

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: 4-8-15 **ONSITE SEWAGE DISPOSAL SYSTEM** P 555800

INSTALLATION APPROVAL DATE: _____ **PERMIT** A _____
CONSTRUCTION

PROPERTY ADDRESS: 2771 FLORENCE ROAD, WOODBINE MD 21797

SUBDIVISION: LAYTON KNOLL LOT: 1 TAX ID: 05-433754

CONTRACTOR: CUMBERLAND & COMPANY EMAIL: _____

CONTRACTOR ADDRESS: _____ PHONE: _____

PROPERTY OWNER: CUMBERLAND DEVELOPMENT CORPORATION EMAIL: Ccumbe54237@gmail.com

OWNER ADDRESS: 16391 A.E.MULLINIX ROAD, WOODBINE, MD 21797 PHONE: 301-252-1122

NORWECO TNTLP-500

BAT UNIT MODEL: GPD PUMP SIZE: N/A PUMP TANK CAPACITY: N/A

DISTRIBUTION SYSTEM: GRAVITY LOW PRESSURE DOSED NUMBER OF BEDROOMS: 4

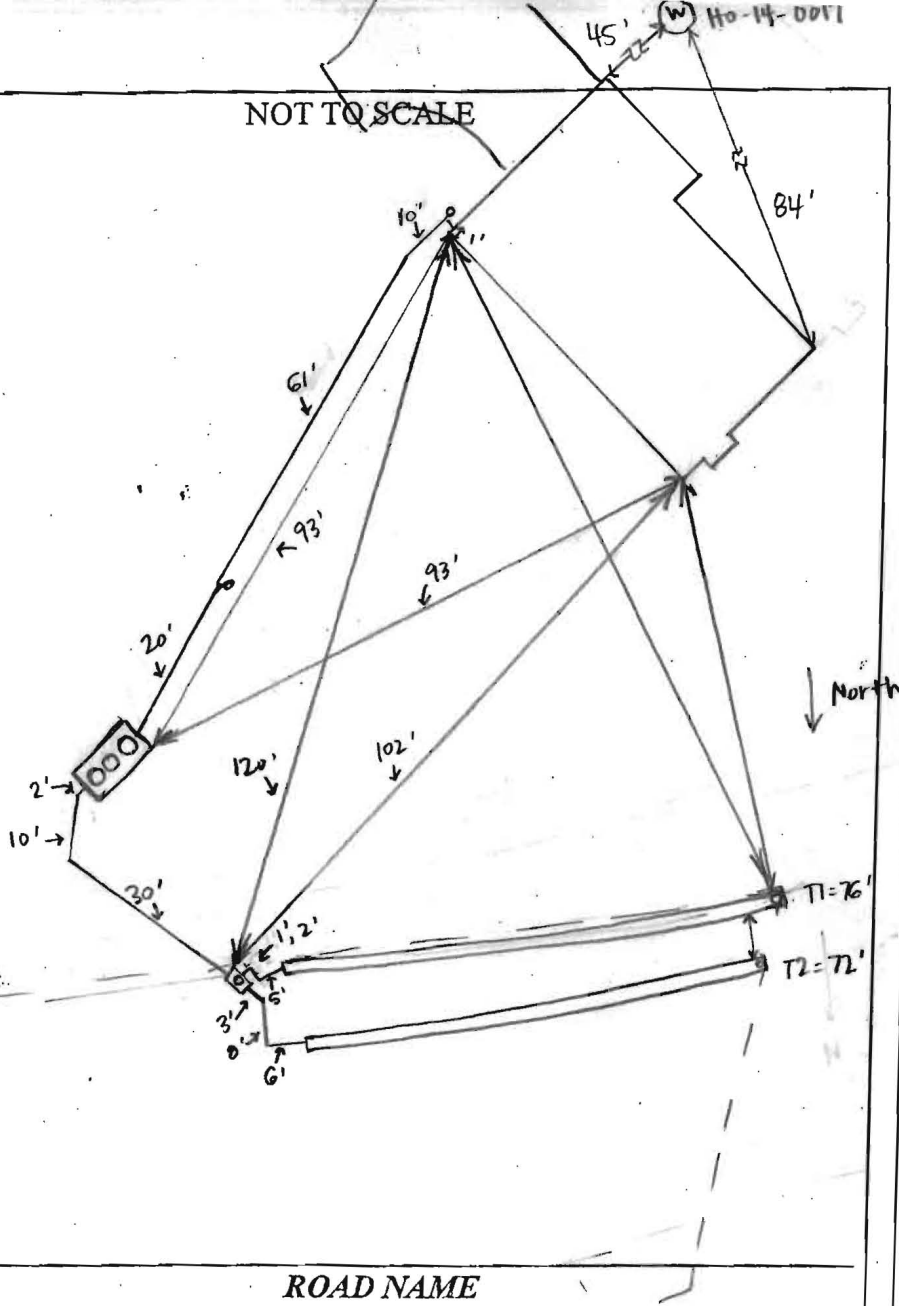
TRENCHES:	LINEAR FEET REQUIRED: <u>125</u>	INLET DEPTH: <u>4</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>7</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>3/4</u>
LOCATION:	PER APPROVED SITE PLAN. SEWAGE DISPOSAL AREA AND BAT UNIT LOCATION MUST BE STAKED BY LICENSED SURVEYOR PRIOR TO PRE-CONSTRUCTION INSPECTION.	
NOTES:	Install 2 x 75' 2' wide, 4' inlet, 8' depth, 9' between	

ISSUED BY: ROBERT BRICKER ISSUE DATE: 4-8-15 EXPIRATION DATE: 4-8-16

- 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
- 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



TRENCH/DRAINFIELD DATA

WIDTH	INLET	BOTTOM
_____	_____	_____
NUMBER OF TRENCHES _____		
TOTAL LENGTH _____		
ABSORPTION AREA _____		
DISTRIBUTION BOX LEVEL _____		
DISTRIBUTION BOX BAFFLE _____		
DISTRIBUTION BOX PORT _____		

SEPTIC TANK DATA

SEPTIC TANK 1 LEVEL _____

MANUFACTURER _____

CAPACITY _____ GAL

SEAM LOC _____

TANK LID DEPTH 1' _____

BAFFLES NO _____

BAFFLE FILTER NO _____

MANHOLE LOC FRONT, MID, REAR _____

6" PORT LOC _____

WATERTIGHT TEST _____

SLOTTED _____

DATE ON LID 3/27/15 via Matt Geckle

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 _____

ROAD NAME

PRE-CONSTRUCTION:

4/13/15 Met Kelly on site for layout. Shot contour on upper part of SRA - easternmost portion of area is higher and trench in that region would be 30' down from top of field. Install two trenches on western portion of SRA: 75' long, 4' inlet, 8' depth, 2' wide, 9' between centers. Move D-box farther east in SRA, closer to beginning of T1. (SC/KW)

INSTALLATION:

4/14/15 Raining - contractor has T1 dug and is filling with stone. T2 dug ~8' in length. Piles of dirt are ~2' away from trench edge to prevent runoff into trench. Bottom doesn't look wet from rain. Portion of connection from house to tank also dug. Tank will arrive tomorrow. (SC) 4/15/15 Trenches dug, filled with stone. No pipe or cloth. Pipe from house to tank location installed - cleanouts just adjacent (not directly over) pipe. (SC) 4/16/15 Contractor expecting tank today - hole dug but no tank yet. (SC) 4/17/15 Tank installed. Trenches have pipe + cloth, left open. (SC) 4/17/15 Connections made from tank to trenches. Matt Geckle on site for Norweco install. (SC) 4/20/15 No fall in pipe leading from D-box to T1. (SC) 4/22/15 Levelled D-box - adequate

FINAL INSPECTOR _____

DATE OF APPROVAL _____

fall in pipe to T1. Caps on observation ports. Need BAT startup certification. (SC)

2771 Florence Rd.

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

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: Dmello
Reference/Control #: 51

LR - Agreement Surcharge
1x 40.00 40.00

=====
SubTotal: 60.00
Total: 60.00

=====
REV-Check-BOA 60.00
Number : 10045

05/01/2015 11:59
#4187069 /495/109

CC13-CH

~ Thank you for visiting us today ~

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 2771 Florence Rd., Woodbine, MD 21797 was installed on April 16, 2015 according to the manufacture's specifications.

Installer: Kelly Cumberland

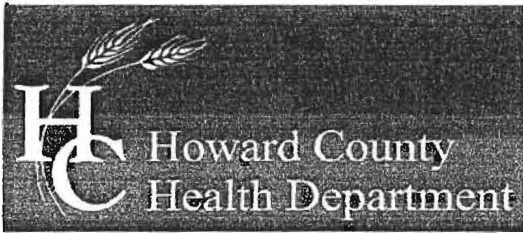
Property Owner: Jan Gordan



MATTHEW GECKLE

Vice-President

Dmello



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 30th day of April, among PERCIVAL DMELLO
AUDREY DMELLO, 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
2771 Florence Rd., in the ___ 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 15149 Folio 507

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. The pre-treatment device being installed is Noreco.

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.

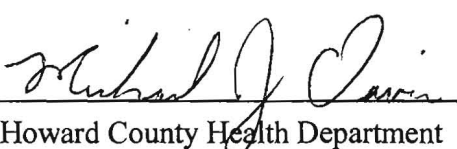
G. This agreement may be voided at any time at the discretion of the County.


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.

 5/1/15
Howard County Health Department

x  4/30/15
Owner #1 Signature / Date

Percival Dmello
Owner #1 Print Name

x  4/30/15
Owner #2 Signature / Date

Audrey Dmello
Owner #2 Print Name

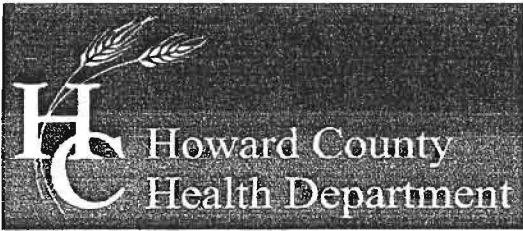
Buyer #1 Signature / Date

Buyer #2 Signature / Date

Buyer #1 Print Name

Buyer #2 Print Name

Dmello



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 30th day of April, among PERCIVAL DMELLO
AUDREY DMELLO, 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
2771 Florence Rd., in the ___ 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 5149 Folio 507

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. The pre-treatment device being installed is Noreco.

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.

Richard J. Carra 4/1/15
Howard County Health Department

x [Signature] 4/30/15
Owner #1 Signature /Date

PERCIVAL DMELLO
Owner #1 Print Name

Buyer #1 Signature Date

Buyer #1 Print Name

x [Signature] 4/30/15
Owner #2 Signature Date

Audrey Dmello
Owner #2 Print Name

Buyer #2 Signature Date

Buyer #2 Print Name

Dmello



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 30th day of April, among PERCIVAL DMELLO
AUDREY DMELLO, 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
2771 Florence Rd., in the ___ 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 5149 Folio 507

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. The pre-treatment device being installed is Noreco.

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.

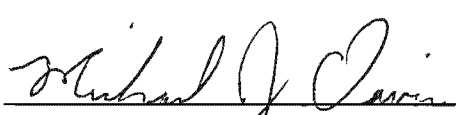
G. This agreement may be voided at any time at the discretion of the County.

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.


 5/1/15
Howard County Health Department

x  4/30/15
Owner #1 Signature Date

PERCIVAL DMELLO
Owner #1 Print Name

Buyer #1 Signature Date

Buyer #1 Print Name

x  4/30/15
Owner #2 Signature Date

Audrey Dmello
Owner #2 Print Name

Buyer #2 Signature Date

Buyer #2 Print Name

Howard County Health Department

Bureau of Environmental Health, Ellicott City, Maryland 410-313-2640

SEWAGE DISPOSAL PERMIT NO. A- _____ P- _____

PERMITTEE

Cumberland Company

LOCATION

2771 Florence Road Layton Knoll Lot 1
Cumberland Development

Do Not Cover Work Until Health Department Approval Appears On This Card

POST THIS CARD WHERE IT CAN BE SEEN FROM ROAD

STOP ALL CONSTRUCTION ON SEWAGE DISPOSAL SYSTEM AND CONTACT HEALTH DEPARTMENT BEFORE CONTINUING

WORK IS SATISFACTORY, CONTINUE

Inspector

Date

Inspector

Date

FINAL INSPECTION MADE, COVER ALL WORK

Inspector

Date

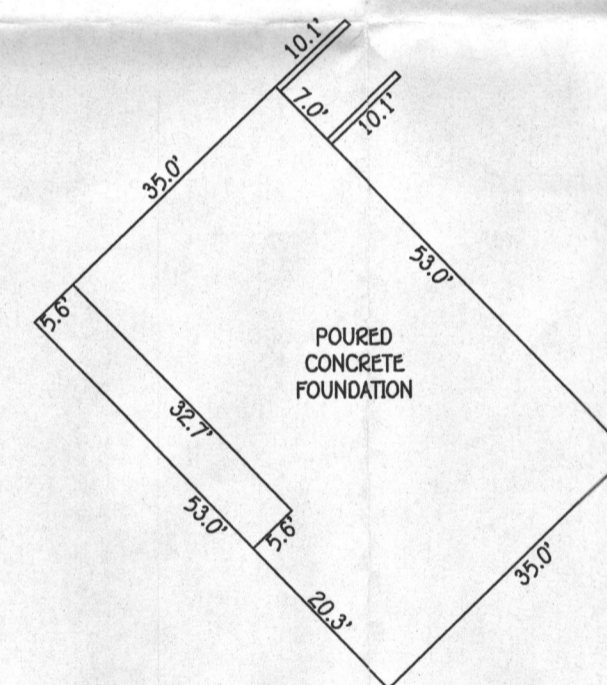
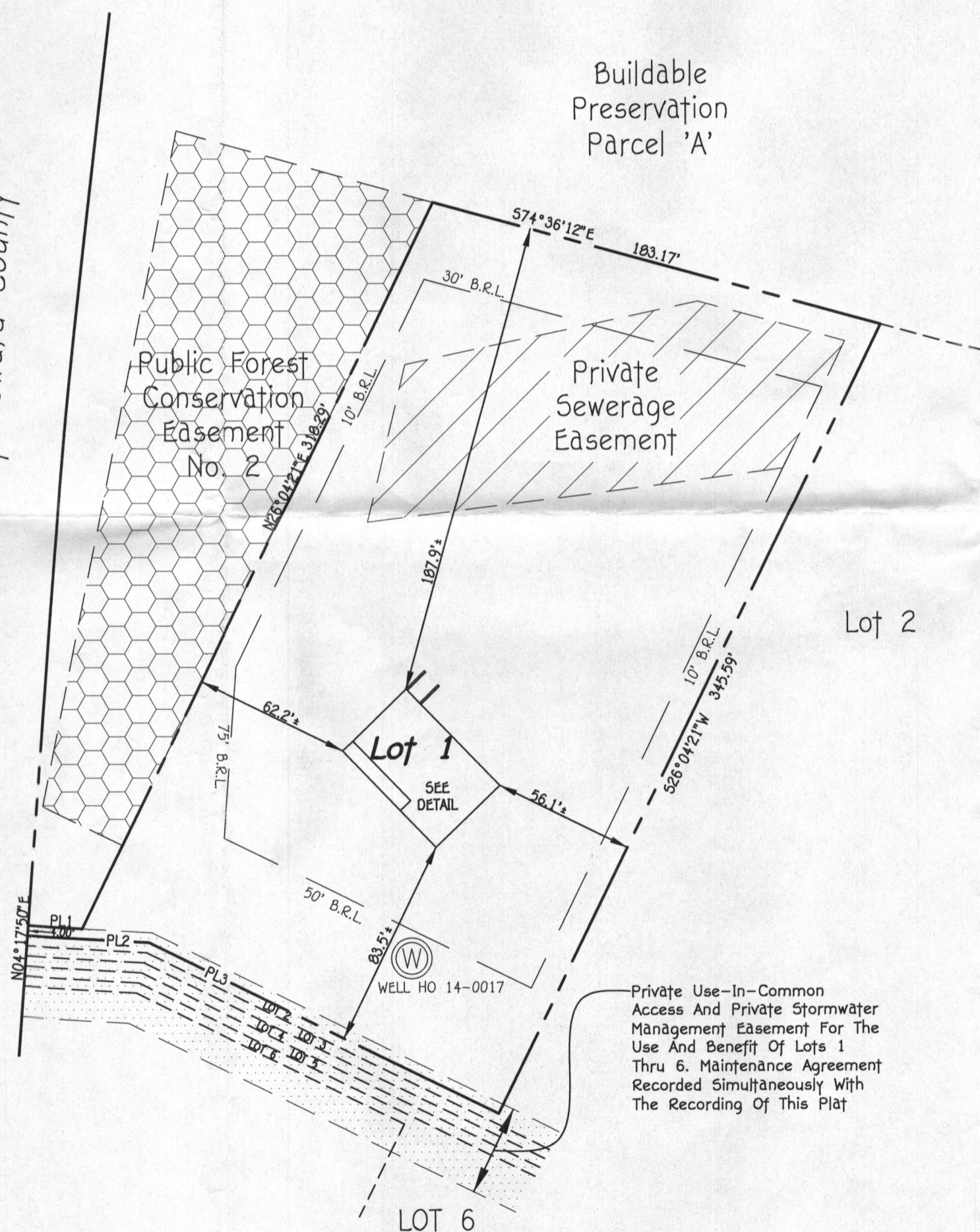
GENERAL NOTES:

- 1) THIS LOCATION DRAWING IS PREPARED FOR THE BENEFIT OF THE CLIENT SIGNING THE HOUSE LOCATION SURVEY APPROVAL FORM INsofar AS IT IS REQUIRED BY A LENDER OR TITLE INSURANCE COMPANY OR ITS AGENTS IN CONNECTION WITH THE CONTEMPLATED TRANSFER, FINANCING OR REFINANCING OF THE PROPERTY SHOWN HEREON. UNLESS INDICATED AS BEING A BOUNDARY SURVEY, THIS LOCATION DRAWING IS NOT INTENDED FOR USE IN THE ESTABLISHMENT OF PROPERTY LINES AND IS NOT TO BE RELIED UPON FOR THE ESTABLISHMENT OR LOCATIONS OF FENCES, GARAGES, BUILDINGS OR OTHER EXISTING OR FUTURE IMPROVEMENTS. AS A RESULT, THIS LOCATION DRAWING DOES NOT PROVIDE FOR ACCURATE IDENTIFICATION OF PROPERTY LINES, BUT SUCH IDENTIFICATION MAY NOT BE REQUIRED FOR THE TRANSFER OF TITLE OR SECURING FINANCING FOR RE-FINANCING.
- 2) SUBJECT PROPERTY IS SHOWN IN ZONE C ON THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP OF HOWARD COUNTY, MARYLAND, COMMUNITY PANEL No. 2400440007-B, EFFECTIVE DEC. 4, 1986.
- 3) THE OFFSETS FROM BUILDING LINE TO PROPERTY LINE AS SHOWN ON THE PLAT HEREON ARE TO AN ACCURACY OF PLUS OR MINUS 1'(+)
- 4) NO TITLE REPORT FURNISHED. SUBJECT TO ALL EASEMENTS, RIGHTS OF WAY AND CONDITIONS OF RECORD.
- 5) PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE, AND THAT I AM A DULY LICENSED PROPERTY LINE SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 339, EXPIRATION DATE 10/04/2016.
- 6) THE EXISTING WELL(S) SHOWN ON THIS PLAN (IDENTIFIED WITH THE ATTACHED WELL TAG NUMBER HO-14-0017 HAS BEEN FIELD LOCATED BY FISHER, COLLINS AND CARTER, INC. PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.
- 7) BUILDING PERMIT# B-14004193

Property Line Line Chart		
Line	Bearing	Length
PL1	S 06°40'56" E	21.47'
PL2	N 06°40'56" W	48.23'
PL3	N 63°55'39" W	153.84'



Florence Road
 Major Collector
 Public Roadway Maintained By Howard County



DETAIL:
1"=20'

310115
Well check approved.
-H.O.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2895



Mark L. Rohel 2/26/15
 PROPERTY LINE SURVEYOR DATE
 REG. #339

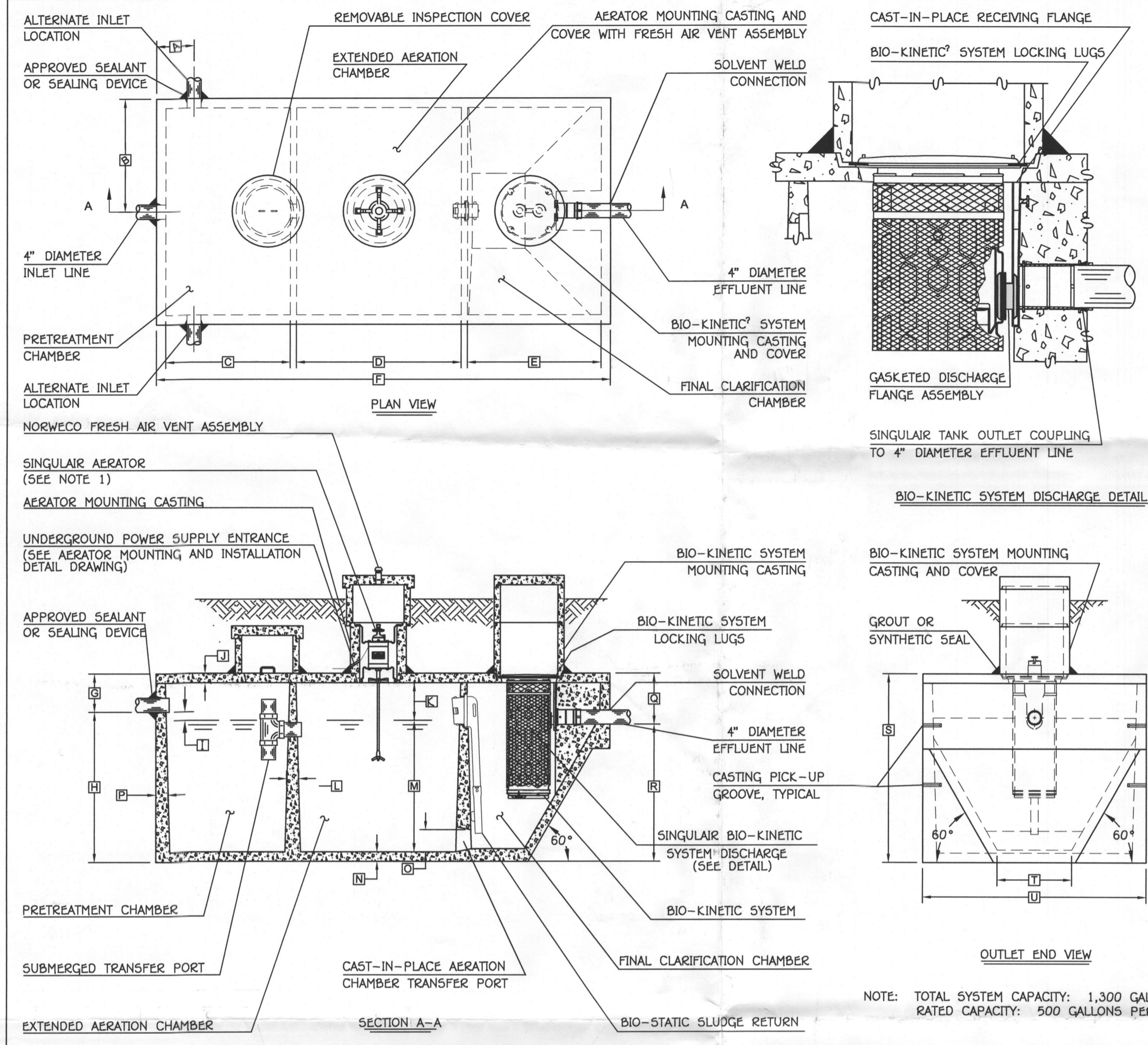
*277/ FLORENCE ROAD
 B.R.L.= BUILDING RESTRICTION LINE
 TOP OF FOUNDATION ELEV.= 745.0'+

LOT 1
 LAYTON KNOLL
 LOTS 1 THRU 6, BUILDABLE PRESERVATION
 PARCEL 'A' AND NON-BUILDABLE
 PRESERVATION PARCEL 'B'
 FOURTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 PLAT #22918 THRU 22920

HOUSE LOCATION DRAWING

FOUNDATION LOCATION: 2/26/15
 FINAL LOCATION:
 BOUNDARY SURVEY:

SCALE: 1"=50'
 DATE: 2/27/15
 DRAWN BY: GAD
 CHECKED BY: MLR
 PROJECT No.: 60787-6001



GENERAL NOTES:

- SINGULAR AERATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 60 MINUTES ON / 60 MINUTES OFF.
- FALL THROUGH SINGULAR[®] 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 SINGULAR 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"
B	3'-0"
C	3'-4"
D	4'-5"
E	3'-7"
F	12'-2"
G	1'-0"
H	4'-0"
I	0'-3"
J	0'-3"
K	1'-0"
L	0'-2"
M	3'-6"
N	0'-3"
O	0'-6"
P	0'-3"
Q	1'-4"
R	3'-8"
S	5'-0"
T	2'-0"
U	6'-0"
V	0'-0"
W	0'-0"
X	0'-0"
Y	0'-0"
Z	0'-0"

norweco 3-28-07 B
LOW-PROFILE SINGULAR[®] BIO-KINETIC WASTEWATER TREATMENT SYSTEM
MODEL TINTLP-500 GPD
10-18-06
NTS
PC-5-1091

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 RECORDED 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 _____ FOLD _____.
- 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.

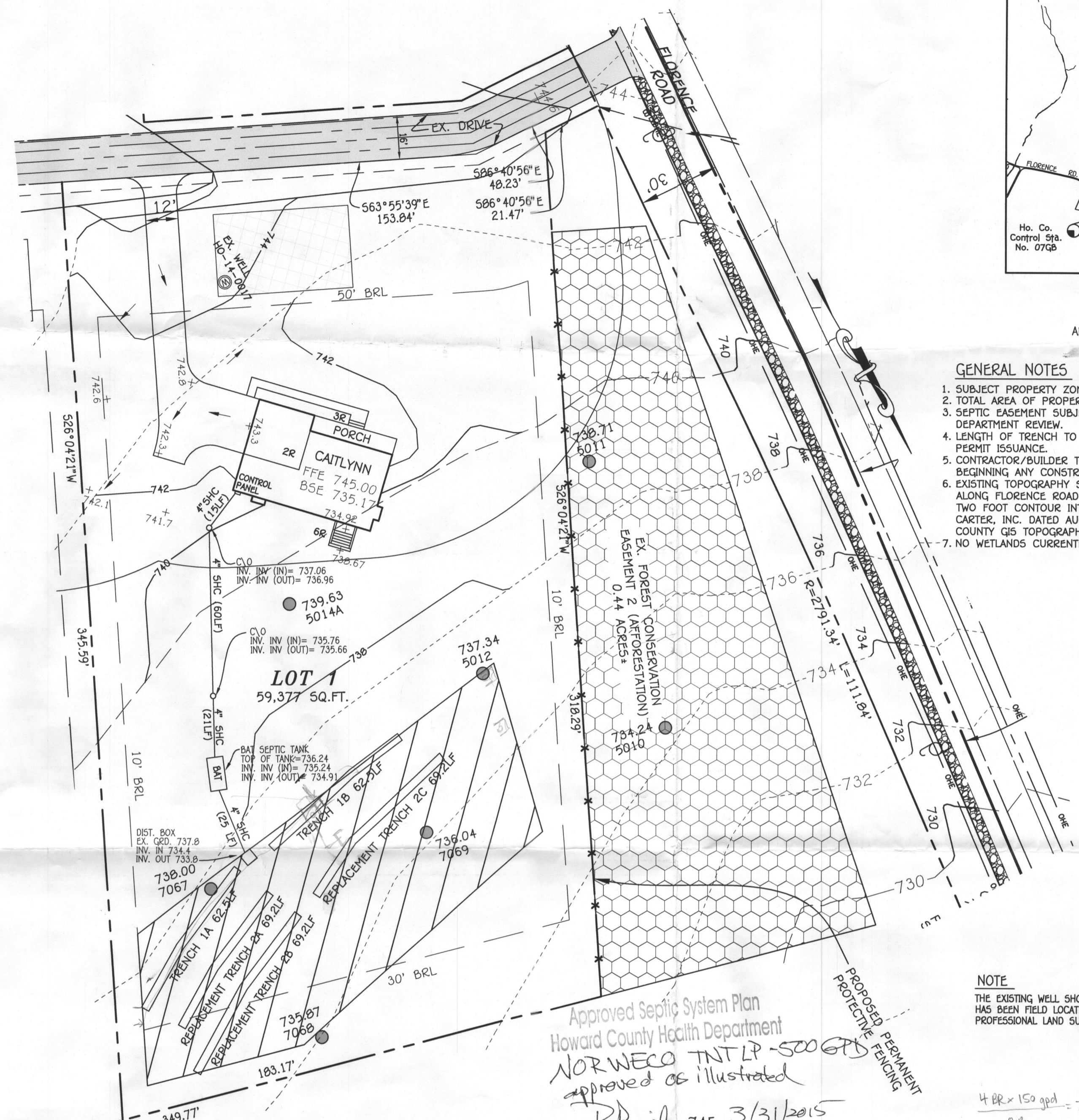
SEPTIC SYSTEM DESIGN
4 BEDROOM HOUSE
LOADING RATE = 600 GPD
APPLICATION RATE = 0.8

INITIAL SYSTEM
EFFECTIVE SIDEWALL BEGINS AT 4 FEET
TRENCH DEPTH = 7 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 3 FEET
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = 0.5
 $(W+2) / (W+1+2D) = (3+2) / (3+1+(2 \times 3))$
SF OF DRAINFIELD = 600 GPD / 0.8 = 750 SF
TRENCH LENGTH = 750 SF x 0.5 / 3 = 125 FEET

REPLACEMENT SYSTEM
EFFECTIVE SIDEWALL BEGINS AT 6 FEET
TRENCH DEPTH = 7 FEET
TRENCH WIDTH (W) = 3 FEET
EFFECTIVE DEPTH (D) = 1 FEET
COEFFICIENT OF REDUCTION OF TRENCH LENGTH = 0.83
 $(W+2) / (W+1+2D) = (3+2) / (3+1+(2 \times 1))$
SF OF DRAINFIELD = 600 GPD / 0.8 = 750 SF
TRENCH LENGTH = 750 SF x 0.83 / 3 = 207.5 FEET

SEPTIC SYSTEM ELEVATIONS
FFE = 745.00
BSE = 735.17
* BASEMENT SEWAGE IS TO BE PUMPED.
INV. OUT OF HOUSE = 737.36
PROPOSED GROUND AT C/O 740.0
INV. INTO C/O 737.06
INV. OUT OF C/O 736.96
PROPOSED GROUND AT C/O 738.9
INTO C/O 735.76
INV. OUT OF C/O 735.66
EX. GROUND AT BAT TANK = 738.5
TOP OF BAT TANK = 736.24
COVER OVER BAT TANK = 2.28 FT
INVERT INTO BAT TANK = 735.24
INVERT OUT OF BAT TANK = 734.91
EX. GRADE AT DIST BOX = 737.8
INVERT INTO DISTRIBUTION BOX = 734.4
INVERT OUT OF DISTRIBUTION BOX = 733.8

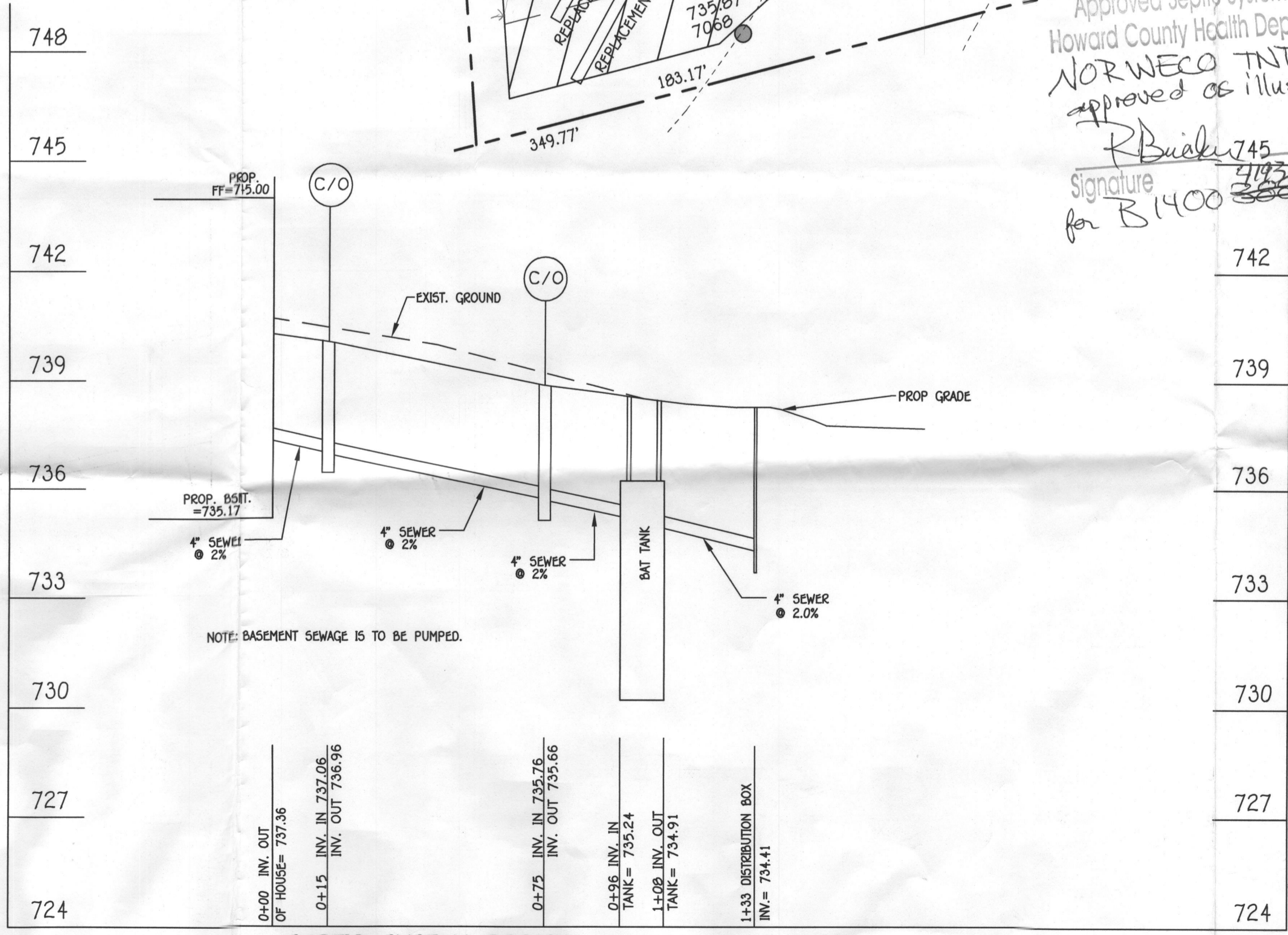
TRENCH DESIGN										
TRENCH	GROUND ELEV.	TOP OF STONE ELEV.	INVERT INTO TRENCH	DEPTH OF STONE AT	DEPTH OF TRENCH (FT)	EFFECTIVE DEPTH AT	EFFECTIVE DEPTH (D)	WIDTH OF TRENCHES (W)	TRENCH SPACING	
T1A	737.7	734.03	733.7	3.67'	3.33'	730.7	4	3	3.0	12
T1B	737.4	733.73	733.4	3.67'	3.33'	730.4	4	3	3.0	12
RT2A	737.4	733.73	733.4	3.67'	3.33'	730.4	6	1	3.0	10
RT2B	737.0	733.33	733.0	3.67'	3.33'	730.0	6	1	3.0	10
RT2C	736.8	733.13	732.8	3.67'	3.33'	729.8	6	1	3.0	10



VICINITY MAP
SCALE: 1" = 2000'
ADC MAP NO. 8, GRIDS B-7 & B-8

GENERAL NOTES

- SUBJECT PROPERTY ZONED: RC-DEO
- TOTAL AREA OF PROPERTY: 59,377 SQ. FT.
- 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.
- EXISTING TOPOGRAPHY SHOWN IS BASED ON A FIELD RUN SURVEY ALONG FLORENCE ROAD & SAINT MICHAELS ROAD WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC. DATED AUGUST, 2014, SUPPLEMENTED WITH HOWARD COUNTY GIS TOPOGRAPHY ON-SITE AND OFF-SITE.
- NO WETLANDS CURRENTLY EXIST ON THE PROPERTY.



SEPTIC SYSTEM PROFILE
SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'

Approved Septic System Plan
Howard County Health Department
NORWECO TINTLP-500 GPD
approved as illustrated
Signature: RB... Date: 3/31/2015
for B1400

NOTE
THE EXISTING WELL SHOWN ON THIS PLAN, TAG NO. HO 14-1017 HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.

4 BR x 150 gpd = 750' trenches + 2' width = 315'
0.8
effective sidewall starts at 4'
40' shade at 12" use 7' bitum
3' effective sidewall -> diff of original length
0.40 x 315' = 126' -> 2 x 62.5' trenches
4" inlet
7' depth
2' wide

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A QUALY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38386, EXPIRATION DATE: 01/12/2016.
Signature: Stephen... Date: 3/16/15
Signature Of Professional Engineer



SITE PLAN FOR BAT SYSTEM INSTALLATION
LAYTON KNOLL
LOT 1
2771 FLORENCE ROAD
ZONED RC-DEO
TAX MAP NO.: 7 GRID NO.: 19 PARCEL NO.: 112
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JANUARY, 2015
SHEET 1 OF 1