



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: 9/19/16

ONSITE SEWAGE DISPOSAL SYSTEM

559769-A

APPROVAL DATE: 12/20/16 (LMA)

PERMIT: CONSTRUCTION

A

PROPERTY ADDRESS: 5024 Bee Frances Way

SUBDIVISION: Greenberry

LOT: 6

TAX ID: 05-598669

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: NVR Inc.

EMAIL:

OWNER ADDRESS: 9720 Patuxent Woods Road

PHONE: 410-379-5956

BAT UNIT MODEL: Hoot H-1000A

PUMP SIZE: 0.4

PUMP TANK CAPACITY: 2000

OPERATION & MAINTENANCE AGREEMENT DATE SIGNED: 6-13-16

DATE RECORDED: 6-15-16

DISTRIBUTION SYSTEM: GRAVITY

PRESSURE DOSED

BEDROOMS: 6

APPLICATION RATE: 1.2

TRENCHES:	LINEAR FEET REQUIRED: <u>155</u>	INLET DEPTH: <u>2.5</u>
	TRENCH WIDTH: <u>3</u>	MAXIMUM BOTTOM DEPTH: <u>4.5</u>
	MINIMUM SPACE BETWEEN TRENCHES: <u>10</u>	EFFECTIVE AREA BEGINNING DEPTH: <u>2.5</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:		

ISSUED BY: Robert Bricker

ISSUE DATE: 9/19/16

EXPIRATION DATE: 9/16/17

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 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 16002518

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.



MAYER BROS., INC.
Precast Concrete Products
 6264 Race Rd. Elkridge, MD 21075

Letter of Satisfaction Hoot System Installation

Address of Property: 5024 Bee Frances Way
Clarksville, MO. 21024

Date of Final Inspection: 12/6/16

Installer: South Carroll Backhoe Service

Hoot Technician/Inspector: Mike Sample

I hereby certify that the Hoot system installed at the property listed above has been installed according to proper Hoot installation practices. I have also verified the startup of the system and it is in proper working order.

Sincerely,

N. Michael Dayer
 Name of Inspector
 Mayer Bros., Inc.

PH: 410-796-1434

WBE

FX: 410-796-1438

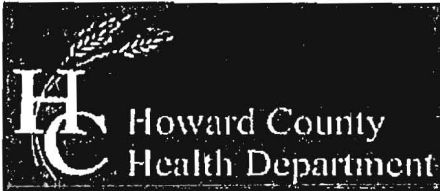
www.mayerbrosprecast.com

Grease Interceptors, Grease Solutions, Aerobic Treatment Units, Septic Tanks, Holding Tanks, Storm Water Structures, Hydroceptors,
 Bench Barrier, Water Meter Vaults, Sectional Valve Vaults, Top Slabs, Curb Heads, Curb Bumpers,
 Custom Precast Products

66 lot 6

House faces Bee Frances Way
Driveway off of Bee Frances Way
address will be
224 Bee Frances Way

MB 7/13/16



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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 ^{13th} ~~20~~ day of ^{JUNE} ~~May~~ 2016, among ^{NISHA PATIL} ~~CHANG PATIL~~,
~~NVR, Inc. & NVR, INC.~~, 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
11904 Northern Bell, Clarksville MD 21029, in the S 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 Folio PLAT # 23453

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 Hot Tax.

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.

Paul Nufon 6/13/2016
Howard County Health Department

Howard County Health Department

Phil An 6/6/16
Owner #1 Signature Date

Owner #1 Print Name

CRISTINA SANCHEZ 5/28/16
Buyer #1 Signature Date

Buyer #1 Print Name

Buyer #2 Signature

Robert C. Grothmann 6/6/16
Owner #2 Signature Date
Owner #1 Print Name

Owner #2 Print Name

CHRISAG PARR 6/6/16
Buyer #2 Signature Date
Buyer #1 Print Name

NISHA PARR
Buyer #2 Print Name

GREENBERRY LOT 6

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

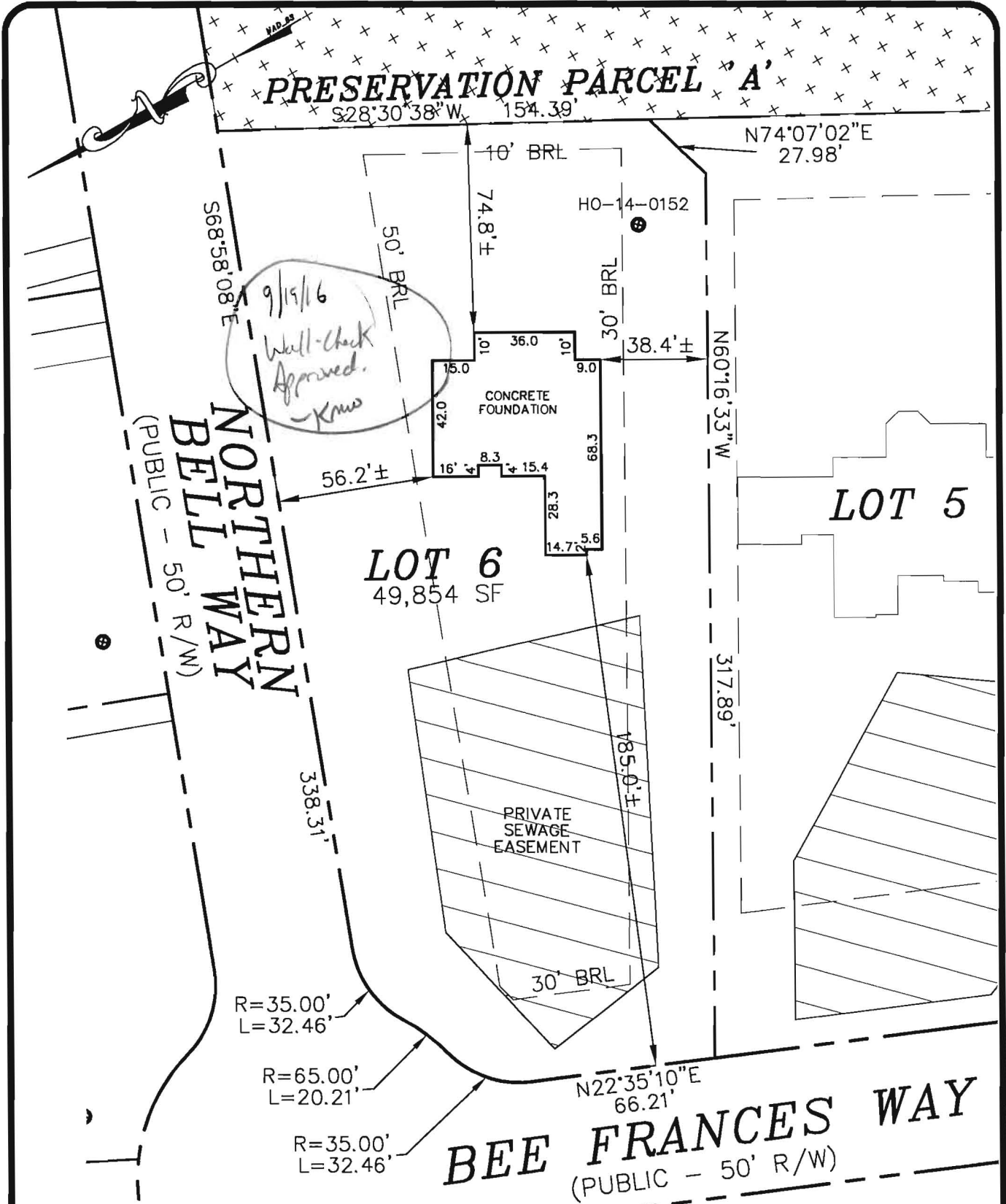
Grantor/Grantee Name: Patel
Reference/Control #: 137

LR - Agreement Surcharge
1x 40.00 40.00

=====
SubTotal: 60.00
Total: 60.00

=====
REV-Check-BOA 60.00
Number : 3062

06/15/2016 10:28 CC13-SB
#6339329 /496/109
~ Thank you for visiting us today~



ADDRESS: 5024 BEE FRANCES WAY
 TOP OF WALL ELEV. = 573.3±
 FIRST FLOOR ELEV. = N/A

LOT 6
GREENBERRY

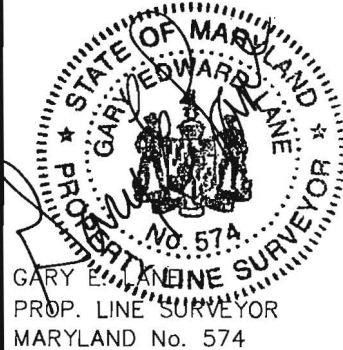
PLATS 23453-23461
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

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. 574, EXPIRATION DATE: 03/21/17.

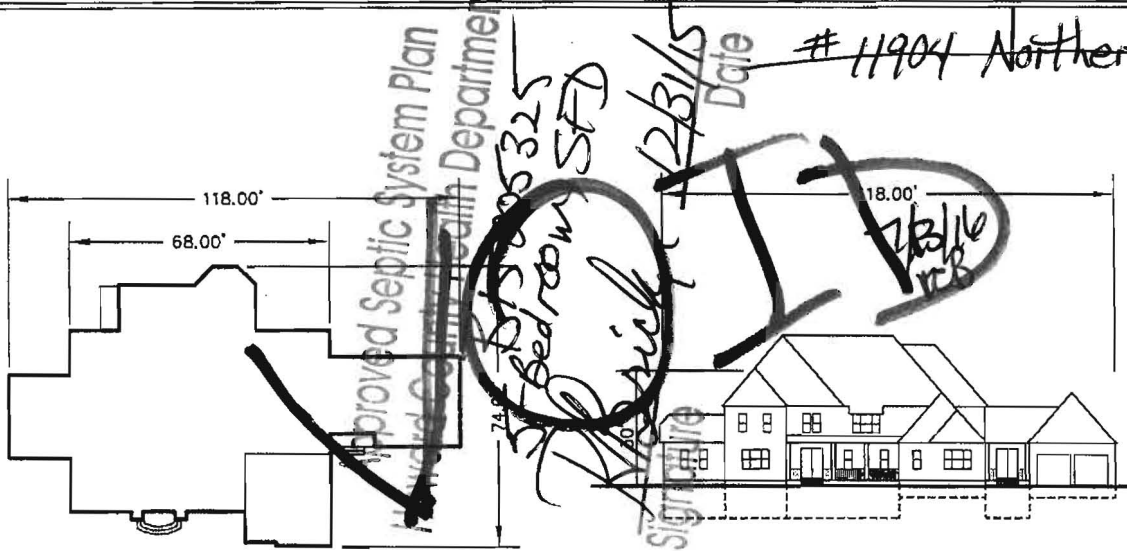
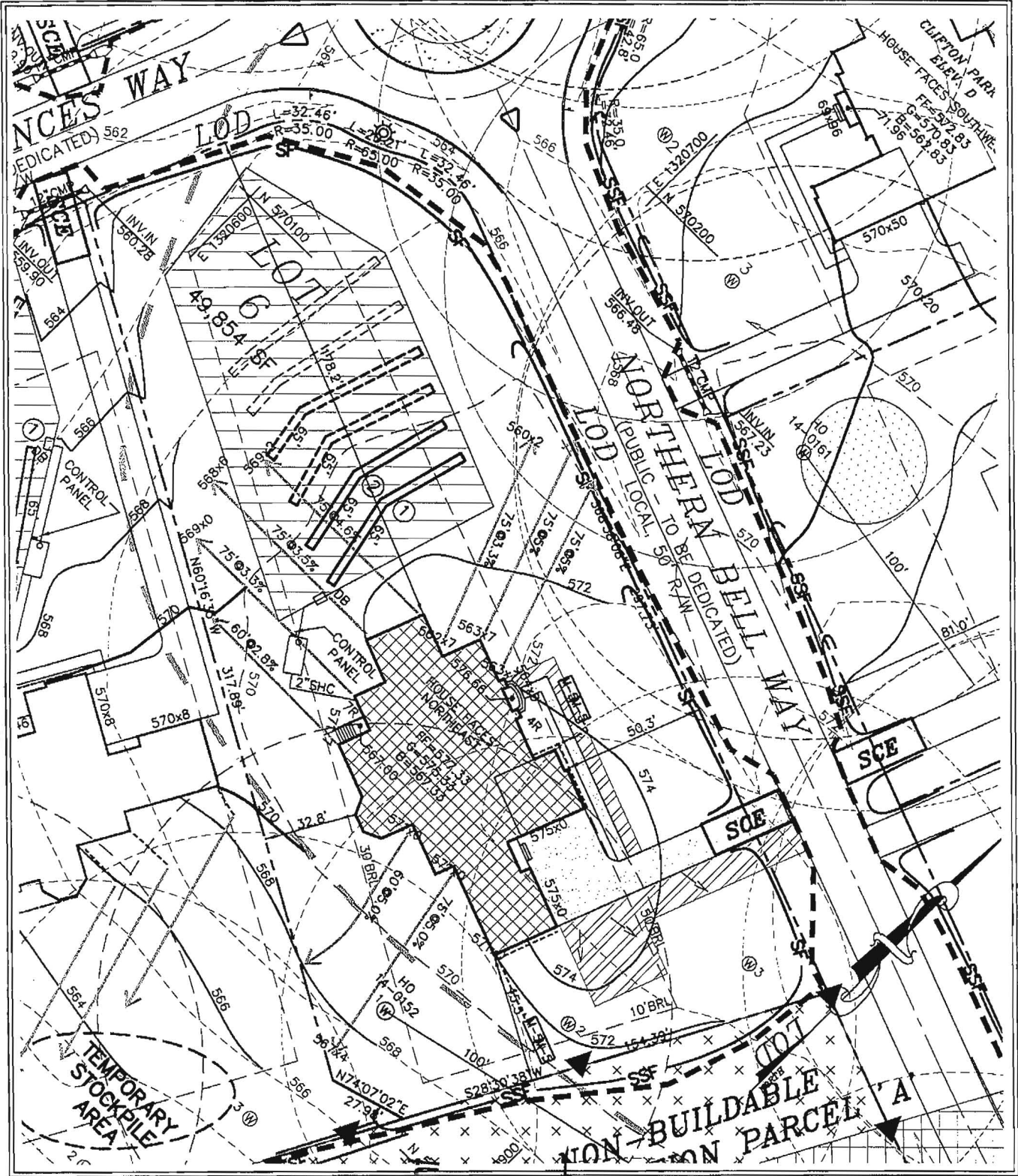
THE INFORMATION SHOWN HAS BEEN ESTABLISHED BY CURRENT ACCEPTABLE SURVEY PROCEDURES AND FROM AVAILABLE RECORD INFORMATION. THIS DRAWING IS TO BE USED FOR TITLE TRANSFER FINANCING, OR REFINANCING ONLY AND IS NOT TO BE USED FOR THE ESTABLISHMENT OF PROPERTY LINES, LOCATION OF FENCES, GARAGES, BUILDINGS, OR OTHER EXISTING OR FUTURE IMPROVEMENTS.

MILDENBERG BOENDER, & ASSOC., INC.

Engineers Planners Surveyors
 7350-B Grace Drive, Columbia, MD 21044
 (410) 997-0296 Balt. (410) 997-0298 Fax.



FOUNDATION	DATE: 08/29/16	FINAL LOCATION	DATE: N/A
DRAWN BY: MES	CHECKED BY: GEL	SCALE: 1"=50'	
PROJECT NO.: 15-005	LOCATION DRAWING		



MONTICELLO II
ELEV. D

PLOT PLAN (SITE SPECIFIC)
GREENBERRY
LOT 6

**MILDENBERG
BOENDER, & ASSOC., INC.**

Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Balt. (410) 997-0298 Fax.

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE: 1"= 50' DRAWN BY: MMM DATE: NOV. 2015 PN: 15-005

P:\2004\15-005\DWG\BAT.DWG

11904 Northern Bell Way
Greenberry
Lot 6

LOTS 4, 5, 6, 17

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: Desai		
Reference/Control #: 48		
LR - Agreement Surcharge	1x 40.00	40.00
LR - Agreement Recording Fee	1x 20.00	20.00
Grantor/Grantee Name: Mendus		
Reference/Control #: 49		
LR - Agreement Surcharge	1x 40.00	40.00
LR - Agreement Recording Fee	1x 20.00	20.00
Grantor/Grantee Name: Ahmad		
Reference/Control #: 50		
LR - Agreement Surcharge	1x 40.00	40.00
LR - Agreement Recording Fee	1x 20.00	20.00
Grantor/Grantee Name: Lee		
Reference/Control #: 51		
LR - Agreement Surcharge	1x 40.00	40.00
SubTotal:		240.00
Total:		240.00
REV-Check-BOA Number : 3001		240.00

12/02/2015 10:32 CC13-DS
#5240036 / 1246/109
Thank you for visiting us today~

SOILS TABLE (WITHIN LOD)

SYMBOL	RATING	NAME	K FACTOR
GgA	(B)	GLENELG LOAM, 0-3% SLOPES.	.20
GgB	(B)	GLENELG LOAM, 3-8% SLOPES.	.20

PRIMARY TRENCH DATA

TRENCH	EX. GROUND ELEVATION	INVERT ELEVATION	BOTTOM OF TRENCH EL.
1	570.4	567.9	565.9
2	570.1	567.6	565.6

SEPTIC TRENCH SIZING

SYSTEM	APPLICATION RATE (GPD / SF)	MAXIMUM FLOW RATE (GPD)	AREA OF REQUIRED TRENCH (SF)	TRENCH WIDTH (FT)	LENGTH OF REQUIRED TRENCH (LF)	EFFECTIVE DEPTH (FT)	TRENCH BOTTOM DEPTH (FT)	TRENCH REDUCTION FACTOR**	ADJUSTED LENGTH OF REQUIRED TRENCH (LF)	MINIMUM TRENCH SPACING (FT)	NUMBER OF TRENCHES	PROVIDED TRENCH LENGTH (FT)
PRIMARY	1.2	900	950	3	250	2.5	4.5	0.62	155	10.0'	2	77.5'
SECONDARY	1.2	900	950	3	250	5.5	7.5	0.62	155	10.0'	2	77.5'
TERTIARY	1.2	900	950	3	250	5.5	7.5	0.62	155	10.0'	3	51.7'

SEWER SYSTEM CHART

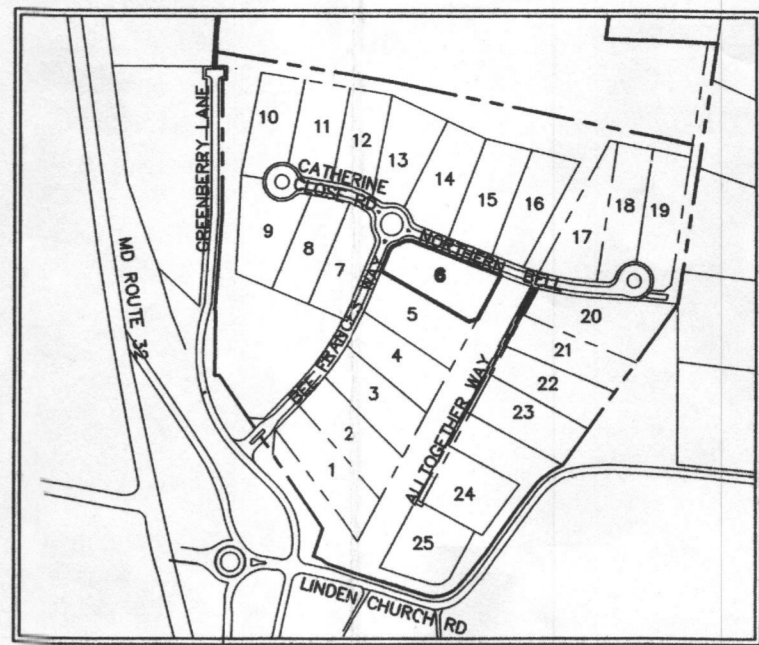
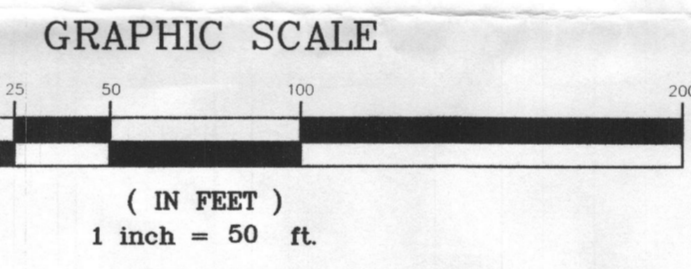
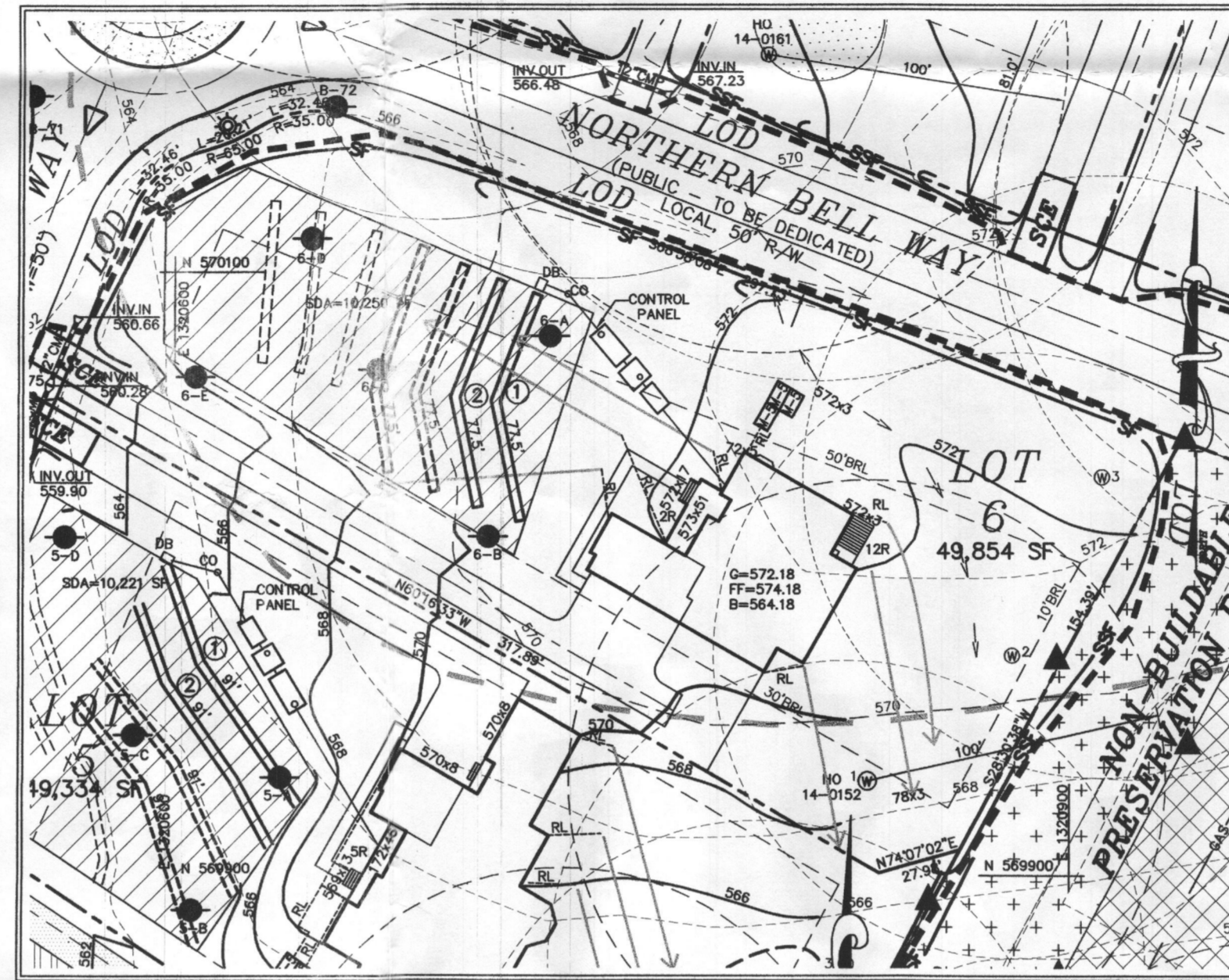
DESCRIPTION	ELEVATION
BASEMENT ELEVATION	564.18
INVERT OUT OF THE HOUSE	569.00
FINISHED GRADE AT SEPTIC TANK	571.50
INVERT INTO SEPTIC TANK	568.36
INVERT OUT OF SEPTIC TANK	568.11
FINISHED GRADE AT HOOT SYSTEM	571.3
INVERT INTO HOOT SYSTEM	568.07
INVERT OUT OF HOOT SYSTEM	567.99
FINISHED GRADE AT PUMP TANK	571.10
TOP OF TANK	569.10
INVERT INTO PUMP TANK	567.85
INVERT OUT OF PUMP TANK	569.43
PUMP TANK FLOOR	563.60
FINISHED GRADE AT DISTRIBUTION BOX	570.00
INVERT INTO DISTRIBUTION BOX	567.50
PUMP OFF	564.93
PUMP ON	565.21
HIGH WATER ALARM	565.71
DOSED RATE	50 GPM
PUMP RUNTIME	3.0 MIN.

MINIMUM TANK CAPACITY = 2,000 GALLONS
PUMP: GOULDS MODEL 3871, EP04 SERIES

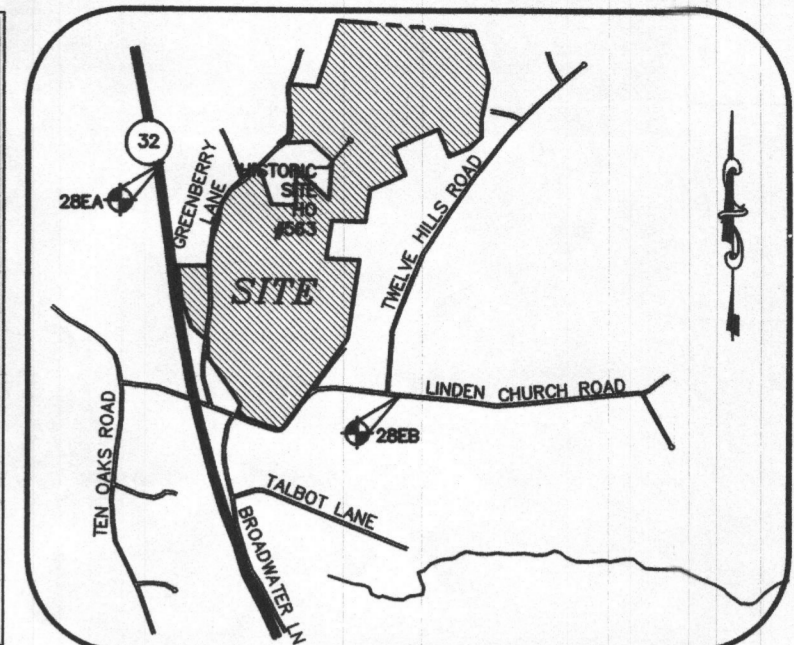
ON-SITE SEWAGE DISPOSAL SYSTEM:

RESIDENTIAL SYSTEM DESIGN: HOOT 600 BNR
6 BEDROOM HOUSE (LIVING AREA = 2,288 SQ.FT.)
150 GALLONS X # OF BEDROOMS = VOLUME OF WASTEWATER /DAY
150 X 6 = 900 GPD
PERC RATE = 2-5 MINUTES/INCH
APPLICATION RATE = 1.2 GPD/SQ.FT.
DESIGN FLOW = APPLICATION RATE = SQ.FT. OF TRENCH REQUIRED
900 ÷ 1.2 = 750 SQ.FT.
SQ.FT. REQUIRED ÷ WIDTH OF TRENCH = LENGTH OF TRENCH
750 ÷ 3.0' = 250 FT
USE 2" OF GRAVEL BELOW DRAIN PIPE
250 X 0.62 = 155
USE TWO (2) TRENCHES (77.5')
A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL
REDUCTION CREDIT
MINIMUM TANK CAPACITY = 750 GALLONS
PUMP: GOULDS MODEL 3871, EP04 SERIES

NOTE:
BASEMENT WILL NOT SEWER BY GRAVITY



LOCATION PLAN
SCALE: 1"=600'



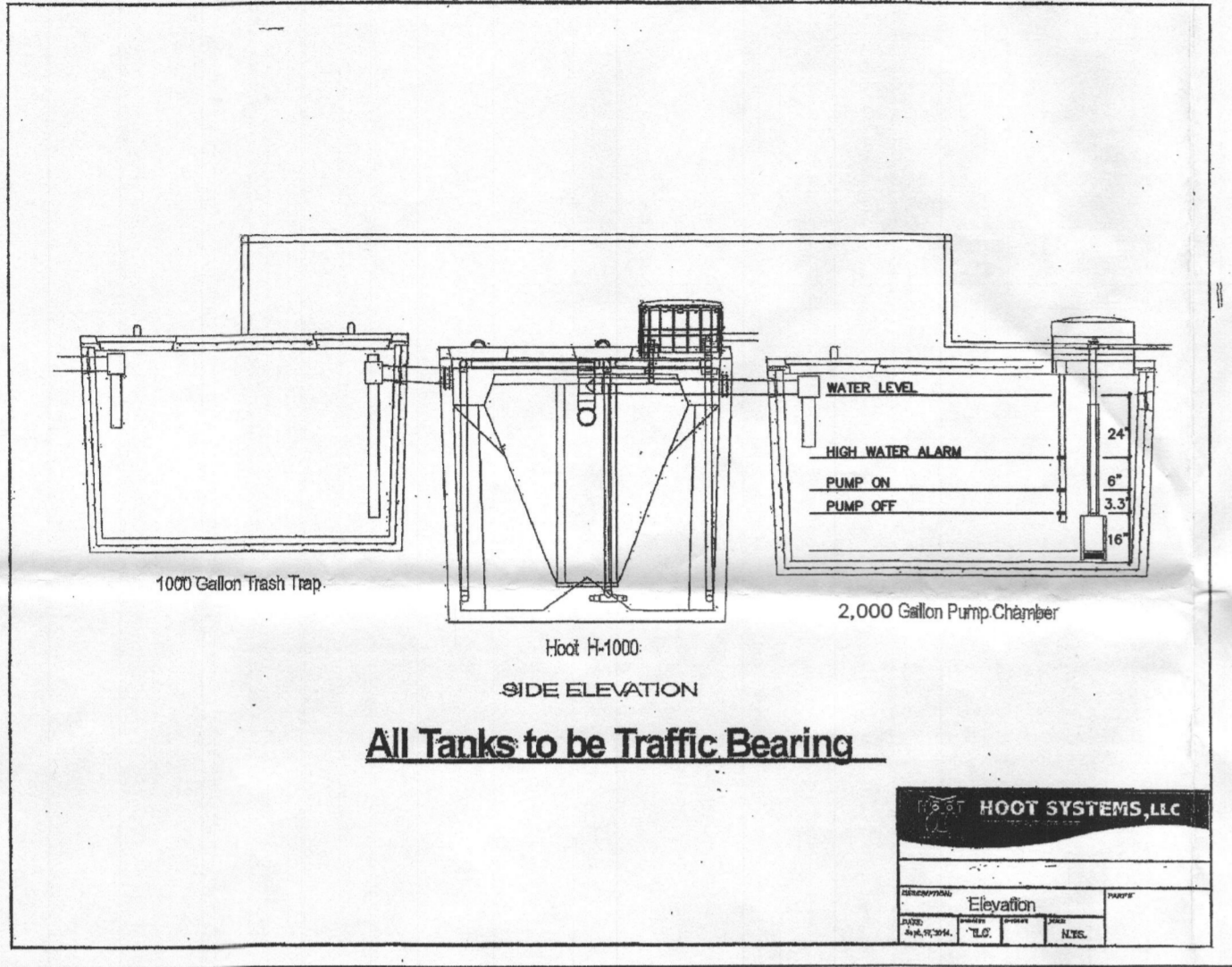
VICINITY MAP
SCALE: 1" = 2000'
ADC MAP 24 GR F6

GENERAL NOTES:

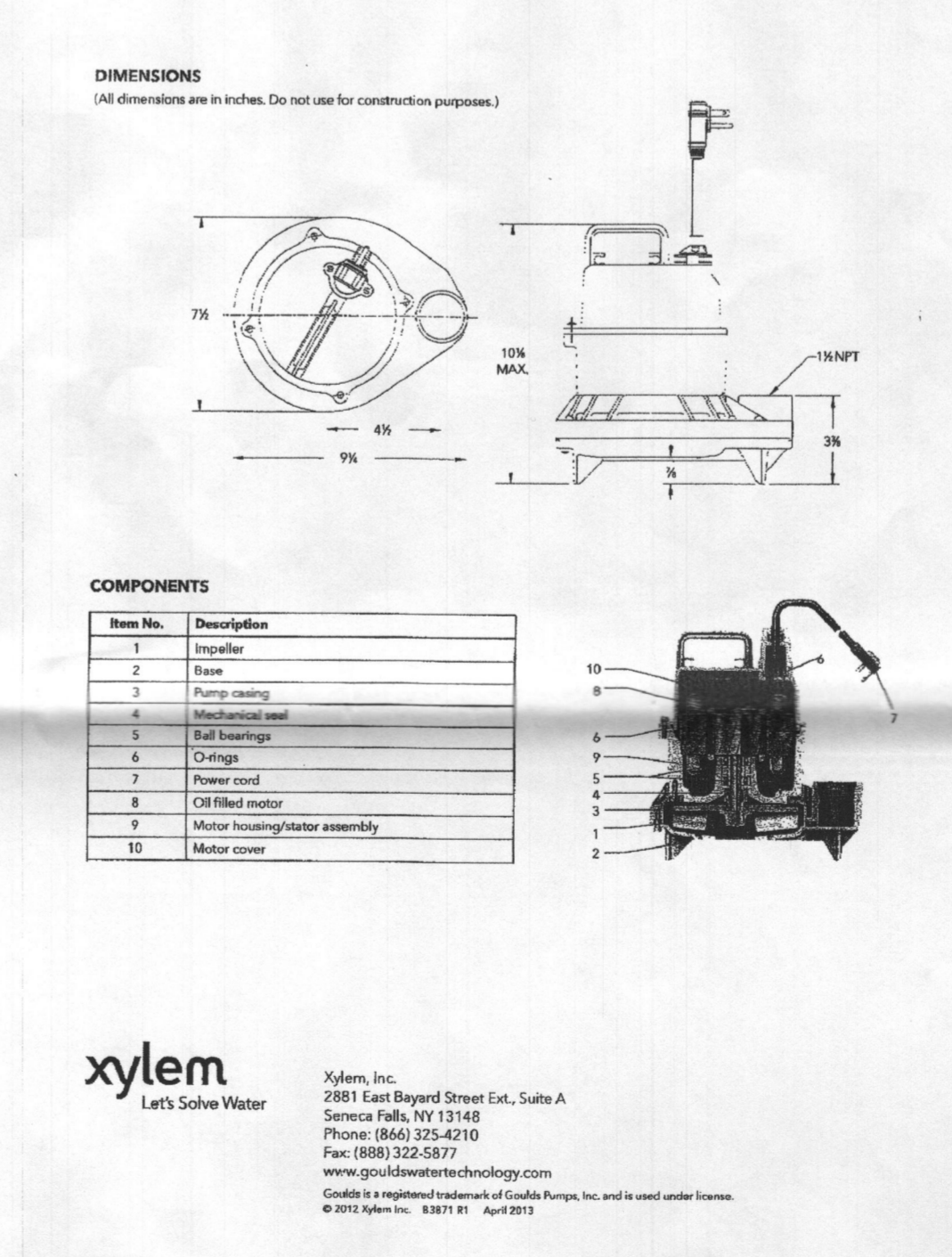
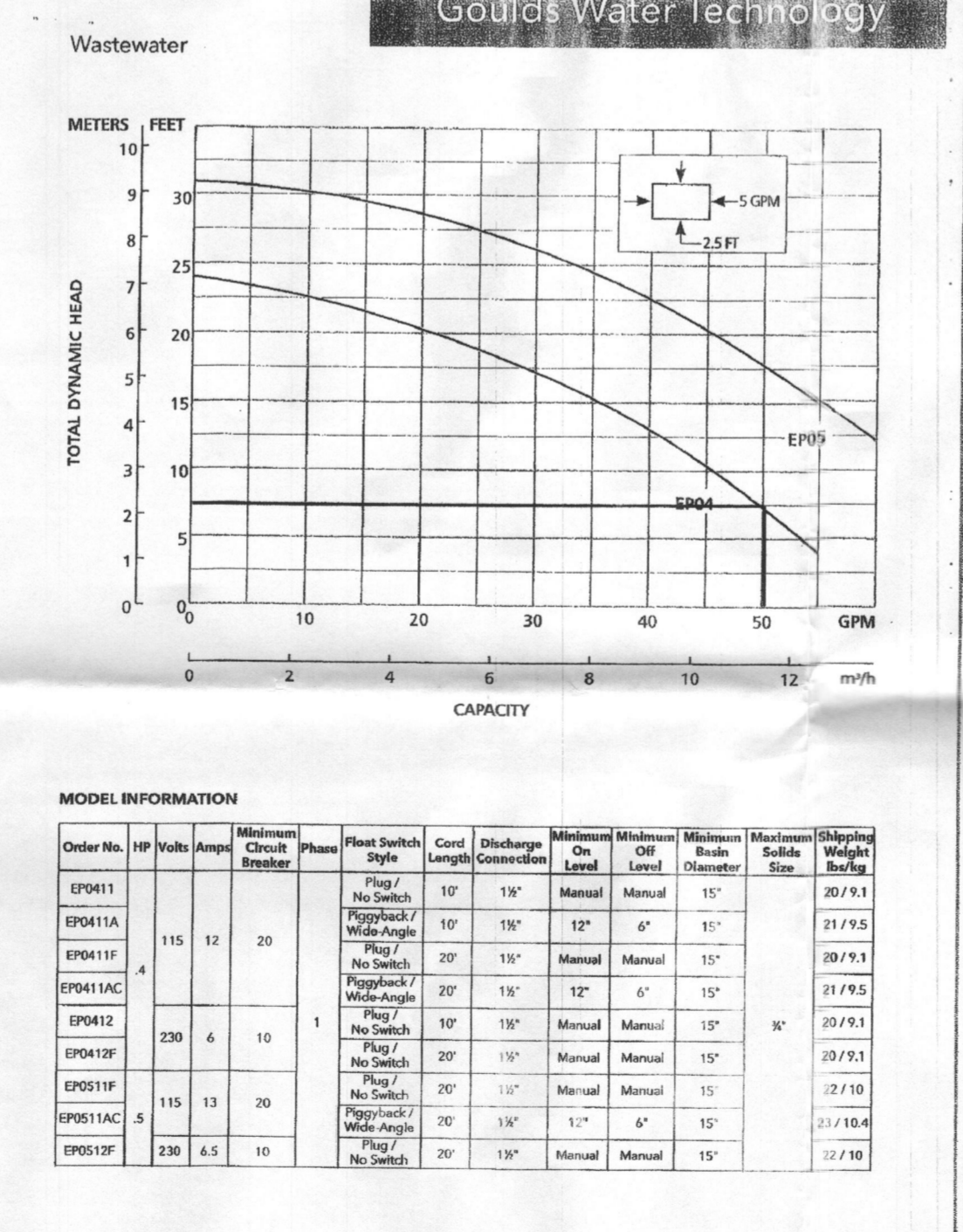
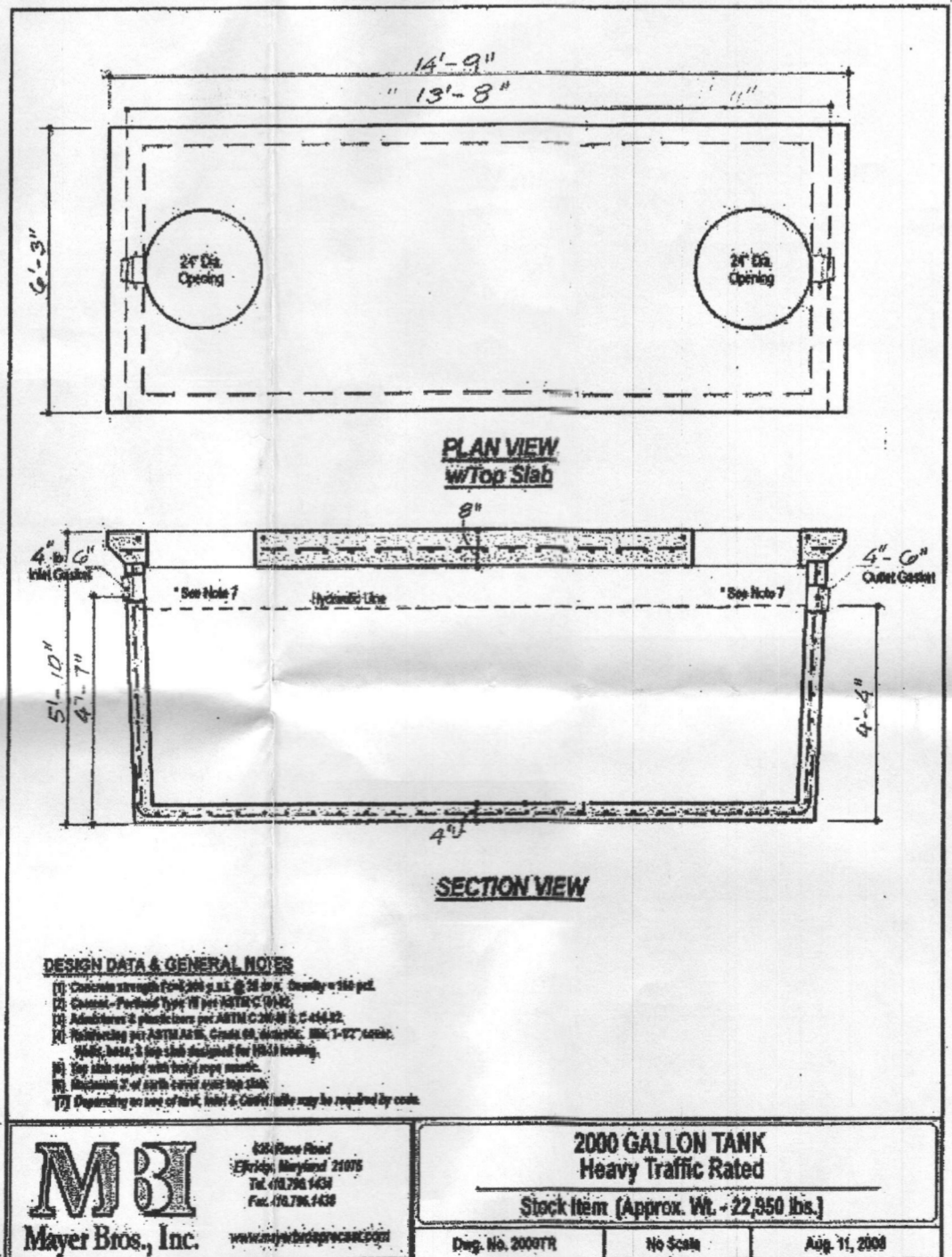
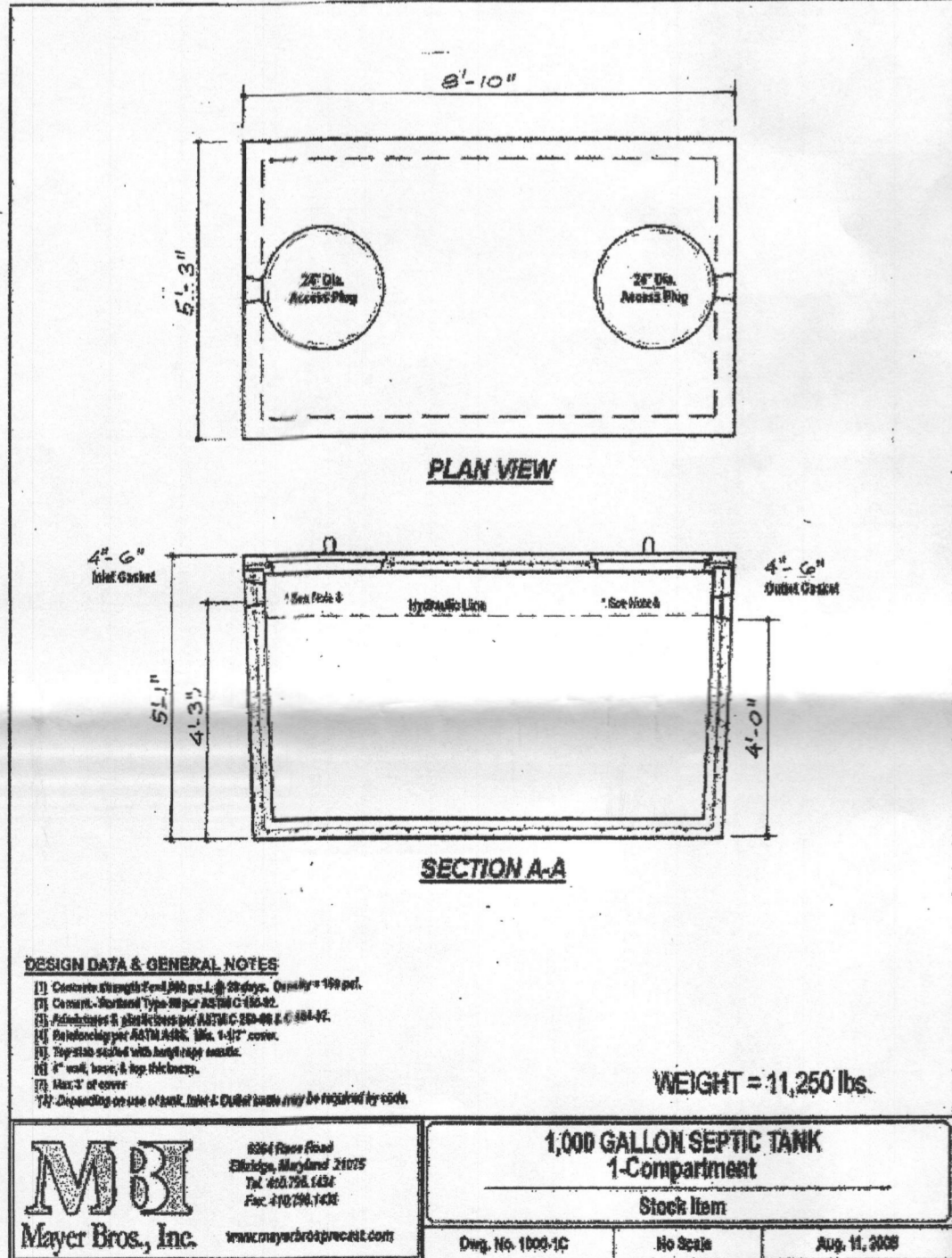
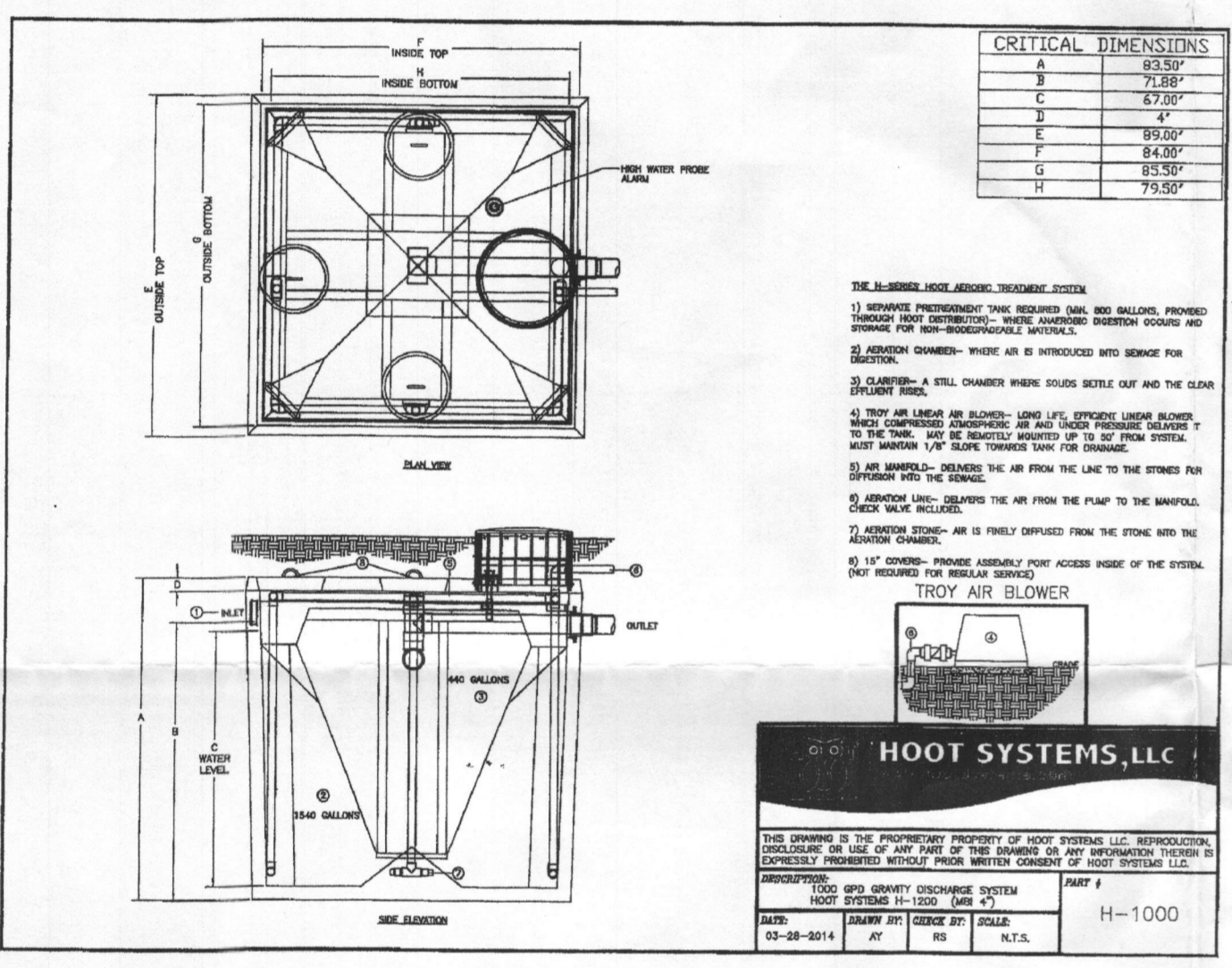
- THE SUBJECT PROPERTY IS ZONED RR-DEO PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- PARCEL BACKGROUND:
TAX MAP: 28
GRID: 9
PARCEL: 48
LOT: 6
DEED REFERENCE: LIBER 5891 FOLIO 307
ELECTION DISTRICT: FIFTH
ZONING: RR-DEO.
AREA: 49,854 S.F.
DPZ FILES: ECP-13-025, SP-13-010, F-14-095, GP-15-081
- 2' TOPOGRAPHY FOR THE DEVELOPED AREAS IS BASED ON AERIAL SURVEY FLOWN BY WINGS TOPOGRAPHY INC. ON OR ABOUT MARCH 2007.
- PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
- SOILS DATA BASED ON THE USDA SOIL SURVEY OF HOWARD COUNTY, MD, DATED MAY, 2008.
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE 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. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- ANY CHANGES TO A PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
- EXISTING WELLS, SEPTIC SYSTEMS, AND SEWERAGE DISPOSAL AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS OR SEWERAGE DISPOSAL AREAS HAVE BEEN SHOWN.

BEST AVAILABLE TECHNOLOGY SITE PLAN NOTES

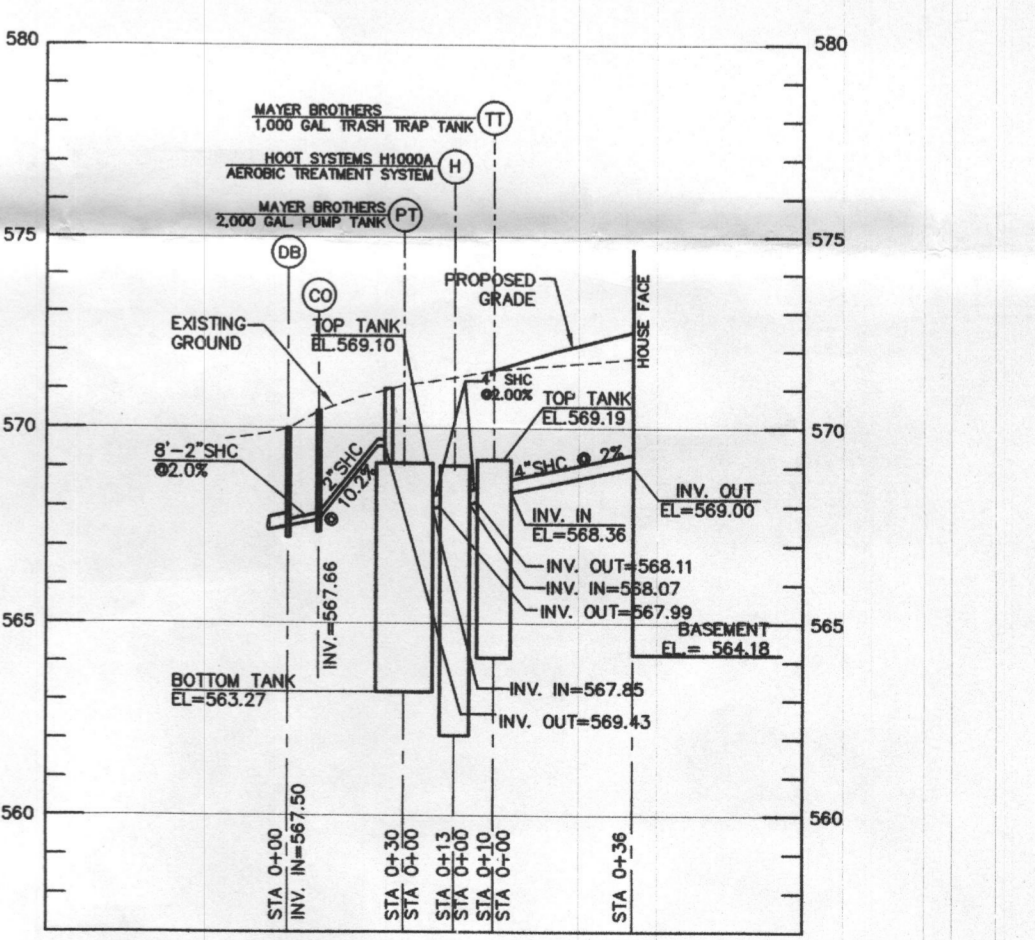
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 3.0' FEET.
- THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON MANUFACTURER'S SPECIFICATIONS.
- 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 (1) 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 THE 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.



All Tanks to be Traffic Bearing



Approved Septic System Plan
Howard County Health Department
Hoot H-1000 w/Goolds EP04 Pump
3,150,053.25 revision or equiv.
Signature: [Signature]
Date: 7/15/16
5024 Bee Frances Way



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. 17942, EXP DATE 09/03/2016.

R. JACOB HIKMAT, P.E.
DATE: 07/11/16

DEVELOPER
NV HOMES
9720 PATUXENT WOODS DRIVE
COLUMBIA, MARYLAND 21046
(410) 379-5956

WELL CERTIFICATION:
THE EXISTING WELL, TAG NO. HO-14-0152, HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN

5024 BEE FRANCES WAY, CLARKSVILLE MD
GREENBERRY LOT 6
SITE PLAN FOR BAT INSTALLATION

MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
7350-B Grace Drive, Columbia, Maryland 21044
(410) 997-0296 Fax

DATE: JULY 2016
PROJECT: 15-005
ILLUSTRATION: MAM
SCORE: MAM
APPROVAL: RJH
DATE: []
NO.: []
REVISIONS: []

1 OF 1

SOILS TABLE (WITHIN LOD)

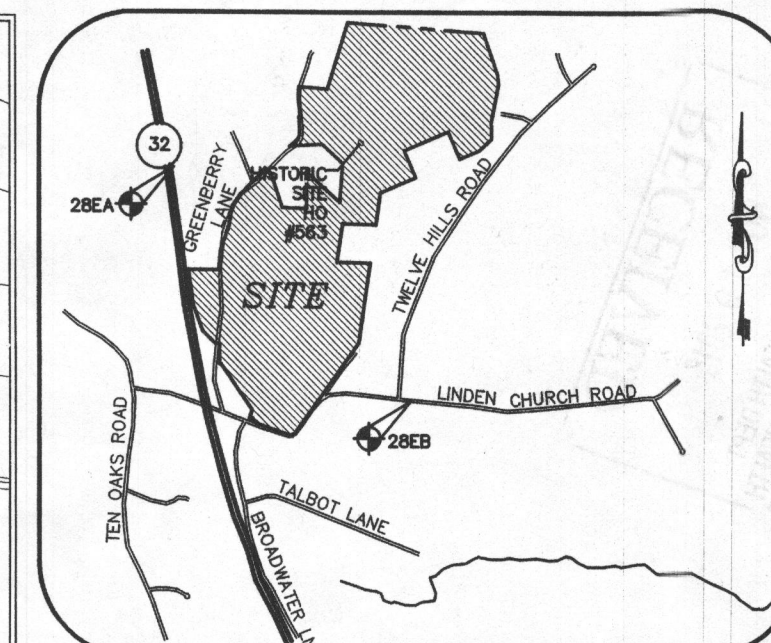
SYMBOL	RATING	NAME	K FACTOR
GgA	(B)	GLENELG LOAM, 0-3% SLOPES	.20
GgB	(B)	GLENELG LOAM, 3-8% SLOPES	.20

PRIMARY TRENCH DATA

TRENCH	EX. GROUND ELEVATION	INVERT ELEVATION	BOTTOM OF TRENCH EL.
1	570.4	567.9	565.9
2	570.1	567.6	565.6

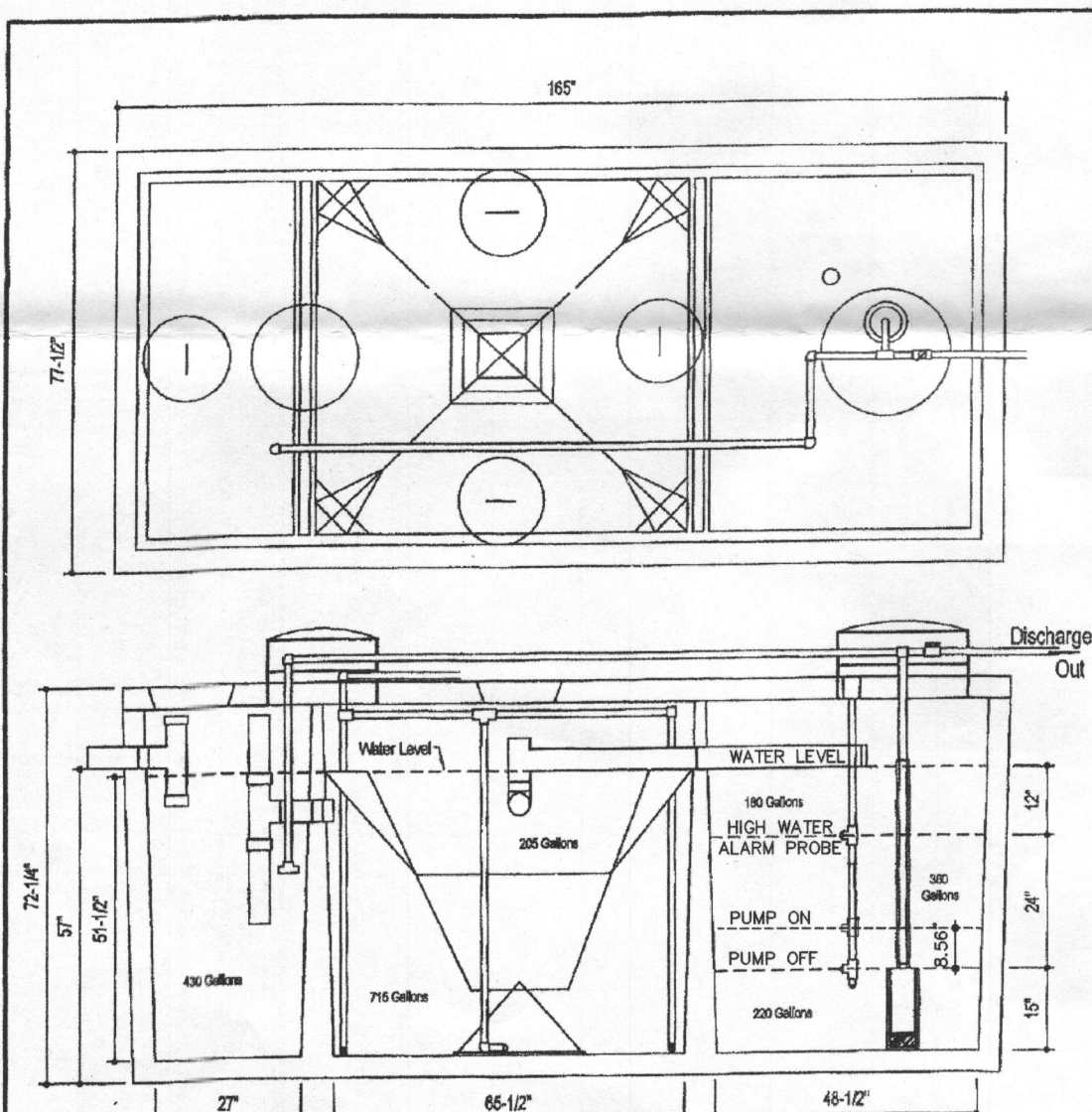
SEPTIC TRENCH SIZING

SYSTEM	APPLICATION RATE (GPD / SF)	MAXIMUM FLOW RATE (GPD)	AREA OF REQUIRED TRENCH (SF)	TRENCH WIDTH (FT)	LENGTH OF REQUIRED TRENCH (LF)	EFFECTIVE DEPTH (FT)	TRENCH BOTTOM DEPTH (FT)	TRENCH REDUCTION FACTOR**	ADJUSTED LENGTH OF REQUIRED TRENCH (LF)	MINIMUM TRENCH SPACING (FT)	NUMBER OF TRENCHES	PROVIDED TRENCH LENGTH (FT)
PRIMARY	1.2	750	625	3	208.3	2.5	4.5	0.62	129.2	10.0'	2	65
SECONDARY	1.2	750	625	3	208.3	5.5	7.5	0.62	129.2	10.0'	2	65
TERTIARY	1.2	750	625	3	208.3	5.5	7.5	0.62	129.2	10.0'	2	65



LOCATION PLAN
SCALE: 1"=600'

VICINITY MAP
SCALE: 1"=2000'
ADC MAP 24 GRID F6



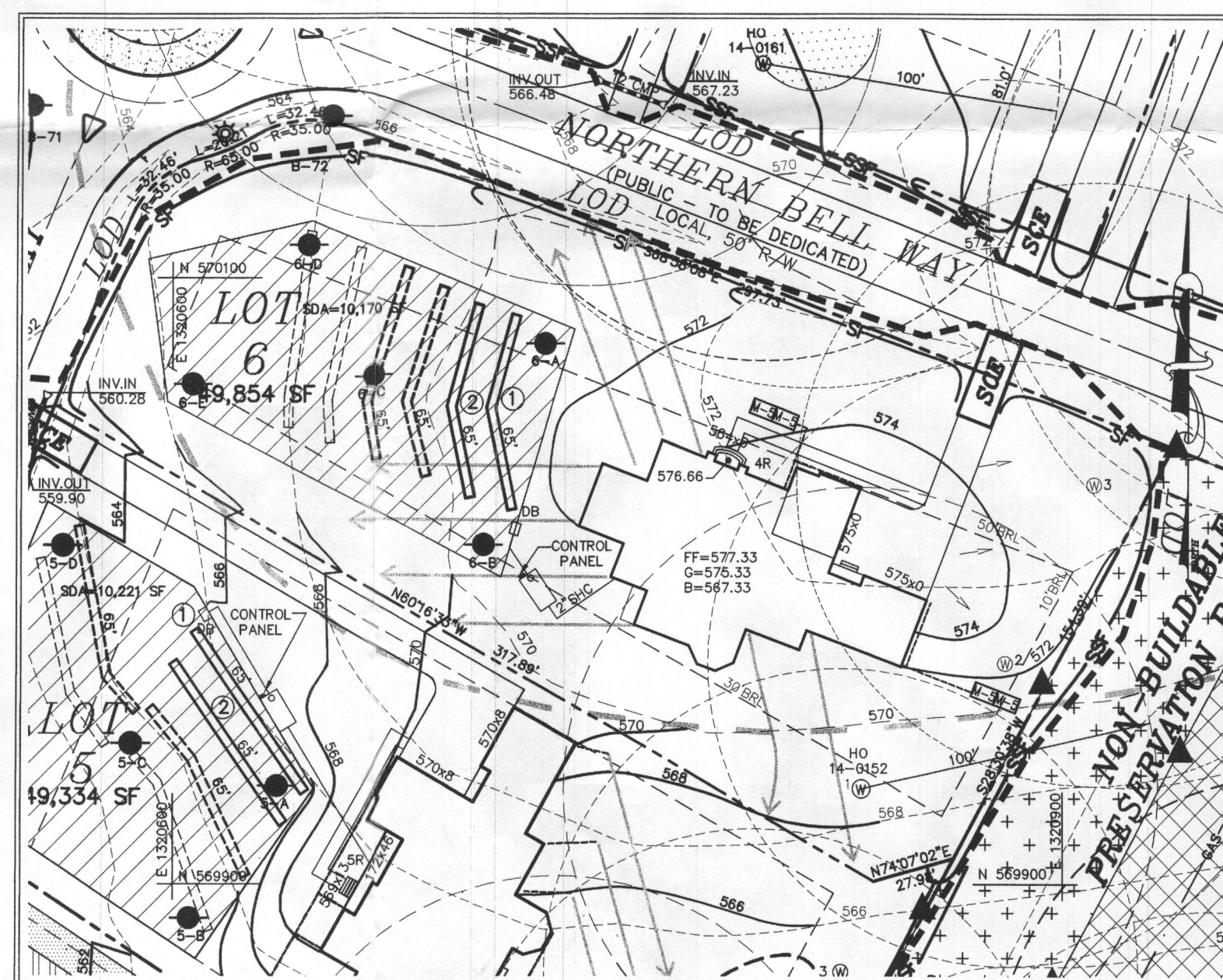
DESIGN DATA & GENERAL NOTES
 1. Concrete strength: Fc=4000 p.s.i. @ 28 days. Density = 150 p.c.
 2. Cement - Portland Type III per ASTM C 150.
 3. Admixtures - Admixtures per ASTM C 309 & C 494.
 4. Reinforcing per ASTM A618, Min. 1-57 steel.

Mayer Brothers, Inc.
 600 GPD BNR SYSTEM
 H-600 BNR
 with 750 GALLON PUMP CHAMBER
 MBI
 Dept. No. Hood Form #1 No Scale March 19, 2009

BAT SYSTEM ELEVATIONS

DESCRIPTION	VALUE
FINISHED GRADE AT SEPTIC TANK	570.50
INVERT INTO TANK	568.25
EXTERIOR BOTTOM OF TANK	563.00
INTERIOR BOTTOM OF TANK	563.33
PUMP OFF	564.58
PUMP ON	565.30
HIGH WATER ALARM	566.94
WATER LEVEL	567.94
INVERT OUT OF TANK	569.33
TOTAL HEAD	6.18
DOSED RATE	50 GPM
PUMP RUNTIME	2.5 MIN.

NOTE:
 BASEMENT WILL NOT SEWER BY GRAVITY



GRAPHIC SCALE
1 inch = 50 ft.

GENERAL NOTES:

- THE SUBJECT PROPERTY IS ZONED RR-DEO PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.
- PARCEL BACKGROUND:
 TAX MAP: 28
 GRID: 9
 PARCEL: 48
 LOT: 6
 DEED REFERENCE: LIBER 5891 FOLIO 307
 ELECTION DISTRICT: FIFTH
 ZONING: RR-DEO
 AREA: 49,854 S.F.
 DPZ FILES: ECP-13-025, SP-13-010, F-14-095, GP-15-081
- TOPOGRAPHY FOR THE DEVELOPED AREAS IS BASED ON AERIAL SURVEY FLOWN BY WINGS TOPOGRAPHY INC. ON OR ABOUT MARCH 2007.
- PRIVATE WELL AND SEPTIC WILL BE UTILIZED.
- SOILS DATA BASED ON THE USDA SOIL SURVEY OF HOWARD COUNTY, MD, DATED MAY, 2008.
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQ. FT. AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE 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. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- ANY CHANGES TO A PRIVATE SEWERAGE EASEMENT SHALL REQUIRE A REVISED PERC CERTIFICATION PLAN.
- EXISTING WELLS, SEPTIC SYSTEMS, AND SEWERAGE DISPOSAL AREAS WITHIN 100' OF THE PROPERTY AND THOSE WELLS WITHIN 200' DOWN GRADIENT OF EXISTING OR PROPOSED SEPTIC SYSTEMS OR SEWERAGE DISPOSAL AREAS HAVE BEEN SHOWN.

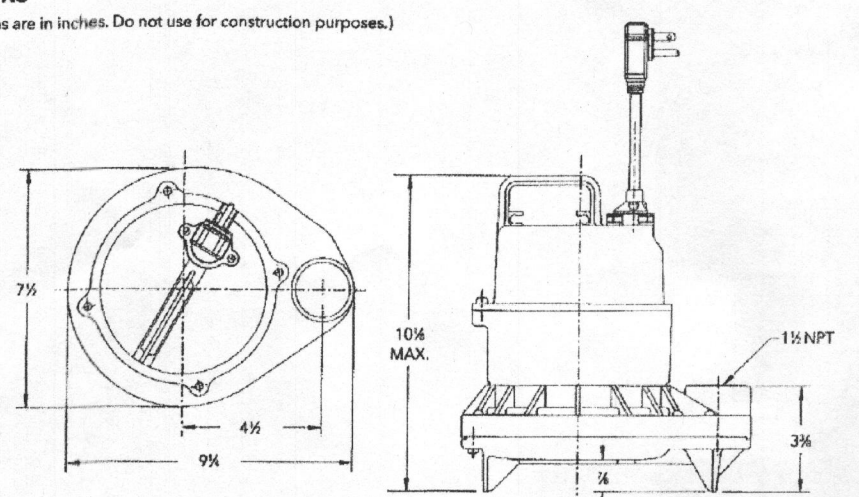
BEST AVAILABLE TECHNOLOGY SITE PLAN NOTES

- 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 SITE PLAN MAY BE REQUIRED.
- THE MAXIMUM DEPTH OF THE BAT PER THE MANUFACTURER'S SPECIFICATION IS 3.0' FEET.
- THE BLOWER MAY NOT BE LOCATED MORE THAN 100 FEET FROM THE TANK BASED ON MANUFACTURER'S SPECIFICATIONS.
- 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 (1) 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 THE 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.

ON-SITE SEWAGE DISPOSAL SYSTEM:

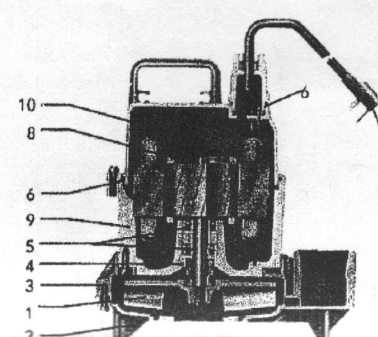
RESIDENTIAL SYSTEM DESIGN: HOOT 600 BNR
 5 BEDROOM HOUSE (LIVING AREA = 2,288 SQ.FT.)
 150 GALLONS X # OF BEDROOMS = VOLUME OF WASTEWATER /DAY
 150 X 5 = 750 GPD
 PERC RATE = 2-5 MINUTES/INCH
 APPLICATION RATE = 1.2 GPD/SQ.FT.
 DESIGN FLOW X APPLICATION RATE = SQ.FT. OF TRENCH REQUIRED
 750 X 1.2 = 625 SQ.FT.
 SQ.FT. REQUIRED X WIDTH OF TRENCH = LENGTH OF TRENCH
 625 X 3.0' = 208.3 FT
 USE 24" OF GRAVEL BELOW DRAIN PIPE
 208.3 X 0.62 = 129.2
 USE TWO (2) TRENCHES (65')
 A MINIMUM OF 10' BETWEEN TRENCHES UTILIZING SIDEWALL REDUCTION CREDIT.
 MINIMUM TANK CAPACITY = 750 GALLONS
 PUMP: GOULDS MODEL 3871, EP04 SERIES

DIMENSIONS
 (All dimensions are in inches. Do not use for construction purposes.)



COMPONENTS

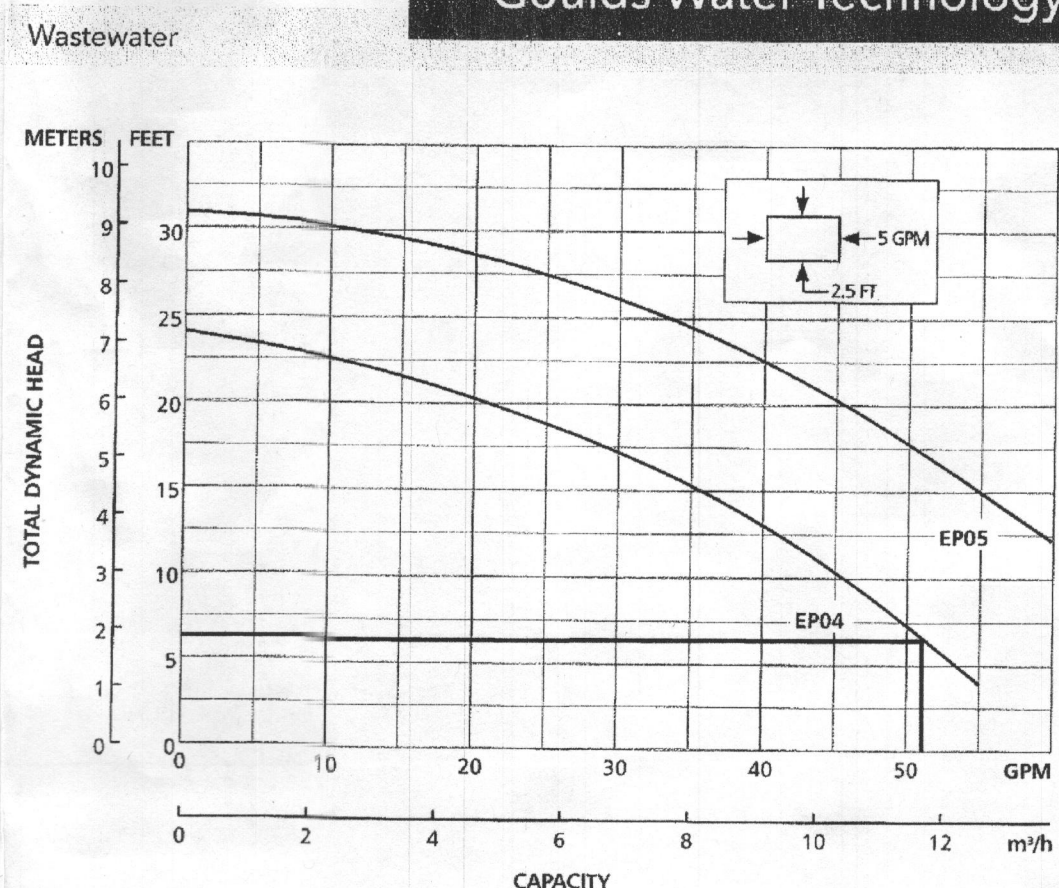
Item No.	Description
1	Impeller
2	Base
3	Pump casing
4	Mechanical seal
5	Ball bearings
6	O-rings
7	Power cord
8	Oil filled motor
9	Motor housing/stator assembly
10	Motor cover



xylem
 Let's Solve Water

Xylem, Inc.
 2881 East Bayard Street Ext., Suite A
 Seneca Falls, NY 13148
 Phone: (866) 325-5210
 Fax: (888) 322-5877
 www.gouldswatertechnology.com
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Goulds Water Technology



MODEL INFORMATION

Order No.	HP	Volts	Amps	Minimum Circuit Breaker	Phase	Float Switch Style	Cord Length	Discharge Connection	On Level	Off Level	Minimum Basin Diameter	Maximum Basin Size	Shipping Weight lbs/kg
EP0411						Plug/No Switch	10'	1 1/2"	Manual	Manual	15"		20/9.1
EP0411A						Plug/No Switch	10'	1 1/2"	Manual	Manual	15"		21/9.5
EP0411F	1/2	115	12	20		Plug/No Switch	20'	1 1/2"	Manual	Manual	15"		20/9.1
EP0411AC	1/2	115	12	20		Plug/No Switch	20'	1 1/2"	Manual	Manual	15"		21/9.5
EP0412	1/2	230	6.5	10	1	Plug/No Switch	10'	1 1/2"	Manual	Manual	15"	10"	20/9.1
EP0412F	1/2	230	6.5	10	1	Plug/No Switch	20'	1 1/2"	Manual	Manual	15"		20/9.1
EP0511F	1/2	115	13	20		Plug/No Switch	20'	1 1/2"	Manual	Manual	15"		22/10
EP0511AC	1/2	115	13	20		Plug/No Switch	20'	1 1/2"	Manual	Manual	15"		23/10.4
EP0512F	1/2	230	6.5	10		Plug/No Switch	20'	1 1/2"	Manual	Manual	15"		22/10

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER
 HOWARD COUNTY HEALTH DEPARTMENT

DATE



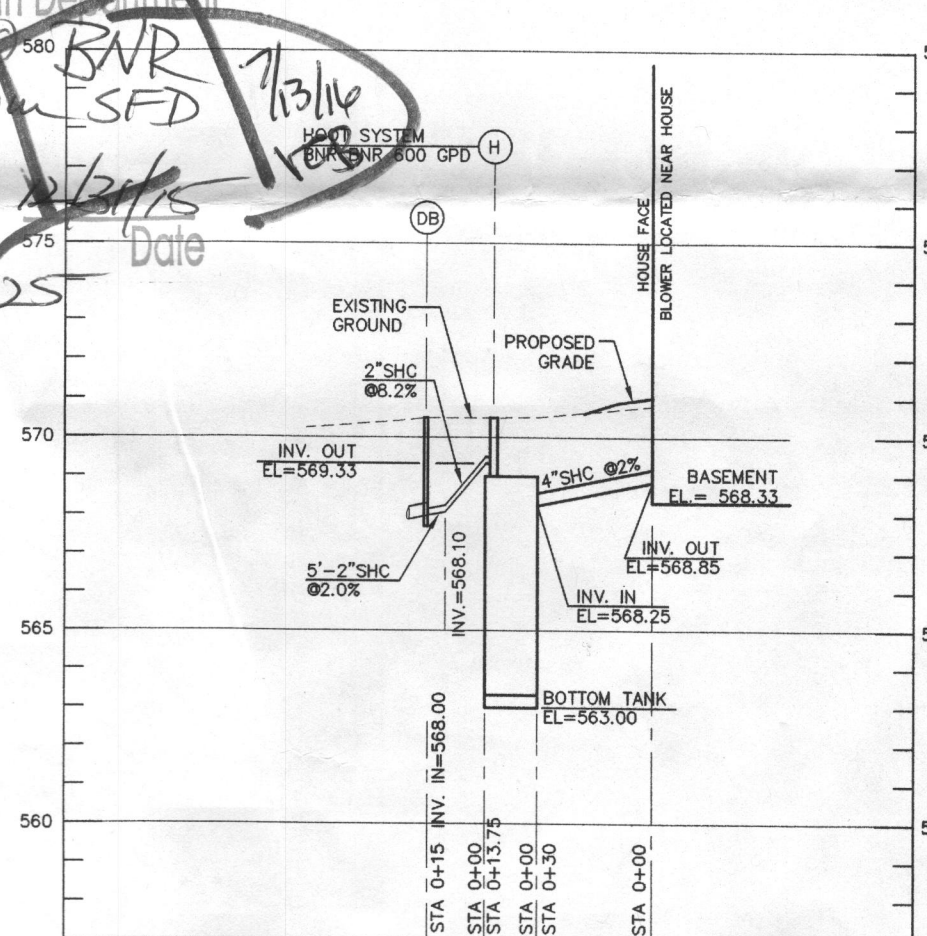
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 17942, EXP DATE 09/03/2016.

R. JACOB HIKMAT, P.E.

11/19/15
 DATE:

WELL CERTIFICATION:

THE EXISTING WELL, TAG NO. HO-14-0152, HAS BEEN FIELD LOCATED AND IS ACCURATELY SHOWN



PROFILE - PRIVATE SEWER

SCALE: 1"=50' HOR
 1"=5' VER

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 7350-B Grace Drive, Columbia, Maryland 21044
 (410) 997-0296 Fax