC SEWER IS AVAILABLE. 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 SEWERAGE EASEMENT. ANY CHANGES TO A PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN. RECORDATION OF A MODIFIED SEWERAGE EASEMENT PLAT SHALL NOT BE NECESSARY.
- THE SEDIMENT AND EROSION CONTROLS, APPROVED BY HOWARD SOIL CONSERVATION DISTRICT BY GRADING PLAN: GP-16-043, SHALL BE USED FOR THE BUILDING PERMIT PLAN.
- TOPOGRAPHY SHOWN HEREON IS TAKEN FROM HOWARD COUNTY GIS AND HAS BEEN FIELD VERIFIED BY BENCHMARK ENGINEERING, INC., ON OR ABOUT OCTOBER, 2015
- EXACT LENGTH OF SEPTIC TRENCHES ARE TO BE DETERMINED BY THE HEALTH DEPARTMENT AT THE TIME OF TRENCH LAYOUT AND INSPECTION.
- SPOIL FROM THE TRENCHING OF THE SEPTIC AREA IS TO BE PLACED ON THE UPHILL SIDE OF THE EXCAVATION FOR EACH INDIVIDUAL LOT.
- ALL SEDIMENT AND EROSION CONTROL FEATURES USED ON THIS SITE SHALL COMPLY WITH 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- ALL DRAINAGE AND STORMWATER MANAGEMENT FEATURES USED ON THIS SITE MUST COMPLY WITH THE APPROVED ROAD CONSTRUCTION PLANS, ENVIRONMENTAL CONCEPT PLAN OR BUILDING PERMIT PLANS.
- COMAR SEPTIC TANK FOR THIS LOT WOULD BE 2,000 GALLONS. THE BAT TANK SIZE IS 1,300 GALLONS.
- THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROJECT'S BOUNDARY EXCEPT AS NOTED.
- ANY CHANGES TO A PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
- STORMWATER MANAGEMENT FOR THE DRIVEWAY IS PROVIDED BY NON-ROOFTOP DISCONNECTION (MDE DESIGNATION N-2) AND MICRO-BIORETENTION (MDE DESIGNATION M-6). STORMWATER MANAGEMENT FOR THE ROOFTOP IS PROVIDED BY DRYWELLS (MDE DESIGNATION M-5) AND MICRO-BIORETENTION (M-6).
- THE DESIGN OF THIS SEPTIC AREA REQUIRES THE USE OF A DEEP TRENCH SYSTEM. CALCULATIONS ARE SHOWN ON SHEET 2. THE SEPTIC DISPOSAL SYSTEM FOR THIS LOT REQUIRES ADVANCED PRE-TREATMENT IN ACCORDANCE WITH MDE REGULATIONS.
- THE EXISTING WELL SHOWN ON THIS PLAN, HO-15-0226, HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC., AND IS ACCURATELY SHOWN.

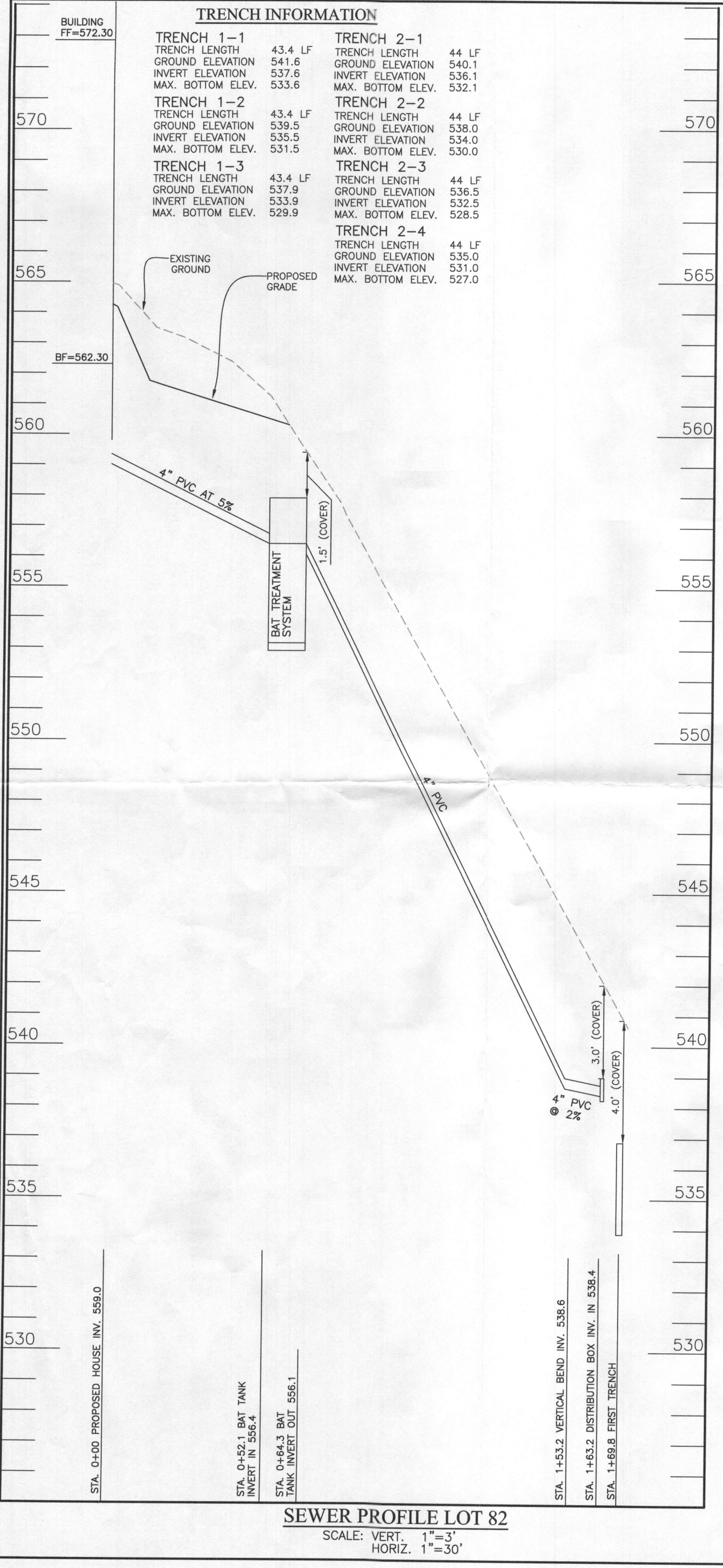


PLAN VIEW  
 1" = 30'

**BENCHMARK ENGINEERING, INC.**  
 ENGINEERS • LAND SURVEYORS • PLANNERS  
 8480 BALTIMORE NATIONAL PIKE • SUITE 315  
 ELLICOTT CITY, MARYLAND 21043  
 PHONE: 410-465-6105 • FAX: 410-465-6644  
 BEI@BEI-CVLENGINEERING.COM

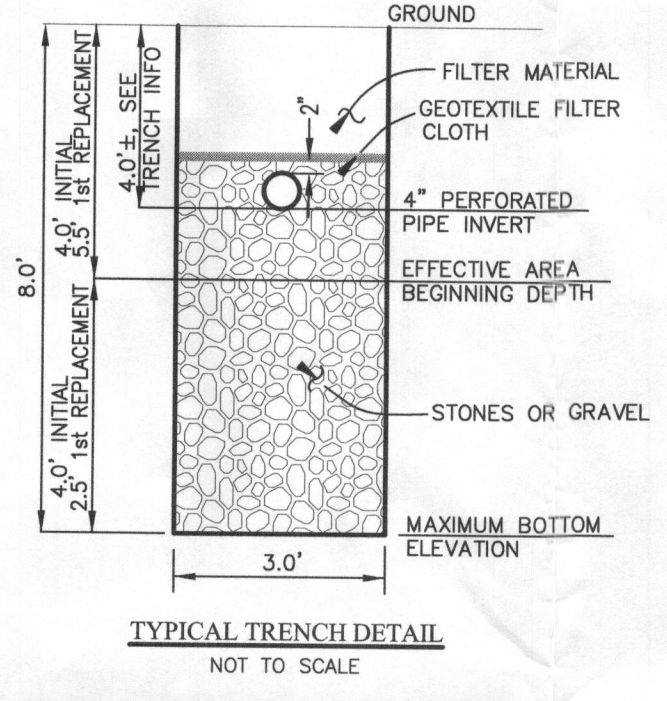
Approved Septic System Plan  
 Howard County Health Department  
 Signature: [Signature] Date: 4/23/2016

|   |   |
|---|---|
| OWNER:<br>TODD STUP<br>BUSINESS FLOORING INC.<br>3709 CHERRY VALLEY DR<br>OLNEY, MD 20832<br>240-401-3316   | PROJECT:<br><b>WELLINGTON SECTION ONE, AREA 1</b><br>LOT 82<br>(FORMERLY KNOWN AS LOT 45) |
| LOCATION:<br>3109 LONGFIELD ROAD<br>GLENWOOD, MD 21738<br>TAX MAP No. 14 - GRID 21 - PARCEL No. 239<br>4TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND<br>TAX ID NUMBER: 14-349717 | TITLE:<br>BAT SITE PLAN   |
| HOUSE TYPE:<br>STUP RESIDENCE   | DATE:<br>APRIL, 2016  |
| DESIGN: JMC/NAF   | DRAFT: NAF  |
| SCALE: 1" = 30'   | PROJECT NO. 2722<br>DRAWING 1 OF 2  |



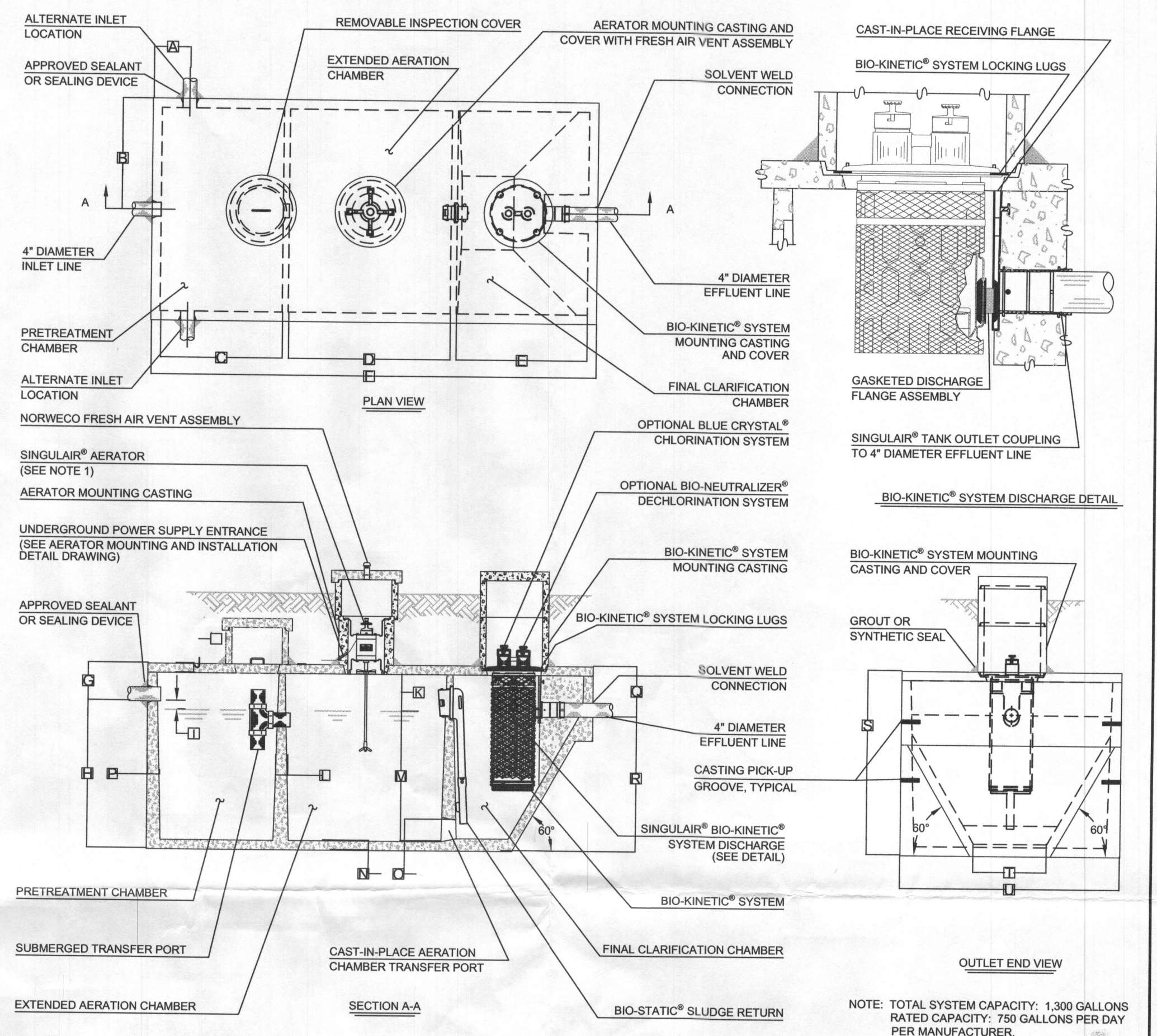
| INITIAL SYSTEM                          |            |           |
|---|------------|-----------|
| Number of Bedrooms                      | 5          |           |
| Application Rate                        | 0.8        | gpd/sf    |
| Effective Area Beginning Depth          | 4          | ft        |
| Bottom Max Depth                        | 8          | ft        |
| Design Flow                             | 750        | gpd       |
| Drainage Field square footage           | 937.5      | sf        |
| Sidewall reduction credit               | 0.41666667 |           |
| Trench width                            | 3          |           |
| Effective Area Depth                    | 4          |           |
| <b>Linear Length of trench Required</b> | <b>130</b> | <b>lf</b> |

| 1st REPLACEMENT SYSTEM                  |            |           |
|---|------------|-----------|
| Number of Bedrooms                      | 5          |           |
| Application Rate                        | 0.8        | gpd/sf    |
| Effective Area Beginning Depth          | 5.5        | ft        |
| Bottom Max Depth                        | 8          | ft        |
| Design Flow                             | 750        | gpd       |
| Drainage Field square footage           | 937.5      | sf        |
| Sidewall reduction credit               | 0.55555556 |           |
| Trench width                            | 3          |           |
| Effective Area Depth                    | 2.5        |           |
| <b>Linear Length of trench Required</b> | <b>174</b> | <b>lf</b> |



| CRITICAL DIMENSIONS |        |   |       |
|---------------------|--------|---|-------|
| A                   | 1'-0"  | N | 0'-3" |
| B                   | 3'-0"  | O | 0'-6" |
| C                   | 3'-4"  | P | 0'-3" |
| D                   | 4'-5"  | Q | 1'-4" |
| E                   | 3'-7"  | R | 3'-8" |
| F                   | 12'-2" | S | 5'-0" |
| G                   | 1'-0"  | T | 2'-0" |
| H                   | 4'-0"  | U | 6'-0" |
| I                   | 0'-3"  | V |       |
| J                   | 0'-3"  | W |       |
| K                   | 1'-0"  | X |       |
| L                   | 0'-2"  | Y |       |
| M                   | 3'-6"  | Z |       |

**norweco**  
LOW-PROFILE SINGULAIR® BIO-KINETIC® WASTEWATER TREATMENT SYSTEM MODEL TWTLP-600 GPD



**NOTES:**  
TOTAL SYSTEM CAPACITY: 1,300 GALLONS  
RATED CAPACITY: 600 GALLONS PER DAY AND  
ABLE TO SERVICE UP TO FIVE (5)  
BEDROOMS PER MANUFACTURER.

- Required BAT Site Plan 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 sit plan may be required.
  - The maximum depth of the BAT shall be per the manufacturer's specification, 3.0'.
  - The blower may not be located further from the tank than the manufacturer's specifications, 75'.
  - The BAT system shall be maintained and operated for the life of the system.
  - The BAT shall be operated by and maintained by a certified service provider.
  - Within one month of installation, a person installing the BAT system shall report to the Maryland Department of the Environment (MDE) in a manner acceptable to MDE, the address and date of completion of the BAT installation and the type of BAT installed.
  - Electrical work for the BAT installation must be performed by a licensed electrician.
  - An agreement and Easement must be completed and signed by all applicable parties, and recorded in Land Records of Howard County.
  - The Health Department requires documentation for the start-up certification from the manufacturer prior to final approval of the installation.

SEE MANUFACTURES SPECIFICATIONS FOR DETAILS. WWW.NORWECO.COM

**BENCHMARK ENGINEERS, INC.**  
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS

8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315  
ELLCOTT CITY, MARYLAND 21043  
PHONE: 410-465-6105 ▲ FAX: 410-465-6644  
BEI@BEI-CIVILENGINEERING.COM

Approved Septic System Plan  
Howard County Health Department

Signature \_\_\_\_\_ Date \_\_\_\_\_

Professional Certification. 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. 45577, Expiration Date: 6-08-2016.

*John M. Curran*  
PROFESSIONAL ENGINEER

OWNER: TODD STUP  
BUSINESS FLOORING INC.  
3709 CHERRY VALLEY DR  
OLNEY, MD 20832  
240-401-3316

PROJECT: WELLINGTON SECTION ONE, AREA 1  
LOT 82  
(FORMERLY KNOWN AS LOT 45)

LOCATION: 3109 LONGFIELD ROAD  
GLENWOOD, MD 21738  
TAX MAP No. 14 - GRID 21 - PARCEL No. 239  
4TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
TAX ID NUMBER: 14-349717

TITLE: BAT SITE PLAN

HOUSE TYPE: STUP RESIDENCE

DATE: APRIL, 2016 PROJECT NO. 2722

DESIGN: JMC/NAF DRAFT: NAF SCALE: 1" = 30' DRAWING 2 OF 2