

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: 10-18-16 **ONSITE SEWAGE DISPOSAL SYSTEM** P 558865

APPROVAL DATE: 1-26-17 **PERMIT: CONSTRUCTION** A _____

PROPERTY ADDRESS: 2045 Drovers Lane

SUBDIVISION: Vista Ridge LOT: 16 TAX ID: 04-595481

CONTRACTOR: Fogle's Septic Clean Inc. EMAIL: kurt@foglesinc.com

CONTRACTOR ADDRESS: 580 Obrecht Road, Sykesville, MD 21784 PHONE: 410-795-5670

CONTRACTOR CERTIFIED FOR BAT INSTALLATION: MDE MANUFACTURER:

PROPERTY OWNER: DR Horton EMAIL: _____

OWNER ADDRESS: 1356 Beverly Road, McLean, VA 22101 PHONE: 571-723-0813

BAT UNIT MODEL: Norweco TNTLP-600 PUMP SIZE: _____ PUMP TANK CAPACITY: _____

OPERATION & MAINTENANCE AGREEMENT DATE SIGNED: 5/13/16 DATE RECORDED: 5/13/16

DISTRIBUTION SYSTEM: GRAVITY PRESSURE DOSED BEDROOMS: 5 APPLICATION RATE: 0.5
~~0.5~~

TRENCHES:	LINEAR FEET REQUIRED: <u>260</u>	INLET DEPTH: <u>3</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>8</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>7</u>

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

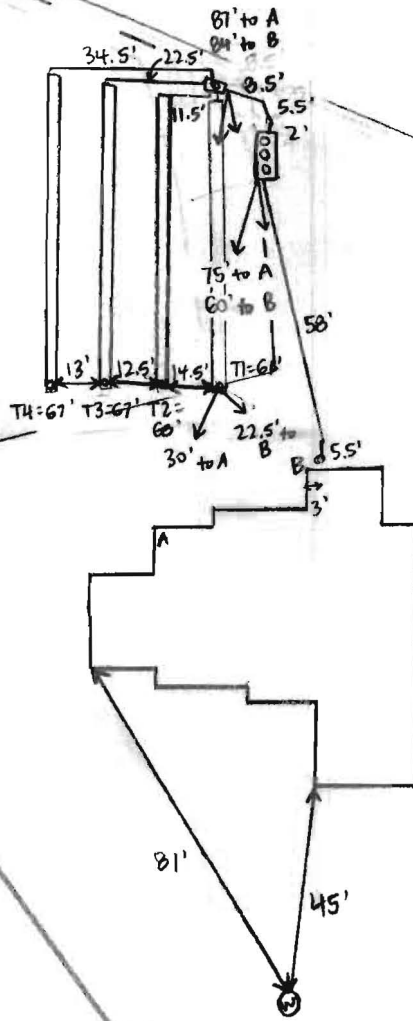
NOTES:

ISSUED BY: Robert Freemon ISSUE DATE: 10/18/16 EXPIRATION DATE: 10/18/17

- 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: WATERTIGHT SEPTIC 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 16005983
- 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.**

NOT TO SCALE



1" = 40'

ROAD NAME

HO-95-2391

TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
3'	3'	8'
NUMBER OF TRENCHES		4
TOTAL LENGTH		262'
ABSORPTION AREA		786' + SIDEWALL
DISTRIBUTION BOX LEVEL		YES
DISTRIBUTION BOX BAFFLE		YES
DISTRIBUTION BOX PORT		YES

SEPTIC TANK DATA

SEPTIC TANK I LEVEL	YES
MANUFACTURER	BACKRIVER/NORWECO
CAPACITY	1300 GAL
SEAM LOC	TOP
TANK LID DEPTH	1.5-2'
BAFFLES	NO
BAFFLE FILTER	NONE
MANHOLE LOC	FRONT, MID, REAR
6" PORT LOC	NONE
WATERTIGHT TEST	NO
SLOTTED	NO
DATE ON LID	8-18-16

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:

11/17/16 On site with Fogle's for layout. No BAT stake and wrong SDA stakes present (from old plan). Need to restake per current BAT site plan. (SC) 11/18/16 BAT tank staked, correct SDA stakes now. Shot contour and laid out 4x65' trenches. (SC)

INSTALLATION: 11/18/16 Tank set. Pipe laid from house to tank - house connection not yet made. Inlet may be 3.5' to make fall from tank. (SC) 11/21/16 T1 finished + open at ends, 3' wide and 3.5' to stone. Fogle's digging T2 - 8' bottom. D-box installed. (SC) 11/22/16 Trenches complete - T2 + T3 open at ends and T4 left open. Levelled speed levelers in D-box. Need house connection and BAT startup certification. (SC) 1/4/17 BAT startup certification received. (SC)

FINAL INSPECTOR

[Signature]

DATE OF APPROVAL

1/20/17

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 Singlair TNT 600 GPD Septic Tank installed at 2045 Drovers Ln., Cooksville, MD 21723 November 18, 2016 was installed according to the manufacture's specifications.

Installer: Jake Sizemore

Property Owner: DR Horton, Inc.

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.

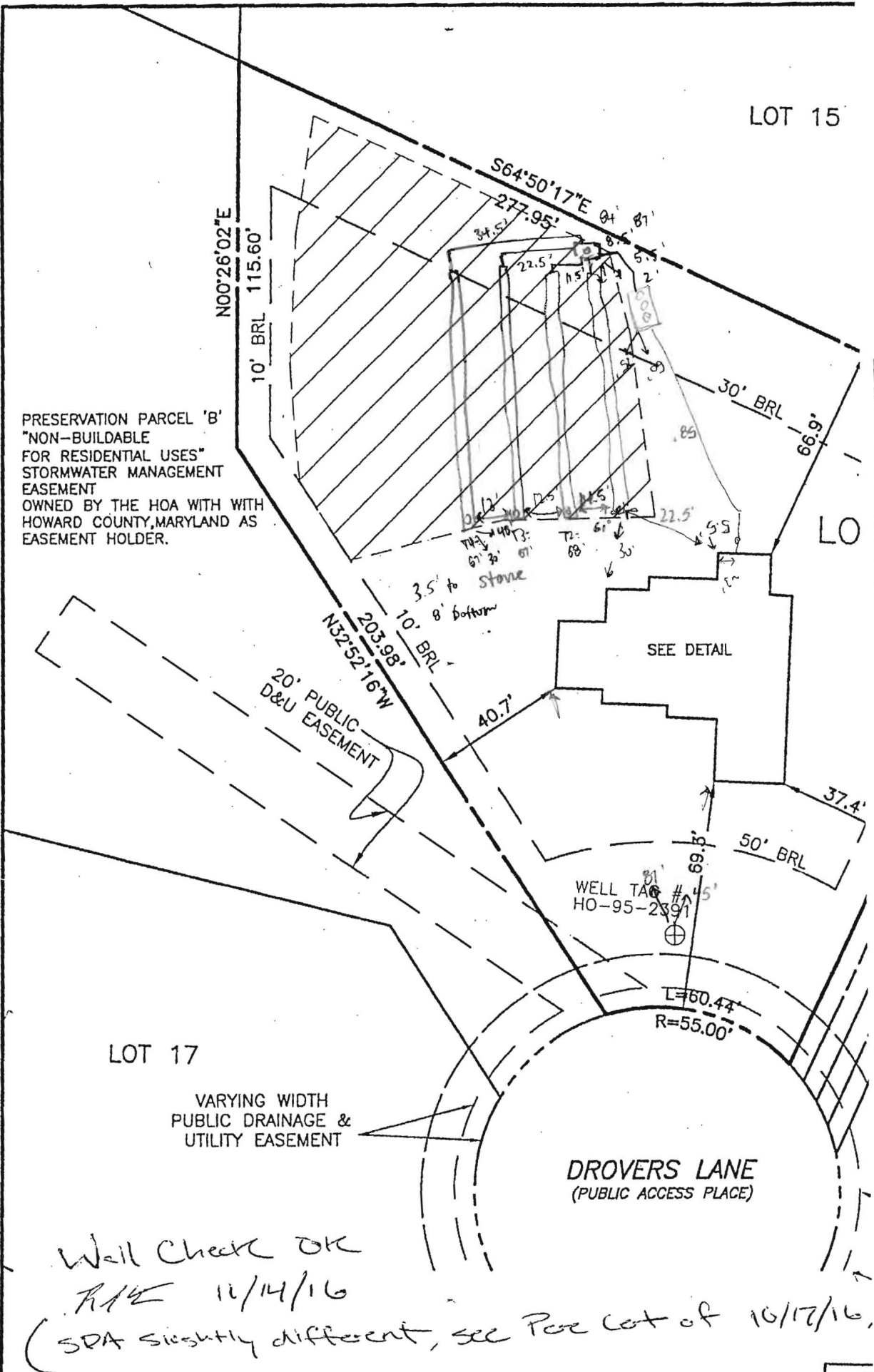


MATTHEW GECKLE

Vice-President

LOT 15

PRESERVATION PARCEL 'B'
"NON-BUILDABLE
FOR RESIDENTIAL USES"
STORMWATER MANAGEMENT
EASEMENT
OWNED BY THE HOA WITH WITH
HOWARD COUNTY, MARYLAND AS
EASEMENT HOLDER.



LOT 17

VARYING WIDTH
PUBLIC DRAINAGE &
UTILITY EASEMENT

DROVERS LANE
(PUBLIC ACCESS PLACE)

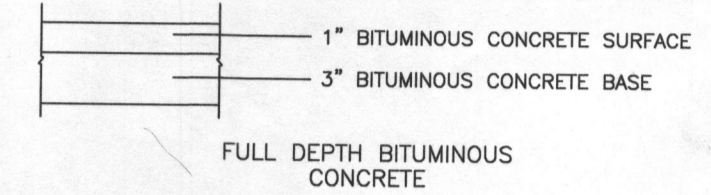
Well Check OK
RAE 11/14/16
(SPA slightly different, see Per Lot of 10/17/16)

TOP OF FOUNDATION WALL ELEVATION = 630.0'
OFFSET DIMENSIONS TO PROPERTY LINES ARE $\pm 0.1'$

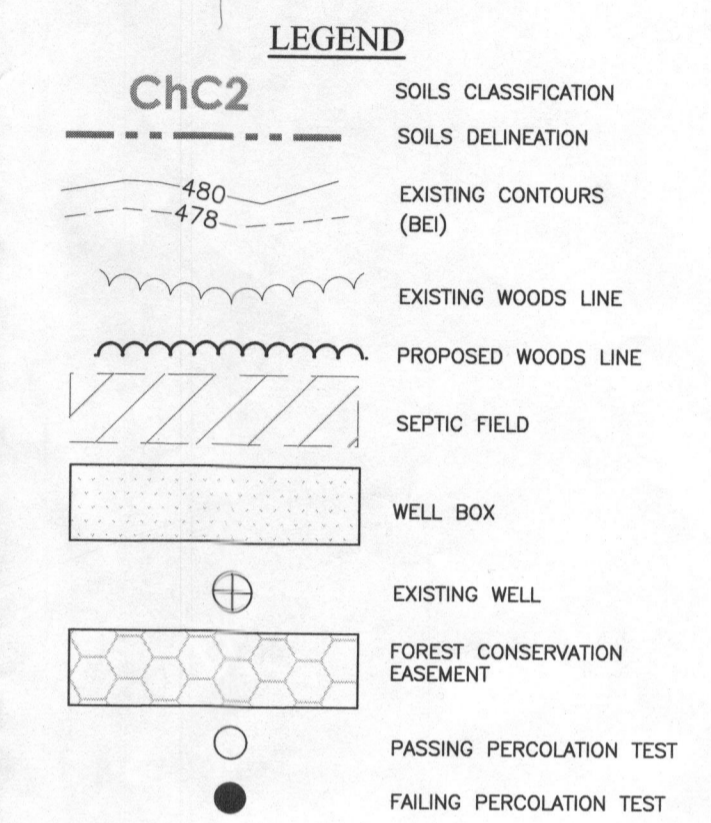
12.7
9.6
13.9

SOILS LEGEND		
MAP SYMBOL	SOIL GROUP	SOIL TYPE
CgB2	C	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
CgC2	B	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
-	-	-

* INDICATES HYDRIC SOILS
TAKEN FROM SOILS SURVEY, ISSUED JULY 1968, MAP NO. 33



PAVING SECTION
NOT TO SCALE



BUILDING PERMIT PLAN NOTES:

1. THE LOT SHOWN HEREON WAS RECORDED ON THE PLAT FOR VISTA RIDGE, PLAT Nos. 22430-22435. REFER TO THE PLATS FOR LOT DIMENSIONS, LOT AREAS, ALL EASEMENTS AND CONDITIONS.
2. SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER A GRADING PLAN AND MODIFIED FOR THIS SPECIFIC HOUSE.
3. TOPOGRAPHY SHOWN HEREON IS TAKEN FROM THE APPROVED ROAD CONSTRUCTION PLANS AND TOPOGRAPHIC INFORMATION PROVIDED BY ACCUBID, INC., ON OR ABOUT JUNE 27, 2013.
4. ALL SEDIMENT AND EROSION CONTROL FEATURES USED ON THIS SITE SHALL COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
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6. THE EXISTING WELL SHOWN ON THIS PLAN, HO-95-2387, HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC., AND IS ACCURATELY SHOWN.
7. THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROJECT'S BOUNDARY EXCEPT AS NOTED.
8. ANY CHANGES TO A PRIVATE SEWAGE EASEMENT OR WELL BOX SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
9. STORMWATER MANAGEMENT FOR THIS LOT WAS DESIGNED TO BE PROVIDED BY BOTH POND #1, A POCKET POND, AND IN POND #2, A MICROPOL ED POND.

Replacement system to maximize width + use center feed trenches to leave room for 3rd system

PLAN VIEW
1" = 30'

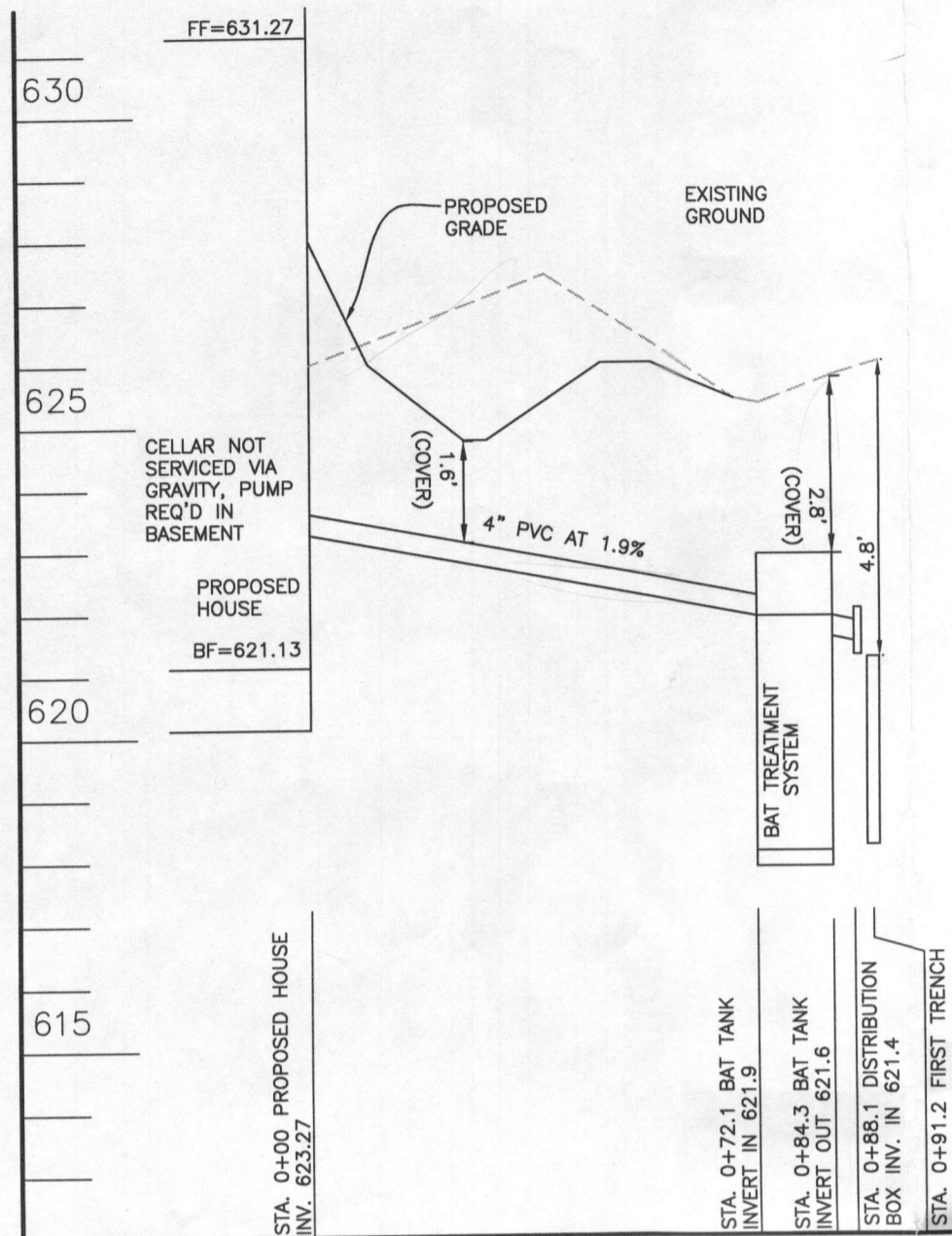
BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.

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

Paul J. ...
Signature Date 10/18/16

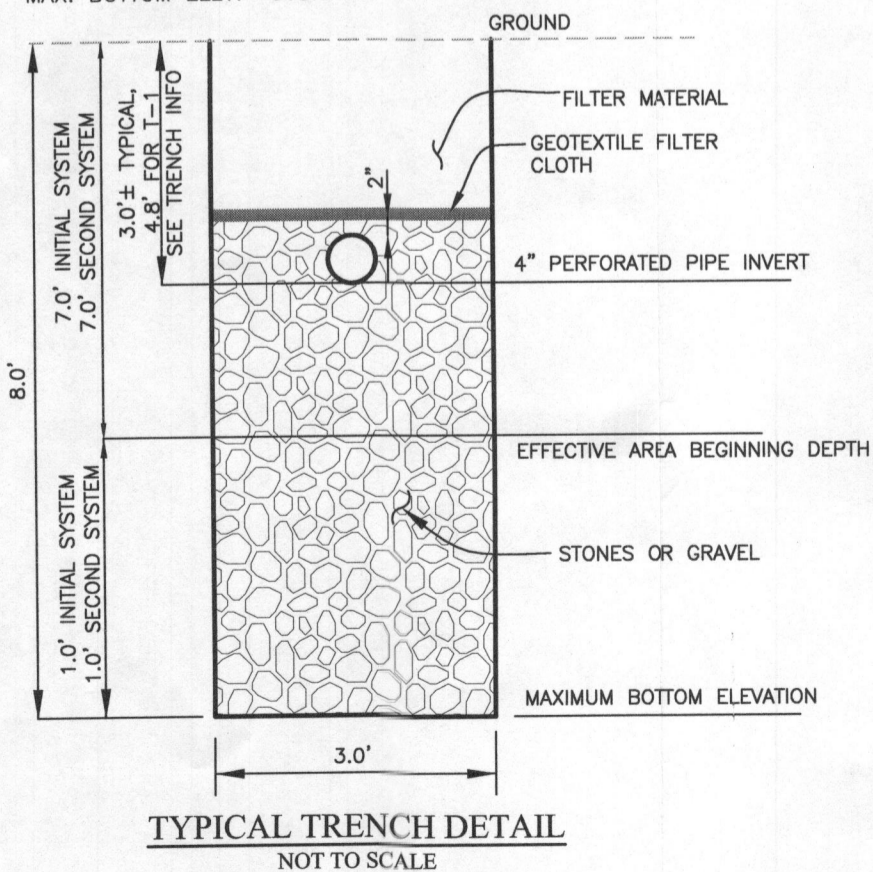
OWNER/BUILDER: DR HORTON, INC. 1356 BEVERLY ROAD SUITE 300 McLEAN, VA 22101 PHONE: 571-723-0813 FAX: 800-551-5015		PROJECT: VISTA RIDGE LOT 16	
DESIGN: JMC		DRAFT: JMC	
DATE: SEPTEMBER, 2016		PROJECT NO. 1635	
SCALE: 1" = 30'		DRAWING 1 OF 2	
LOCATION: 2045 DROVERS LANE COOKSVILLE, MD 21723 TAX MAP No. 8 - BLOCK No. 23 - PARCEL No. 176 4TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND TAX ID NUMBER 04-595485		TITLE: BAT SITE PLAN - REVISED	
HOUSE TYPE: GLEN ABBEY			



SEWER PROFILE - LOT 16
SCALE: VERTICAL 1"=3', HORIZONTAL 1"=30'

TRENCH INFORMATION

TRENCH	LENGTH	GROUND ELEVATION	INVERT ELEVATION	MAX. BOTTOM ELEV.
TRENCH 1-1	61 LF	626.0	621.2	618.0
TRENCH 2-1	87 LF	622.1	619.1	614.1
TRENCH 1-2	66.33 LF	625.2	621.2	617.2
TRENCH 2-2	87 LF	621.0	618.0	613.0
TRENCH 1-3	66.33 LF	624.1	621.1	616.1
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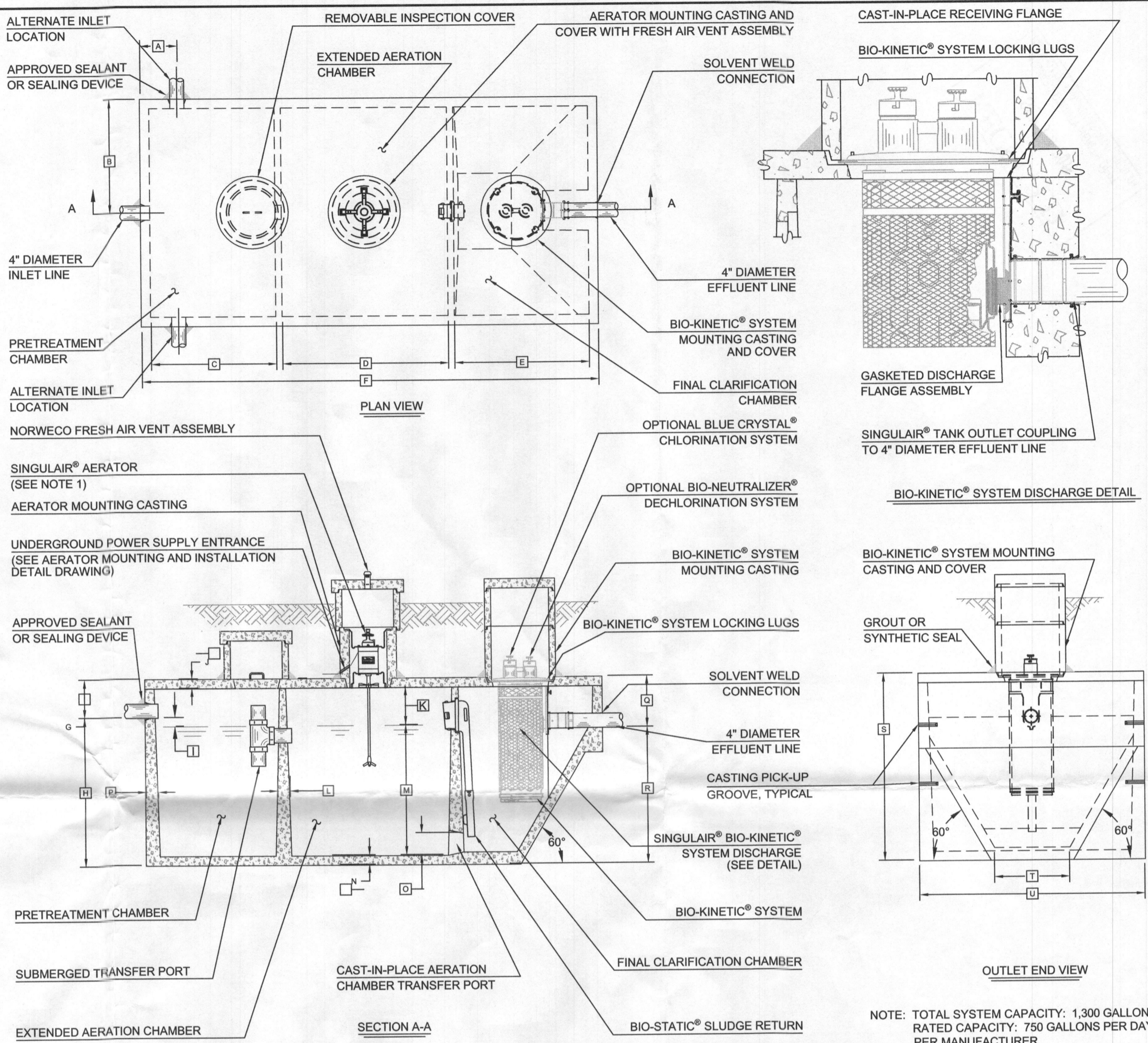


INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	7	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.83	
Trench width	3	
Effective Area Depth	1	
Linear Length of trench Required	260	lf

1st REPLACEMENT SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	7	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.83	
Trench width	3	
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Linear Length of trench Required	260	lf

Approved Septic System Plan
Howard County Health Department
[Signature] 10/15/16
Signature Date

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	



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
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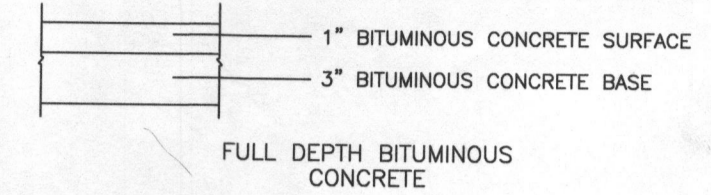
SIGNATURE AND SEAL ARE FOR CULVERT PROFILE ONLY.
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 45577, Expiration Date: 6-08-2018.

[Signature]
Professional Engineer
No. 45577

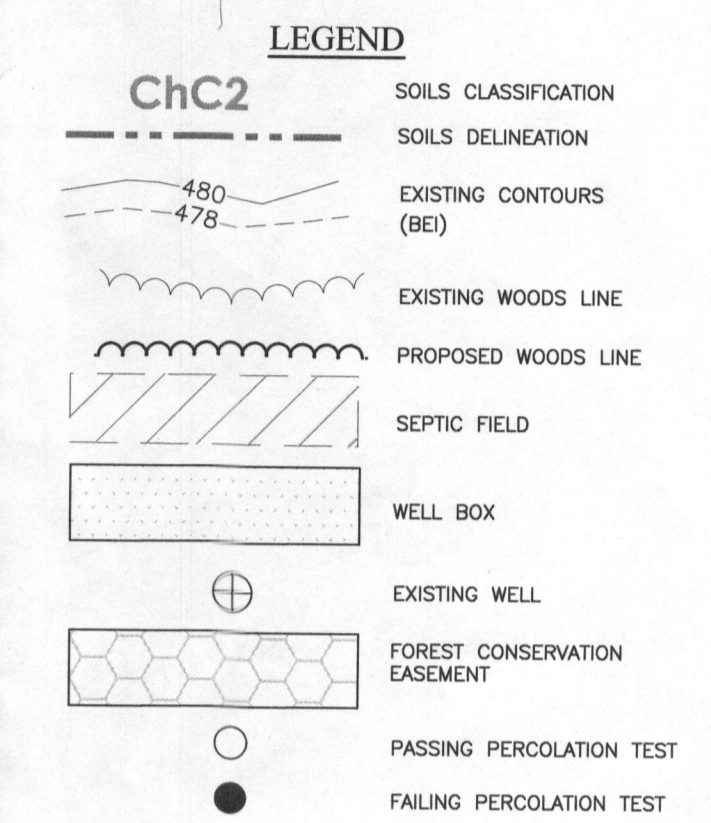
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LOCATION: 2045 DROVERS LANE COOKSVILLE, MD 21723 TAX MAP No. 8 - BLOCK No. 23 - PARCEL No. 176 4TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND TAX ID NUMBER 04-595485	TITLE: BAT PLAN
HOUSE TYPE: GLEN ABBEY	DATE: APRIL, 2016 SEPTEMBER, 2016
DESIGN: JMC	DRAFT: JMC
SCALE: 1" = 30'	PROJECT NO. 1635 DRAWING 2 OF 2

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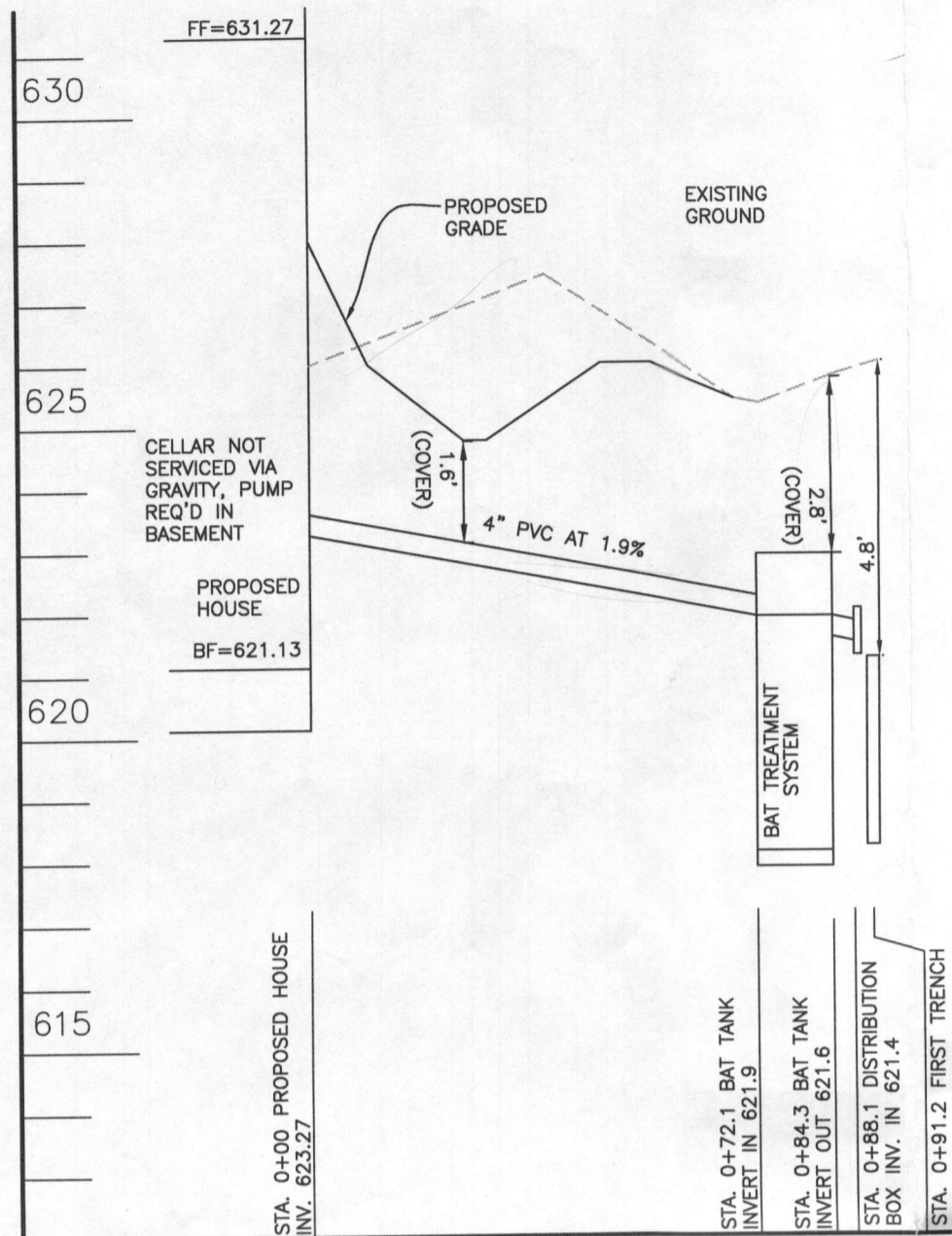
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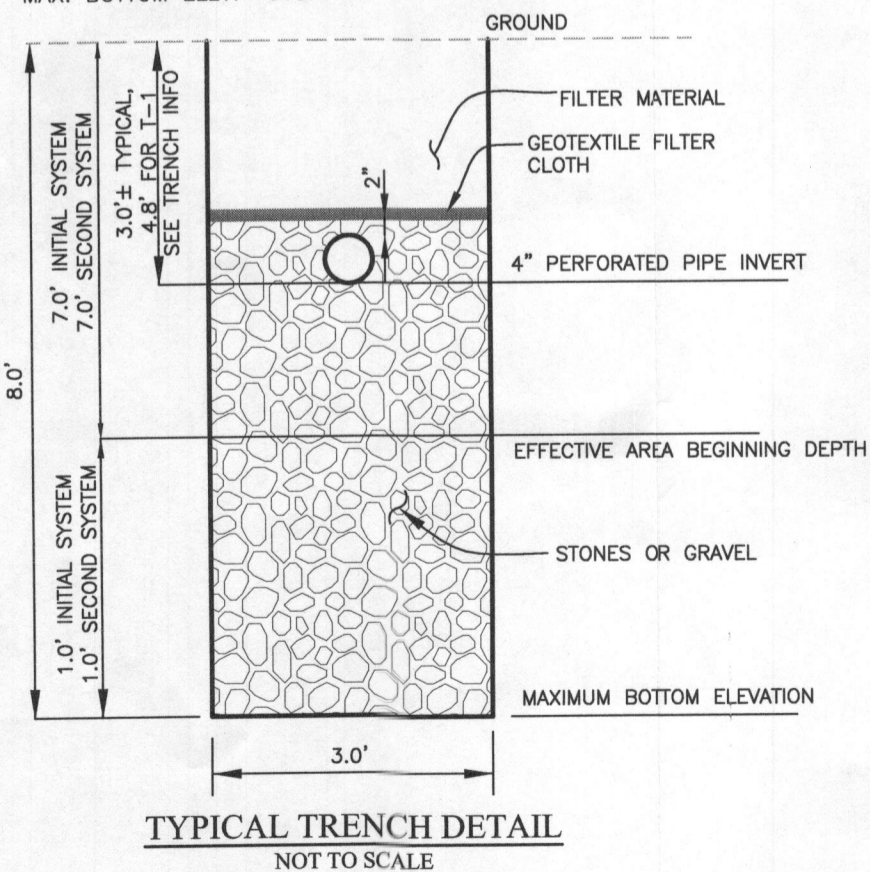
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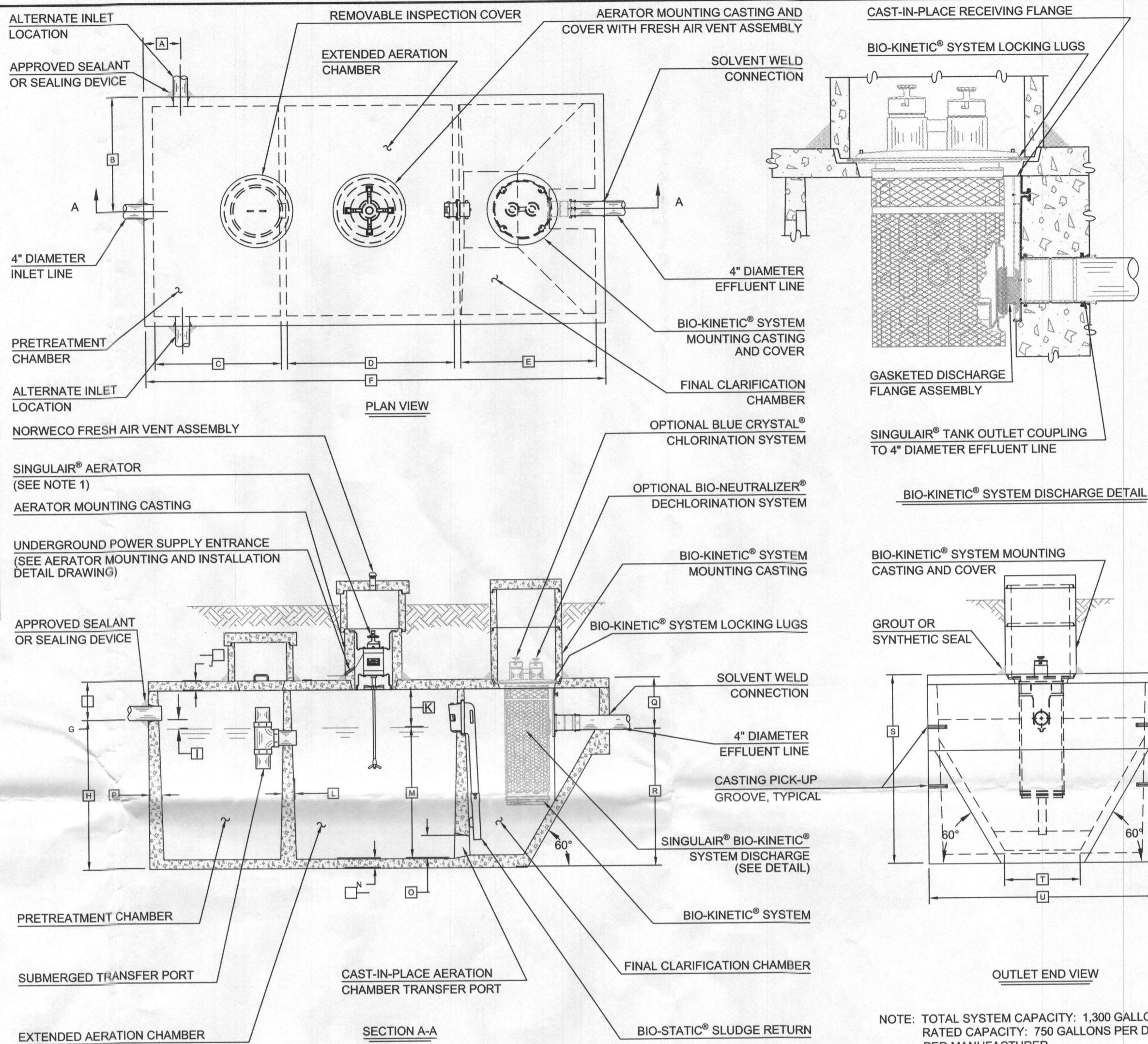


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[Signature] 10/15/16
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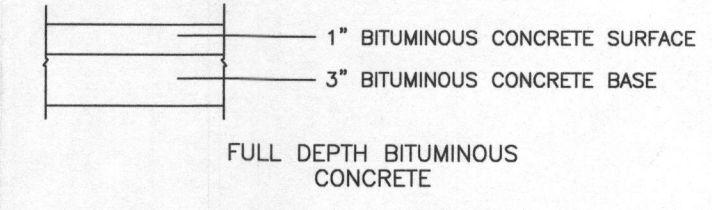
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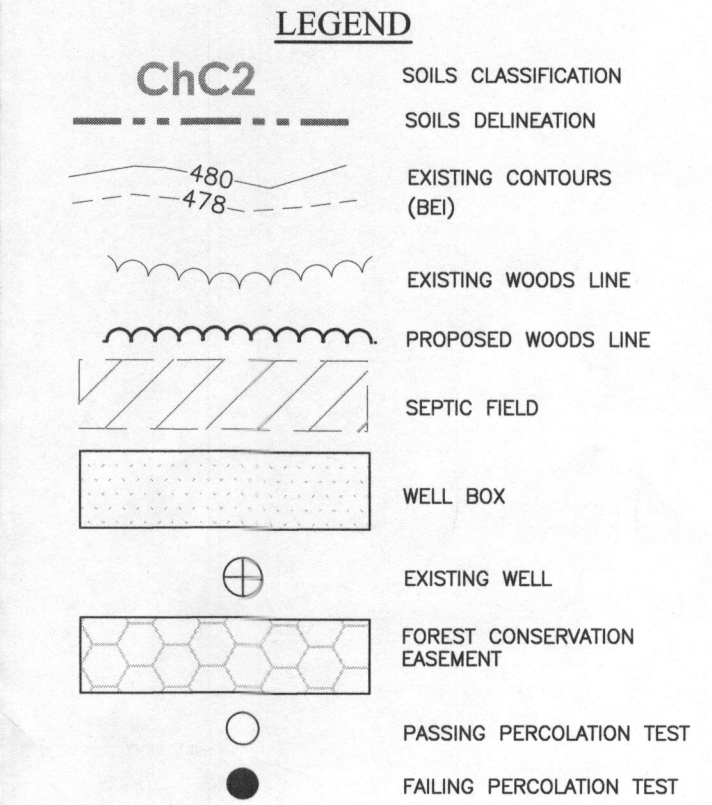
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* INDICATES HYDRIC SOILS
 TAKEN FROM SOILS SURVEY, ISSUED JULY 1968, MAP NO. 33



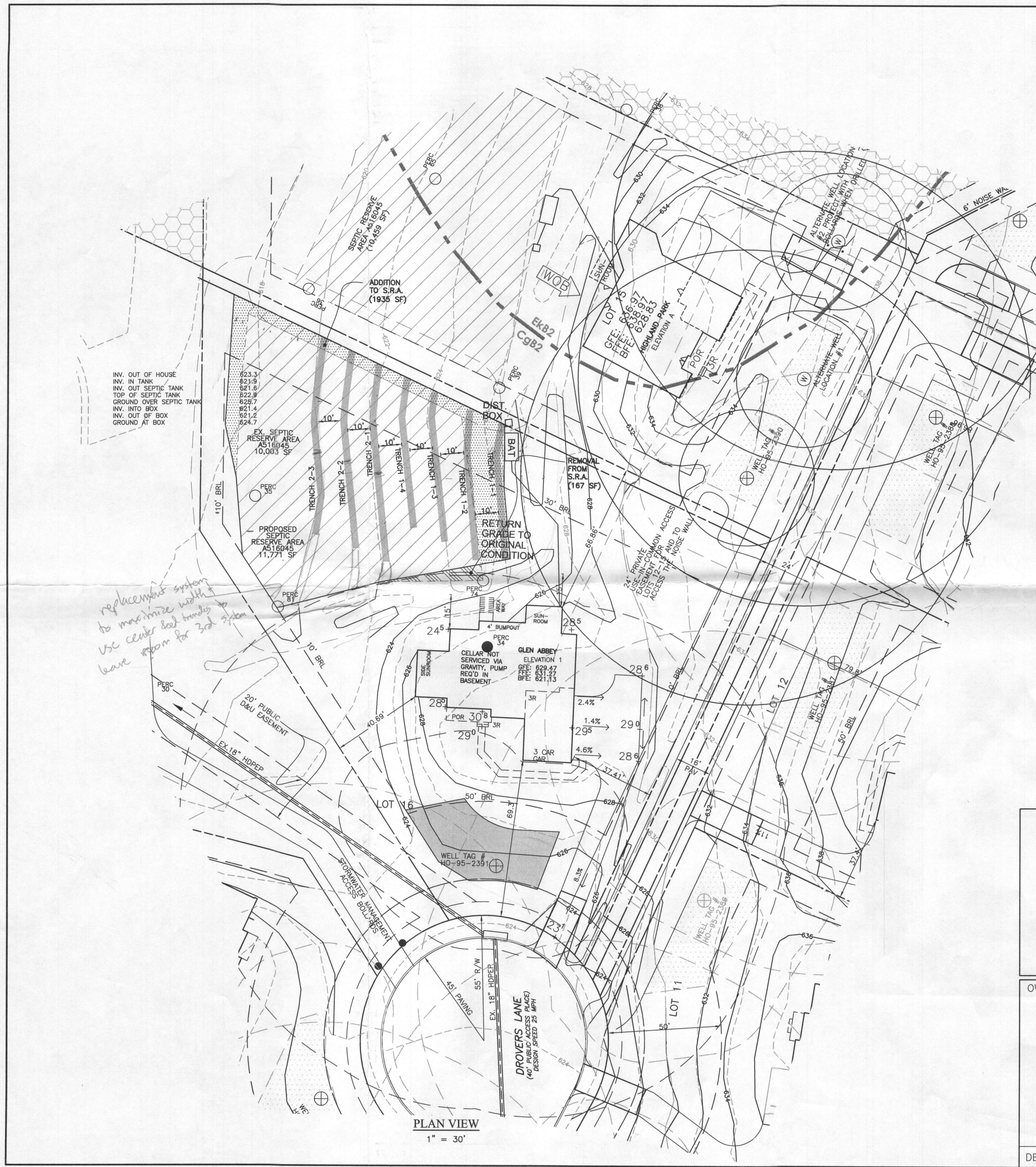
PAVING SECTION
NOT TO SCALE

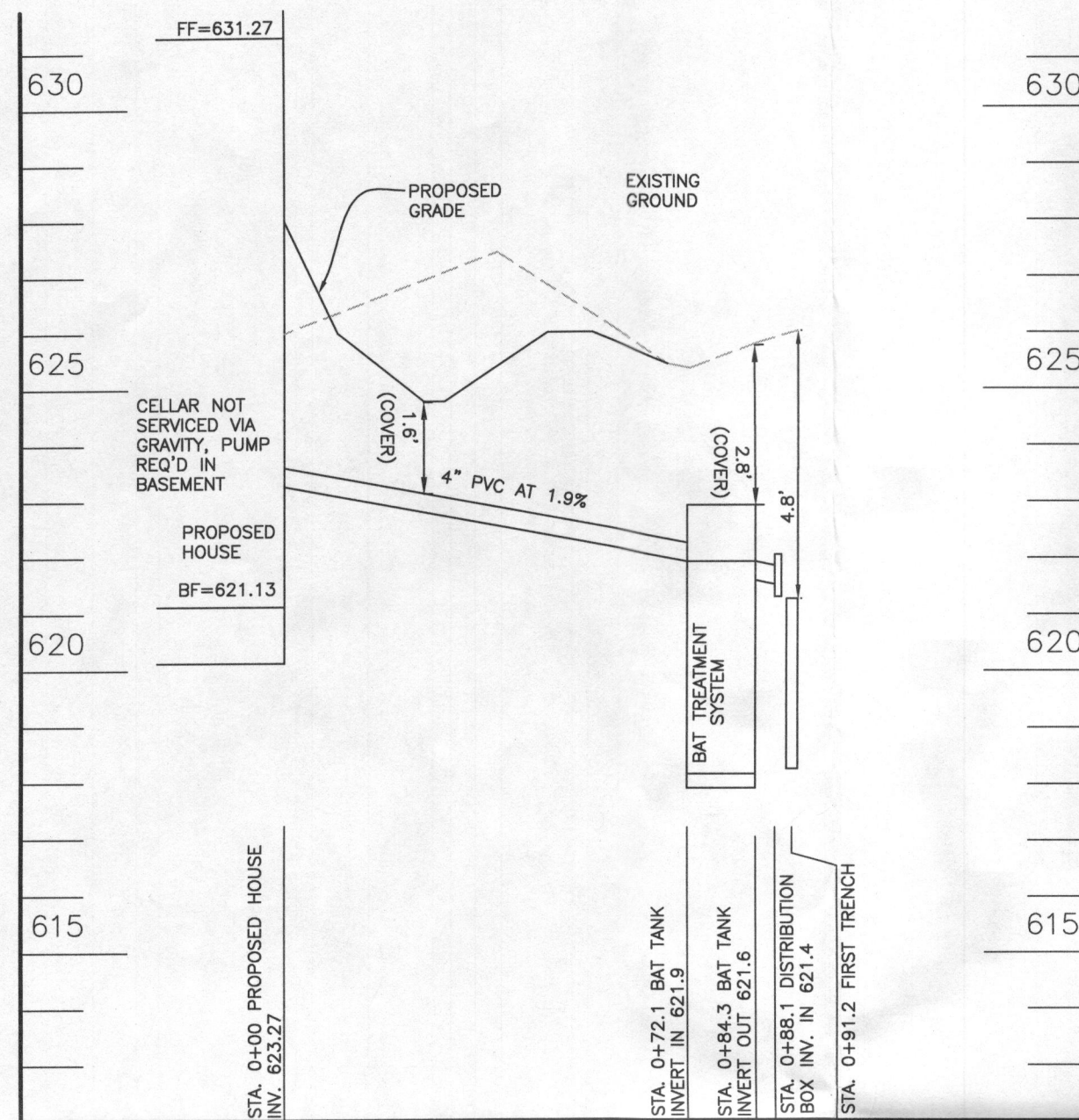


BUILDING PERMIT PLAN NOTES:

1. THE LOT SHOWN HEREON WAS RECORDED ON THE PLAT FOR VISTA RIDGE, PLAT Nos. 22430-22435. REFER TO THE PLATS FOR LOT DIMENSIONS, LOT AREAS, ALL EASEMENTS AND CONDITIONS.
2. SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER A GRADING PLAN AND MODIFIED FOR THIS SPECIFIC HOUSE.
3. TOPOGRAPHY SHOWN HEREON IS TAKEN FROM THE APPROVED ROAD CONSTRUCTION PLANS AND TOPOGRAPHIC INFORMATION PROVIDED BY ACCUBID, INC., ON OR ABOUT JUNE 27, 2013.
4. ALL SEDIMENT AND EROSION CONTROL FEATURES USED ON THIS SITE SHALL COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
5. ALL DRAINAGE AND STORMWATER MANAGEMENT FEATURES USED ON THIS SITE MUST COMPLY WITH THE APPROVED ROAD CONSTRUCTION PLANS EXCEPT AS WAIVED.
6. THE EXISTING WELL SHOWN ON THIS PLAN, HO-95-2387, HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC., AND IS ACCURATELY SHOWN.
7. THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROJECT'S BOUNDARY EXCEPT AS NOTED.
8. ANY CHANGES TO A PRIVATE SEWAGE EASEMENT OR WELL BOX SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
9. STORMWATER MANAGEMENT FOR THIS LOT WAS DESIGNED TO BE PROVIDED BY BOTH POND #1, A POCKET POND, AND IN POND #2, A MICORPOOL ED POND.

BENCHMARK ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS ENGINEERING, INC. 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 <i>Robert [Signature]</i> 10/18/16 Signature Date	
OWNER/BUILDER:		PROJECT:	
DR HORTON, INC. 1356 BEVERLY ROAD SUITE 300 McLEAN, VA 22101 PHONE: 571-723-0813 FAX: 800-551-5015		VISTA RIDGE LOT 16	
LOCATION:		2045 DROVERS LANE COOKVILLE, MD 21723 TAX MAP No. 8 - BLOCK No. 23 - PARCEL No. 176 4TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND TAX ID NUMBER 04-595485	
TITLE:		BAT SITE PLAN - REVISED	
HOUSE TYPE:		GLEN ABBEY	
DATE:	SEPTEMBER, 2016	PROJECT NO.	1635
DESIGN:	JMC	DRAFT:	JMC
SCALE:	1" = 30'	DRAWING	1 OF 2



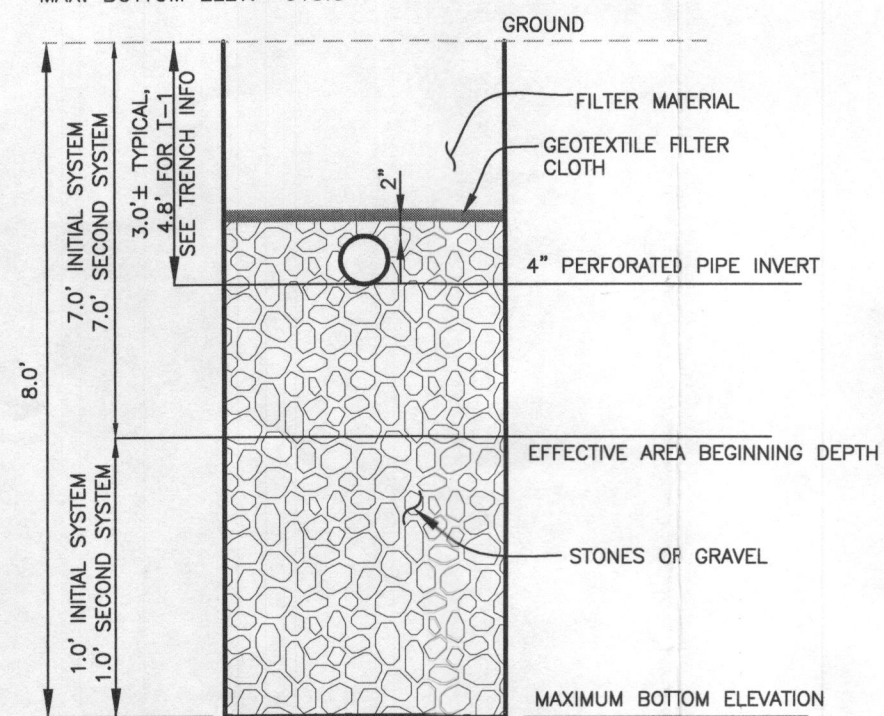


SEWER PROFILE - LOT 16

SCALE: VERTICAL 1"=3', HORIZONTAL 1"=30'

TRENCH INFORMATION

TRENCH	LENGTH (LF)	GROUND ELEVATION	INVERT ELEVATION	MAX. BOTTOM ELEV.
TRENCH 1-1	61	626.0	621.2	618.0
TRENCH 1-2	66.33	625.2	621.2	617.2
TRENCH 1-3	66.33	624.1	621.1	616.1
TRENCH 1-4	66.33	623.0	620.0	615.0
TRENCH 2-1	87	622.1	619.1	614.1
TRENCH 2-2	87	621.0	618.0	613.0
TRENCH 2-3	87	620.1	617.1	612.1



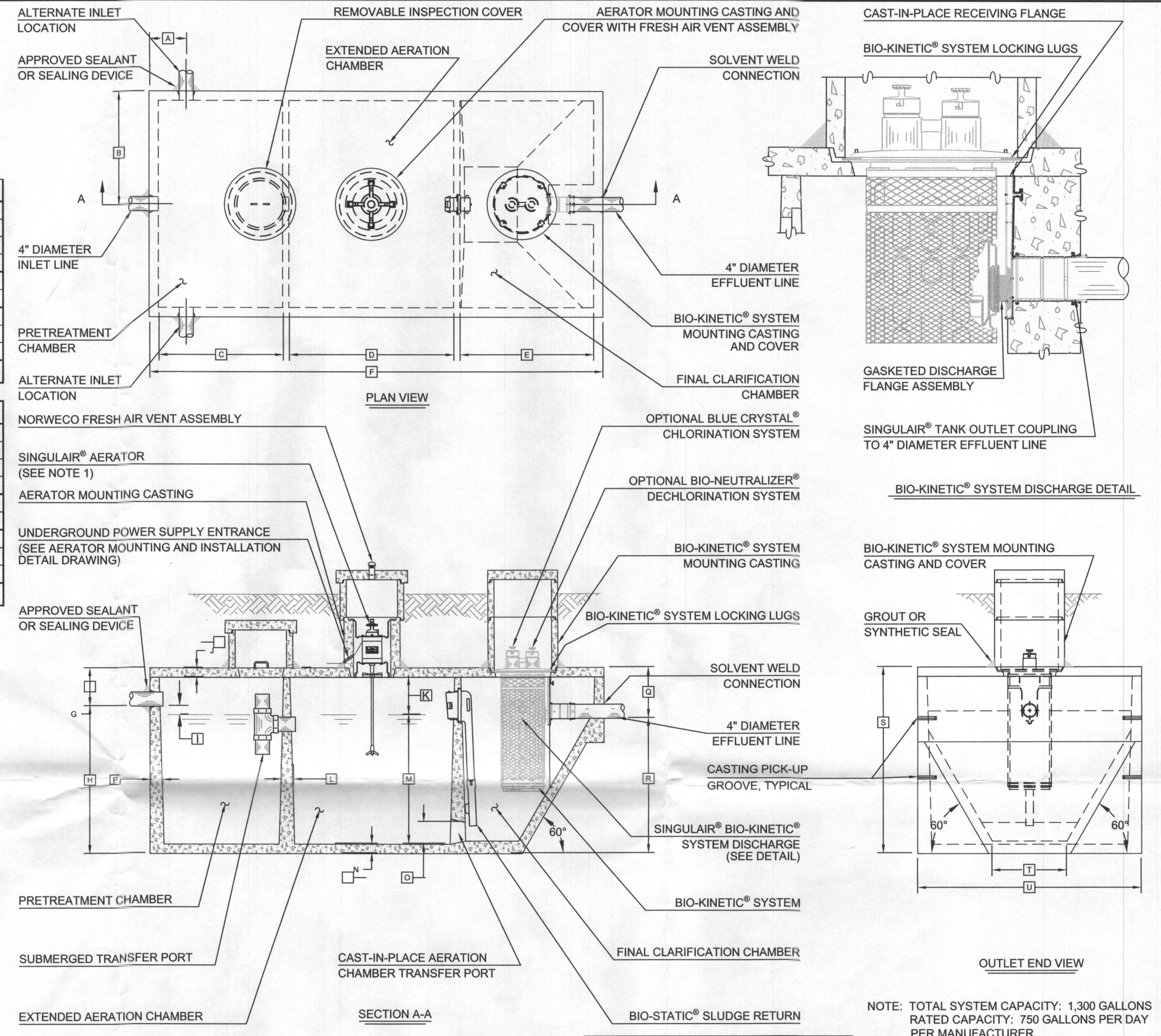
TYPICAL TRENCH DETAIL NOT TO SCALE

INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	7	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.83	
Trench width	3	
Effective Area Depth	1	
Linear Length of trench Required	260	lf

1st REPLACEMENT SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	7	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.83	
Trench width	3	
Effective Area Depth	1	
Linear Length of trench Required	260	lf

Approved Septic System Plan
 Howard County Health Department
Signature 10/13/16
 Date

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	



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.
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 - 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.

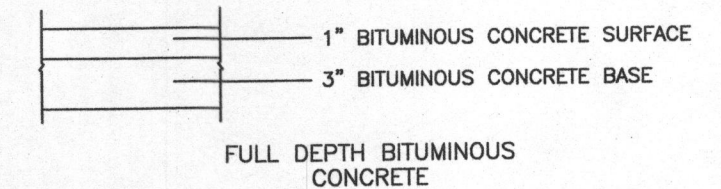
BENCHMARK ENGINEERING, INC.
 ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
 8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 ▲ FAX: 410-465-6644
 BEI@BEI-CIVILENGINEERING.COM

SIGNATURE AND SEAL ARE FOR CULVERT PROFILE ONLY:
 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: 6-08-2018
Signature
 9/16/16

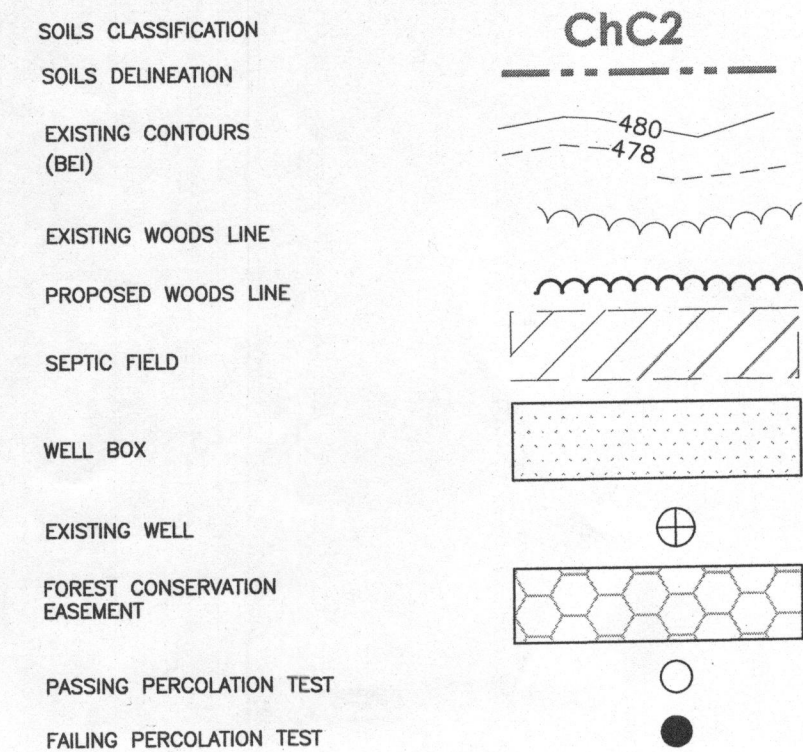
OWNER/BUILDER: DR HORTON, INC. 1356 BEVERLY ROAD SUITE 300 McLEAN, VA 22101 PHONE: 571-723-0813 FAX: 800-551-5015	PROJECT: VISTA RIDGE LOT 16
LOCATION: 2045 DROVERS LANE COOKSVILLE, MD 21723 TAX MAP No. 8 - BLOCK No. 23 - PARCEL No. 176 4TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND TAX ID NUMBER 04-595485	TITLE: BAT PLAN
HOUSE TYPE: GLEN ABBEY	DATE: APRIL, 2016 SEPTEMBER, 2016
DESIGN: JMC	DRAFT: JMC
SCALE: 1" = 30'	PROJECT NO. 1635 DRAWING 2 OF 2

SOILS LEGEND		
MAP SYMBOL	SOIL GROUP	SOIL TYPE
CgB2	C	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
CgC2	B	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
-	-	-

* INDICATES HYDRIC SOILS
 TAKEN FROM SOILS SURVEY, ISSUED JULY 1968, MAP NO. 33



PAVING SECTION
 NOT TO SCALE
LEGEND



BUILDING PERMIT PLAN NOTES:

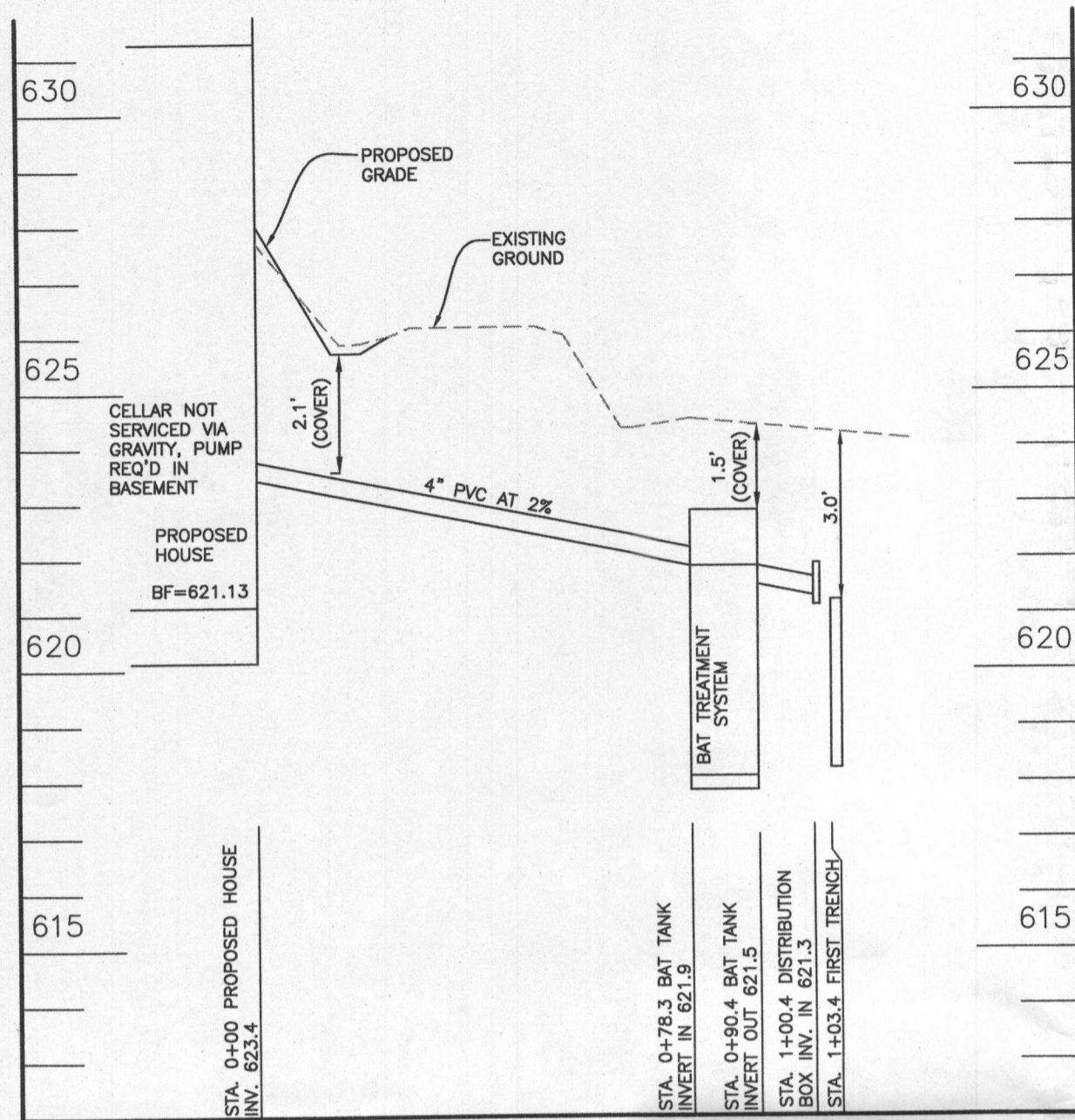
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Superseded By 10/18/16

 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-CIVILENGINEERING.COM	<i>APC</i> Approved Septic System Plan Howard County Health Department <i>Dana Conrad 5-16-16</i> Signature Date <i>B1</i>
	OWNER/BUILDER: DR HORTON, INC. 1356 BEVERLY ROAD SUITE 300 McLEAN, VA 22101 PHONE: 571-723-0813 FAX: 800-551-5015
TITLE: BAT SITE PLAN	HOUSE TYPE: GLEN ABBEY
DATE: APRIL, 2016	PROJECT NO. 1635
DESIGN: JMC	DRAFT: JMC
SCALE: 1" = 30'	DRAWING 1 OF 2



PLAN VIEW
 1" = 30'

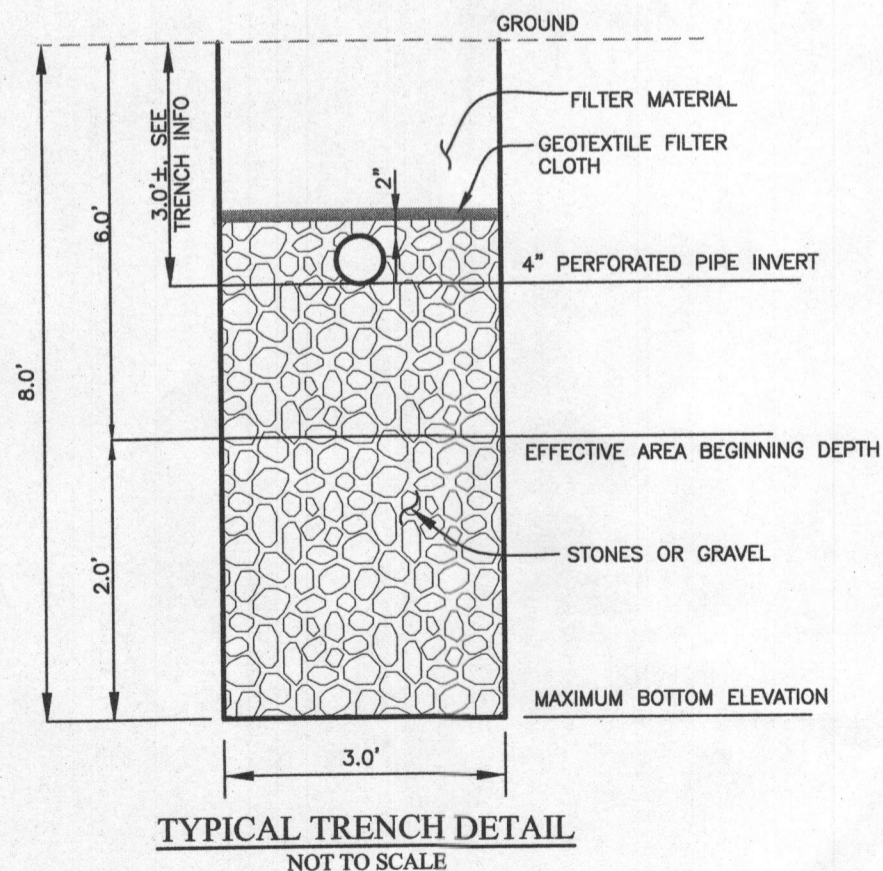


SEWER PROFILE - LOT 16

SCALE: VERTICAL 1"=3', HORIZONTAL 1"=30'

TRENCH INFORMATION

TRENCH 1-1	TRENCH 2-1	TRENCH 1-2	TRENCH 2-2	TRENCH 1-3	TRENCH 2-3
TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF
GROUND ELEVATION 624.2	GROUND ELEVATION 621.9	GROUND ELEVATION 623.9	GROUND ELEVATION 620.7	GROUND ELEVATION 623.0	GROUND ELEVATION 619.8
INVERT ELEVATION 621.2	INVERT ELEVATION 618.9	INVERT ELEVATION 620.9	INVERT ELEVATION 617.7	INVERT ELEVATION 620.0	INVERT ELEVATION 616.8
MAX. BOTTOM ELEV. 616.2	MAX. BOTTOM ELEV. 613.9	MAX. BOTTOM ELEV. 615.9	MAX. BOTTOM ELEV. 612.7	MAX. BOTTOM ELEV. 615.0	MAX. BOTTOM ELEV. 611.8

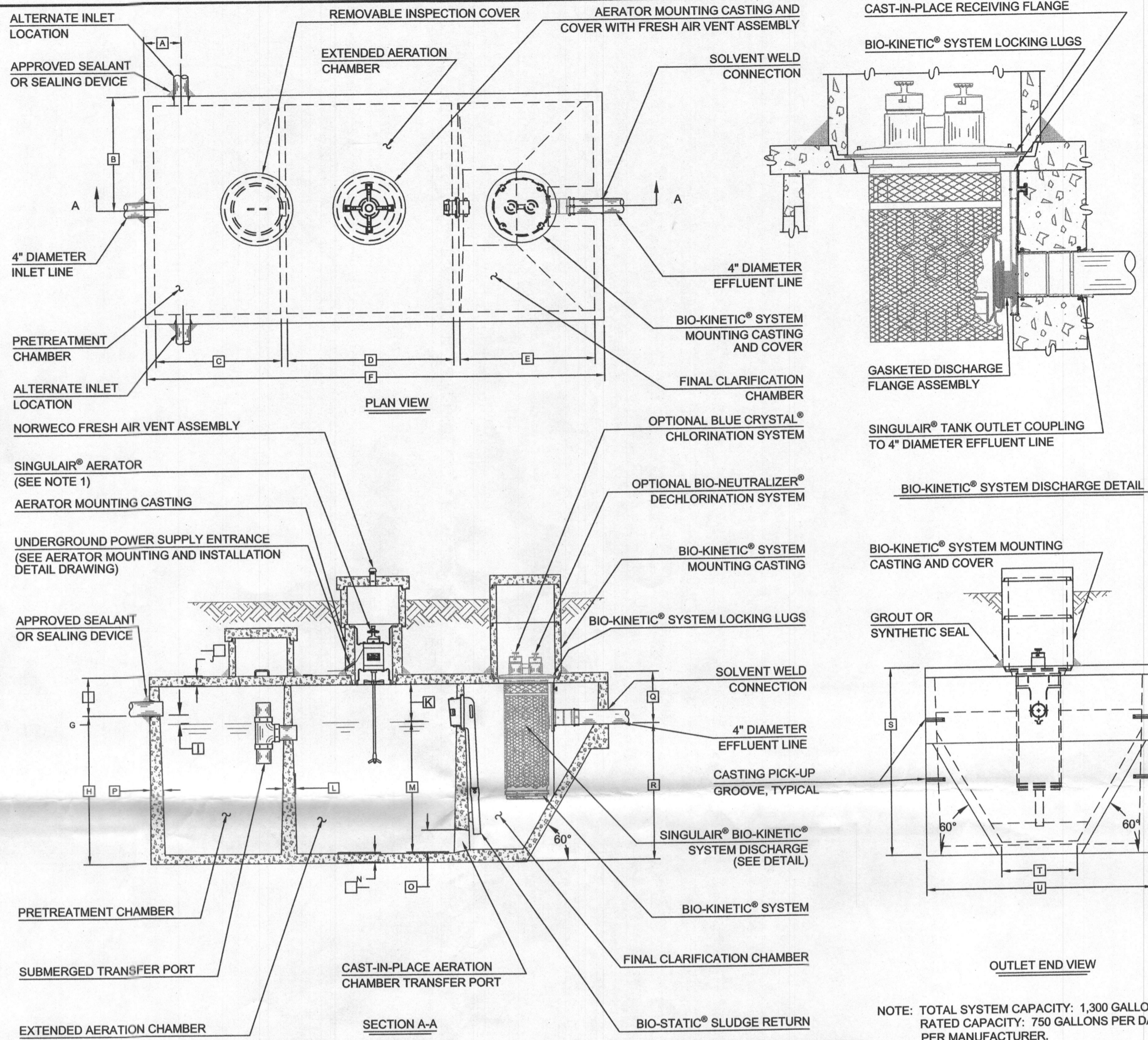


INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	6	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.625	
Trench width	3	
Effective Area Depth	2	
Linear Length of trench Required	195	lf

1st REPLACEMENT SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	6	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.625	
Trench width	3	
Effective Area Depth	2	
Linear Length of trench Required	195	lf

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 TNLTP-600 GPD
 U.S. AND FOREIGN PATENTS PENDING
 © MMVII
 3-26-07
 BDS
 JMM
 10-16-06
 NTS
 PC-5-7091



NOTES:
 TOTAL SYSTEM CAPACITY: 1,300 GALLONS
 RATED CAPACITY: 600 GALLONS PER DAY AND
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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-CIVILENGINEERING.COM

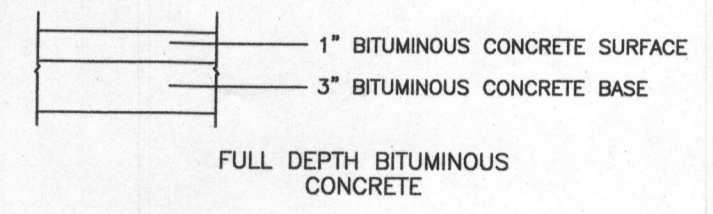
SIGNATURE AND SEAL ARE FOR CULVERT PROFILE ONLY:
 Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 45577, Expiration Date: 6-08-2016.



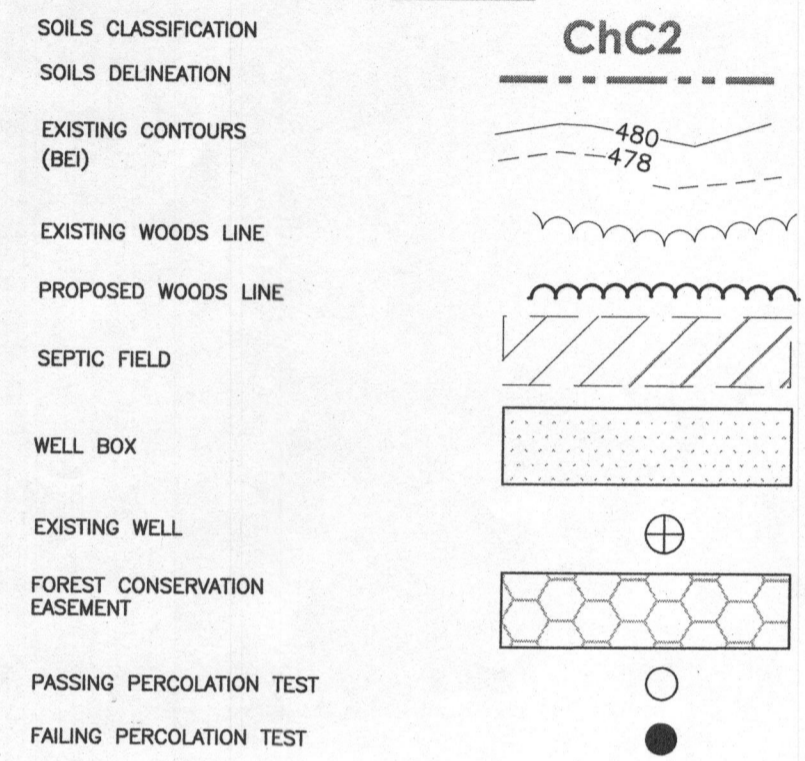
OWNER/BUILDER: DR HORTON, INC. 1356 BEVERLY ROAD SUITE 300 MCLEAN, VA 22101 PHONE: 571-723-0813 FAX: 800-551-5015	PROJECT: VISTA RIDGE LOT 16
LOCATION: 2045 DROVERS LANE COOKSVILLE, MD 21723 TAX MAP No. 8 - BLOCK No. 23 - PARCEL No. 176 4TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND TAX ID NUMBER 04-595449	TITLE: BAT PLAN
HOUSE TYPE: GLEN ABBEY	DATE: APRIL, 2016
DESIGN: JMC	DRAFT: JMC
SCALE: 1" = 30'	PROJECT NO. 1635 DRAWING 2 OF 2

SOILS LEGEND		
MAP SYMBOL	SOIL GROUP	SOIL TYPE
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CgC2	B	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
-	-	-

* INDICATES HYDRIC SOILS
TAKEN FROM SOILS SURVEY, ISSUED JULY 1968, MAP NO. 33



PAVING SECTION
NOT TO SCALE
LEGEND



BUILDING PERMIT PLAN NOTES:

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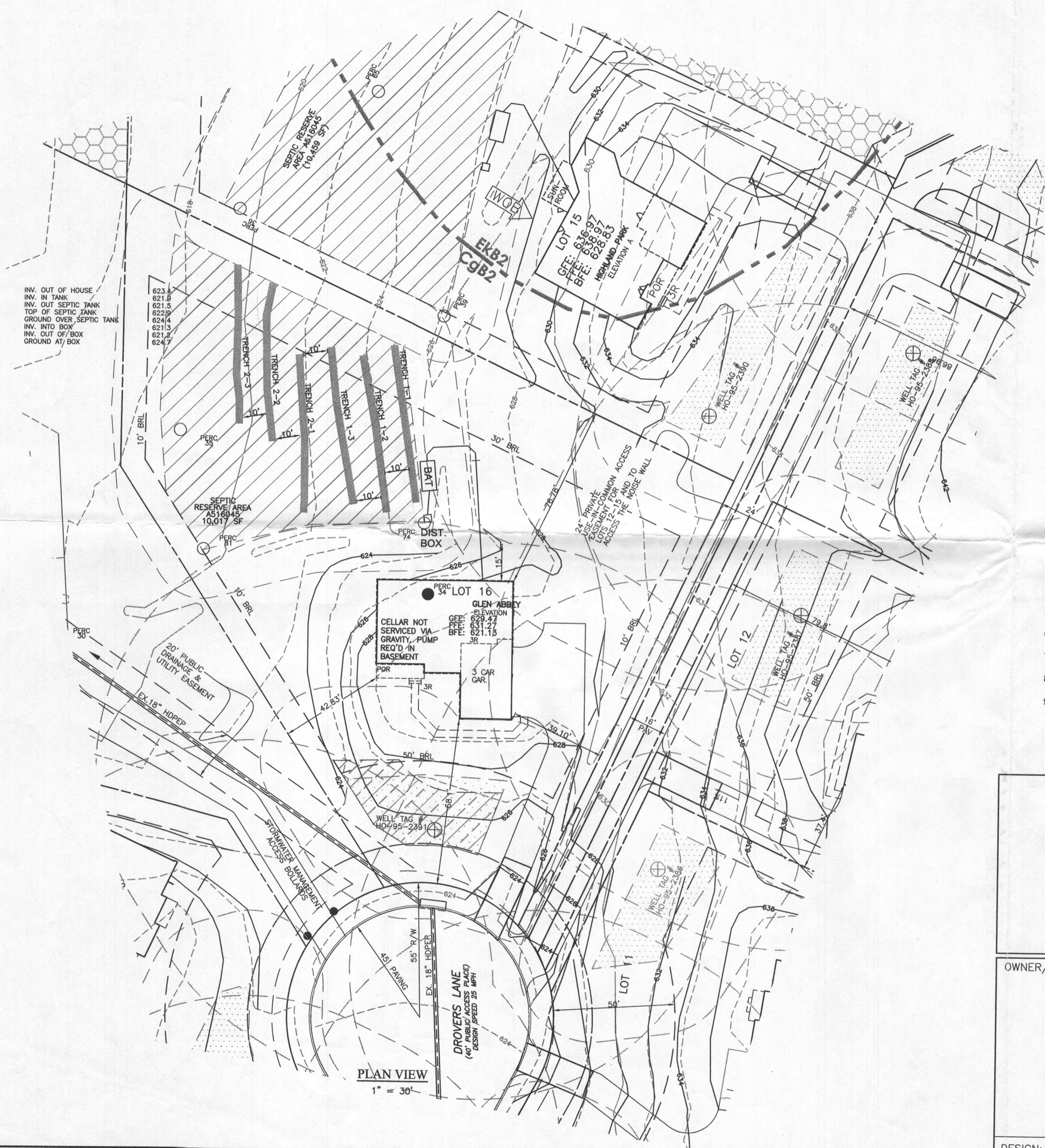
Superseded By 10/18/16

BENCHMARK
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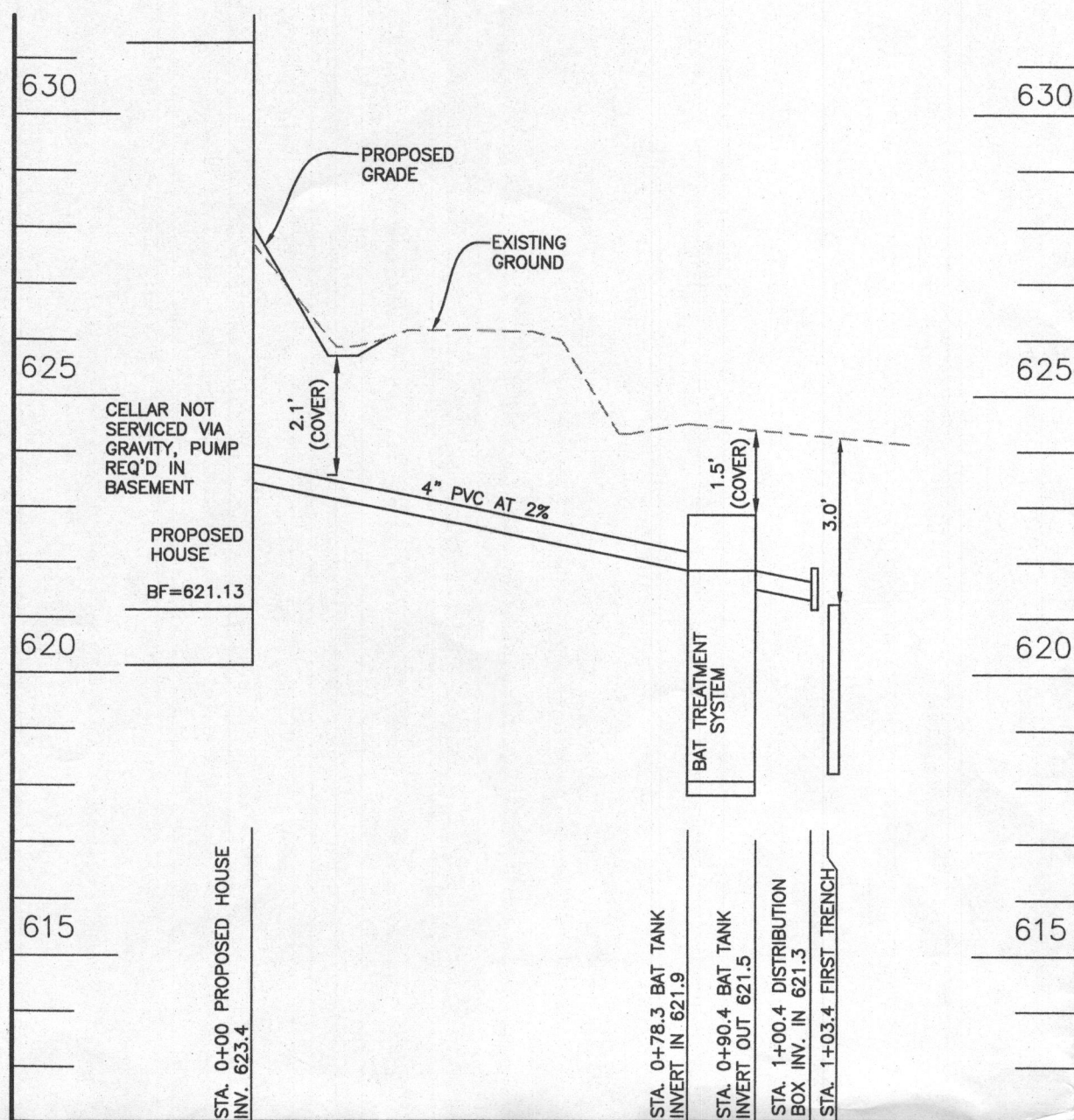
RAC

Approved Septic System Plan
Howard County Health Department
Dana Bernard 5-6-16
Signature Date

OWNER/BUILDER: DR HORTON, INC. 1356 BEVERLY ROAD SUITE 300 MCLEAN, VA 22101 PHONE: 571-723-0813 FAX: 800-551-5015	PROJECT: VISTA RIDGE LOT 16
	LOCATION: 2045 DROVERS LANE COOKSVILLE, MD 21723 TAX MAP No. 8 - BLOCK No. 23 - PARCEL No. 176 4TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND TAX ID NUMBER 04-5954
TITLE: BAT SITE PLAN	HOUSE TYPE: GLEN ABBEY
DATE: APRIL, 2016	PROJECT NO. 1635
DESIGN: JMC	DRAFT: JMC
SCALE: 1" = 30'	DRAWING 1 OF 2



PLAN VIEW
1" = 30'

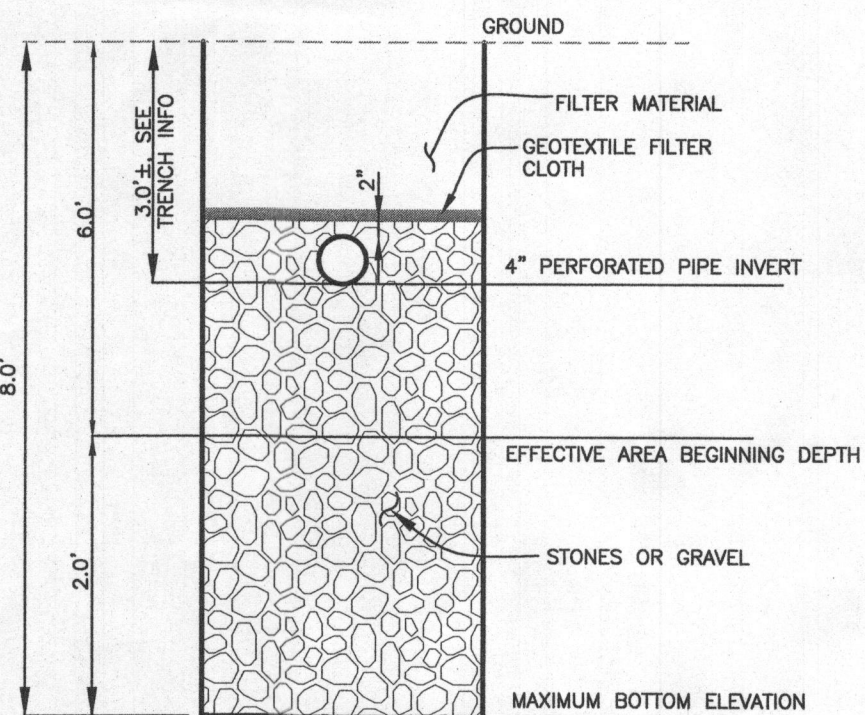


SEWER PROFILE - LOT 16

SCALE: VERTICAL 1"=3', HORIZONTAL 1"=30'

TRENCH INFORMATION

TRENCH 1-1	TRENCH 2-1	TRENCH 1-2	TRENCH 2-2	TRENCH 1-3	TRENCH 2-3
TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF
GROUND ELEVATION 624.2	GROUND ELEVATION 621.9	GROUND ELEVATION 623.9	GROUND ELEVATION 620.7	GROUND ELEVATION 623.0	GROUND ELEVATION 619.8
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TYPICAL TRENCH DETAIL
NOT TO SCALE

INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	6	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.625	
Trench width	3	
Effective Area Depth	2	
Linear Length of trench Required	195	lf

1st REPLACEMENT SYSTEM		
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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	

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LOW-PROFILE SINGULAIR® BIO-KINETIC® WASTEWATER TREATMENT SYSTEM MODEL TNTLP-600 GPD

U.S. AND FOREIGN PATENTS PENDING

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3-26-07 B

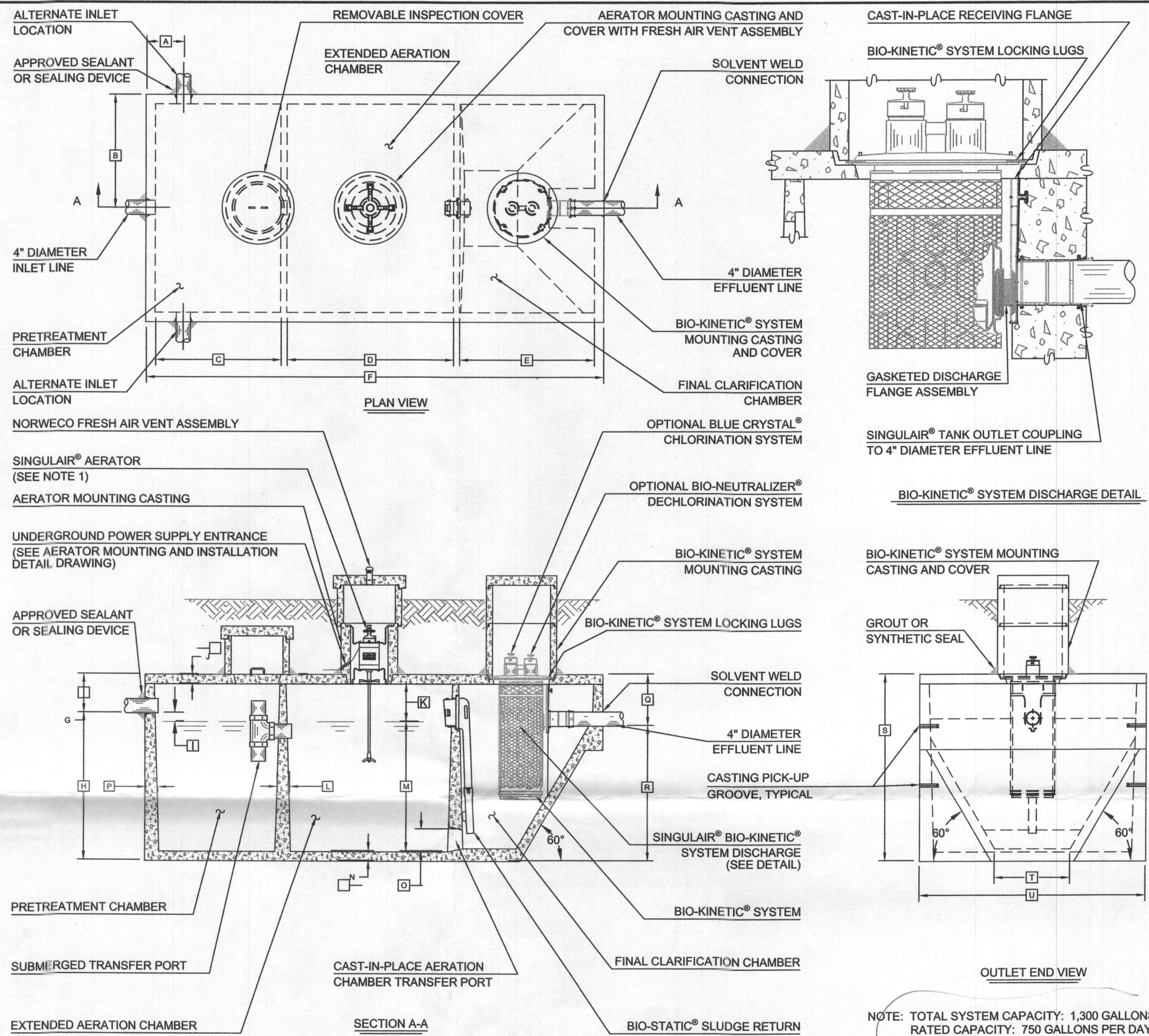
BDS

JMM

10-16-06

NTS

PC-5-7091



NOTES:
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SEE MANUFACTURER SPECIFICATIONS FOR DETAILS. WWW.NORWECO.COM

BENCHMARK ENGINEERING, INC.

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ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 ▲ FAX: 410-465-6644
BEI@BEI-CIVILENGINEERING.COM

SIGNATURE AND SEAL ARE FOR CULVERT PROFILE ONLY.

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.

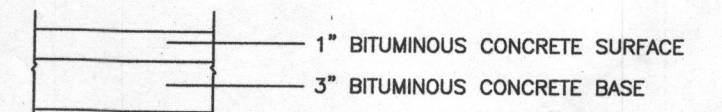
[Signature]

4/5/16

OWNER/BUILDER: DR HORTON, INC. 1356 BEVERLY ROAD SUITE 300 McLEAN, VA 22101 PHONE: 571-723-0813 FAX: 800-551-5015	PROJECT: VISTA RIDGE LOT 16
LOCATION: 2045 DROVERS LANE COOKSVILLE, MD 21723 TAX MAP No. 8 - BLOCK No. 23 - PARCEL No. 176 4TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND TAX ID NUMBER 04-595461	TITLE: BAT PLAN
HOUSE TYPE: GLEN ABBEY	DATE: APRIL, 2016
DESIGN: JMC	DRAFT: JMC
PROJECT NO. 1635	DRAWING 2 OF 2

SOILS LEGEND		
MAP SYMBOL	SOIL GROUP	SOIL TYPE
CgB2	C	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
CgC2	B	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
-	-	-

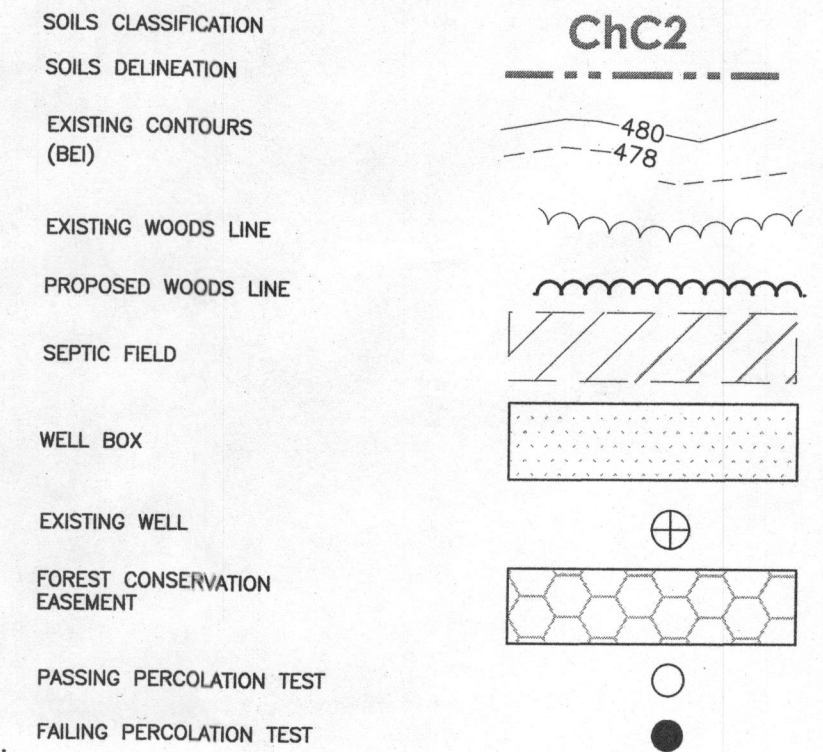
* INDICATES HYDRIC SOILS
TAKEN FROM SOILS SURVEY, ISSUED JULY 1968, MAP NO. 33



FULL DEPTH BITUMINOUS CONCRETE

PAVING SECTION
NOT TO SCALE

LEGEND



BUILDING PERMIT PLAN NOTES:

1. THE LOT SHOWN HEREON WAS RECORDED ON THE PLAT FOR VISTA RIDGE, PLAT Nos. 22430-22435. REFER TO THE PLATS FOR LOT DIMENSIONS, LOT AREAS, ALL EASEMENTS AND CONDITIONS.
2. SEDIMENT AND EROSION CONTROLS WERE APPROVED BY HOWARD SOIL CONSERVATION DISTRICT UNDER A GRADING PLAN AND MODIFIED FOR THIS SPECIFIC HOUSE.
3. TOPOGRAPHY SHOWN HEREON IS TAKEN FROM THE APPROVED ROAD CONSTRUCTION PLANS AND TOPOGRAPHIC INFORMATION PROVIDED BY ACCUBID, INC., ON OR ABOUT JUNE 27, 2013.
4. ALL SEDIMENT AND EROSION CONTROL FEATURES USED ON THIS SITE SHALL COMPLY WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
5. ALL DRAINAGE AND STORMWATER MANAGEMENT FEATURES USED ON THIS SITE MUST COMPLY WITH THE APPROVED ROAD CONSTRUCTION PLANS EXCEPT AS WAIVED.
6. THE EXISTING WELL SHOWN ON THIS PLAN, HO-95-2387, HAS BEEN FIELD LOCATED BY BENCHMARK ENGINEERING, INC., AND IS ACCURATELY SHOWN.
7. THERE ARE NO EXISTING WELLS OR SEPTIC SYSTEMS WITHIN 100' OF THIS PROJECT'S BOUNDARY EXCEPT AS NOTED.
8. ANY CHANGES TO A PRIVATE SEWAGE EASEMENT OR WELL BOX SHALL REQUIRE A REVISED PERCOLATION CERTIFICATION PLAN.
9. STORMWATER MANAGEMENT FOR THIS LOT WAS DESIGNED TO BE PROVIDED BY BOTH POND #1, A POCKET POND, AND IN POND #2, A MICROPOL ED POND.

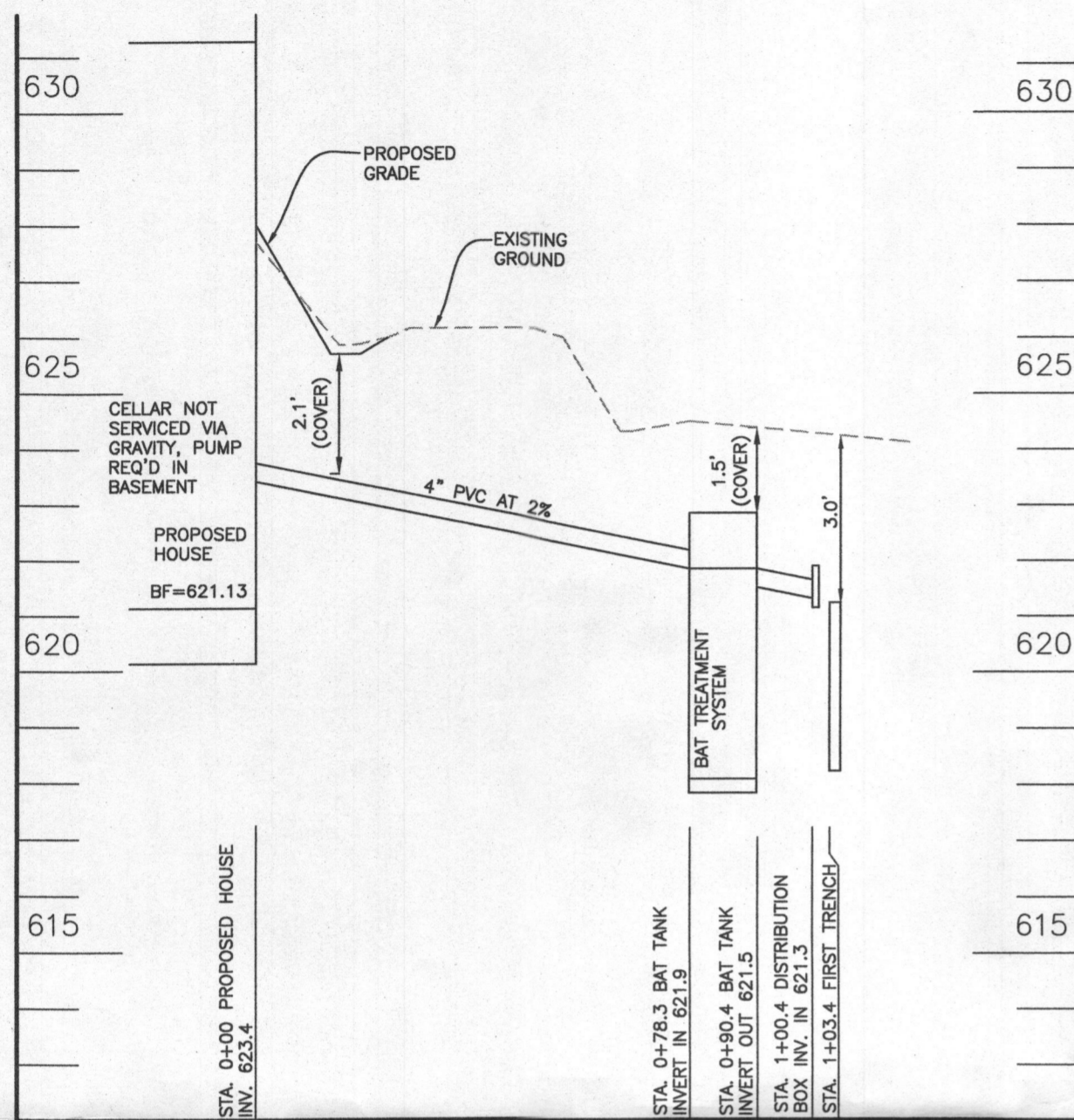
BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.

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

OWNER/BUILDER: DR HORTON, INC. 1356 BEVERLY ROAD SUITE 300 McLEAN, VA 22101 PHONE: 571-723-0813 FAX: 800-551-5015	PROJECT: VISTA RIDGE LOT 16	
	LOCATION: 2045 DROVERS LANE COOKSVILLE, MD 21723 TAX MAP No. 8 - BLOCK No. 23 - PARCEL No. 176 4TH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND TAX ID NUMBER 04-595471	
	TITLE: BAT SITE PLAN	
	HOUSE TYPE: GLEN ABBEY	
	DATE: APRIL, 2016	PROJECT NO. 1635
DESIGN: JMC	DRAFT: JMC	SCALE: 1" = 30'
		DRAWING 1 OF 2



PLAN VIEW
1" = 30'

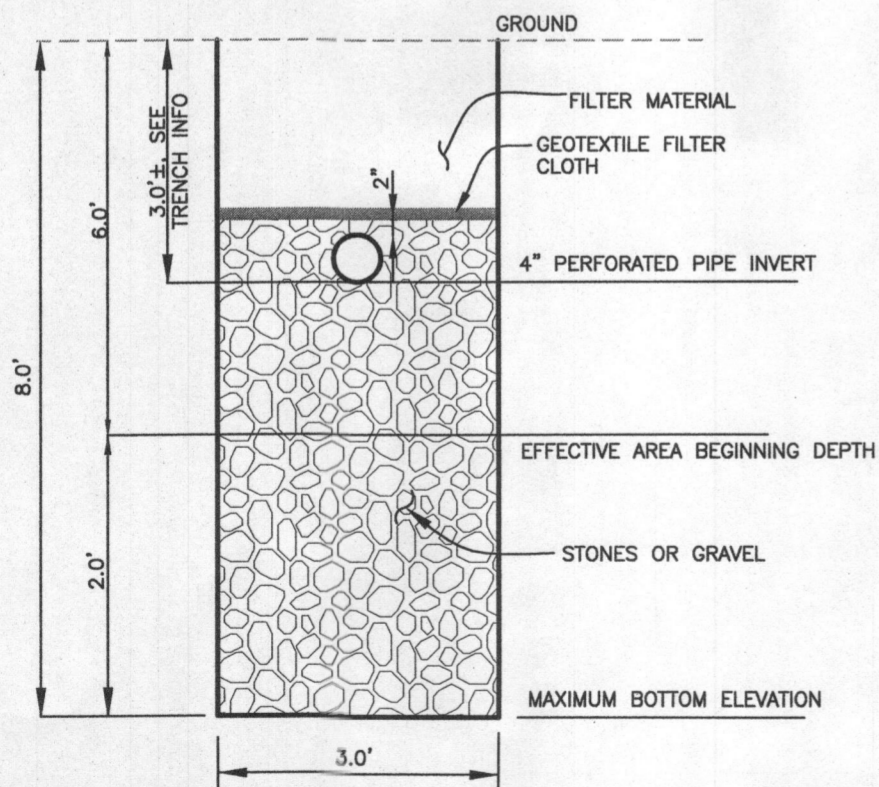


SEWER PROFILE - LOT 16

SCALE: VERTICAL 1"=3', HORIZONTAL 1"=30'

TRENCH INFORMATION

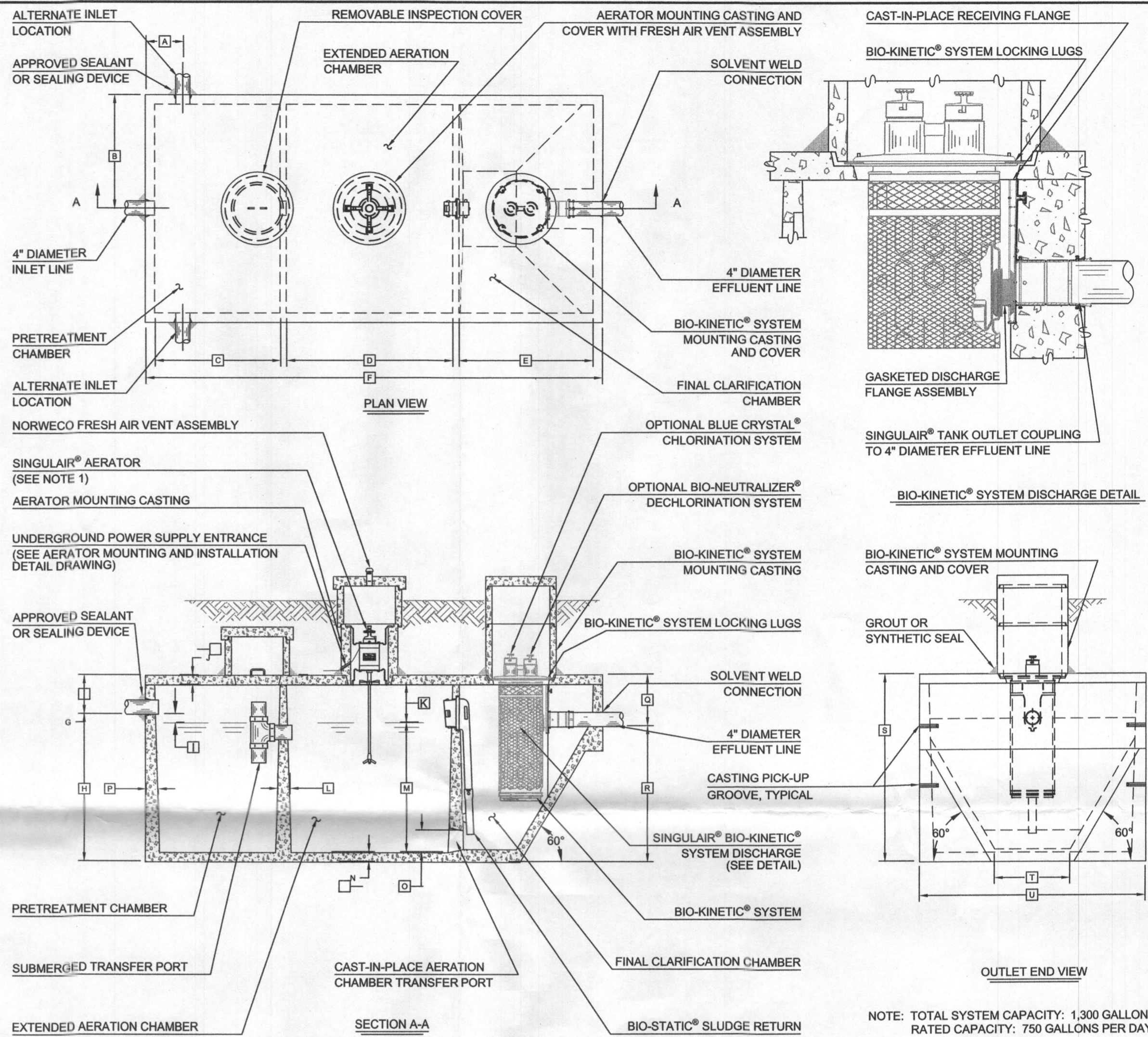
TRENCH 1-1	TRENCH 2-1	TRENCH 1-2	TRENCH 2-2	TRENCH 1-3	TRENCH 2-3
TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF	TRENCH LENGTH 65 LF
GROUND ELEVATION 624.2	GROUND ELEVATION 621.9	GROUND ELEVATION 623.9	GROUND ELEVATION 620.7	GROUND ELEVATION 623.0	GROUND ELEVATION 619.8
INVERT ELEVATION 621.2	INVERT ELEVATION 618.9	INVERT ELEVATION 620.9	INVERT ELEVATION 617.7	INVERT ELEVATION 620.0	INVERT ELEVATION 616.8
MAX. BOTTOM ELEV. 616.2	MAX. BOTTOM ELEV. 613.9	MAX. BOTTOM ELEV. 615.9	MAX. BOTTOM ELEV. 612.7	MAX. BOTTOM ELEV. 615.0	MAX. BOTTOM ELEV. 611.8



TYPICAL TRENCH DETAIL
NOT TO SCALE

INITIAL SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	6	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.625	
Trench width	3	
Effective Area Depth	2	
Linear Length of trench Required	195	lf

1st REPLACEMENT SYSTEM		
Number of Bedrooms	5	
Application Rate	0.8	gpd/sf
Effective Area Beginning Depth	6	ft
Bottom Max Depth	8	ft
Design Flow	750	gpd
Drainage Field square footage	937.5	sf
Sidewall reduction credit	0.625	
Trench width	3	
Effective Area Depth	2	
Linear Length of trench Required	195	lf



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.

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 TNTLP-600 GPD
U.S. AND FOREIGN PATENTS PENDING © MMVII
REVISIONS: 3-26-07 B
DESIGNED BY: JMM
SCALE: 10-16-06
NTS
PC-5-7091

BENCHMARK ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315
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HOUSE TYPE: GLEN ABBEY	DATE: APRIL, 2016
DESIGN: JMC	DRAFT: JMC
SCALE: 1" = 30'	PROJECT NO. 1635 DRAWING 2 OF 2