



Building Permit Application

Howard County Maryland
Department of Inspections, Licenses and Permits
3430 Court House Drive
Permits: 410-313-2455
www.howardcountymd.gov

Date Received: 11/09/15

Permit No.: B15004982

Building Address: 11807 Chapel Estates Dr.
City: Clarksville State: MD Zip Code: 21029
Suite/Apt. # N/A SDP/WP/BA #: _____
Census Tract: _____ Subdivision: Chapel Rise
Section: _____ Area: _____ Lot: #1
Tax Map: 29 Parcel: _____ Grid: 8 & 14
Zoning: RC-DEO Map Coordinates: _____ Lot Size: 3.004 AC

Property Owner's Name: Kambiz Ghogati
Address: BOSS High Castle Rd
City: Ellicott City State: MD Zip Code: 21043
Phone: (410) 279-7484 Fax: _____
Email: kghogati@gmail.com

Applicant's Name & Mailing Address, (If other than stated herein)
Applicant's Name: Mostafa Izadi
Address: P.O. Box 129
City: Riderwood State: MD Zip Code: 21139
Phone: (410) 382-9180 Fax: 410 296-0505
Email: mizadi@aec-engineers.biz

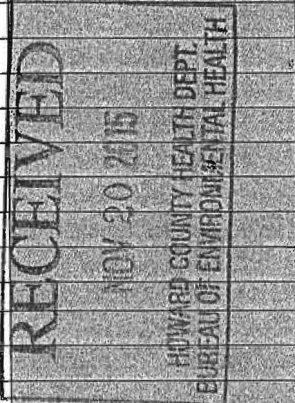
Contractor Company: Forbes Home Improvements & Const., Inc.
Contact Person: Peter Forbes
Address: P.O. Box 9691
City: Baltimore State: MD Zip Code: 21237
License No.: #5160
Phone: 443-506-7888 Fax: 443-873-7644
Email: forbeshome7@comcast.net

Engineer/Architect Company: AEC, PC
Responsible Design Prof.: Mostafa Izadi, PE
Address: P.O. Box 129
City: Riderwood State: MD Zip Code: 21139
Phone: (410) 382-9180 Fax: (410) 296-0505
Email: mizadi@aec-engineers.biz

Existing Use: Residential
Proposed Use: Residential
Estimated Construction Cost: \$ 60,000.00
Description of Work: Construction of 3 segmental retaining walls. Wall 1 (186' L - 7.5' H, max.) Wall 2A (25' L - 4' H, max.) Wall 2B (38' L - 4' high, max.)
Occupant or Tenant: _____
Was tenant space previously occupied? Yes No
Contact Name: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Phone: _____ Fax: _____
Email: _____

Commercial Building Characteristics	Residential Building Characteristics	
Height:	<input type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories:	Depth	Width
Gross area, sq. ft./floor:	1 st floor:	
	2 nd floor:	
Area of construction (sq. ft.):	Basement:	
	<input type="checkbox"/> Finished Basement	
Use group:	<input type="checkbox"/> Unfinished Basement	
	<input type="checkbox"/> Crawl Space	
Construction type:	<input type="checkbox"/> Slab on Grade	
<input type="checkbox"/> Reinforced Concrete	No. of Bedrooms:	
<input type="checkbox"/> Structural Steel	Multi-family Dwelling	
<input type="checkbox"/> Masonry	No. of efficiency units:	
<input type="checkbox"/> Wood Frame	No. of 1 BR units:	
<input type="checkbox"/> State Certified Modular	No. of 2 BR units:	
	No. of 3 BR units:	
	Other Structure:	
	Dimensions:	
<input checked="" type="checkbox"/> Roadside Tree Project Permit	Footings:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Roof:	
Roadside Tree Project Permit #	<input type="checkbox"/> State Certified Modular	
	<input type="checkbox"/> Manufactured Home	

Utilities	
Water Supply	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Sewage Disposal	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Electric:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Gas:	<input type="checkbox"/> Yes <input type="checkbox"/> No
Heating System	
<input type="checkbox"/> Electric	<input type="checkbox"/> Oil
<input type="checkbox"/> Natural Gas	<input type="checkbox"/> Propane Gas
<input type="checkbox"/> Other:	
Sprinkler System:	
<input type="checkbox"/> Yes	<input type="checkbox"/> No
Grading Permit Number:	
<u>SFD</u>	
Building Shell Permit Number: <u>B15003963</u>	



THE UNDERSIGNED HEREBY CERTIFIES AND AGREES AS FOLLOWS: (1) THAT HE/SHE IS AUTHORIZED TO MAKE THIS APPLICATION; (2) THAT THE INFORMATION IS CORRECT; (3) THAT HE/SHE WILL COMPLY WITH ALL REGULATIONS OF HOWARD COUNTY WHICH ARE APPLICABLE THERETO; (4) THAT HE/SHE WILL PERFORM NO WORK ON THE ABOVE REFERENCED PROPERTY NOT SPECIFICALLY DESCRIBED IN THIS APPLICATION; (5) THAT HE/SHE GRANTS COUNTY OFFICIALS THE RIGHT TO ENTER ONTO THIS PROPERTY FOR THE PURPOSE OF INSPECTING THE WORK PERMITTED AND POSTING NOTICES.

Applicant's Signature: [Signature]
Email Address: mizadi@aec-engineers.biz
Title/Company: VP, Advanced Engineering Consultants, PC

Print Name: MOSTAFA IZADI
Date: 11/17/15

NOV 09 2015

LICENSES & PERMITS DIVISION

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY
PLEASE WRITE NEATLY & LEGIBLY

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA (Zoning)		
PSZA (Engineering)		
Health	<u>1-23-16</u>	<u>[Signature]</u>

Is Sediment Control approval required for issuance? Yes No
 CONTINGENCY CONSTRUCTION START

DPZ SETBACK INFORMATION	
Front:	
Rear:	
Side:	
Side St.:	
All minimum setbacks met?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Is Entrance Permit Required?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:	
SDP/Red-line approval date:	

Filing Fee	\$
Permit Fee	\$ <u>150.00</u>
Tech Fee	\$ <u>15.00</u>
Excise Tax	\$
PSFS	\$
Guaranty Fund	\$
Add'l per Fee	\$
Total Fees	\$ <u>165.00</u>
Sub- Total Paid	\$
Balance Due	\$
Check	# <u>66679</u>

Distribution of Copies: White: Building Officials Green: PSZA,Zoning Yellow: PSZA,Engineering Pink: Health Gold: SHA



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 City: Clarksville State: MD Zip Code: 21029
 Suite/Apt. # _____ SDP/WP/BA #: _____
 Census Tract: _____ Subdivision: _____
 Section: _____ Area: _____ Lot: 1
 Tax Map: _____ Parcel: _____ Grid: _____
 Zoning: _____ Map Coordinates: Lot Size: _____

Existing Use: Vacant Lot
 Proposed Use: New House
 Estimated Construction Cost: \$ 1,150,00
 Description of Work: New House Construction
5 Bedroom, 6 Bathroom, Unfinished Basement, Garage

Occupant or Tenant: _____
 Was tenant space previously occupied? Yes No
 Contact Name: _____
 Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone: _____ Fax: _____
 Email: _____

Property Owner's Name: Kambiz Ghozati
 Address: 8055 High Castle Rd.
 City: Ellicott City State: MD Zip Code: 21403
 Phone: 410.279.7484 Fax: _____
 Email: _____

Applicant's Name & Mailing Address, (If other than stated herein)
 Applicant's Name: Kevin Murray
 Address: 5537 Twin Knolls Rd, Suite 435
 City: Columbia State: MD Zip Code: 21045
 Phone: 410.730.2300 Fax: 410.730.2796
 Email: Kevinm@ARIUMAE.COM

Contractor Company: Forbes Home Improvement and Construction, Inc.
 Contact Person: Mostafa Izadi
 Address: P.O. Box 9691
 City: Baltimore State: MD Zip Code: 21237
 License No.: MHBR# 5160
 Phone: 443.873.7646 Fax: _____
 Email: _____

Engineer/Architect Company: Arium AE
 Responsible Design Prof.: 5537 Twin Knolls Rd.
 Address: Suite 435
 City: Columbia State: MD Zip Code: 21045
 Phone: 410.730.2300 Fax: _____
 Email: _____

Commercial Building Characteristics	Residential Building Characteristics	
Height:	<input checked="" type="checkbox"/> SF Dwelling <input type="checkbox"/> SF Townhouse	
No. of stories:	Depth	Width
Gross area, sq. ft./floor:	1 st floor: 56'	82'
Area of construction (sq. ft.):	2 nd floor: 46'	82'
Use group:	Basement: 46'	82'
Construction type:	<input type="checkbox"/> Finished Basement	
<input type="checkbox"/> Reinforced Concrete	<input checked="" type="checkbox"/> Unfinished Basement	
<input type="checkbox"/> Structural Steel	<input type="checkbox"/> Crawl Space	
<input type="checkbox"/> Masonry	<input type="checkbox"/> Slab on Grade	
<input type="checkbox"/> Wood Frame	No. of Bedrooms:	
<input type="checkbox"/> State Certified Modular	Multi-family Dwelling	
	No. of efficiency units:	
	No. of 1 BR units:	
	No. of 2 BR units:	
	No. of 3 BR units:	
	Other Structure:	
	Dimensions:	
<input checked="" type="checkbox"/> Roadside Tree Project Permit	Footings:	
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Roadside Tree Project Permit #	<input type="checkbox"/> State Certified Modular	
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Utilities	
Water Supply	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Sewage Disposal	
<input type="checkbox"/> Public	
<input checked="" type="checkbox"/> Private	
Electric: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Gas: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Heating System	
<input type="checkbox"/> Electric <input type="checkbox"/> Oil	
<input checked="" type="checkbox"/> Natural Gas <input type="checkbox"/> Propane Gas	
<input type="checkbox"/> Other:	
Sprinkler System:	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Grading Permit Number:	
Building Shell Permit Number:	

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Kevin Murray
 Applicant's Signature
 KevinM@ariumae.com
 Email Address
 Architectural Designer / Arium AE, LLC
 Title/Company

Kevin Murray
 Print Name
09.15.2015
 Date

Checks Payable to: DIRECTOR OF FINANCE OF HOWARD COUNTY

****PLEASE WRITE NEATLY & LEGIBLY****
-FOR OFFICE USE ONLY-

AGENCY	DATE	SIGNATURE OF APPROVAL
State Highways		
Building Officials		
PSZA (Zoning)		
PSZA (Engineering)		
Health		<u>W. Bernard</u>

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DPZ SETBACK INFORMATION	
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Side St.:	
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Is Entrance Permit Required?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Historic District?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Lot Coverage for New Town Zone:	
SDP/Red-line approval date:	

Filing Fee	\$	<u>100</u>
Permit Fee	\$	
Tech Fee	\$	
Excise Tax	\$	
PSFS	\$	
Guaranty Fund	\$	<u>50</u>
Add'l per Fee	\$	
Total Fees	\$	
Sub- Total Paid	\$	
Balance Due	\$	
Check	#	<u>3302</u>

FRICION LOSS IN 2" PIPE FITTINGS:
 15 1/8 HB x 4 FEET PER FITTING = 60 EQUIVALENT FEET OF PIPE
 3 TEE/CROSS x 11 FEET PER FITTING = 33 EQUIVALENT FEET OF PIPE
 1 UNION x 2 FEET PER FITTING = 2 EQUIVALENT FEET OF PIPE
 2 ELBOWS x 9 FEET PER FITTING = 18 EQUIVALENT FEET OF PIPE
 TOTAL EQUIVALENT FEET OF PIPE = 113 FT

TOTAL LINEAR FEET OF 2" SCH. 40 PVC = 383.3 LF + 113 LF = 496.3 LF

DYNAMIC HEAD
 496.3 LF x 3.38 FT PER 100 LF OF PIPE = 16.77 FT OF FRICTION HEAD
 VERTICAL FROM PUMP OFF TO DISCHARGE = 2.00 FT
 VERTICAL FROM PUMP OFF TO HIGHEST ELEV. OF MAIN = 4.75 FT OF STATIC HEAD
 VERTICAL FROM DISCHARGE TO HIGHEST ELEV. OF MAIN = 26.27 FT
 TOTAL DYNAMIC HEAD = 49.79 FT

PIPE VOLUMES
 383.3 LF (2" SCH. 40 PIPE) x 17.4 GALLONS PER 100 LF = 66.7 GALLONS
 168.2 LF (1.75" SCH. 40 PIPE) x 10.6 GALLONS PER 100 LF = 17.8 GALLONS

MINIMUM DOSE
 MINIMUM DOSE = (5 x LATERAL PIPE VOLUME) + (FORCE MAIN & MANIFOLD)
 = (5 x 17.8) + (66.7)
 = 155.7 GALLONS

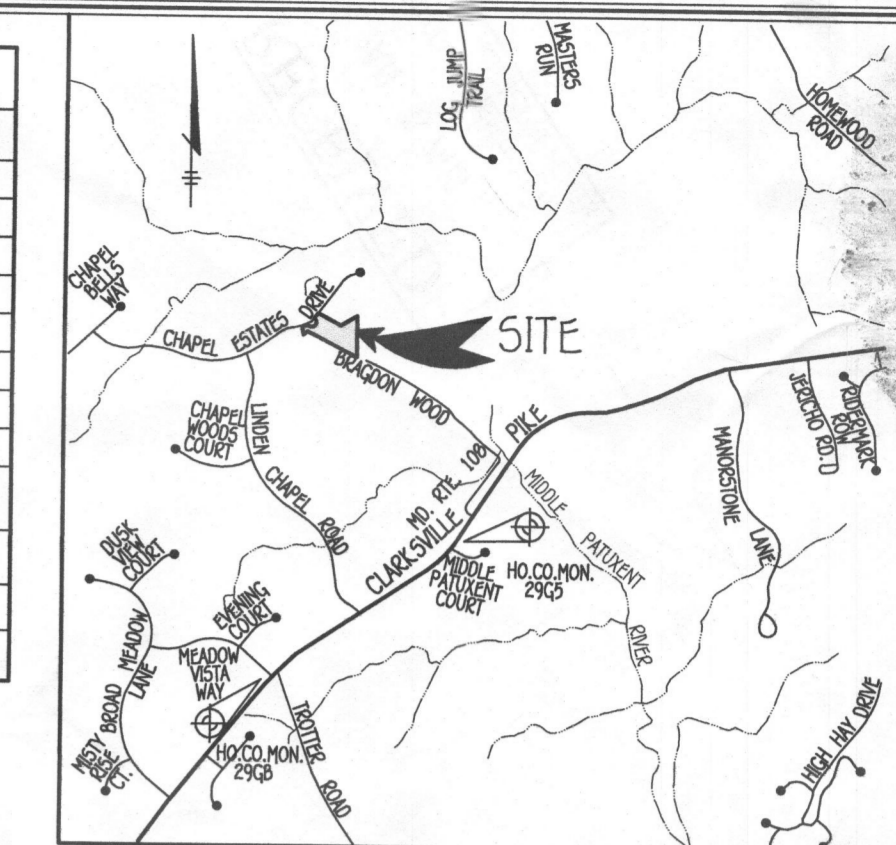
155.7 GALLONS IS LESS THAN 1/6 DESIGN FLOW (1,050/6=175)
 USE 183.2 GALLON DOSE (175 GALLON MINIMUM)
 (RUN TIME = 4 MIN (45.8 GPM x 4 = 183.2 GALLON DOSE))

PUMP NEEDS TO HANDLE 45.8 GPM AT 49.8 FT OF HEAD
 USE 0.75 HP (ME75 PUMP)

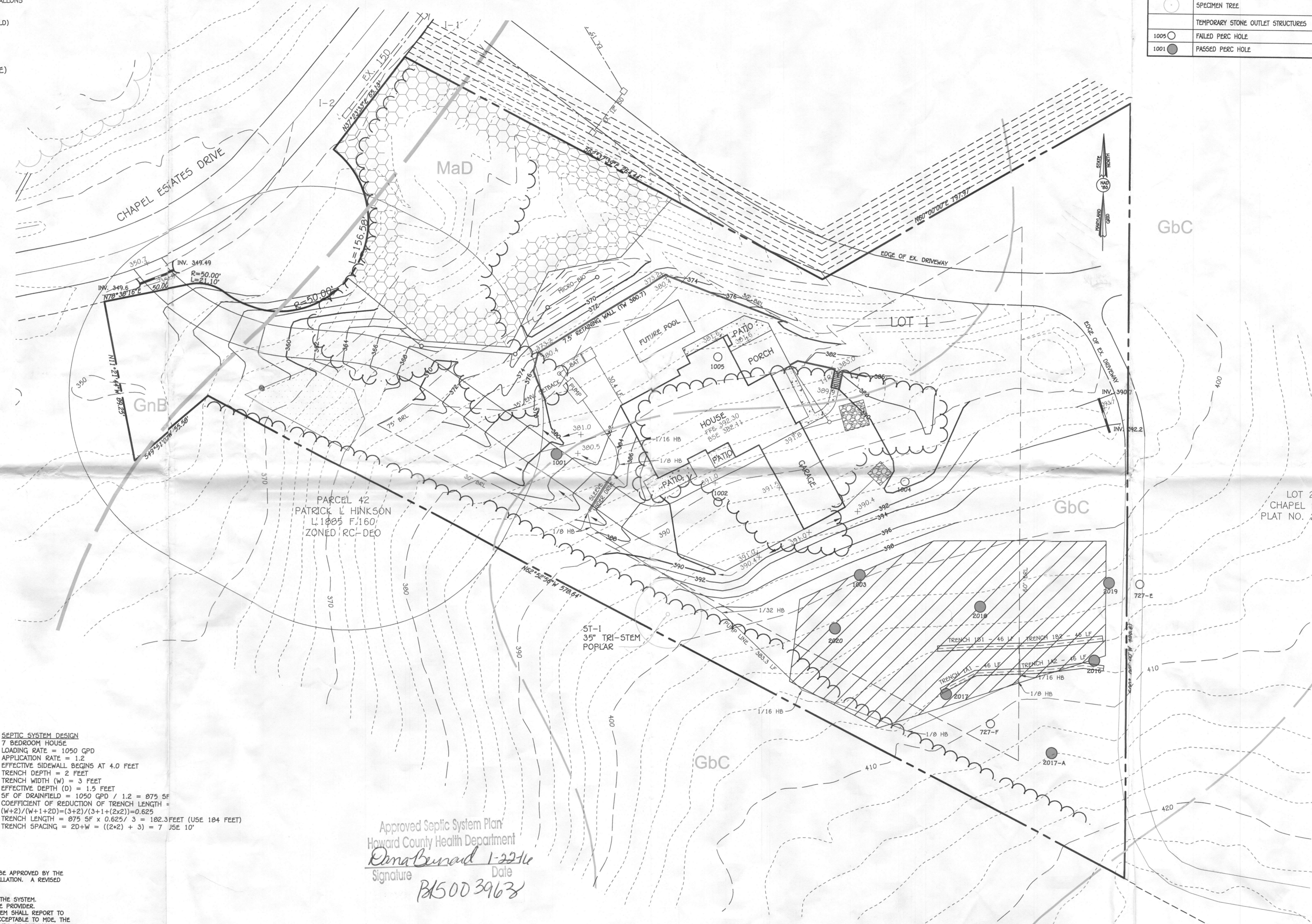
TRENCH	GROUND ELEV.	TOP OF STONE ELEV.	PIPE INVERT ELEV.	DEPTH TO STONE FROM GROUND	DEPTH OF STONE (FT)	BOTTOM OF TRENCH ELEV.	EFFECTIVE DEPTH STARTS AT	EFFECTIVE DEPTH (D)	TRENCH DEPTH	WIDTH OF TRENCHES (W)	TRENCH SPACING
1A1	407.8	404.3	403.8	3.5'	2.5'	401.8	4'	2'	6'	3.0'	10'
1A2	407.8	404.3	403.8	3.5'	2.5'	401.8	4'	2'	6'	3.0'	10'
1B1	405.8	402.3	401.8	3.5'	2.5'	399.8	4'	2'	6'	3.0'	10'
1B2	405.8	402.3	401.8	3.5'	2.5'	399.8	4'	2'	6'	3.0'	10'

TRENCH	GROUND ELEV.	PIPE INVERT ELEV.	TRENCH LENGTH (FT)	LATERAL PIPE LENGTH (FT)	PERFORATION DIAMETER (IN)	HEAD (FT)	PERFORATION FLOW RATE (GPM)	PERFORATION SPACING (FT)	NUMBER OF ORIFICES	TRENCH FLOW RATE (GPM)
1A1	407.8	403.8	46	43.45	5/16	2	1.63	6.57	7	11.41
1A2	407.8	403.8	46	43.45	5/16	2	1.63	6.57	7	11.41
1B1	405.8	401.8	46	42.17	5/16	4	2.30	9.20	5	11.50
1B2	405.8	401.8	46	42.17	5/16	4	2.30	9.20	5	11.50
TOTAL TRENCH FLOW RATE										45.82

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
- - - -	PROPOSED CONTOUR 2' INTERVAL
X362.5	SPOT ELEVATION
-DF--DF-	DIVERSION FENCE
-SSF--SSF-	SUPER SILT FENCE
-SF--SF-	SILT FENCE
---	EROSION CONTROL MATTING
---	LIMITS OF DISTURBANCE
○	SPECIMEN TREE
○	TEMPORARY STONE OUTLET STRUCTURES
○	FAILED PERC HOLE
○	PASSED PERC HOLE



VICINITY MAP
 SCALE: 1" = 2000'
 HO. CO. MD. ADC MAP 4934, GRID C3



SEPTIC SYSTEM ELEVATIONS
 FFE = 392.30
 BSE = 382.11
 INV. OUT OF HOUSE = 378.69
 PROP GROUND AT PRETREATMENT TANK = 380.9
 TOP OF PRETREATMENT TANK = 379.08
 COVER OVER PRETREATMENT TANK = 1.82 FT
 INVERT INTO PRETREATMENT TANK = 378.08
 INVERT OUT OF PRETREATMENT TANK = 377.41
 PROP GROUND AT BAT TANK = 380.9
 TOP OF BAT TANK = 379.08
 COVER OVER BAT TANK = 1.82 FT
 INVERT INTO BAT TANK = 377.41
 INVERT OUT OF BAT TANK = 377.75
 PROP GROUND AT C/O = 380.9
 INTO C/O = 377.68
 INV. OUT OF C/O = 377.68
 PROP GROUND AT PUMP TANK = 381.2
 TOP OF PUMP TANK = 378.2
 COVER OVER PUMP TANK = 3 FEET
 INVERT INTO PUMP TANK = 377.45
 INVERT OUT OF PUMP TANK = 379.45

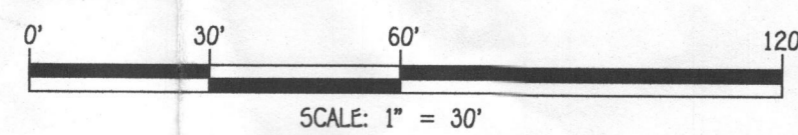
SEPTIC SYSTEM DESIGN
 7 BEDROOM HOUSE
 LOADING RATE = 1050 GPD
 APPLICATION RATE = 1.2
 EFFECTIVE SIDEWALL BEGINS AT 4.0 FEET
 TRENCH DEPTH = 2 FEET
 TRENCH WIDTH (W) = 3 FEET
 EFFECTIVE DEPTH (D) = 1.5 FEET
 SF OF DRAINFIELD = 1050 GPD / 1.2 = 875 SF
 COEFFICIENT OF REDUCTION OF TRENCH LENGTH =
 (W+2)/(W+1+2D) = (3+2)/(3+1+(2x2)) = 0.625
 TRENCH LENGTH = 875 SF x 0.625 / 3 = 182.3 FEET (USE 184 FEET)
 TRENCH SPACING = 2D+W = ((2x2) + 3) = 7 USE 10'

Approved Septic System Plan
 Howard County Health Department
Dana Leonard 1-22-16
 Signature Date
 BK5003963

- BAT NOTES**
- ANY CHANGE TO THE LOCATIONS OR DEPTHS TO ANY COMPONENTS MUST BE APPROVED BY THE ENGINEER AND THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO INSTALLATION. A REVISED SITE PLAN MAY BE REQUIRED.
 - THE MAXIMUM COVER OVER THE BAT SHALL BE 3 FEET.
 - THE BAT SYSTEM SHALL BE MAINTAINED AND OPERATED FOR THE LIFE OF THE SYSTEM. THE BAT SHALL BE OPERATED BY AND MAINTAINED BY A CERTIFIED SERVICE PROVIDER.
 - WITHIN ONE MONTH OF INSTALLATION, A PERSON INSTALLING THE BAT SYSTEM SHALL REPORT TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) IN A MANNER ACCEPTABLE TO MDE, THE ADDRESS AND DATE OF COMPLETION OF THE BAT INSTALLATION AND THE TYPE OF BAT INSTALLED.
 - ANY ELECTRICAL WORK FOR THE BAT INSTALLATION MUST BE PERFORMED BY A LICENSED ELECTRICIAN.
 - AN AGREEMENT AND EASEMENT HAS BEEN COMPLETED AND SIGNED BY ALL APPLICABLE PARTIES, AND RECORDED IN THE LAND RECORDS OF HOWARD COUNTY, LIBER FOLIO
 - 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.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2895

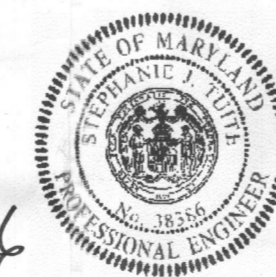
OWNER/DEVELOPER
 KAMBIZ GHOUZATI
 8055 HIGH CASTLE ROAD
 ELICOTT CITY, MARYLAND 21043
 410-279-7484



PROFESSIONAL CERTIFICATION

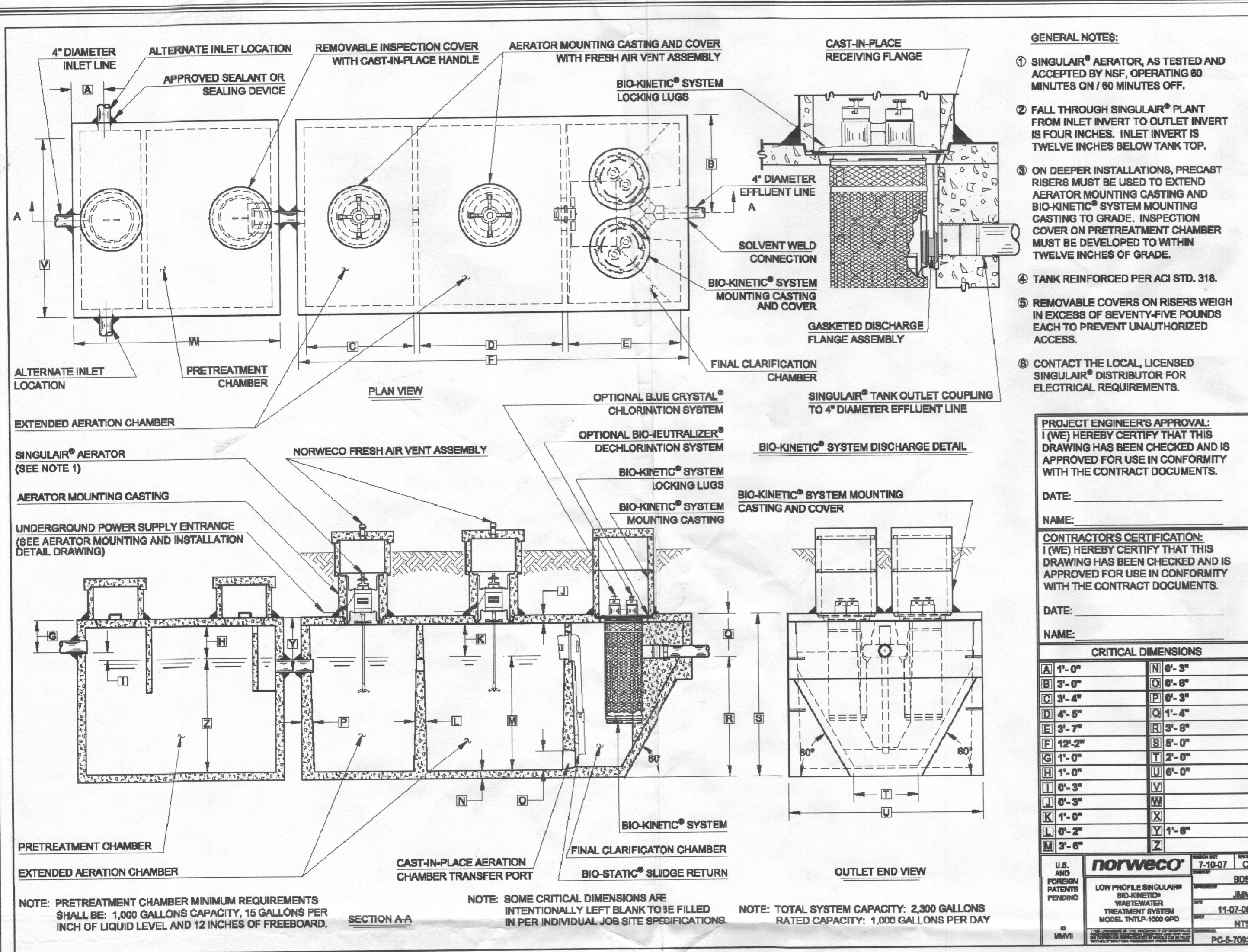
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38306, EXPIRATION DATE: 01/12/2018.

Stephanie Luter 1/12/16
 Signature Of Professional Engineer DATE



PLAN VIEW
 SCALE: 1" = 30'

Building Plan
 BAT SITE PLAN
 CHAPEL RISE, LOT 1
 11807 CHAPEL ESTATES DRIVE
 ZONED RC-DEO PLAT NO. 22022
 TAX MAP NO.: 29 GRID NO'S: B & 14
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 30' DATE: JANUARY 2016
 SHEET 1 OF 2



- GENERAL NOTES:**
- SINGULAR[®] AERATOR, AS TESTED AND ACCEPTED BY NSF, OPERATING 80 MINUTES ON / 90 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. INSPECTION COVER ON PRETREATMENT CHAMBER MUST BE DEVELOPED TO WITHIN TWELVE INCHES OF GRADE.
 - TANK REINFORCED PER ACI STD. 318.
 - 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.

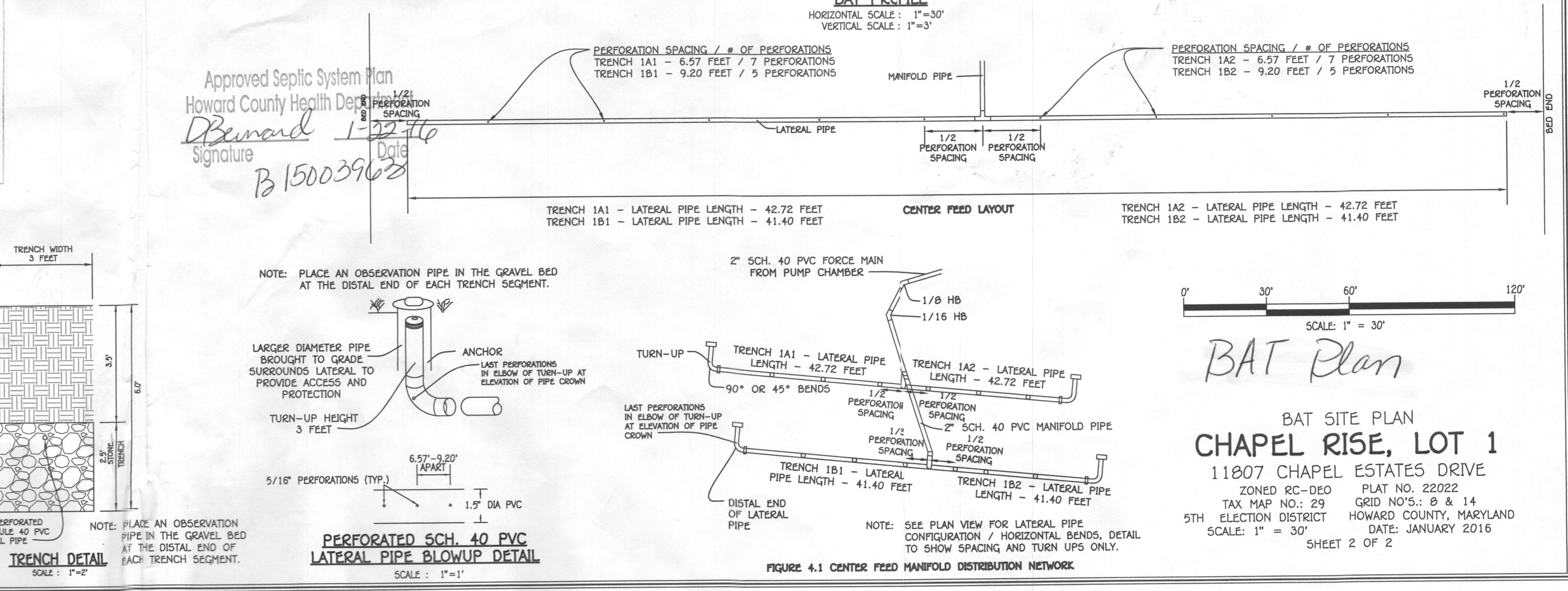
DATE: _____
NAME: _____

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

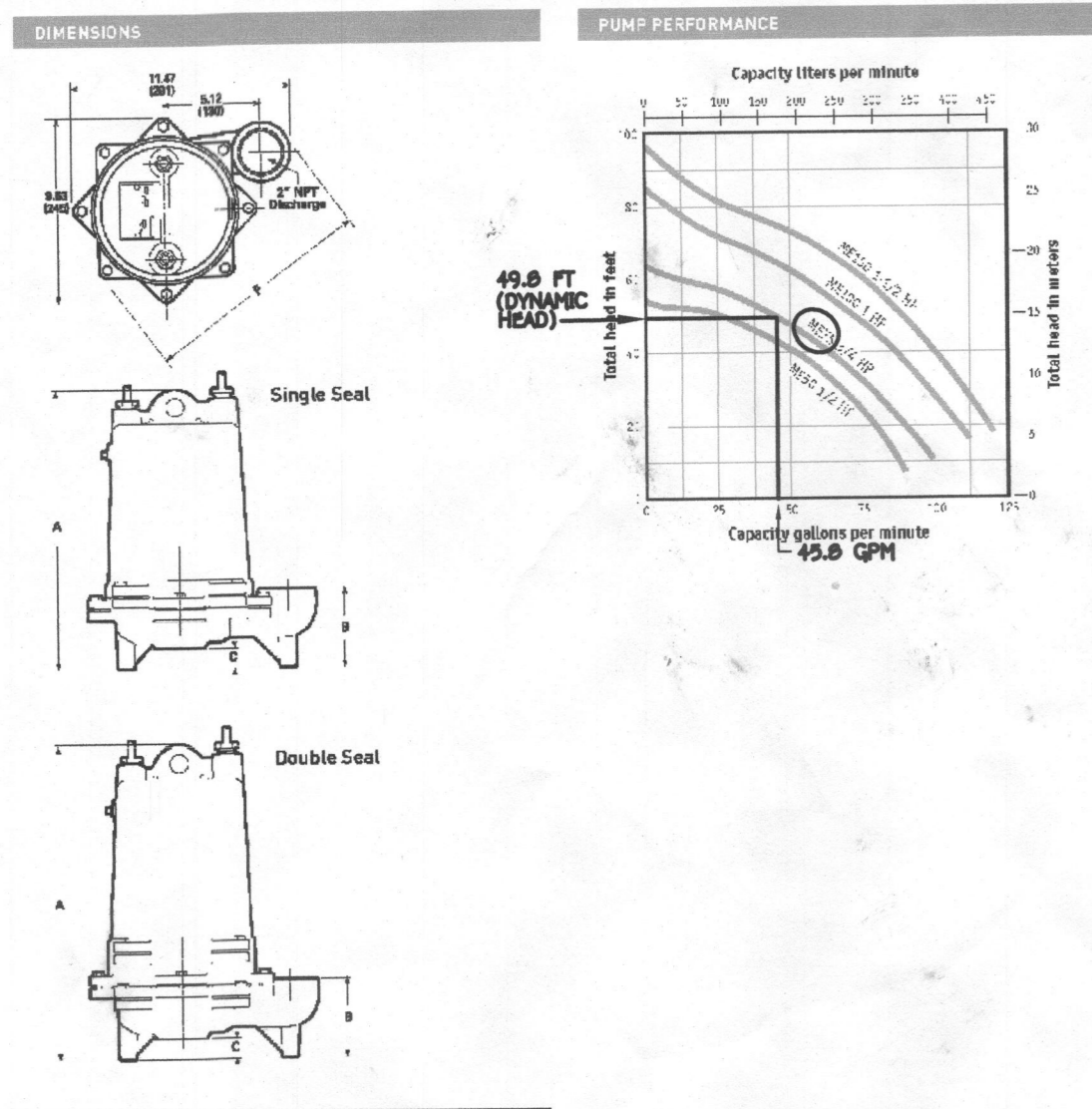
DATE: _____
NAME: _____

CRITICAL DIMENSIONS

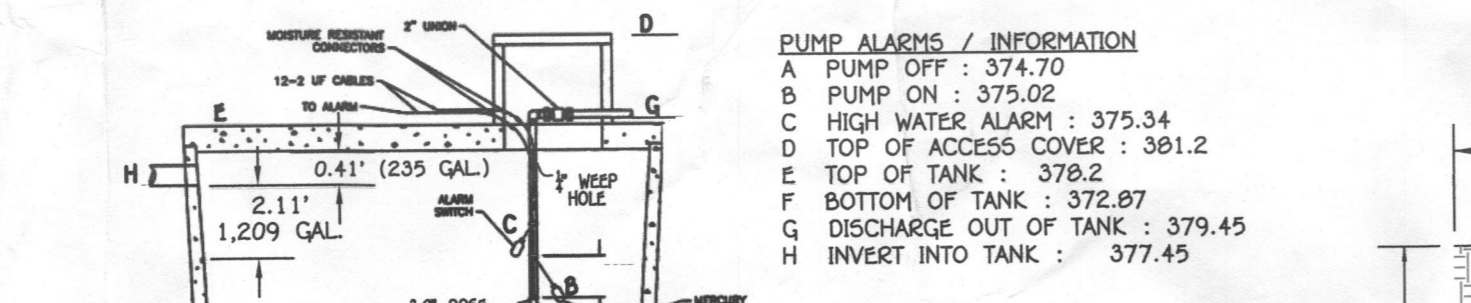
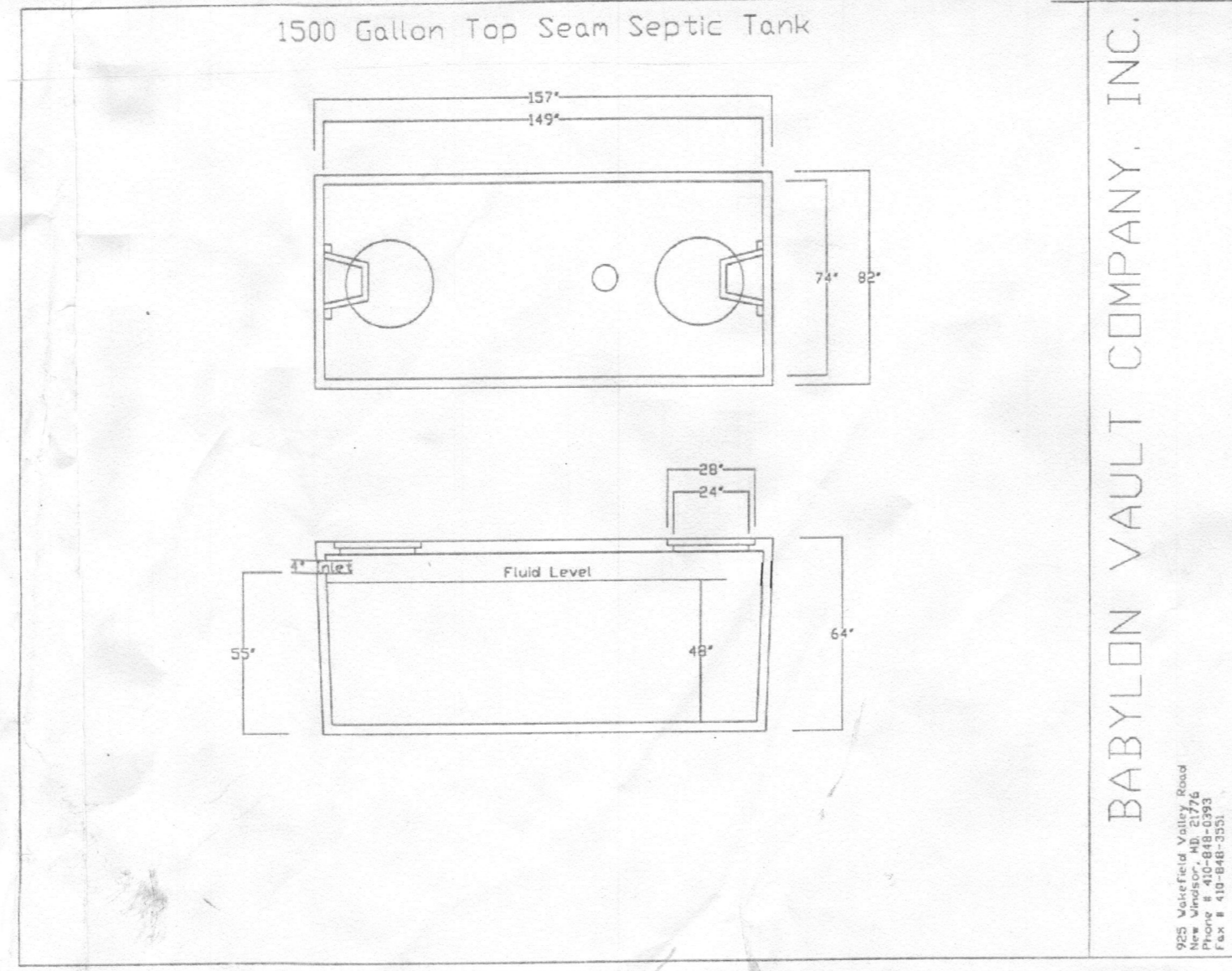
A	1'-0"	N	0'-3"
B	3'-0"	O	0'-6"
C	3'-4"	P	0'-3"
D	4'-5"	Q	1'-4"
E	3'-7"	R	3'-6"
F	12'-2"	S	0'-0"
G	1'-0"	T	2'-0"
H	1'-0"	U	0'-0"
I	0'-3"	V	0'-0"
J	0'-3"	W	0'-0"
K	1'-0"	X	0'-0"
L	0'-2"	Y	1'-8"
M	3'-6"	Z	0'-0"



MYERS[®] ME SERIES



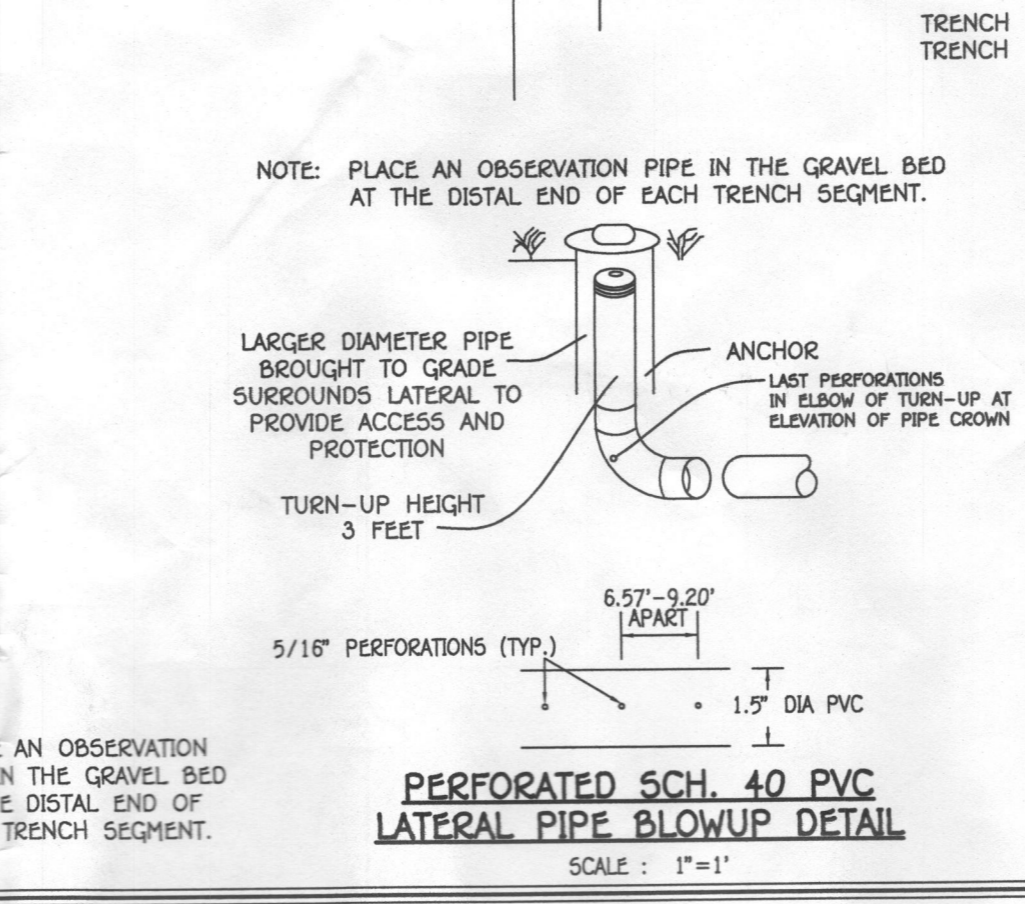
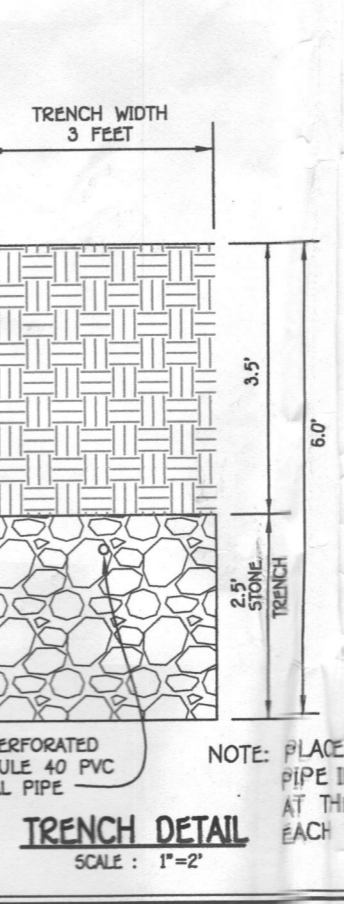
Catalog Number	A (inches)	B (inches)	C (inches)	F (inches)
ME505	15.8 (400)	4.99 (127)	1.83 (46)	12.13 (308)
ME500	18.9 (478)	4.09 (104)	1.83 (46)	12.13 (308)
ME755, ME1005, ME1505	15.8 (400)	4.0 (102)	1.73 (44)	12.5 (318)
ME750, ME1000, ME1500	18.8 (478)	4.0 (102)	1.73 (44)	12.5 (318)



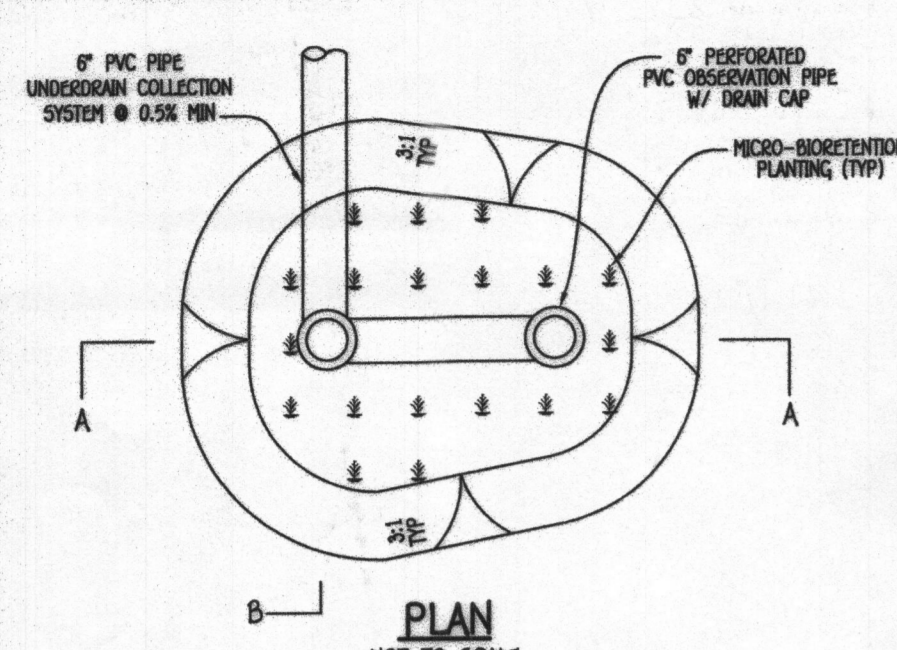
PROFESSIONAL CERTIFICATION

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. 38306, EXPIRATION DATE: 01/12/2018.

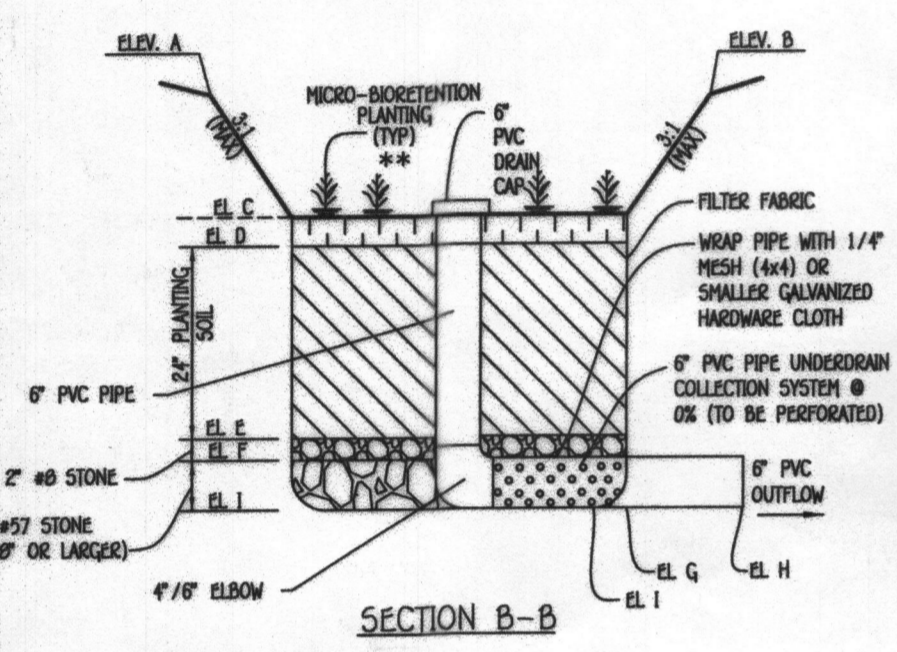
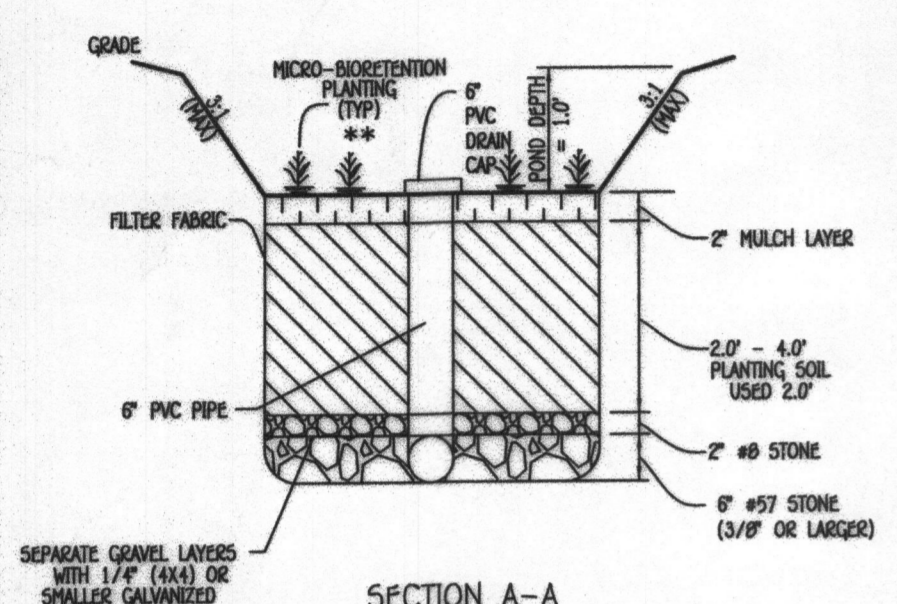
Signature of Professional Engineer: *Stephen J. ...* DATE: 1/22/16



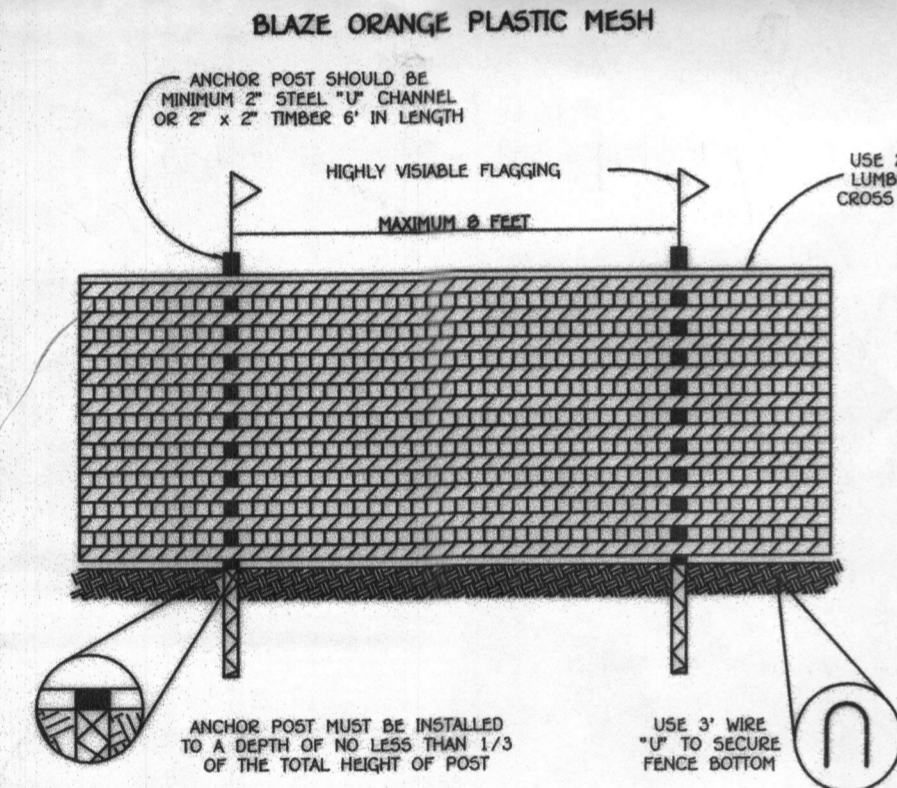
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MICRO-BIORETENTION PLANTING DETAIL
NOT TO SCALE



MICRO-BIORETENTION DETAIL (M-6)
NOT TO SCALE



NOTES:
1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA SHALL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

BUILDER/DEVELOPER'S CERTIFICATE

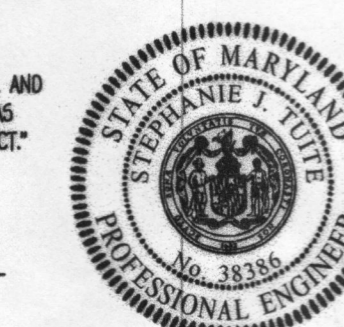
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Signature: *Kaj...* Date: 9/12/16

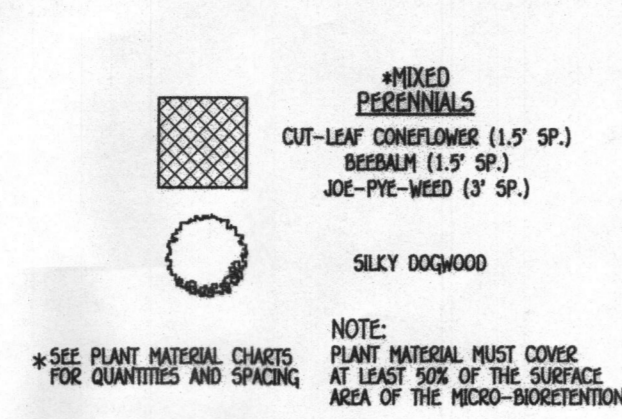
ENGINEER'S CERTIFICATE

"I/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Signature: *Stephen J...* Date: 9/17/16



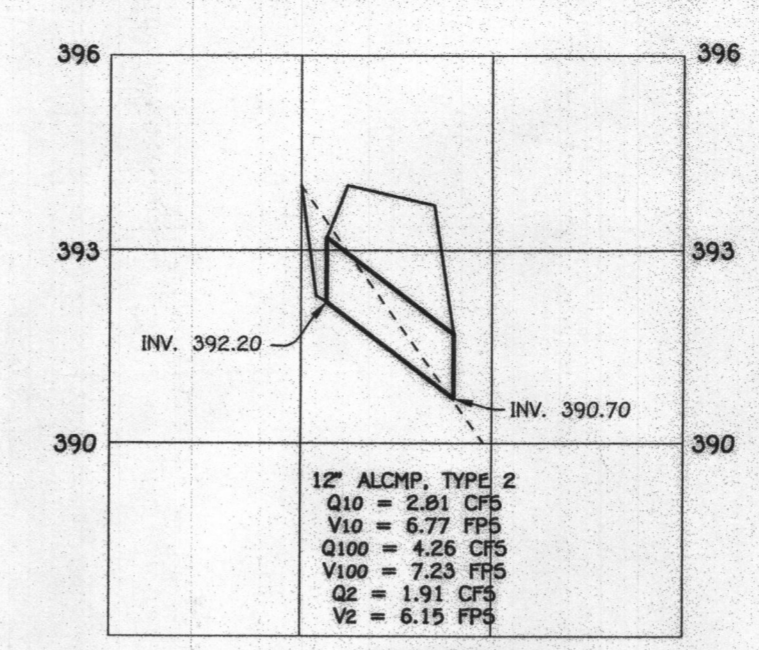
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CONTRADORS SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL FREE
ELLSWORTH CITY, MARYLAND 21042
(410) 441-8222



MICRO-BIO QUANTITY	NAME	MAXIMUM SPACING (FT.)
60	MIXED PERENNIALS	1.5 TO 3.0 FT.
3	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

MICRO-BIO FILTER	A	B	C	D	E	F	G	H	I
1	368.50	368.50	367.50	367.33	365.33	365.17	364.67	364.38	364.67

NOTE: PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE MICRO-BIORETENTION

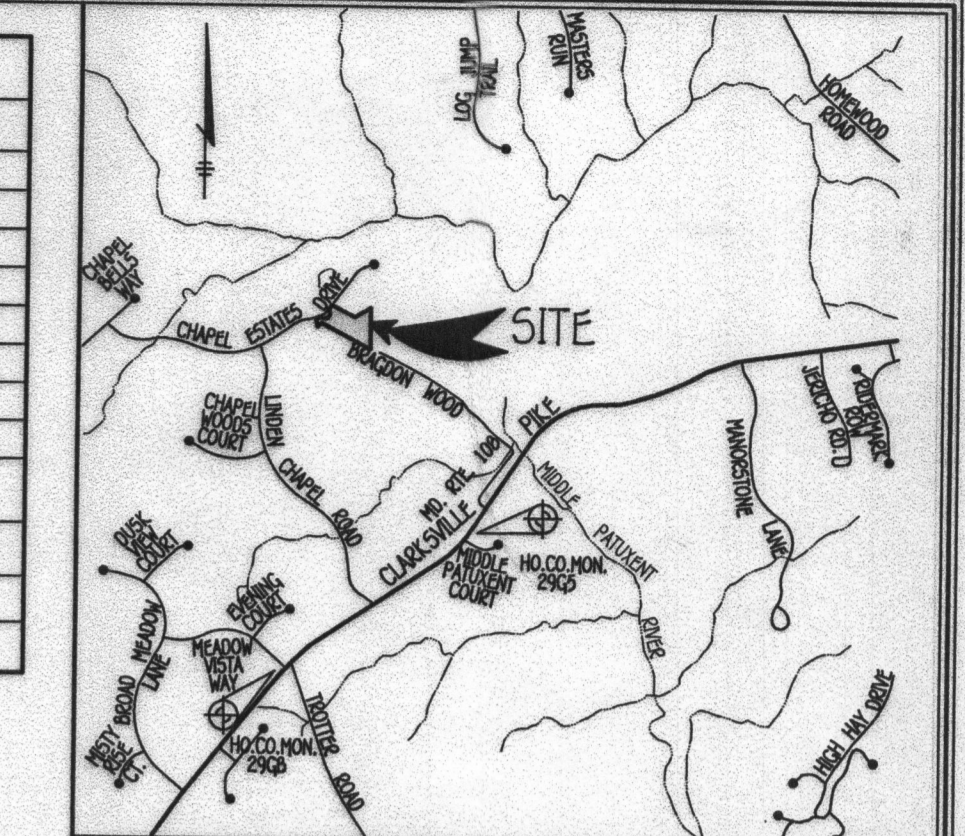


TEMPORARY CULVERT
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'

LEGEND

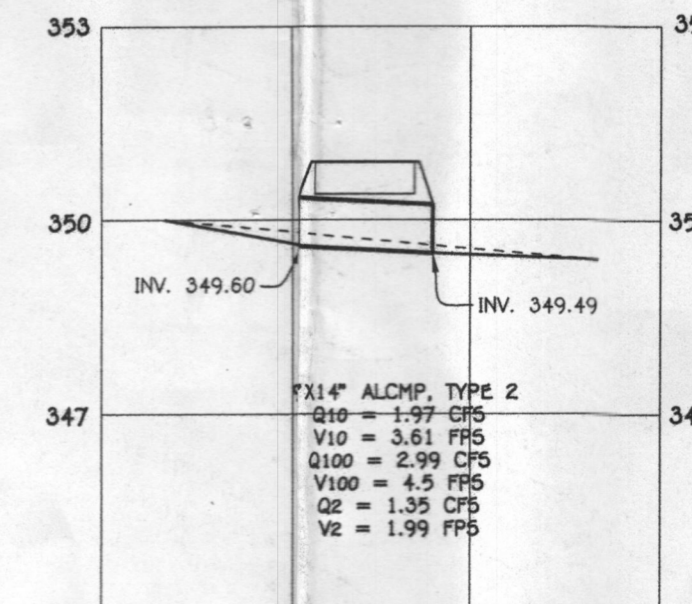
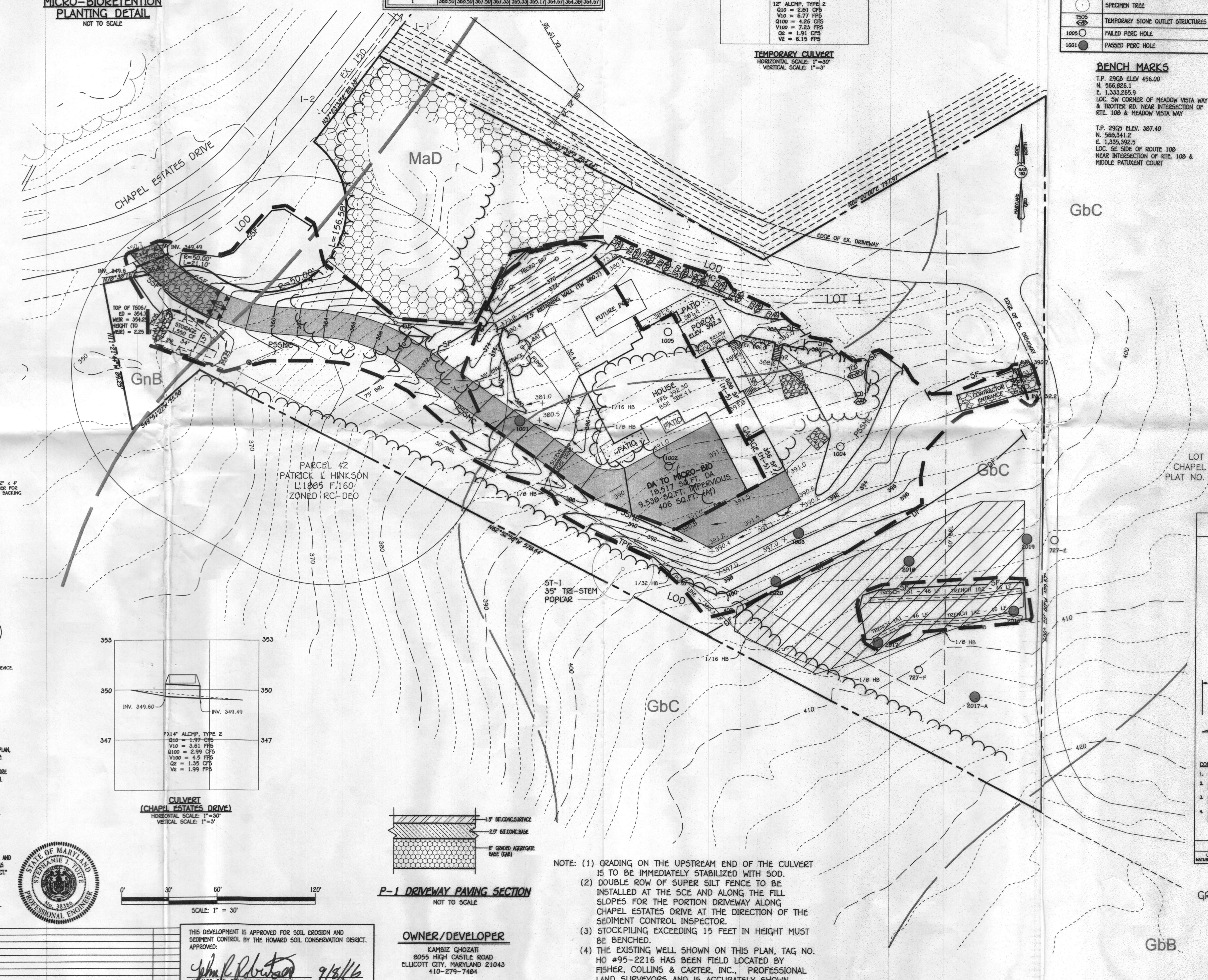
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
- - - -	PROPOSED CONTOUR 2' INTERVAL
3362.5	SPOT ELEVATION
-DF-DF-	DIVERSION FENCE
-SSF-SSF-	SUPER SILT FENCE
-SF-SF-	SILT FENCE
ECM	EROSION CONTROL MATTING
LOD	LIMITS OF DISTURBANCE
○	SPECIMEN TREE
TS05	TEMPORARY STONE OUTLET STRUCTURES
1005	FAILED PERC HOLE
1001	PASSED PERC HOLE

BENCH MARKS
T.P. 2905 ELEV 456.00
N 566,825.1
E 1,333,255.9
LOC. SW CORNER OF MEADOW VISTA WAY & TROTTER RD. NEAR INTERSECTION OF RTE. 108 & MEADOW VISTA WAY
T.P. 2905 ELEV 387.40
N 568,341.2
E 1,335,392.5
LOC. SE SIDE OF ROUTE 108 NEAR INTERSECTION OF RTE. 108 & MIDDLE PATUXENT COURT

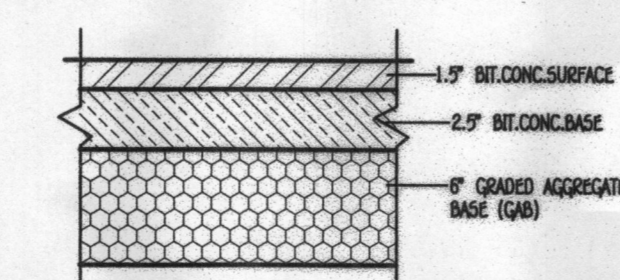


VICINITY MAP
SCALE: 1" = 2000'
HO. CO. MD. ADC MAP 4934, GRID C3

- GENERAL NOTES**
- SUBJECT PROPERTY ZONED: RC-DEO
 - TOTAL AREA OF PROPERTY: 3.004 AC.
 - LIMIT OF DISTURBANCE: 51,810 SQ.FT. OR 1.19 ACRES±.
 - SEPTIC EASEMENT SUBJECT TO HOWARD COUNTY HEALTH DEPARTMENT REVIEW.
 - LENGTH OF TRENCH TO BE DETERMINED AT TIME OF SEPTIC PERMIT ISSUANCE.
 - CONTRACTOR/BUILDER TO VERIFY ELEVATION IN THE FIELD BEFORE BEGINNING ANY CONSTRUCTION.
 - BOUNDARY OF LOT BASED ON PLAT #22022.
 - FIELD RUN TOPOGRAPHIC SURVEY CONDUCTED FISHER, COLLINS & CARTER, INC. DATED DECEMBER, 2014 AND SUPPLEMENTED BY HOWARD COUNTY GIS TOPOGRAPHY.
 - WETLANDS, STREAM, AND THEIR BUFFERS EXIST ON THIS LOT WITHIN THE EXISTING FOREST CONSERVATION EASEMENT.

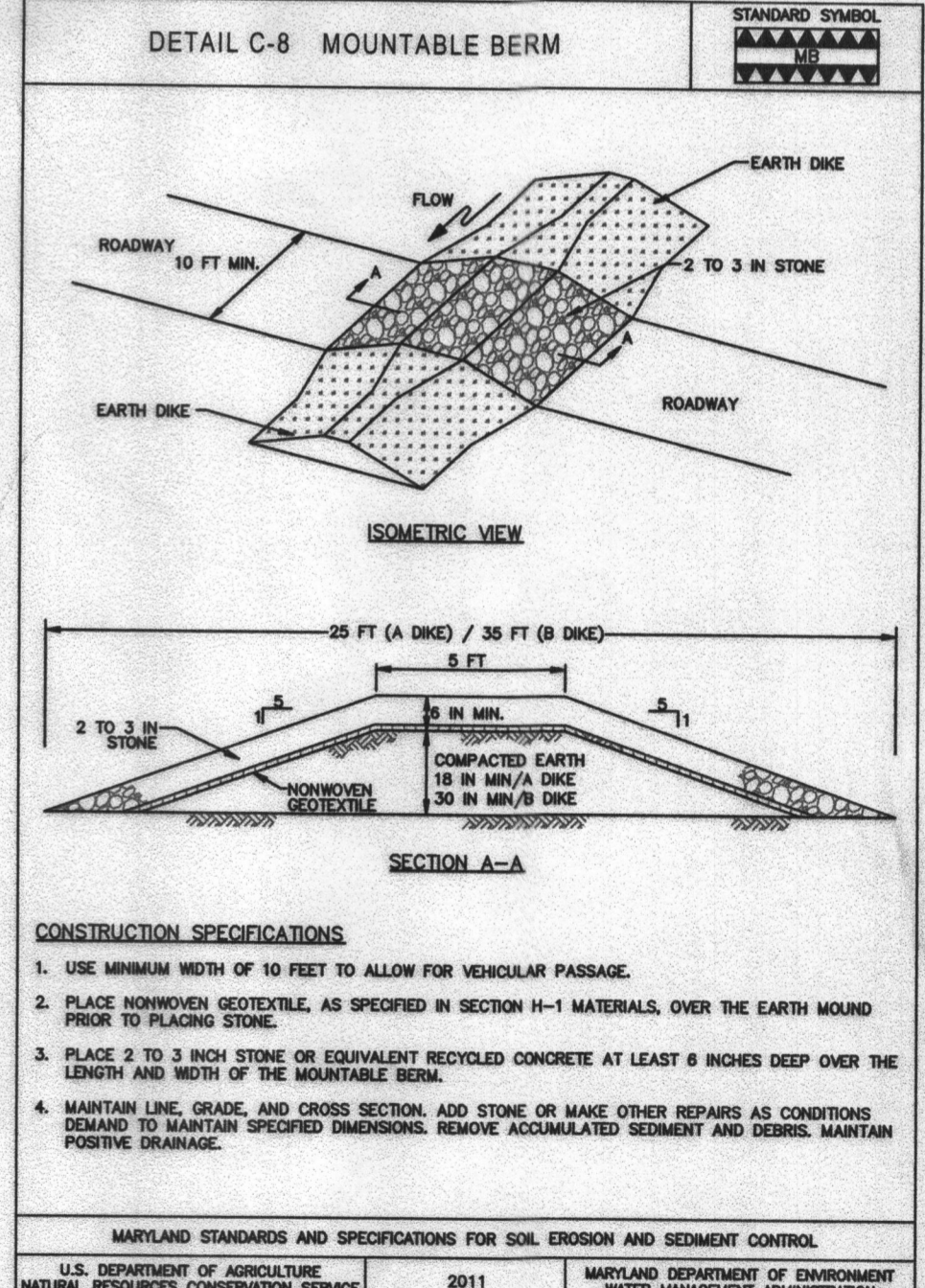


CULVERT (CHAPEL ESTATES DRIVE)
HORIZONTAL SCALE: 1"=30'
VERTICAL SCALE: 1"=3'



P-1 DRIVEWAY PAVING SECTION
NOT TO SCALE

- NOTE:**
- GRADING ON THE UPSTREAM END OF THE CULVERT IS TO BE IMMEDIATELY STABILIZED WITH SOD.
 - DOUBLE ROW OF SUPER SILT FENCE TO BE INSTALLED AT THE SCE AND ALONG THE FILL SLOPES FOR THE PORTION DRIVEWAY ALONG CHAPEL ESTATES DRIVE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
 - STOCKPILING EXCEEDING 15 FEET IN HEIGHT MUST BE BENCHED.
 - THE EXISTING WELL SHOWN ON THIS PLAN, TAG NO. HO #95-2216 HAS BEEN FIELD LOCATED BY FISHER, COLLINS & CARTER, INC., PROFESSIONAL LAND SURVEYORS AND IS ACCURATELY SHOWN.



- CONSTRUCTION SPECIFICATIONS:**
- USE MINIMUM WIDTH OF 10 FEET TO ALLOW FOR VEHICULAR PASSAGE.
 - PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE EARTH MOUND PRIOR TO PLACING STONE.
 - PLACE 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE MOUNTABLE BERM.
 - MAINTAIN LINE, GRADE, AND CROSS SECTION. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN SPECIFIED DIMENSIONS. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

GP-15-070
GRADING AND SEDIMENT/EROSION CONTROL PLAN
CHAPEL RISE
LOT 1
ZONED RC-DEO LOT 1 PLAT NO. 22022
TAX MAP NO.: 29 GRID NO'S.: 8 & 14
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: APRIL, 2015
SHEET 1 OF 2