

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

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

RECEIPT DATE: 2/25/2015 **ONSITE SEWAGE DISPOSAL SYSTEM** P 555749

INSTALLATION APPROVAL DATE: 5/8/15 SEC **PERMIT** A _____

CONSTRUCTION

PROPERTY ADDRESS: 18336 Chelsea Knolls Drive, Mt. Airy, MD 21771

SUBDIVISION: Chelsea Knolls LOT: 14 TAX ID: 04-594328

CONTRACTOR: Hatfield's Equipment Inc. EMAIL: ken@hatfieldsequipment.com

CONTRACTOR ADDRESS: P.O. Box 519, Annapolis Junction, MD 20701 PHONE: 301-490-4289

PROPERTY OWNER: Ryan Homes EMAIL: dsnyder@nvrinc.com

OWNER ADDRESS: 9720 Patuxent Woods Drive, Columbia, MD 21046 PHONE: 410-796-0980

BAT UNIT MODEL: Norweco TNTLP-500GPD PUMP SIZE: 0.4 HP* PUMP TANK CAPACITY: 1500 gallons

DISTRIBUTION SYSTEM: GRAVITY LOW PRESSURE DOSED NUMBER OF BEDROOMS: 5

TRENCHES:	LINEAR FEET REQUIRED: <u>222.5 225'</u>	INLET DEPTH: <u>3.5</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>5</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>3.5</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:	See BAT Plan for details concerning LPD design. *Meyers series 40 pump specified. Install Observation Pipe in gravel bed near distal end of each trench. <u>5 x 45' Trenches</u>	

ISSUED BY: Robert Bricker ISSUE DATE: 2/25/2015 EXPIRATION DATE: 2/25/2016

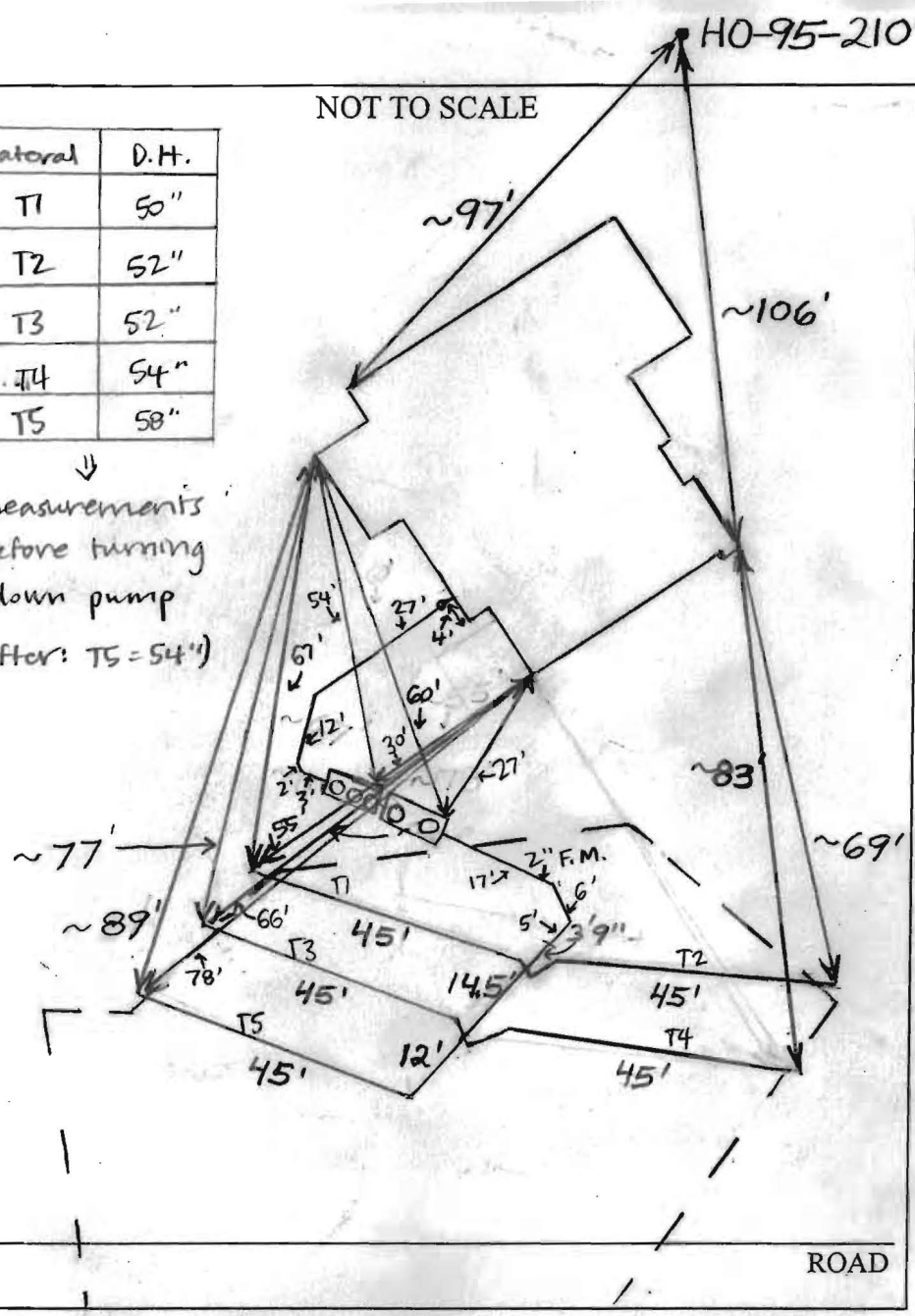
- NOTE: CONTRACTOR MUST SCHEDULE A PRE-CONSTRUCTION INSPECTION PRIOR TO BEGINNING ANY INSTALLATION
- NOTE: CONTRACTOR MUST SCHEDULE AN INSPECTION AND GAIN APPROVAL OF ALL COMPONENTS PRIOR TO COVERING
- NOTE: STONE MUST BE APPROVED BY HEALTH DEPARTMENT AND GRAVEL TICKET MUST BE AVAILABLE FOR REVIEW.
- NOTE: WATERTIGHT 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
- 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.**

Lateral	D.H.
T1	50"
T2	52"
T3	52"
T4	54"
T5	58"

↓
 measurements
 before turning
 down pump
 (after: T5 = 54")

NOT TO SCALE



WIDTH	INLET	BOTTOM
3'	3'-3.5'	5'
NUMBER OF TRENCHES 5		
TOTAL LENGTH ~225'		
ABSORPTION AREA 675+ Sidewall		

SEPTIC TANK DATA	
SEPTIC TANK 1 LEVEL	YES
CAPACITY	1300 GAL
SEAM LOC	TOP
TANK LID DEPTH	2-3'
BAFFLES	NO
BAFFLE FILTER	NO
MANHOLE LOC	FRONT, MID, REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SEPTIC TANK 2 LEVEL	YES
CAPACITY	1500 GAL
SEAM LOC	TOP
TANK LID DEPTH	2-3'
BAFFLES	NO
BAFFLE FILTER	NO
MANHOLE LOC	FRONT + REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
1-2-15 DATE ON LID	
PUMP OPERATIONAL	
ALARM OPERATIONAL	

PRE-CONSTRUCTION 3/19/2015 Need to cut down grade at tank locations or the tanks will be too deep. Install tanks and trenches similar to BAT plan. (BB)

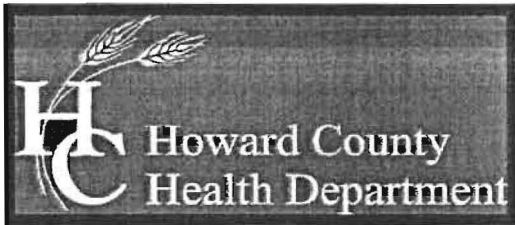
INSTALLATION 3/25/2015 Trenches installed. No plumbing or tank installed. (BB)

4/7/15 Tanks set and house connection made. (SC) 4/7/15 Pump installed in pump tank - Myers 1/2 HP pump. 2" F.M. connection made from pump tank to manifold. Need BAT startup certification. (SC) 4/20/2015

(I & A) AGREEMENT RECORDED IN LAND RECORDS ON _____ (date)

FINAL INSPECTOR Sarah Collins DATE OF APPROVAL 5/8/15

4/20/2015 Received start-up from Back River Precast/Norweco. Need pump and alarm test. (BB) 5/8/15 Pump + alarm test w/ Jeff from Hatfield's. MESO pump installed; dialed back pump slightly b/c farthest lateral had 58" dia. (SC)



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

Lot 14

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

THIS AGREEMENT is made this 15th day of May 2014 among Chelsea Knolls, LC, 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 18336 Chelsea Knolls Drive, Mt Airy, Maryland 21771, in the 4th Election District of Howard County, Maryland, and the deed to same is recorded or shall be recorded among the Land Records of Howard County, Maryland in Liber 8717 Folio 579.

WHEREAS, The Lot 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.

NOW, THEREFORE, the parties hereto agree as follows:

- A. Owner hereby grants to the County the right to enter upon the Lot at any reasonable time 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 to develop accurate and thorough test results.
- 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 Lot 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 Lot that the system shall require maintenance or other attention. Upon taking title to the Lot, 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.

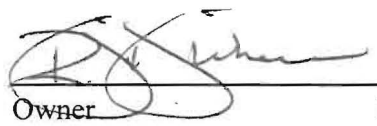
G. This agreement may be voided at any time at the discretion of the County.

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.

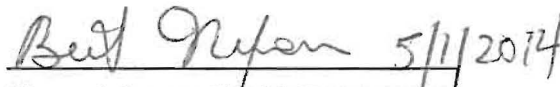
IN WITNESS WHEREOF, the parties have signed and sealed this agreement on the date indicated above.

 4/25/14

Owner Date

Chelsea Knolls, L.C., Russell Dickens, Manager

Owner Date

 5/11/2014

Howard County Health Department

13038-3001

Clerk of the Circuit Court for
Howard County
Land Records/Licensing
14 SAT AGREEMENTS
The Thomas Dorsey Building
9250 Bendix Road
Columbia, MD 21045
410-313-5850

=====

LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 82

LR - Agreement Surcharge
1x 40.00 40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 83

LR - Agreement Surcharge
1x 40.00 40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 84

LR - Agreement Surcharge
1x 40.00 40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 85

LR - Agreement Surcharge
1x 40.00 40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 86

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LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 87

LR - Agreement Surcharge
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LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 88

LR - Agreement Surcharge
1x 40.00 40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 89

LR - Agreement Surcharge
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LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 90

LR - Agreement Surcharge
1x 40.00 40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC

1x 40.00 40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 88

LR - Agreement Surcharge
1x 40.00 40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 89

LR - Agreement Surcharge
1x 40.00 40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 90

LR - Agreement Surcharge
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LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 91

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Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 92

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Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 93

LR - Agreement Surcharge
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LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 94

LR - Agreement Surcharge
1x 40.00 40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: 95

LR - Agreement Surcharge
1x 40.00 40.00
LR - Agreement Recording Fee
** VOID **

1x -20.00
LR - Agreement Surcharge
** VOID **

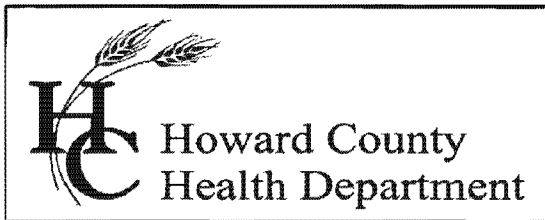
1x -40.00
LR - Agreement Recording Fee
1x 20.00 20.00
Grantor/Grantee Name: Chelsea Knolls LC
Reference/Control #: 95

LR - Agreement Surcharge
1x 40.00 40.00

=====
SubTotal: 840.00
Total: 840.00
=====

REV-Check-BDA 840.00
Number : 3616

05/01/2014 14:01 CC13-JE
#2738771 /494/109
Thank you for visiting us today



Bureau of Environmental Health

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

January 12, 2015

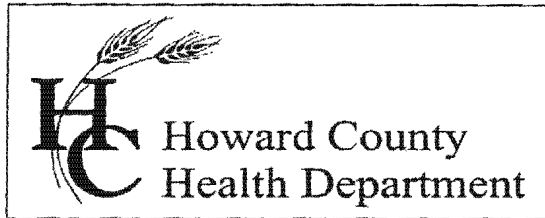
To: Stephanie Tuitte, Fisher, Collins & Carter, Inc..
Stephanie@fcc-eng.com

From: Robert Bricker, REHS/R.S., L.E.H.S.
Environmental Sanitarian II
Well and Septic Program

RE: 18336 Chelsea Knolls Drive, BAT Plan comment

Edits are needed in the submitted BAT Plan for the subject property. See the ten (10) comments listed below.

1. Using ¼" perforations, the required Distal Head (or Discharge Head) is 3 feet.
 - a. Correct the "Head" value in both tables for Low Pressure Dosing System.
 - b. Correct the "Distal Head" value in Total Dynamic Head calculation.
 - c. Correct the "Perforation Flow Rate" in both tables for Low Pressure Dosing System.
 - d. Re-calculate "Trench Flow Rate" in both tables for Low Pressure Dosing System.
 - e. Correct the calculation for Total Dynamic Head.
 - f. Label the turn-up height as 3 feet in the detail for the lateral turn-up.
2. Correct the "Perforation Spacing" values in the table for Initial System. There is the same number of perforations in each lateral so there should be no difference in the spacing between perforations.
3. The "Pipe Volumes" constant for 1.5-inch pipe is incorrect. Correct the value and re-calculate Pipe Volumes and Minimum Dose.
4. The diameter of the Force Main-Manifold is too small and will result in a flow velocity of about 11 feet per second or a little more. A larger pipe diameter such as 2-inch is recommended.
5. Specify the type of pipe, e.g., 'SDR26' or 'SCH 40', for the Force Main/Manifold, and 'SCH 40' for the Laterals, respectively.



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

December 18, 2014

To: Stephanie Tuitte, Fisher, Collins & Carter, Inc..

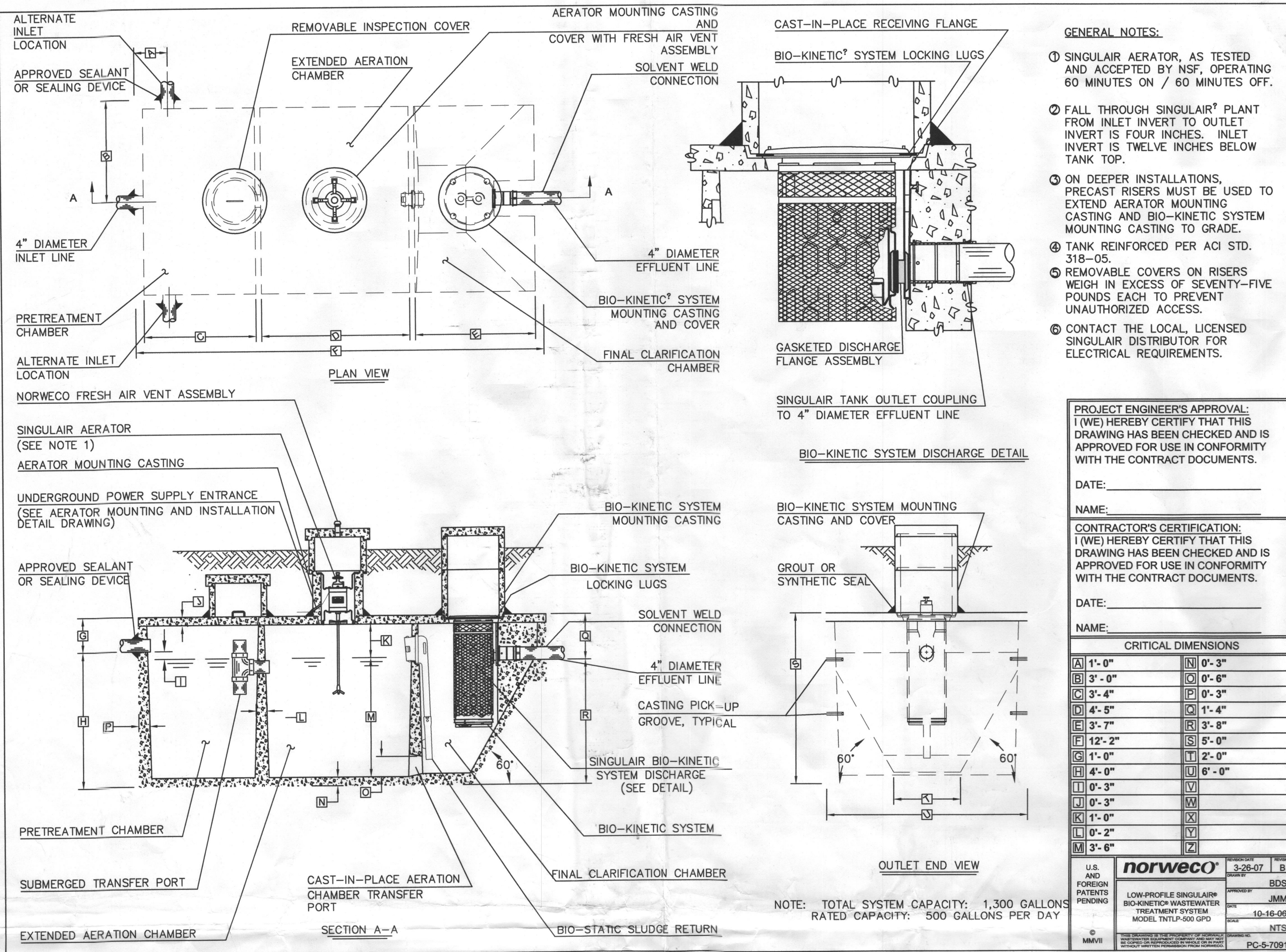
From: Robert Bricker, REHS/R.S., L.E.H.S.
Environmental Sanitarian II
Well and Septic Program

RE: 18336 Chelsea Knolls Drive, BAT Plan comment

The submitted building permit for this proposal designates that a 5-bedroom residence is proposed. The BAT-LPD Plan submitted to the Health Department is for a 4-bedroom residence. Revise and resubmit an appropriate plan for the proposed structure.

Please know that the BAT unit is too close to the areaway. The areaway is interpreted as being part of the foundation. Both the BAT unit and the Pump Tank must be 20 feet distance from the areaway.

Copy: Darren Snyder, Ryan Homes
file



GENERAL NOTES:

- SINGULAIR AERATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 60 MINUTES ON / 60 MINUTES OFF.
- FALL THROUGH SINGULAIR[®] PLANT FROM INLET INVERT TO OUTLET INVERT IS FOUR INCHES. INLET INVERT IS TWELVE INCHES BELOW TANK TOP.
- ON DEEPER INSTALLATIONS, PRECAST RISERS MUST BE USED TO EXTEND AERATOR MOUNTING CASTING AND BIO-KINETIC SYSTEM MOUNTING CASTING TO GRADE.
- TANK REINFORCED PER ACI STD. 318-05.
- REMOVABLE COVERS ON RISERS WEIGH IN EXCESS OF SEVENTY-FIVE POUNDS EACH TO PREVENT UNAUTHORIZED ACCESS.
- CONTACT THE LOCAL LICENSED SINGULAIR DISTRIBUTOR FOR ELECTRICAL REQUIREMENTS.

PROJECT ENGINEER'S APPROVAL:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

DATE: _____
NAME: _____

CONTRACTOR'S CERTIFICATION:
I (WE) HEREBY CERTIFY THAT THIS DRAWING HAS BEEN CHECKED AND IS APPROVED FOR USE IN CONFORMITY WITH THE CONTRACT DOCUMENTS.

DATE: _____
NAME: _____

CRITICAL DIMENSIONS

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

U.S. AND FOREIGN PATENTS PENDING

norweco 3-26-07 B
BDS
LOW-PROFILE SINGULAIR BIO-KINETIC WASTEWATER TREATMENT SYSTEM MODEL TWT-SP-500-GPD
10-16-06
NTS
PC-5-7091

NOTE: TOTAL SYSTEM CAPACITY: 1,300 GALLONS
RATED CAPACITY: 500 GALLONS PER DAY

BAT 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 COVER OVER THE BAT SHALL BE 3 FEET.
- 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.
- ANY ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
- AN AGREEMENT AND EASEMENT HAS BEEN COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, LIBER 15565, FOLIO 087.
- THE HEALTH DEPARTMENT REQUIRES DOCUMENTATION FOR THE START-UP CERTIFICATION FROM THE MANUFACTURER PRIOR TO FINAL APPROVAL OF THE INSTALLATION.
- SURFACE RUNOFF SHALL BE DIRECTED AROUND THE BAT TANK.

SEPTIC SYSTEM ELEVATIONS

FTE = 788.40
BSE = 778.55
5 BEDROOM HOUSE
INV. OUT OF HOUSE = 784.53
PROP GROUND AT C/O = 785.8
INV. INTO C/O = 783.71
INV. OUT OF C/O = 783.63
PROP GROUND AT BAT TANK = 786.1
TOP OF BAT TANK = 784.49
COVER OVER BAT TANK = 1.5 FT
INVERT INTO BAT TANK = 783.49
INVERT OUT OF BAT TANK = 783.16
PROP GROUND AT PUMP TANK = 786.4
INVERT INTO PUMP TANK = 782.84
INVERT OUT OF PUMP TANK = 784.00
*BASEMENT SEWERAGE TO BE PUMPED

SEPTIC SYSTEM DESIGN

LOADING RATE = 750 GPD
APPLICATION RATE = 0.9
EFFECTIVE SIDEWALL BEGINS AT 3.5 FEET
TRENCH DEPTH = 1.5 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 1.5 FEET
5F OF DRAINFIELD = 750 GPD / 0.9 = 930 5F
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = (W+2)/(W+1+2D) = (3+2)/(3+1+2(1.5)) = 0.71
TRENCH LENGTH = 930 5F x 0.71 x 3 = 222 FEET
TRENCH SPACING = 2D+W = (2(1.5) + 3) = 6 USE 10'

LOW PRESSURE DOSING SYSTEM - INITIAL INSTALLATION

TRENCH	GROUND ELEV.	PIPE INVERT ELEV.	TRENCH LENGTH (FT)	LATERAL PIPE LENGTH (FT)	PERFORATION DIAMETER (IN)	HEAD (FT)	PERFORATION FLOW RATE (GPM)	PERFORATION SPACING (FT)	NUMBER OF ORIFICES	TRENCH FLOW RATE (GPM)
1A1	786.3	782.0	44.5	39.56	1/4	3	1.04	4.94	9	11.5
1A2	786.3	782.0	44.5	39.56	1/4	3	1.04	4.94	9	11.5
1B1	786.2	782.7	44.5	39.56	1/4	3.1	1.04	4.94	9	11.5
1B2	786.2	782.7	44.5	39.56	1/4	3.1	1.04	4.94	9	11.5
1C	786.1	782.6	44.5	39.56	1/4	3.2	1.04	4.94	9	11.5
TOTAL TRENCH FLOW RATE										57.5

LOW PRESSURE DOSING SYSTEM - REPLACEMENT

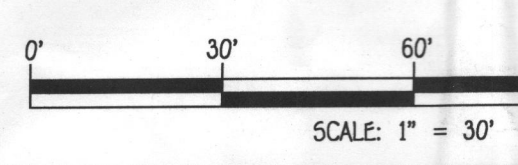
TRENCH	GROUND ELEV.	PIPE INVERT ELEV.	TRENCH LENGTH (FT)	LATERAL PIPE LENGTH (FT)	PERFORATION DIAMETER (IN)	HEAD (FT)	PERFORATION FLOW RATE (GPM)	PERFORATION SPACING (FT)	NUMBER OF ORIFICES	TRENCH FLOW RATE (GPM)
RT2A	786.1	782.6	44.5	39.56	1/4	3	1.28	4.94	9	11.5
RT2B1	785.4	781.9	44.5	38.95	1/4	3.7	1.38	5.55	8	11.0
RT2B2	785.4	781.9	44.5	38.95	1/4	3.7	1.38	5.55	8	11.0
RT2C1	784.5	781.0	44.5	38.14	1/4	4.6	1.56	6.36	7	10.9
RT2C2	784.5	781.0	44.5	38.14	1/4	4.6	1.56	6.36	7	10.9
TOTAL TRENCH FLOW RATE										55.3

TRENCH DESIGN

TRENCH	GROUND ELEV.	TOP OF STONE ELEV.	PIPE INVERT ELEV.	DEPTH TO STONE FROM GROUND	DEPTH OF TRENCH (FT)	BOTTOM OF TRENCH ELEV.	EFFECTIVE DEPTH AT	EFFECTIVE DEPTH (D)	WIDTH OF TRENCHES (W)	TRENCH SPACING
1A1	786.3	783.13	782.80	3.17	1.83	781.30	3.5	1.5	3.0	10
1A2	786.3	783.13	782.80	3.17	1.83	781.30	3.5	1.5	3.0	10
1B1	786.2	783.03	782.70	3.17	1.83	781.20	3.5	1.5	3.0	10
1B2	786.2	783.03	782.70	3.17	1.83	781.20	3.5	1.5	3.0	10
RT2A1	786.1	782.93	782.60	3.17	1.83	781.10	3.5	1.5	3.0	10
RT2A2	786.1	782.93	782.60	3.17	1.83	781.10	3.5	1.5	3.0	10
RT2B1	785.4	782.23	781.90	3.17	1.83	780.40	3.5	1.5	3.0	10
RT2B2	785.4	782.23	781.90	3.17	1.83	780.40	3.5	1.5	3.0	10
RT2C1	784.5	781.33	781.00	3.17	1.83	779.50	3.5	1.5	3.0	10
RT2C2	784.5	781.33	781.00	3.17	1.83	779.50	3.5	1.5	3.0	10

NOTE: MANHOLE INVERT AT 783.3 TO TRENCH 1A1, 1A2, 1B1, 1B2, & 1C.

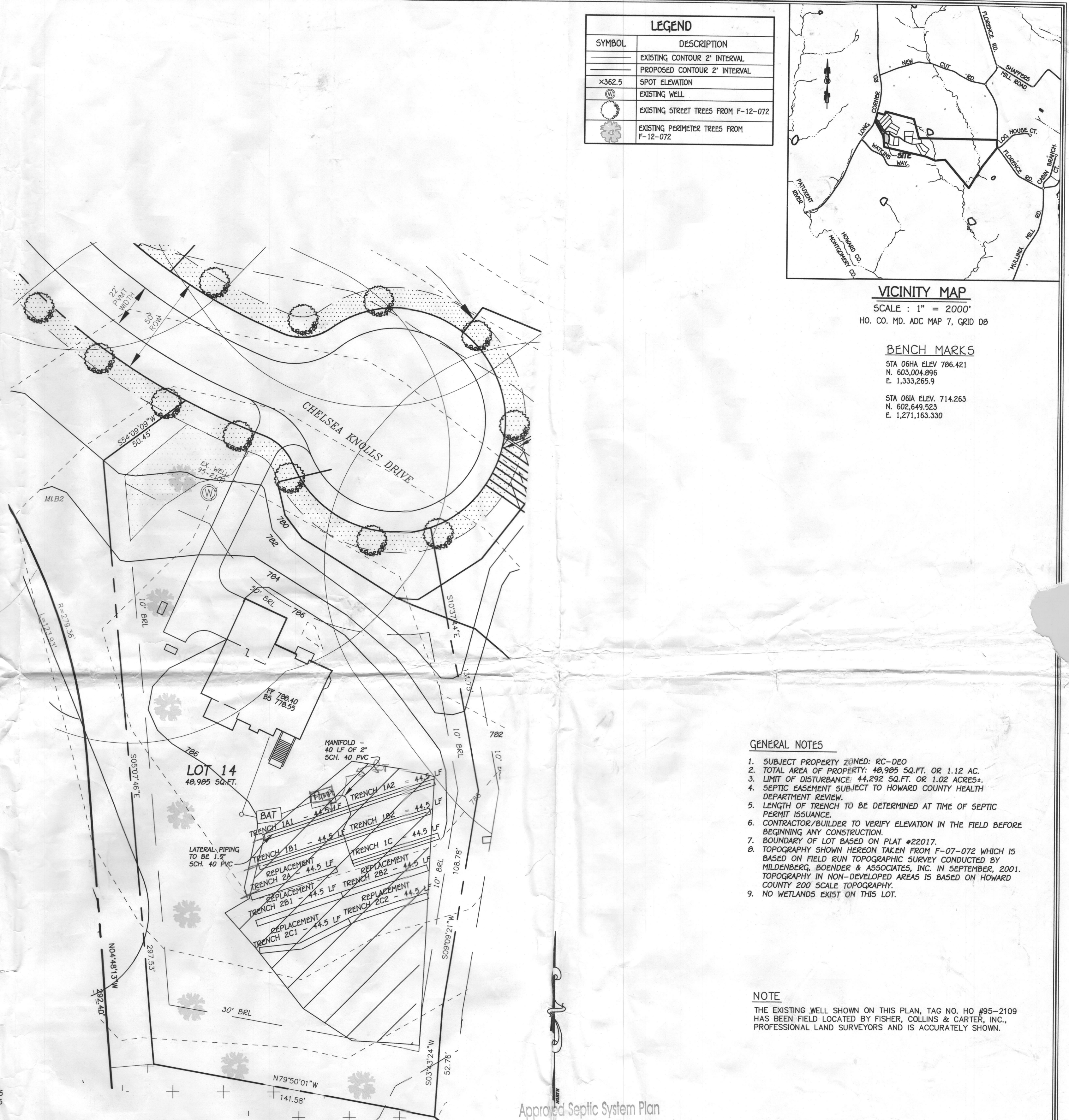
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALDROCK NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
410.461.3295



PROFESSIONAL CERTIFICATION

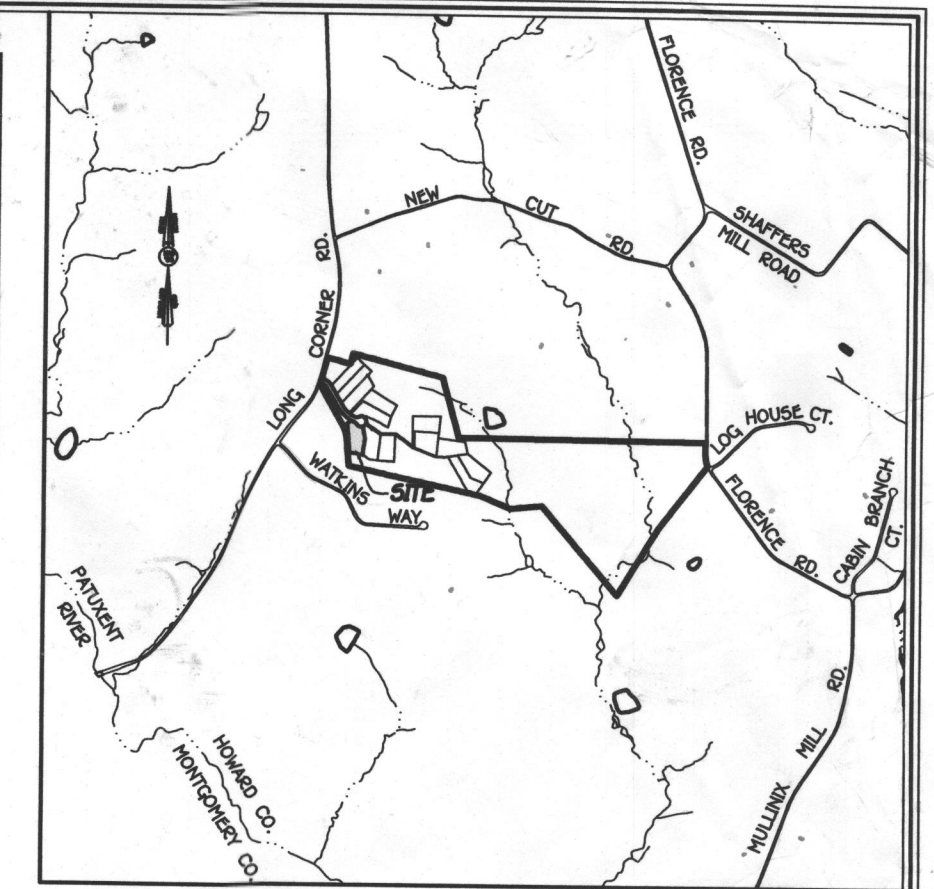
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2016.

Stephen J. ... 11/9/15
Signature of Professional Engineer DATE



LEGEND

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
- - -	PROPOSED CONTOUR 2' INTERVAL
x362.5	SPOT ELEVATION
○	EXISTING WELL
○	EXISTING STREET TREES FROM F-12-072
○	EXISTING PERIMETER TREES FROM F-12-072



VICINITY MAP
SCALE: 1" = 2000'
HO. CO. MD. ADC MAP 7, GRID D8

BENCH MARKS

STA 06A ELEV 786.421
N. 603,004.896
E. 1,333,265.9

STA 06A ELEV. 714.263
N. 602,649.523
E. 1,271,163.330

GENERAL NOTES

- SUBJECT PROPERTY ZONED: RC-DEO
- TOTAL AREA OF PROPERTY: 48,985 SQ.FT. OR 1.12 AC.
- LIMIT OF DISTURBANCE: 44,292 SQ.FT. OR 1.02 ACRES.
- SEPTIC EASEMENT SUBJECT TO HOWARD COUNTY HEALTH DEPARTMENT REVIEW.
- LENGTH OF TRENCH TO BE DETERMINED AT TIME OF SEPTIC PERMIT ISSUANCE.
- CONTRACTOR/BUILDER TO VERIFY ELEVATION IN THE FIELD BEFORE BEGINNING ANY CONSTRUCTION.
- BOUNDARY OF LOT BASED ON PLAT #22017.
- TOPOGRAPHY SHOWN HEREON TAKEN FROM F-07-072 WHICH IS BASED ON FIELD RUN TOPOGRAPHIC SURVEY CONDUCTED BY MILDENBERG, BOENDER & ASSOCIATES, INC. IN SEPTEMBER, 2001. TOPOGRAPHY IN NON-DEVELOPED AREAS IS BASED ON HOWARD COUNTY 200 SCALE TOPOGRAPHY.
- NO WETLANDS EXIST ON THIS LOT.

NOTE

THE EXISTING WELL SHOWN ON THIS PLAN, TAG NO. HO #95-2109 HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.

SOILS LEGEND

SOIL	NOTE	CLASS
HSE	Hs. Silty claystone loam, 3 to 8 percent slopes, moderately eroded	A
HCE	Hs. Silty claystone loam, 6 to 15 percent slopes, moderately eroded	A

Approved Septic System Plan
Howard County Health Department
NORWECO TWT-AP-500 GPD
1500-gal Pump Tank w/ Meyer Mesh
to LPT 1/22/2015
Date
B14004359

PLAN VIEW
SCALE: 1"=30'

See Sheet 2, ME Sates curves

OWNER
CHELSEA KNOLLS, LC
1355 BEVERLY RD, SUITE 240
MELLEAN, VIRGINIA 22101
(703) 734-9730
(301) 720-3021

DEVELOPER
RYAN HOMES, INC.
ATTN: KEVIN BOWSER
9720 PATUXENT WOODS DRIVE
COLUMBIA, MARYLAND 21046
410-796-0980

BAT SITE PLAN
CHELSEA KNOLLS
LOT 14
18336 CHELSEA KNOLLS DRIVE
ZONING: RC-DEO
TAX MAP No. 12 GRID No. 5 PARCEL No. 78
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: DECEMBER, 2014
SHEET 1 OF 2

I:\2015\13038\dwg\GPBAT Site Plans\13038 Lot 14 BAT.dwg, 1/19/2015 11:01:18 AM, 11

