

STORMWATER AS-BUILT PLANS

SUBMISSION CHECKLIST

The As-built approval procedure for release of performance surety has multiple steps which include the following: As-built Review, As-built Inspection, and Signature Set Review.

To start the process, you will need to upload documents to the SWM Permit under the Attachment Tab. After the documents are uploaded, go to the Application Tab, and under Awaiting Documents check the Confirm Documents are Uploaded button and save. That should create an asbuilt review task to start the review. If you have issues uploading or after you do an upload to the SWM Permit, please email the County Reviewer to make sure that the system created an As-built Review task.

As-built Review needs the following documents:

1. Redlined Survey of the SWM facility/facilities on the original approved IMPROVEMENT PLAN.
 - a. The survey needs to check the following information:
surface contours in and around the SWM facility, filtering area, rip rap, inverts of the outflow and inflows, spillway weirs and orifices, underdrains and cleanouts, flow splitters, key dam structural features, etc.
 - b. Cross-Section and Profiles need to be checked.
 - c. Specifications and Details need to be checked.
 - d. Structural Elevation Tables to be checked.
 - e. Landscaping needs to be checked.
 - f. SWM Summary tables need to be included on the cover sheet. The SWM Summary table needs to include Drainage Area to the SWM facility, Impervious Area Treated, Pe

Required, Pe Addressed, ESDv Required, ESDv Addressed, RCN, and Time of Concertation (Tc).

2. Drainage Area Plans/Maps
3. Redlined marked ups of the Stormwater Management Report documenting all changes that happened during construction.
4. 3rd Party Geotechnical Construction Certification and/or 3rd Party Inspection Report. The 3rd Party Inspection Report must include construction photos, material tickets, and daily inspector logs for the key installation time periods.
5. If the SWM facility is a MD378 facility. The County Permit Staff will require the Soil Conservations District's (SCD) approval of the As-built.
6. Recorded Stormwater Deed of Easement and Declaration of Covenants. The County Permit Staff will tell you if this document is missing from the permit file in their comments.

As-built Inspection, Is setup by the County Permit Staff after they find the Asbuilts submittal acceptable.

7. The SWM facility/facilities will need to pass a field inspection where the County Inspector checks to make sure the SWM facility matches the Asbuilt plans, operating as designed, and not requiring any repairs at this time.

Signature Set Review

8. Updated plans addressing the County Inspector's comments from the Asbuilt Inspection.
9. Signed Signature Set Documents: The permits system will generate, or County Staff will provided Signature Set Document after the SWM facilities pass inspection.

Redlined Marked-up
Plans of the original
approved plan set.

FREDERICK COUNTY DEVELOPMENT REVIEW NOTE:
REVIEWED IN ACCORDANCE WITH LOCAL COUNTY REQUIREMENTS. FREDERICK COUNTY
ASSUMES NO LIABILITY FOR DESIGN AND/OR CONSTRUCTION. APPROVAL IS VALID
FOR TWO (2) YEARS AFTER THE LAST DATE SHOWN ABOVE. THE PROJECT MUST BE
UNDER CONSTRUCTION BEFORE THE APPROVAL EXPIRATION TO BE CONSIDERED
ACTIVE. OTHERWISE, RESUBMITTAL OF PLANS, INCLUDING APPLICABLE FEES, MUST BE
MADE TO DEVELOPMENT REVIEW FOR REAPPROVAL. FEES FOR RESUBMITTAL
CANNOT BE WAIVED.

LEGEND

	EXISTING	PROPOSED
INTERIOR LOT LINE		
R/W-PROPERTY LINE		
CENTERLINE		
EASEMENTS		
CURBING AND CURB & GUTTER		
BUILDINGS		
SPOT ELEVATIONS	+296.0	+96.0
BENCH MARK		
CONTOURS	310	310
STORM DRAIN		
SANITARY SEWER	SS	SS
WATER LINES	W	W
U/G GAS,ELEC.OR TELEPHONE	G,E,T.	G,E,T.
OVERHEAD ELEC. LINES		
DRAINAGE FLOW & DIRECTION		
MANHOLE		
INLETS		
PLUG OR CAP		
WATER VALVE		
FIRE HYDRANT		
UTILITY POLE		
LIGHT POLE		
SANITARY SEWER LATERALS		
WATER LATERALS		
REDUCER		
FENCE	x	x
CONCRETE		
LIMIT OF DISTURBANCE		
SILT FENCE		
EARTH DIKE		
STONE CHECK DAM		
STABILIZED CONSTRUCTION ENTRANCE		
INLET PROTECTION		
ROCK OUTLET PROTECTION		
SUPER SILT FENCE		
TEST PIT		
CURLEX MATTING		

AS-BUILT IMPROVEMENT PLANS FOR GAS HOUSE PIKE WIDENING HAMPTONS WEST

W/S CONTRACT #411A-SW

DECEMBER 2019

PREPARED FOR:

OWNER/DEVELOPER:

Oakdale Investments, LLC

c/o Elm Street Development

1355 Beverly Road, Suite #240

McLean, VA 22101

Attn: Jason Wiley

Phone: 703.734.9730

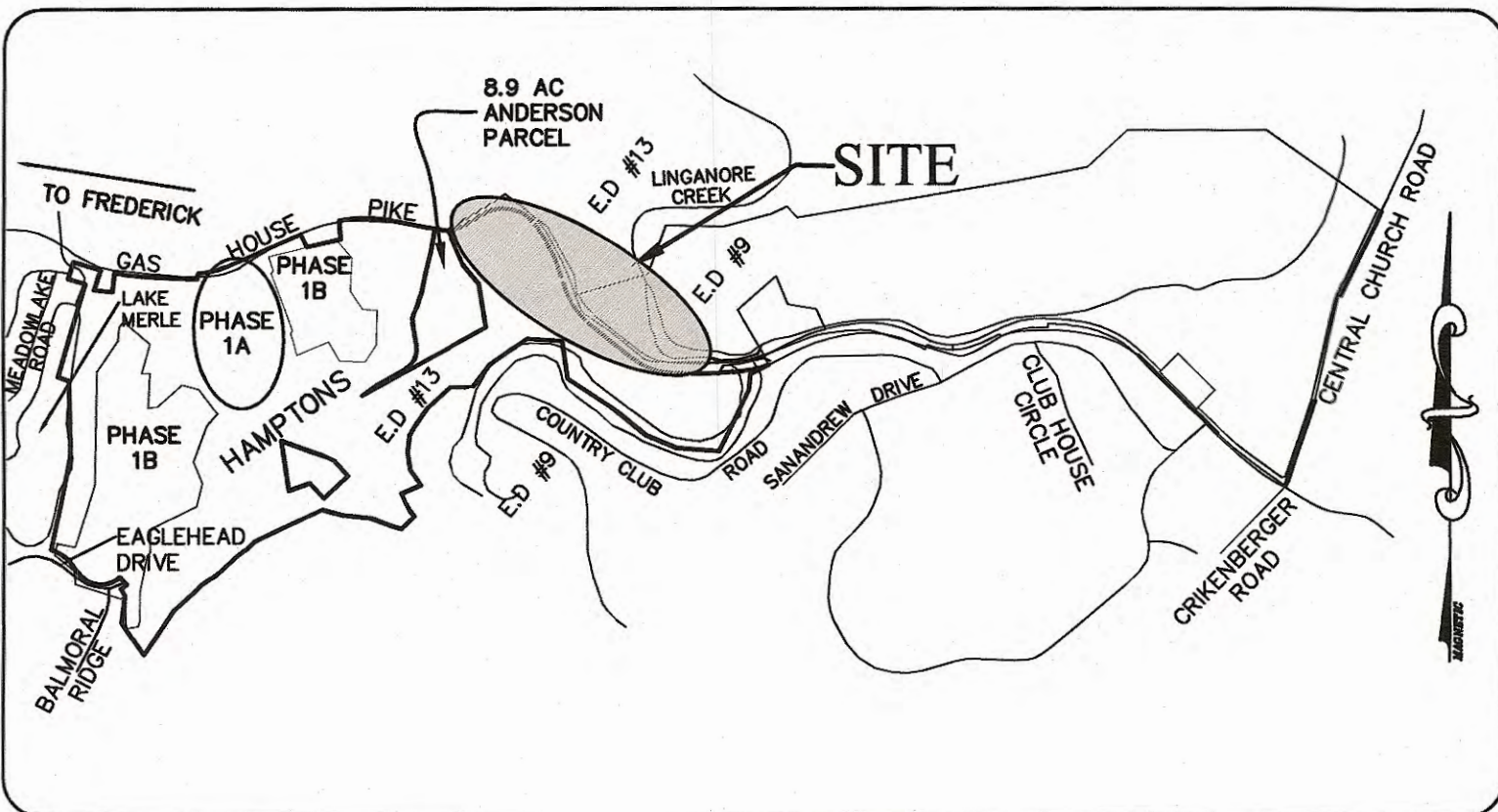
Asbuilt Professional Seal and
Certification

PREPARED BY:

**HARRIS
SMARIGA**
PLANNERS • ENGINEERS • SURVEYORS

125 S. CARROLL STREET
SUITE 100
FREDERICK
MARYLAND 21701

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F. 301.662.4906
www.harris-smariga.com



VICINITY MAP
SCALE: 1"=1,600'
TAX MAP #69
PARCELS #52 #198 & #169
SCALE: 1"=1,600'±

Asbuilt SWM Summary
Tables

SWM PRACTICE TABLE
FACILITY NAME AND/OR NUMBER: ESD #1 (FROM APPROVED CONSTRUCTION DRAWINGS):
DRAINAGE AREA TO FACILITY (ACRES): 1.18 Ac
DRAINAGE AREA NUMBER (AS IDENTIFIED ON DRAWINGS):
POST RCN: 55
POST T/C: (IF APPLICABLE)
Pc REQUIRED: 2.5
Pc ADDRESSED: 2.5
IMPERVIOUS AREA TREATED: 12,323 SF
STORAGE (CUBIC FEET): 2,830 CF

*PROVIDE INDIVIDUAL BMP AND DRAINAGE AREA FOOTPRINTS FOR EACH PRACTICE

SWM PRACTICE TABLE
FACILITY NAME AND/OR NUMBER: ESD #2 (FROM APPROVED CONSTRUCTION DRAWINGS):
DRAINAGE AREA TO FACILITY (ACRES): 2.09 Ac
DRAINAGE AREA NUMBER (AS IDENTIFIED ON DRAWINGS):
POST RCN: 55
POST T/C: (IF APPLICABLE)
Pc REQUIRED: 2.3
Pc ADDRESSED: 2.3
IMPERVIOUS AREA TREATED: 25,000 SF
STORAGE (CUBIC FEET): 3,067 CF

*PROVIDE INDIVIDUAL BMP AND DRAINAGE AREA FOOTPRINTS FOR EACH PRACTICE

THE TOTAL AREA TO BE DISTURBED SHOWN ON THESE PLANS HAS BEEN
DETERMINED TO BE APPROXIMATELY 209,100 SQ.FT. (4.80 AC.) AND THE
TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS
HAS BEEN COMPUTED TO BE APPROXIMATELY 2,750 CU.YDS. OF
EXCAVATION AND APPROXIMATELY 5,650 CU.YDS. OF FILL.

SIGNATURE: DATE: 4/9/20
PRINT NAME: Jason A. Wiley DATE: _____
DISTURBED AREA QUANTITY
NOT FOR BIDDING PURPOSES

FREDERICK SOIL CONSERVATION DISTRICT

APPROVED BY: DISTRICT MANAGER
DATE: 4/27/20

S.C.D. APPROVAL FOR SEDIMENT AND
EROSION CONTROL IS CONTINGENT UPON ISSUANCE
OF ALL APPLICABLE REGULATORY PERMITS.

OWNER/DEVELOPER CERTIFICATION

I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING,
CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE
PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE
PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL
HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT
OF NATURAL RESOURCES APPROVED TRAINING PROGRAM
FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE
BEGINNING THE PROJECT.

"I/WE UNDERSTAND THAT AS-BUILT PLANS MUST BE
SUBMITTED AND APPROVED FOLLOWING CONSTRUCTION
OF THE STORM WATER MANAGEMENT POUD AND THAT
CONSTRUCTION MUST BE SUPERVISED BY A REGISTERED
PROFESSIONAL ENGINEER."
OWNER/DEVELOPER (NAME & TITLE PRINTED)
 703.734.9730
(SIGNATURE) TELEPHONE

ENGINEERS CERTIFICATION
I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE
THAT THE PLANS HAVE BEEN DESIGNED IN
ACCORDANCE WITH LOCAL ORDINANCES, COMAR 26.17.01
AND 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR
SOIL EROSION AND SEDIMENT CONTROL.

SIGNATURE: 28643
REG. NO.

Sheet List Table	
Sheet Number	Sheet Title
AB-1	COVER SHEET
C-1	TYPICAL SECTIONS NOTES AND DETAILS
C-2	GRADING AND SEDIMENT EROSION CONTROL PLAN - 1
C-3	GRADING AND SEDIMENT EROSION CONTROL PLAN - 2
C-4	DIMENSION, PAVING, AND UTILITY PLAN - 1
C-5	DIMENSION, PAVING, AND UTILITY PLAN - 2
C-6	WATERLINE PROFILES - 1
C-7	WATERLINE PROFILES - 2
C-8	STORMWATER MANAGEMENT PLAN
C-9	STORMWATER MANAGEMENT PLAN - 2
C-10	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
C-11	ROAD PROFILE - 1
C-12	ROAD PROFILE - 2
C-13	ROAD PROFILE - 3
C-14	PAVEMENT MARKING AND SIGNAGE - 1
C-15	PAVEMENT MARKING AND SIGNAGE - 2
AB-4	SWM AS-BUILT CERTIFICATIONS

Professional Certification: I hereby certify that these plans were prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 28643 Expiration Date 3-28-21

HARRIS
SMARIGA
PLANNERS • ENGINEERS • SURVEYORS

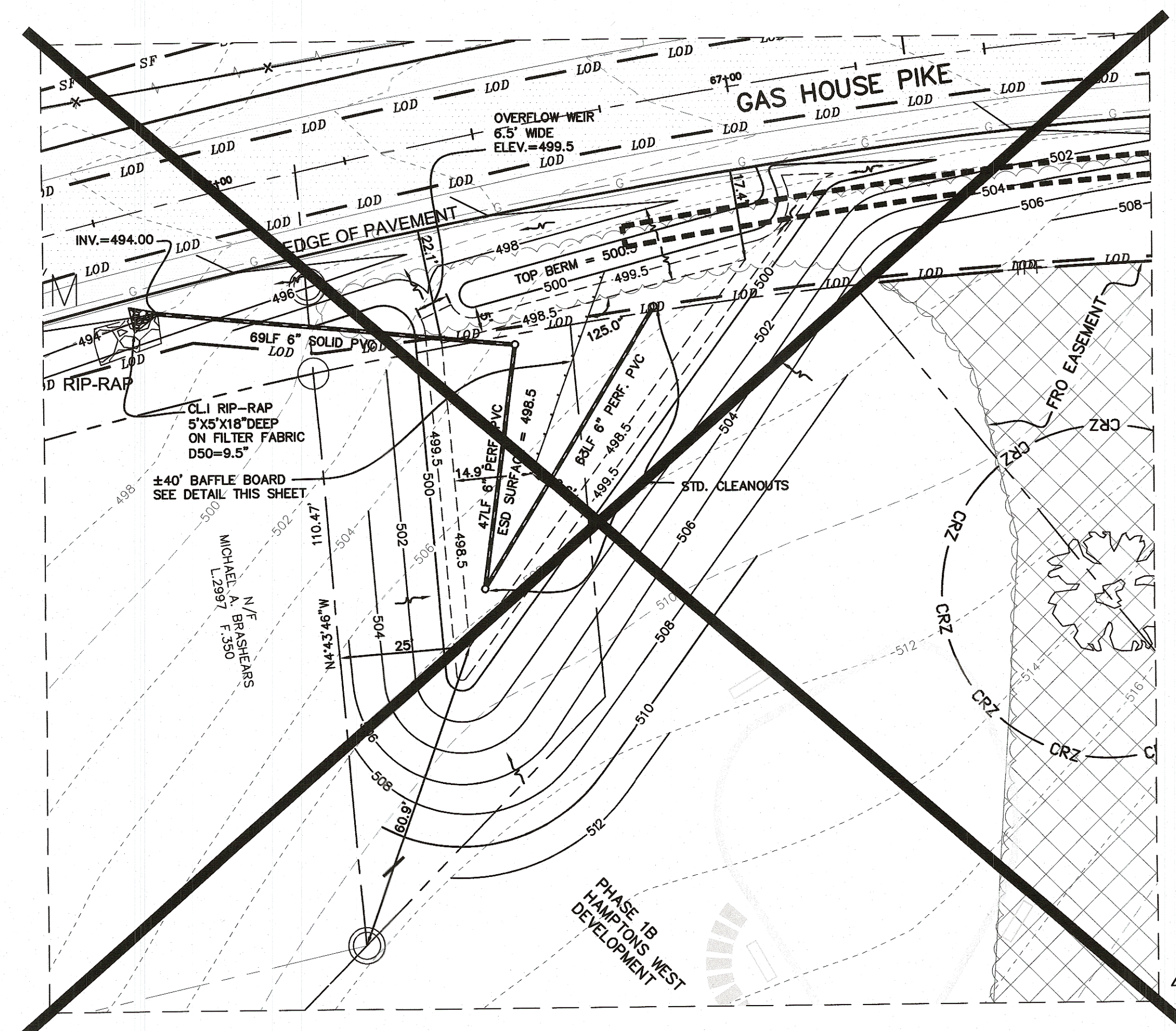
FOR
GAS HOUSE PIKE WIDENING

SCALE: AS SHOWN
DRAWN BY: DLS
CHECKED BY: MAN
DATE: DEC. 2019
SHEET: 0-1
OF: 15
PROJECT: 6097-0ROAD
SITUATED FROM CROSSING OF LINGANORE CREEK
WEST TO INTERSECTION OF EAGLEHEAD DRIVE
FREDERICK COUNTY, MARYLAND

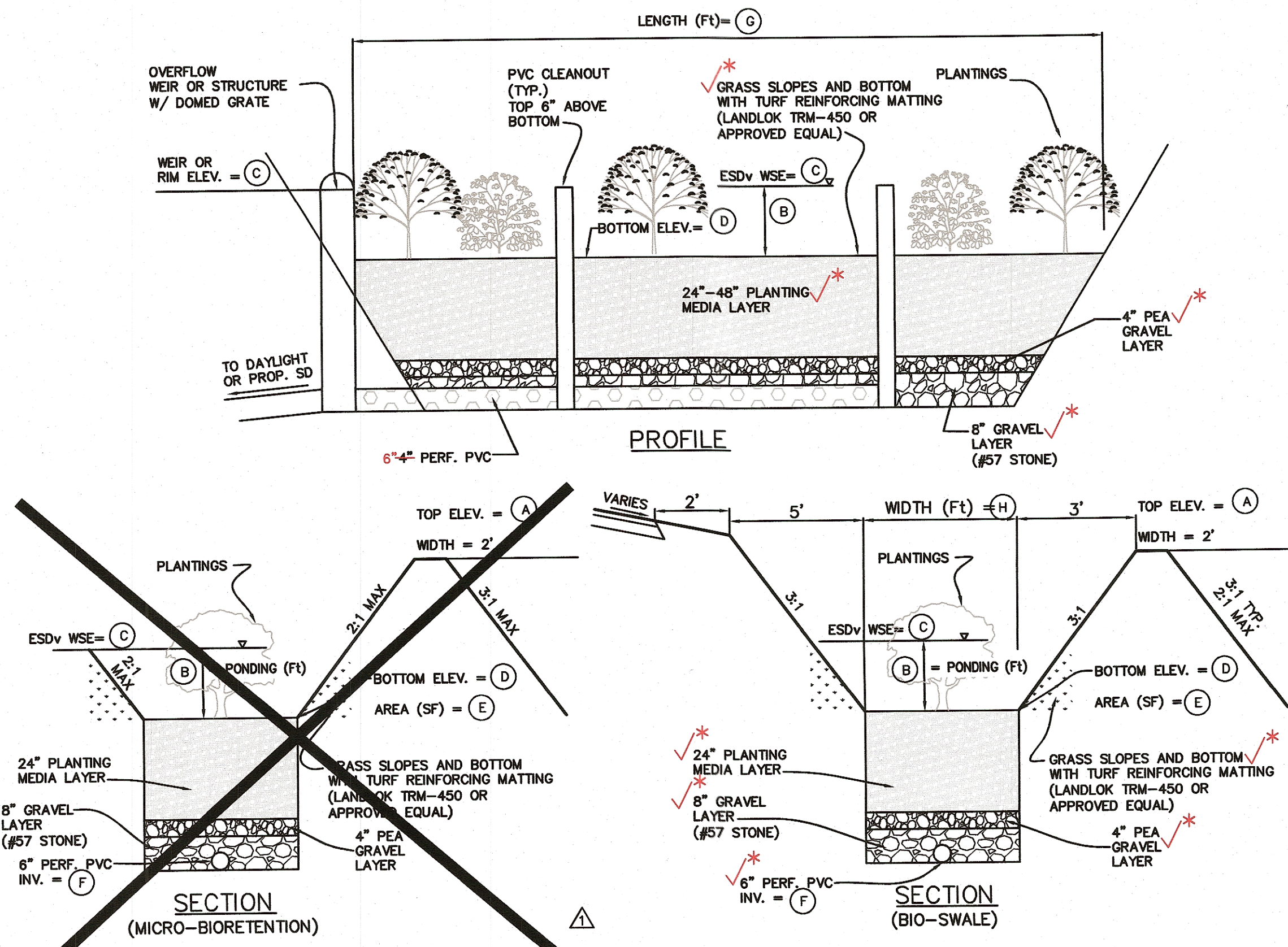
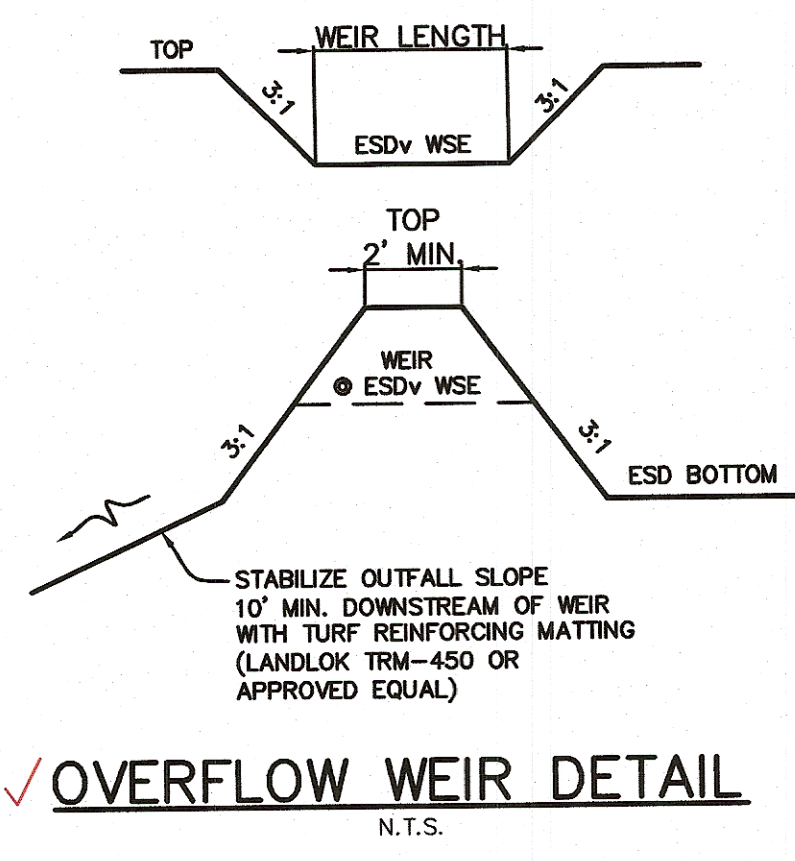
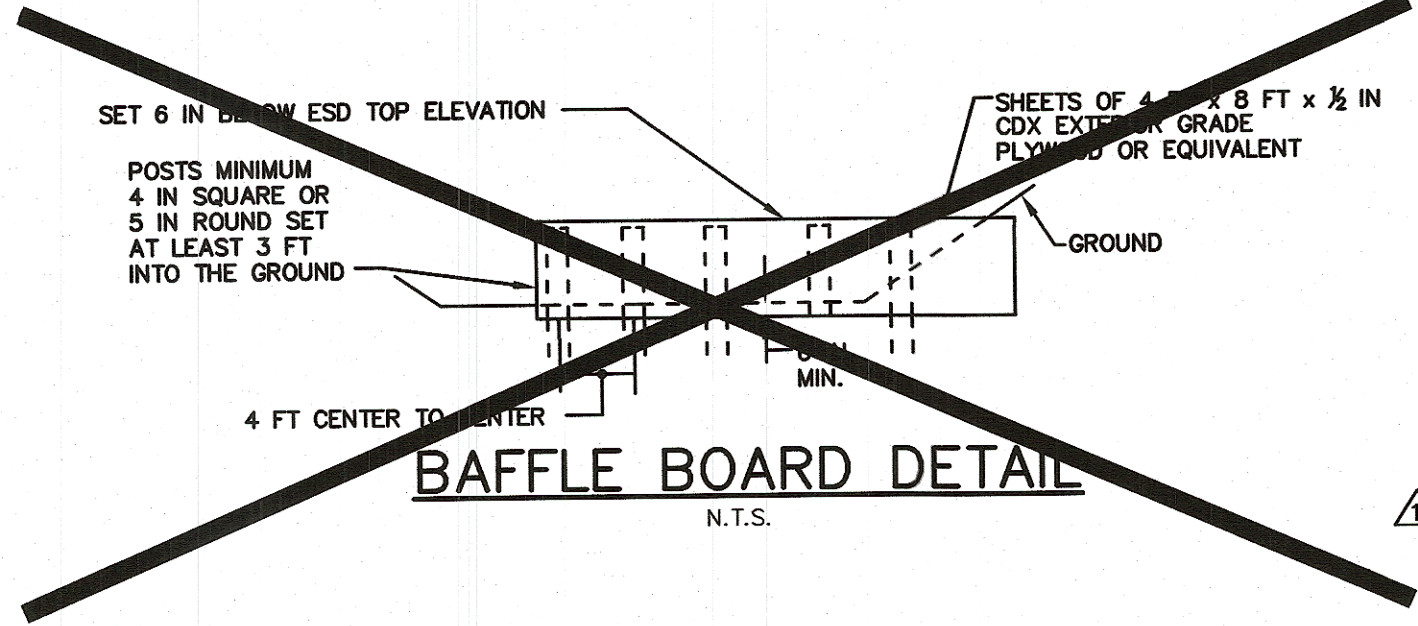
REVISION TO PREVIOUS:
A/P #: PW261832
REVISION TO PREVIOUS:
A/P #: PW257626

CDD-Dev. Review

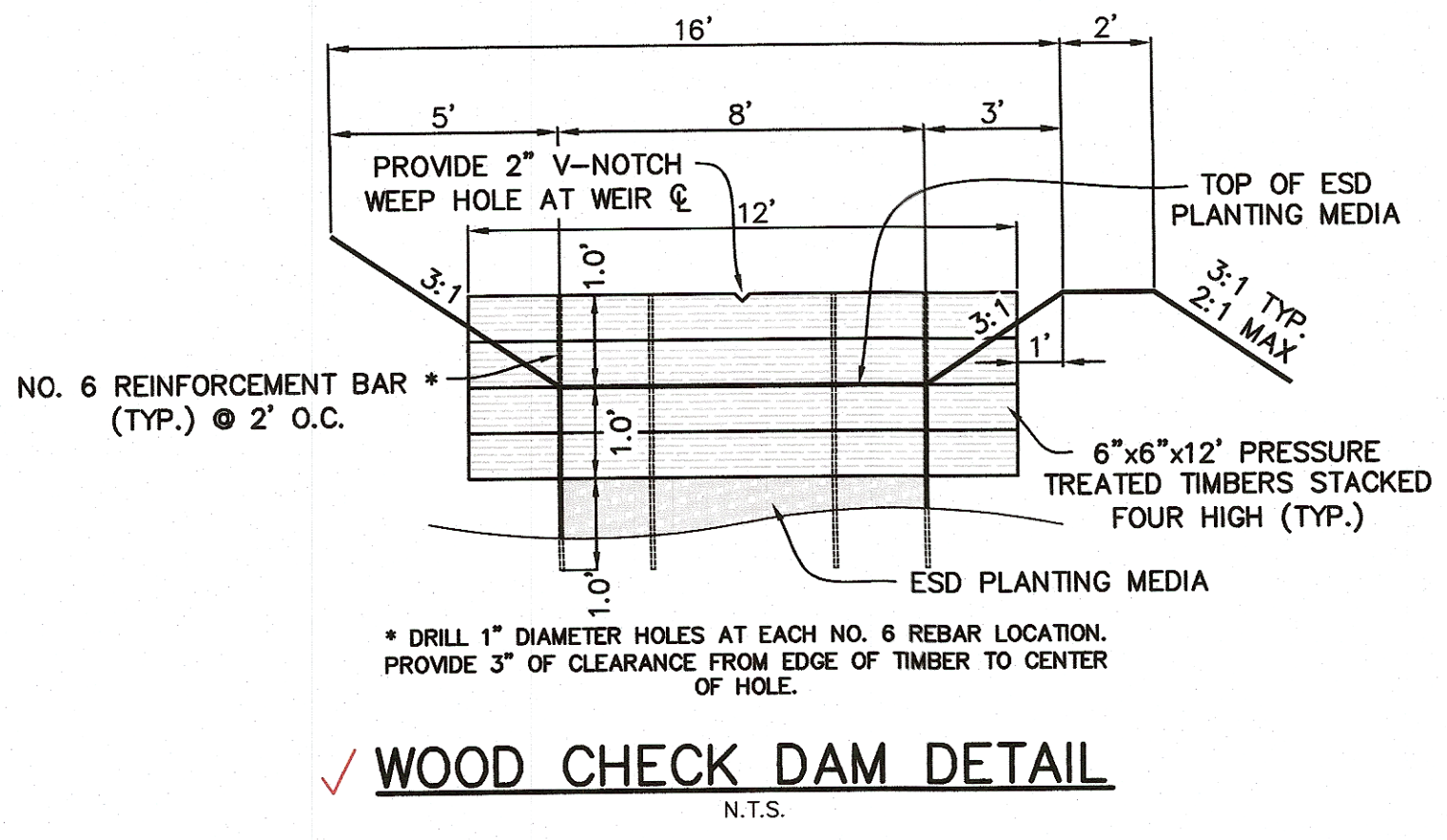
File #: S892S
A/P #: PW265118
Due Date:



ESD #1
MICRO-BIORETENTION AREA
SCALE: 1" = 20'



TYPICAL MICRO-BIORETENTION AND BIO-SWALE DETAILS
N.T.S.



WOOD CHECK DAM DETAIL
N.T.S.

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil (2" to 4" deep)	loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile	AASHTO M-43	n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGRGREGATE (3/8" TO 3/4")	
Underdrain piping	F 758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes, not necessary underneath pipes. Perforated pipe shall be wrapped with 1/2-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; $f'_c = 3500$ psi @ 28 days, normal weight, air-entrained reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 318.2R; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Gneiss (AASHTO #10) are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.

Cross-section and Elevation checked

MICRO-BIORETENTION AREA AND BIO-SWALE DIMENSIONS

ESD #	A	B	C	D	E	F	G	H
1	500.0	1.0	499.3	496.3	497.7	499.3	50±	60±
2	367-349	1.0	367-349	366-348	2,490	363-348	-312±	8'

ESD DESIGN SUMMARY

ESD #	Drainage Area (sf)	Impervious Area (sf)	Practice Area (sf)	Treated ESDv (cf)	Pe Provided (in)
1	51,505	12,232	1,310	2,830	2.5
2	91,000	25,000	2,490	5,478	2.4

* SEE SHEET AB-1 FOR UPDATED SWM SUMMARY TABLES

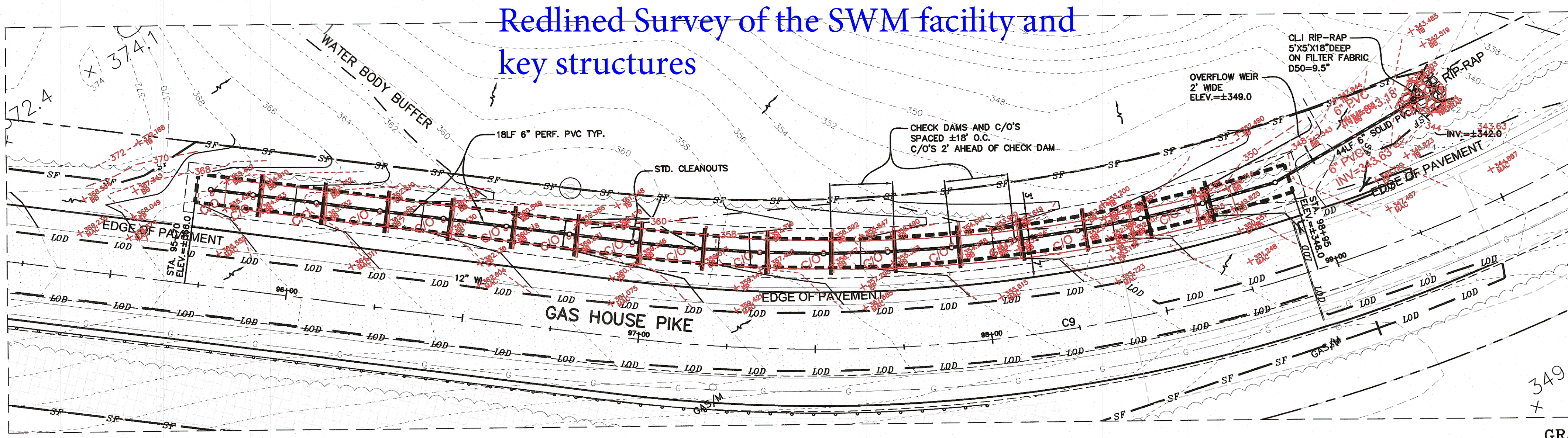
SWM REVISION NOTE:
SEE REVISED ESD #1 DETAILS ON SHEET C-9A

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED IN CONFORMANCE WITH THE SIGNED IMPROVEMENT PLANS AND AS HIGHLIGHTED ON THE AS-BUILT PLANS PROVIDED.

SIGNATURE: _____ P.E. NO. 28643
DATE: 6/22/22

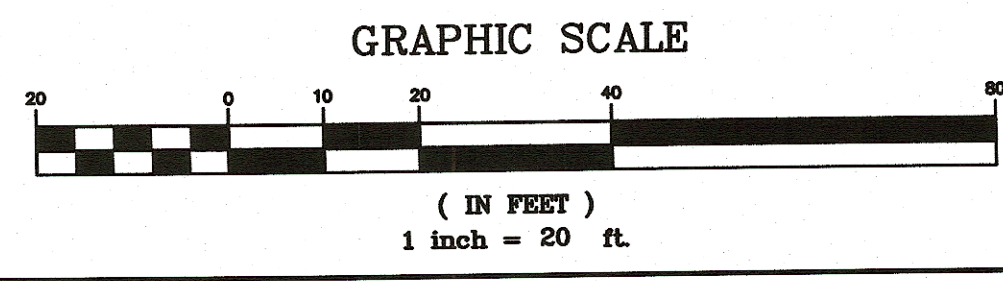
CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION BY HSA AND/OR OTHERS. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

(* BASED ON FIELD AS-BUILT SURVEY & INSPECTIONS BY HSA AND INSPECTIONS/TESTS PERFORMED BY HILLIS-CARNES ENGINEERING ASSOCIATES, INC. AND INCLUDED IN THIS CERTIFICATION)



Redlined Survey of the SWM facility and key structures

ESD #2
BIO-SWALE
SCALE: 1" = 20'



FREDERICK SOIL CONSERVATION DISTRICT
APPROVED BY: _____
DATE: 4/27/20

S.C.D. APPROVAL FOR SEDIMENT AND EROSION CONTROL IS CONTINGENT UPON ISSUANCE OF ALL APPLICABLE REGULATORY PERMITS.

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.

Professional Engineer
HARRIS SMARIGA
PLANNERS • ENGINEERS • SURVEYORS

125 S. CARROLL STREET
FREDERICK, MARYLAND 21701
P: 301.662.4488
F: 301.662.4408
www.harris-smariga.com

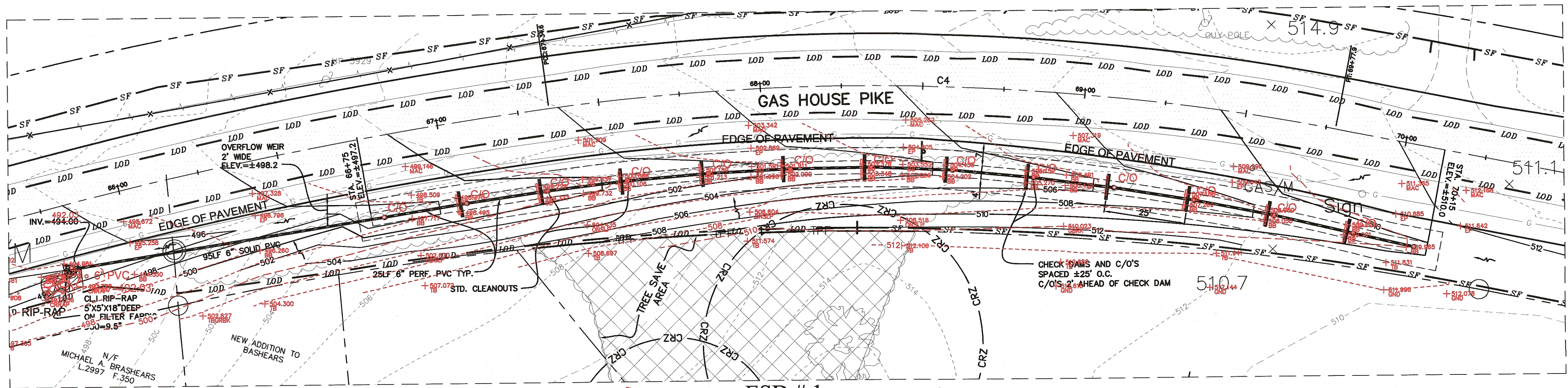
EXPIRATION DATE: 3-28-21
LICENSE NO. 28643

FOR
STORMWATER-MANAGEMENT-PLAN

GAS HOUSE PIKE WIDENING

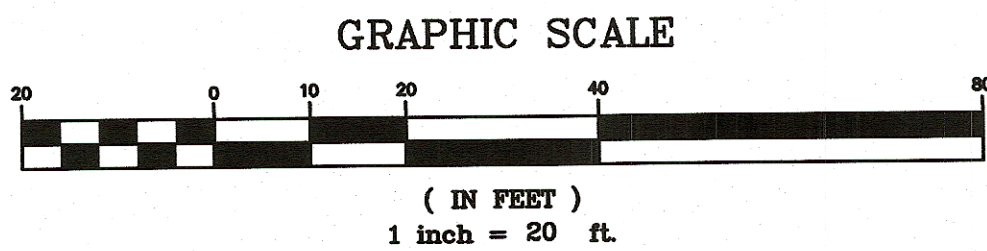
SITUATED FROM CROSSING OF LINCOLN CREEK
WEST TO INTERSECTION OF EAGLEHEAD DRIVE
FREDERICK COUNTY, MARYLAND

SCALE: 1" = 20'
DRAWN BY: DLS
CHECKED BY: MAM
DATE: 2019
SHEET: 6-9
OF: 15
PROJECT: 6097-OROAD
AB-2-C-9



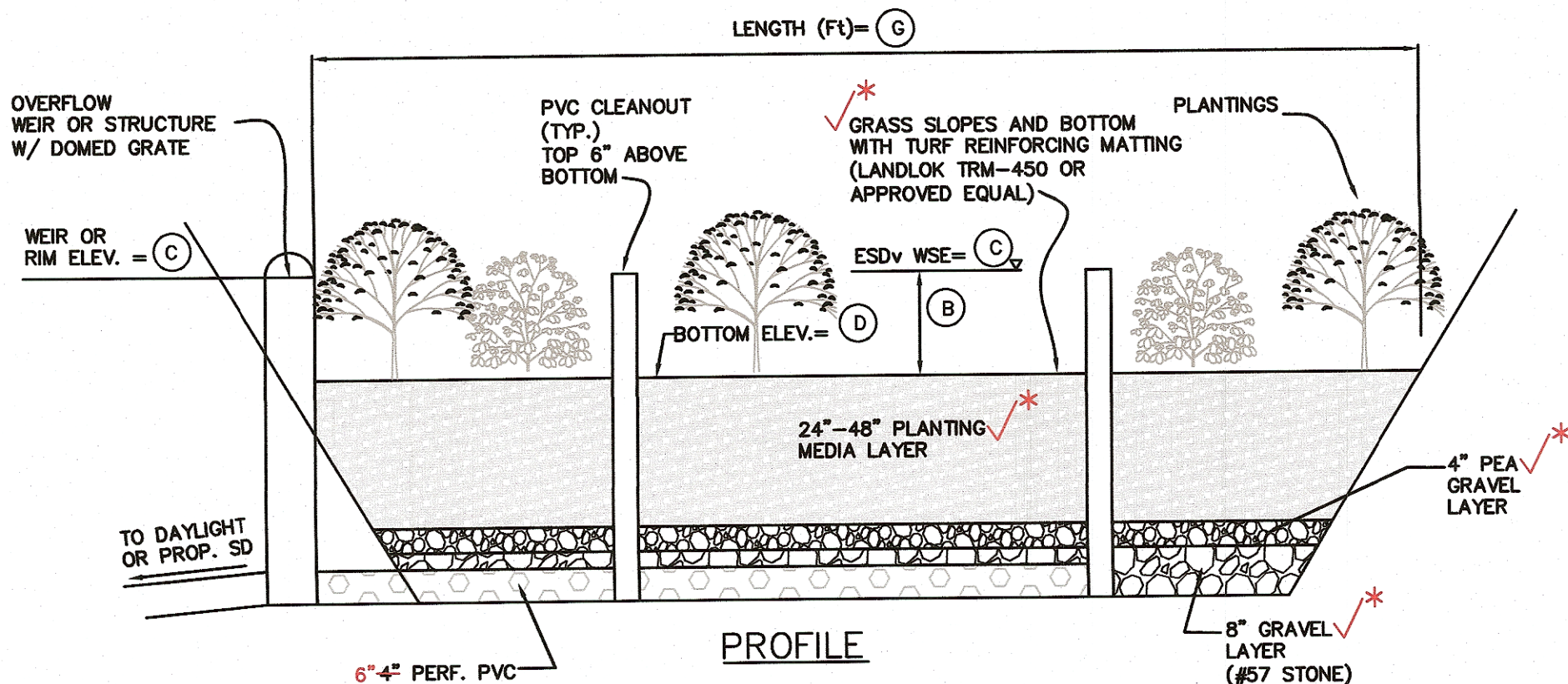
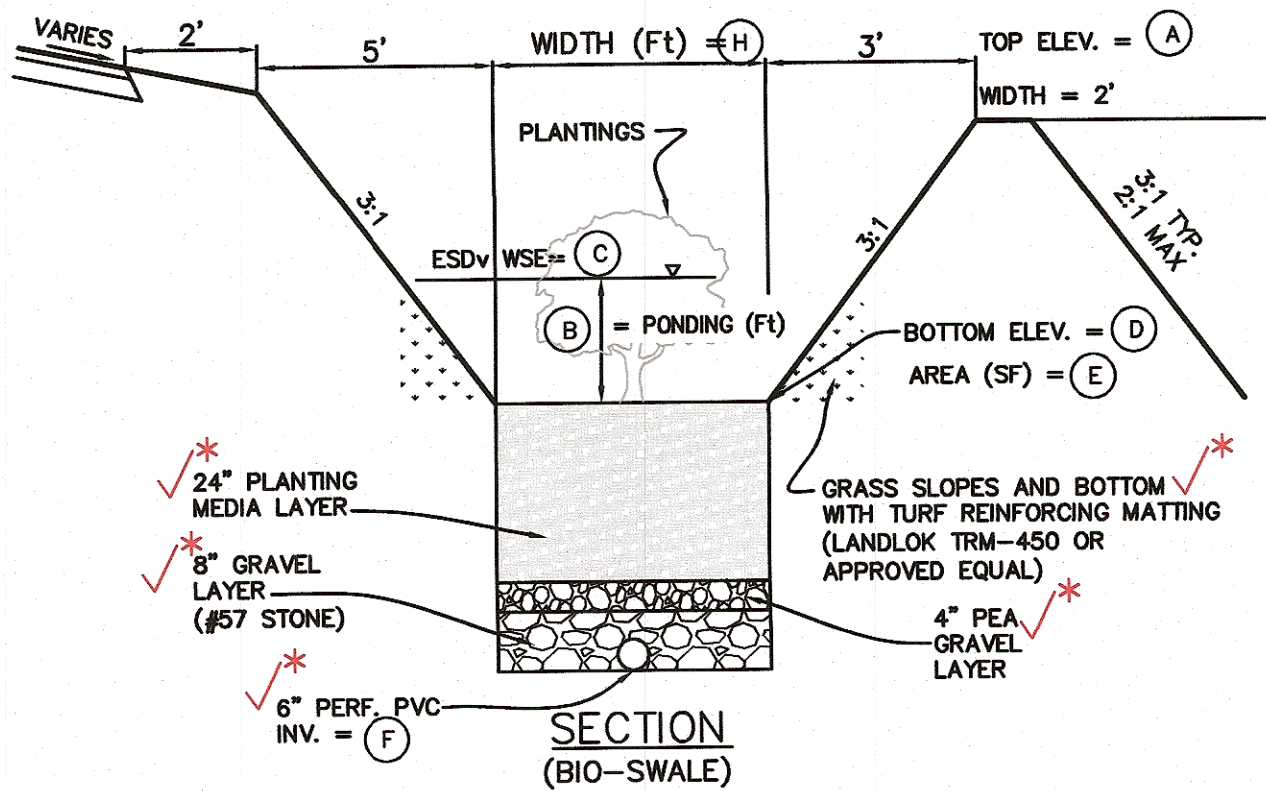
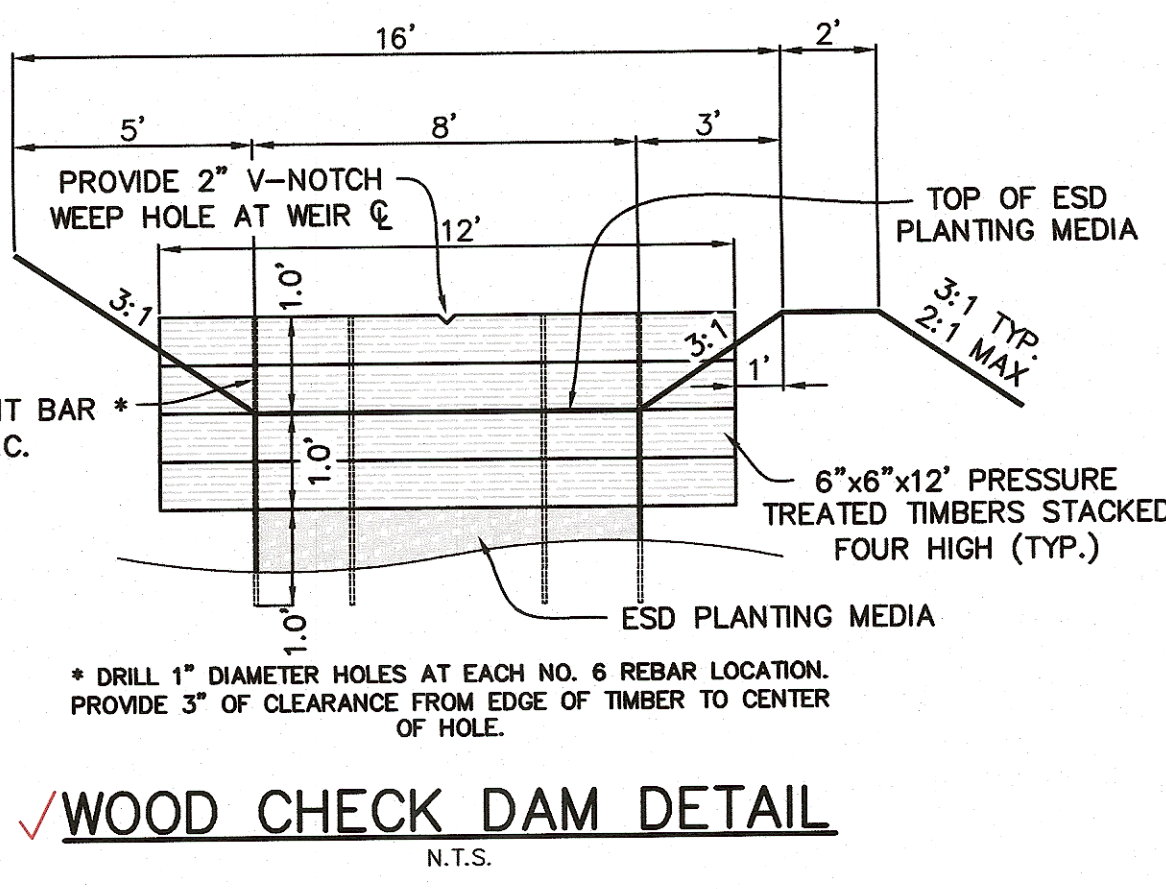
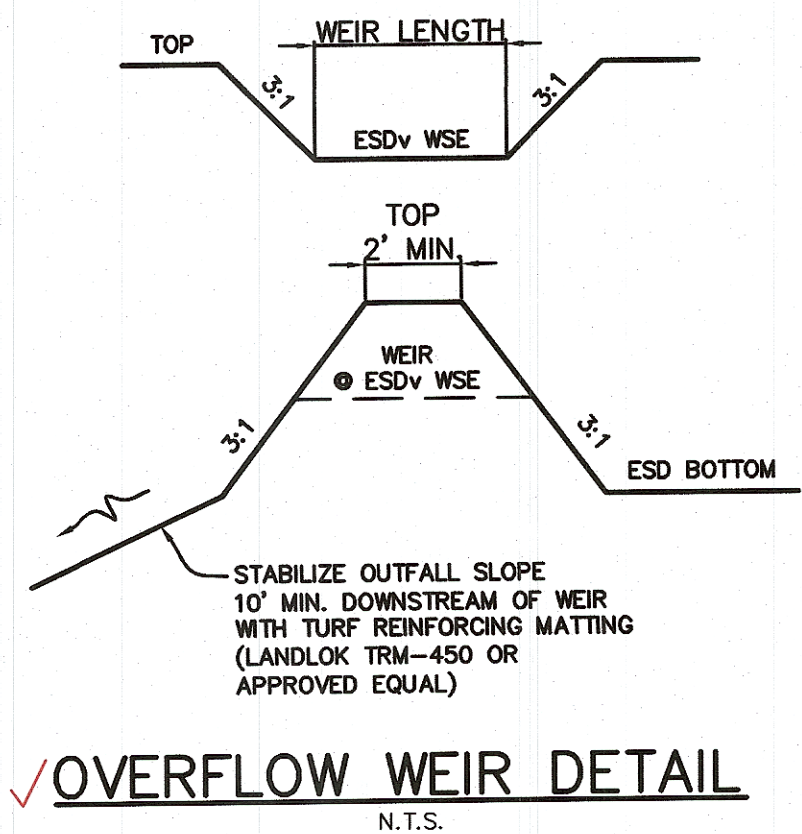
ESD #1
MICRO-BIORETENTION AREA
SCALE: 1" = 20'

ESD #1
BIO-SWALE



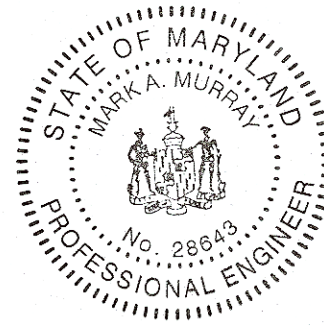
Appendix B.4. Construction Specifications for Environmental Site Design Practices

Table B.4.1 Materials Specifications for Micro-Bioretention, Rain Gardens & Landscape Infiltration			
Material	Specification	Size	Notes
Plantings	see Appendix A, Table A.4	n/a	plantings are site-specific
Planting soil [2' to 4' deep]	loamy sand (60 - 65%) & compost (35 - 40%) or sandy loam (30%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 3%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobble	stone: 2" to 5"	
Geotextile	n/a	n/a	PE Type I nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4")	
Underdrain piping	758, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipe; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth.
Poured in place concrete (if required)	MSHA Mix No. 3; f'c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved State or local standards requires design drawings scaled and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 350.R/89; vertical loading (14-10 or 14-20); allowable horizontal loading (based on soil pressure); and analysis of potential cracking.
Sand	AASHTO-M-46 or ASTM-C-33	0.02" to 0.04"	Sand substitutions such as Diabase and Grystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



TYPICAL BIO-SWALE DETAILS
N.T.S.

BIO-SWALE DIMENSIONS								
ESD #	A	B	C	D	E	F	G	H
1	511-498.2	1.0	511-498.2	510-497.2	1,310	507-494.2	328'±	4'



I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED IN
CONFORMANCE WITH THE SIGNED IMPROVEMENT PLANS AND AS HIGHLIGHTED ON THE
AS-BUILT PLANS PROVIDED.
SIGNATURE: _____ P.E. No. 28843
DATE: 6/22/22

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE
INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION BY HSA
AND/OR OTHERS. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS
AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING
STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES
AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS
IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY
ACCEPTED INDUSTRY PRACTICES.
(* BASED ON FIELD AS-BUILT SURVEY & INSPECTIONS BY HSA AND INSPECTIONS/TESTS
PERFORMED BY HILLIS-CARNES ENGINEERING ASSOCIATES, INC. AND INCLUDED IN THIS
CERTIFICATION)

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. 28843 Expiration Date 3-26-21

125 S. CAPITAL STREET
FREDERICK
MARYLAND 21701
P: 301.662.4488
F: 301.662.4485
www.harris-smariga.com

PLANNING • ENGINEERING • SURVEYING

REVISIONS:

2/25/20 REV. PER FCO & SCD QMNTS	2/5/21 REV. ESD#1 INTO ROW
4/17/20 REV. PER FCO & SCD QMNTS	
7/10/20 REV. PER FCO QMNTS	
9/1/20 REV. PER FCO QMNTS	
11/10/20 REV. PER FCO QMNTS	
12/15/20 REV. PER FCO QMNTS	
12/23/20 REV. PER FCO QMNTS	

FOR

SWM AS-BUILT

STORMWATER MANAGEMENT

PLAN - 2

GAS HOUSE PIKE WIDENING

SITUATED FROM CROSSING OF LINCOLN CREEK
WEST TO INTERSECTION OF MARYLAND
FREDERICK COUNTY, MARYLAND

SCALE: 1" = 20'

DRAWN BY: DLS

CHECKED BY: MAM

DATE: DEC 2019

SHEET: 0-9A

OF: 15 0A-3

PROJECT: 6097-UR0AD

AS-3-C-9A

HILLIS-CARNES

ENGINEERING ASSOCIATES

3rd Party Geotechnical Certification
added to the plans

April 19, 2022

Mr. Gene Bollinger
Project Manager
Elm Street Development
1355 Beverly Rd. Suite 240
McLean, VA 22101
✉ gbollinger@elmstreetdev.com

1660 Bowman Farm Road, Suite 105
Frederick, MD 21701
Phone (301) 662-2522
Fax (301) 662-5575
www.hcea.com

Re: Report of Construction Materials Testing and Inspection
Hamptons West – Gas House Pike Widening
Micro-Bioretenction ESD #1 & ESD #2
New Market, MD 21774
HCEA Project No.: 02219A

Mr. Bollinger,

As requested, Hillis Carnes Engineering Associates, Inc. representatives were on-site to observe and document the construction of the above referenced bio-retentions located within Hamptons West – Gas House Pike Widening. Our services included observing the excavation of the bio-retentions, the installation the associated pipes, layers of stone, pea gravel, planting media and documentation of the various construction phases of the bio-retentions.

It was observed that the bio-retentions, including 6” perforated PVC pipe, 8” gravel layer (#57 stone), 4” pea gravel and 24” planting media layer were observed to be installed per the provided documents.

To the best of our knowledge, understanding, and belief, the bio-retentions have been constructed in general conformance with the available contract drawings and specifications. Should you have any questions concerning this report or require further information, please feel free to contact our office.

Sincerely,
Hillis-Carnes Engineering Associates, Inc.

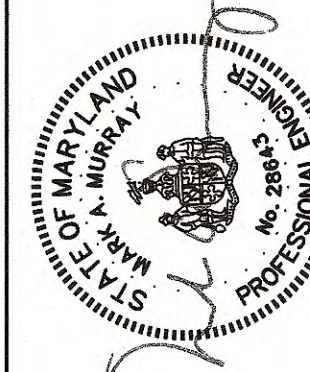


Robert Brown
Project Manager



Rajesh K. Goel, P.E.
Principal Engineer

Corporate Headquarters - Annapolis Junction, MD
Maryland • Washington, DC • Delaware • Pennsylvania • Virginia • Caribbean

SCALE: AS SHOWN		HARRIS SMARIGA PLANNERS • ENGINEERS • SURVEYORS 125 S. CARROLL STREET SUITE 100 FREDERICK, MD 21701 P 301.662.4488 F 301.662.4485 www.harris-smariga.com		 Professional Certification: I hereby certify that these plans were prepared or checked by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 28643 Expiration Date 3-28-21	
DRAWN BY: RLP		REVISIONS:		2/25/20 REV. PER FCO & SCD CHNITS	
CHECKED BY: MAM		4/17/20 REV. PER FCO & SCD CHNITS		7/10/20 REV. PER FCO CHNITS	
DATE: DEC. 2019		9/1/20 REV. PER FCO CHNITS		11/10/20 REV. PER FCO CHNITS	
SHEET: AB-4		12/15/20 REV. PER FCO CHNITS		12/23/20 REV. PER FCO CHNITS	
OF: 15		PROJECT: 6097-ORoad		SITUATED FROM CROSSING OF LINGANORE CREEK WEST TO INTERSECTION OF EAGLEHEAD DRIVE	
PROJECT: 6097-ORoad		FOR: GAS HOUSE PIKE WIDENING		FREDERICK COUNTY, MARYLAND	
AB-4		SMA ASBUILT		STORMWATER MANAGEMENT - CERTIFICATIONS	

**ASBUILT ENGINEERING COMPUTATIONS
FOR
STORMWATER MANAGEMENT**

Asbuilt SWM Report

**GAS HOUSE PIKE WIDENING
HAMPTONS WEST
JOB NO. 6097-0ROAD**

**HARRIS, SMARIGA & ASSOCIATES, INC.
125 S. CARROLL STREET, SUITE 100
FREDERICK, MARYLAND 21701
TEL: (301) 662-4488
FAX: (301) 662-4906**

**April 2022
Rev. May 2022**

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. 28643
Expiration Date: 3-26-23



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<u>ITEM</u>	<u>PAGE NUMBER</u>
STORMWATER MANAGEMENT NARRATIVE.....	3
ASBUILT ESD COMPUTATIONS	9-12
PREV. APPROVED COMPS.....	13-15

Attachment:

SWM DA MAP....., DA-1

NARRATIVE

PROJECT DESCRIPTION:

The total site, a portion of Gas House Pike, is located in the central-western portion of Frederick County, MD running from Liganore Creek Bridge west to the intersection with Eaglehead Drive, and is within the existing Lake Liganore Planned Unit Development at New Market. These plans and computations cover the proposed widening and safety improvements for Gas House Pike to meet Frederick County minor arterial standards along the frontage of the Hamptons West Development per the APFO LOU executed 7/11/13 between Oakdale Investments and Frederick County. Being that the primary objective of the project is safety improvements to an existing roadway, constrained by limited right-of-way and steep slopes and containing no concentrated discharge points, only stormwater treatment for new impervious area is proposed.

This portion of Gas House Pike lies within the Lake Liganore watershed, and crosses Liganore Creek just beyond its eastern extent. The site consists of hydrologic "B" soils per the Frederick County Soils Manual.

As-built Conclusion

	ESDv design	ESDv provided	ESDv Req'd
Bio Swale	2,830 CF	2,830 CF	2,830 CF
Bio Swale	5,478 CF	5,097 CF	5,478 CF
TOTAL	8,308 CF	7,927 CF	7,454 CF

$$7927 \geq 7454$$

therefore requirement has been met.

AS-BUILT SWM STRUCTURAL REQUIREMENTS

ESD # 1

Bio-Swale

Drainage Area (DA) = 51,505 sf
 Impervious Area (I) = 12,232 sf = 23.7 % Impervious
 Surface Area of Practice (Af) = 1,310 sf
 $R_v = 0.05 + 0.009(I)$
 $R_v = 0.264$

Surface Area Check

Af shall be at least 2% of contributing surface area

Af min = .02 x DA

Af min. = 1030 sf

Provided Af = 1,310 sf

The maximum amount of runoff that can be captured by this practice is limited to the 1-year 24-hour storm, which is 2.5" for Frederick County, MD:

$$ESD_v = \frac{(PE)(RV)(A)}{12} = 2,830 \text{ cf} = \text{Max. allowable}$$

Volume Provided :

The bio-swale has a surface area of 1,310 sf

A ponding depth of 1.0' will be provided. The filter media and gravel layer will be 3.0' deep.

Given that the porosity (n) for these layers is 0.4, the total combined storage within this practice is

$$V_f = ((A_f)(h_f)) + ((A_f)(d_f)(n))$$

Where: Af = 1,310 provided surface area
 hf = 1 ponding depth in landscaping
 df = 3.0 Depth of media
 n = 0.4 porosity of media

$$V_f = 2,882$$

The treated volume is controlled by the smaller of the two amounts:

$$V_f < \text{Max. allowable} \quad \text{therefore,}$$

$$\text{Treated Volume} = 2,830 \text{ CF}$$

$$\text{Provided } P_e: P_e = (12)(ESD_v)/(R_v)(A)$$

$$P_e = 2.5 \text{ inches}$$

$$\text{Post } RCN = 55$$

AS-BUILT SWM STRUCTURAL REQUIREMENTS

ESD # 2

Bio-Swale

Drainage Area (DA) = 91,000 sf
 Impervious Area (I) = 25,000 sf = 27.5 % Impervious
 Surface Area of Practice (Af) = 2,317 sf
 $R_v = 0.05 + 0.009(I)$
 $R_v = 0.297$

Surface Area Check

Af shall be at least 2% of contributing surface area

Af min = .02 x DA

Af min. = 1820 sf

Provided Af = 2,317 sf

The maximum amount of runoff that can be captured by this practice is limited to the 1-year 24-hour storm, which is 2.5" for Frederick County, MD:

$$ESD_v = \frac{(PE)(RV)(A)}{12} = 5,635 \text{ cf} = \text{Max. allowable}$$

Volume Provided :

The bio-swale has a surface area of 2,317 sf

A ponding depth of 1.0 will be provided. The filter media and gravel layer will be 3.0' deep.

Given that the porosity (n) for these layers is 0.4, the total combined storage within this practice is

$$V_f = ((A_f)(h_f)) + ((A_f)(d_f)(n))$$

Where: Af = 2,317 provided surface area
 hf = 1.0 ponding depth in swale
 df = 3.0 Depth of media
 n = 0.4 porosity of media

$$V_f = 5,097$$

The treated volume is controlled by the smaller of the two amounts:

$$V_f < \text{Max. allowable} \quad \text{therefore,}$$

$$\text{Treated Volume} = 5,097 \text{ CF}$$

$$\text{Provided } P_e: P_e = (12)(ESD_v)/(R_v)(A)$$

$$P_e = 2.3 \text{ inches}$$

$$\text{Post RCN} = 55$$

AS-BUILT SWM STRUCTURAL REQUIREMENTS

SITE DESIGN ASSESSMENT:

SITE TARGET P_e = 1.6 "

SITE TARGET ESDv = 7,454 cf

ESD #	Drainage Area (sf)	Impervious Area (sf)	Practice Area (sf)	Treated ESDv (cf)	P_e Provided (in)
1	51,505	12,232	1,310	2,830	2.5
2	91,000	25,000	2,317	5,097	2.3

TOTAL: 142,505 37,232 3,627 **7,927**

7,927 > **7,454** Full ESDv Requirement Met

SUBTOTAL ESD VOLUME: = **7,927** cf

SITE PROVIDED $P_e = 12 * (ESDv) / (R_v) * (A) =$ **1.70** **RCN =** **55**

Therefore min. requirement has been met.

The total calculated ESDv captured is greater than the target ESDv, therefore the the site is considered to have been designed to the MEP and ESD requirements met

From Prev. Approved. Comps

SWM STRUCTURAL REQUIREMENTS

ESD # 1

~~Micro-Bioretention~~

Bio-Swale

Drainage Area (DA) = 51,505 sf
Impervious Area (I) = 12,232 sf = 23.7 % Impervious
Surface Area of Practice (Af) = ~~1,747 sf~~ 1,310 sf
Rv = 0.05+0.009(I)
Rv = 0.264

Surface Area Check

Af shall be at least 2% of contributing surface area

Af min = .02 x DA

Af min. = 1030 sf

Provided Af = ~~1,747 sf~~ 1,310 sf

The maximum amount of runoff that can be captured by this practice is limited to the 1-year 24-hour storm, which is 2.5" for Frederick County, MD:

$$\text{ESDv} = \frac{(\text{PE})(\text{RV})(\text{A})}{12} = 2,830 \text{ cf} = \text{Max. allowable}$$

Volume Provided :

The bio-swale has a surface area of ~~1,747 sf~~ 1,310 sf
A ponding depth of 1.0' will be provided. The filter media and gravel layer will be 3.0' deep.
Given that the porosity (n) for these layers is 0.4, the total combined storage within this practice is
 $V_f = ((A_f)(h_f)) + ((A_f)(d_f)(n))$

Where: Af = ~~1,747~~ 1,310 provided surface area
hf = 1 ponding depth in landscaping
df = 3.0 Depth of media
n = 0.4 porosity of media
~~Vf = 3,843~~ Vf = 2,882

The treated volume is controlled by the smaller of the two amounts:

Vf > Max. allowable therefore,
Treated Volume = 2,830 CF

Provided Pe: $Pe = (12)(\text{ESDv})/(\text{Rv})(\text{A})$

Pe = 2.5 inches

Post RCN = 55

From Prev. Approved Comps

SWM STRUCTURAL REQUIREMENTS

ESD # 2

Bio-Swale

Drainage Area (DA) = 91,000 sf
Impervious Area (I) = 25,000 sf = 27.5 % Impervious
Surface Area of Practice (Af) = 2,490 sf
 $R_v = 0.05 + 0.009(I)$
 $R_v = 0.297$

Surface Area Check

Af shall be at least 2% of contributing surface area

Af min = .02 x DA

Af min. = 1820 sf

Provided Af = 2,490 sf

The maximum amount of runoff that can be captured by this practice is limited to the 1-year 24-hour storm, which is 2.5" for Frederick County, MD:

$$ESD_v = \frac{(PE)(RV)(A)}{12} = 5,635 \text{ cf} = \text{Max. allowable}$$

Volume Provided :

The bio-swale has a surface area of 2,490 sf

A ponding depth of 1.0 will be provided. The filter media and gravel layer will be 3.0' deep.

Given that the porosity (n) for these layers is 0.4, the total combined storage within this practice is

$$V_f = ((A_f)(h_f)) + ((A_f)(d_f)(n))$$

Where: Af = 2,490 provided surface area
hf = 1.0 ponding depth in swale
df = 3.0 Depth of media
n = 0.4 porosity of media

$$V_f = 5,478$$

The treated volume is controlled by the smaller of the two amounts:

$$V_f < \text{Max. allowable} \quad \text{therefore,}$$
$$\text{Treated Volume} = 5,478 \text{ CF}$$

$$\text{Provided Pe: } P_e = (12)(ESD_v)/(R_v)(A)$$

$$P_e = 2.4 \text{ inches}$$

$$\text{Post RCN} = 55$$

From Prev. Approved comps

SWM STRUCTURAL REQUIREMENTS

SITE DESIGN ASSESSMENT:

SITE TARGET P_e = 1.6 "

SITE TARGET ESDv = 7,454 cf

ESD #	Drainage Area (sf)	Impervious Area (sf)	Practice Area (sf)	Treated ESDv (cf)	P_e Provided (in)
1	51,505	12,232	1,747	2,830	2.5
2	91,000	25,000	2,490	5,478	2.4

TOTAL: 142,505 37,232 4,237 **8,308**

8,308 > **7,454** Full ESDv Requirement Met

SUBTOTAL ESD VOLUME: = **8,308** cf

SITE PROVIDED $P_e = 12 * (ESDv) / (R_v) * (A) =$ **1.78** **RCN =** **55**

Therefore min. requirement has been met.

The total calculated ESDv captured is greater than the target ESDv, therefore the the site is considered to have been designed to the MEP and ESD requirements met

Signed Signature Set Document



DIVISION OF PLANNING & PERMITTING FREDERICK COUNTY, MARYLAND

30 North Market Street . Frederick, Maryland 21701
Phone (301) 600-1138 . Fax (301) 600-1645 <http://www.frederickcountymd.gov>

Signature Set-Approved As-Built

S/SP	S829S	Subdivision / Site Name	Gas House Pike Widening
AP# (Imp. Plan)	PW257626	Approved date	12/28/2020
A/P# (AS-Built)	319986	Approved date	7/15/2022

Engineering- Final As-built submission to be uploaded into the SWM permit via the portal:



1 APPROVED

- Redlined plan set
- Drainage area map plan
- SWM Computations
- Geotechnical Reports



SWM DATA TABLES (to be placed on cover sheet of red-lined as-built plan set)

CD/DVD to be mailed to 30 North Market Street, Frederick MD 21701

Attn: GIS – 2nd Floor



- Redlined plan set submission in the Digital Submission Standards listed below
- DA Map
- SWM Computations

The Applicant hereby certifies under the penalties of perjury, and agrees as follows: 1) That he/she is authorized to make this application on behalf of all property owners, 2) That the information is correct, 3) That he/she will comply with all regulations of Frederick County, which are applicable hereto.

Mark A. Murrey

Printed name of Owner or Agent

[Signature]

Signature of Owner or Agent

SWM Summary Table

SHEET SWM-1

RV X Area

Where: RV = 0.33 (Per Approved SWM Report)

Area = 155.17 Acres = 6,759,205 sf (Per Approved SWM Report)

$$Pe \text{ (Provided)} = \frac{299,237 \times 12}{0.33 \times 6,759,205} = 1.61$$

$$Pe \text{ (Provided)} = 1.61$$

SCD MD378 Small Pond Summary Sheet

MD-ENG-14 (Rev. 10/2000) Reference: NRCS-MD-378	2/25/2022 APPROVAL	U.S. Department of Agriculture Natural Resources Conservation Service POND SUMMARY SHEET
--	-------------------------------------	---

Note: This form is to be used for NRCS Class "A" ponds only. Other ponds should permit from Maryland Department of the Environment, Dam Safety Division.

FORM INFORMATION

Project Name:	Tallyn Ridge
SD File No.:	
Pond No.:	6B

MARYLAND COORDINATES

(to nearest 1000 feet)

East	1206170	
North	020920	
County	Frederick	
ADC Map/Grid	30 / A10.11 & B10.11	

OWNER INFORMATION

Name:	MS Gladhill Farm, LLC	
Address:	1960 Gallows Road	
	Suite 200	
City, State, Zip:	Vienna, VA 22182	

TYPE OF POND:

<input checked="" type="checkbox"/> Scavated	<input type="checkbox"/> Embankment	
<input type="checkbox"/> Both		

Drainage Area:	12.77	Acres
Surface Area:	0.79	Acres
Normal Depth:	6 (+/-)	Feet
Design Storm Frequency:	100	Years
Storage at Design High Water (DHW):	2.98	Ac-ft

PURPOSE OF POND (check all that apply)

<input type="checkbox"/> Stormwater Management-Wet <input type="checkbox"/> Stormwater Management-Dry <input type="checkbox"/> Infiltration/Water Quality <input type="checkbox"/> Water Supply/Irrigation <input type="checkbox"/> Sand & Gravel Wash Pond	<input type="checkbox"/> Sediment Control <input type="checkbox"/> Livestock <input type="checkbox"/> Flood Control <input type="checkbox"/> Recreation <input type="checkbox"/> Borrow Material
---	--

<input type="checkbox"/> Wetland Mitigation <input type="checkbox"/> Wildlife/Fish <input type="checkbox"/> Fire Control <input type="checkbox"/> Other (Specify below):	
---	--

EMBANKMENT

Top Elevation	327.5	Feet
Normal Pool Elevation	322.0	Feet
DHW Water Elevation	325.33	Feet

Maximum Fill Height	11.5	Feet
Top Width	10	Feet
Side Slopes: U.S.	3	-1
D.S.	3	-1

Will embankment serve as public roadway? ☐ Yes ☐ No

PRINCIPAL SPILLWAY

Channel	24 Inches	Design Capacity at DHW: 44.09 cfs
BCCBP	<input type="checkbox"/> Alum (CA) <input type="checkbox"/> ICP	<input type="checkbox"/> PVC
Barrel	<input type="checkbox"/> Other:	<input type="checkbox"/> Cast-in-Place Box Culvert

EMERGENCY SPILLWAY

Velocity: N/A	Ft/sec	Design Capacity at DHW: N/A
Crest Elevation: N/A	Ft	Bottom Width: N/A
Spillway Protection: <input type="checkbox"/> Grass <input type="checkbox"/> Riprap		Side Slopes: N/A
		Other: -

DISTANCES BELOW POND TO

Property Line: 25 (+/-) Feet	
Public Road: N/A Feet	

Soil Conservation District (Name):

STATE OF MARYLAND
ANDRE W. MUELLER
No. 32594
PROFESSIONAL ENGINEER
9/13/15

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. 32594 - Expiration Date 3/31/2016

IMPROVEMENT PLAN
TALLYN RIDGE

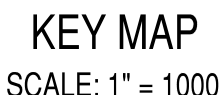
FREDERICK COUNTY, MARYLAND

© Bowman Consulting Group, Ltd.

Bowman

CONSULTING

AM/KK/MB DESIGN	AM/KK/MB DRAWN	JS CHKD
SCALE	H: V:	
JOB No.	5747-01-003	
DATE :	SEPTEMBER 2020	
SWM-2A		
SHEET	404-A	4 OF 8



FREDERICK SOIL CONSERVATION DISTRICT

Steve Latham
Asst. District Manager




2/14/22

DH

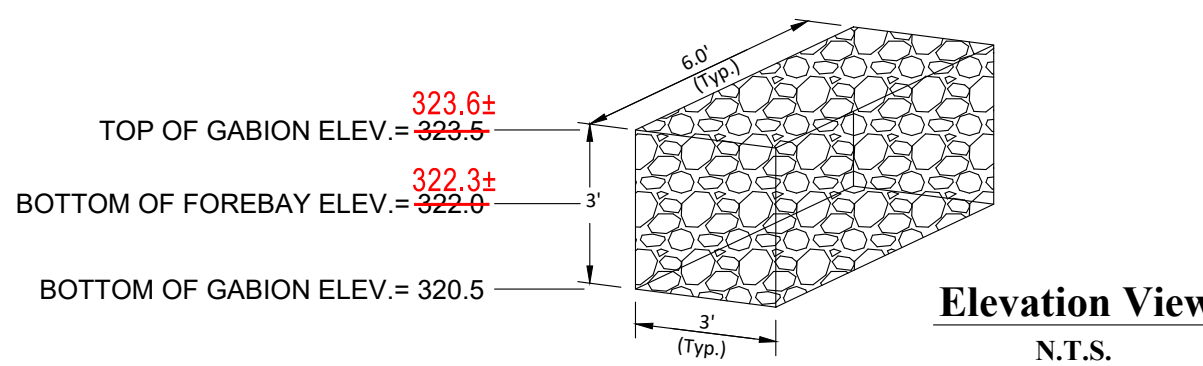
SCD and NRCS approval for sediment and erosion control is contingent upon issuance of all applicable regulatory permits.

I hereby certify that the facility shown on this plan as being constructed in conformance with the signed improvement plans and as highlighted on the as-built plans provided.

LEGEND

	LIMITS OF SAFETY BENCH
	LIMITS OF AQUATIC BENCH
	LIMITS OF FOREBAY LINER

Asbuilt Professional Seal and Certification



GABION NOTES:

1. TOP OF GABION ELEVATION = ~~323.61~~ **323.64**
2. ALL WIRE USED IN GABION CONSTRUCTION SHALL BE ZINC COATED ALL PLIERS AND TOOLS SHALL BE PLASTIC COATED.
3. FILTER CLOTH SHALL BE PLACED WHENEVER GABION COMES IN CONTACT WITH SOIL.
4. STONE FILL SHALL CONSIST OF HARD, DURABLE CLEAN STONE, 4"-8" IN SIZE OR APPROVED BY THE ENGINEER.
5. CONSTRUCTION MATERIALS AND METHODS SHALL BE IN ACCORDANCE WITH MACCAFFERRI GABIONS INC., SPECS OR EQUAL.

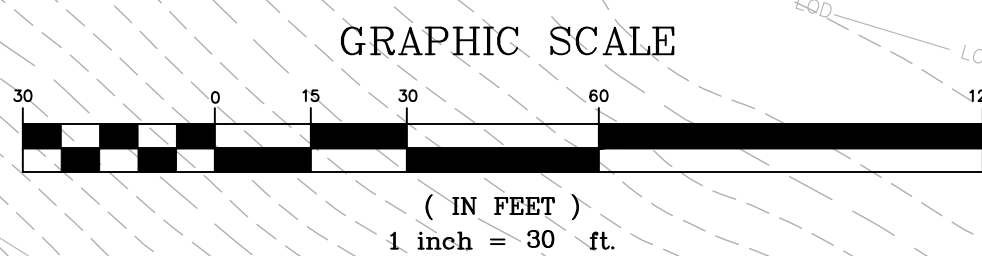
FREDERICK COUNTY, MARYLAND
DEVELOPMENT REVIEW ENGINEERING

APPROVED: *[Signature]* 1/12/15
DEVELOPMENT REVIEW CHIEF DATE

APPROVED: *[Signature]* 1/14/15
STORMWATER MANAGEMENT DATE

REVIEWED IN ACCORDANCE WITH LOCAL COUNTY REQUIREMENTS. FREDERICK COUNTY ASSUMES NO LIABILITY FOR DESIGN AND/OR CONSTRUCTION. APPROVAL IS VALID FOR TWO (2) YEARS [ONE (1) IF PUBLIC WATER AND/OR SEWER IS INVOLVED] AFTER THE LAST DATE SHOWN ABOVE. THE PROJECT MUST BE UNDER CONSTRUCTION BEFORE THE APPROVAL EXPIRATION TO BE CONSIDERED ACTIVE. OTHERWISE, RESUBMITTAL OF PLANS, INCLUDING APPLICABLE FEES, MUST BE MADE TO DEVELOPMENT REVIEW FOR REAPPROVAL. FEES FOR RESUBMITTAL CANNOT BE WAIVED.

REV #	DATE	REVISION / DESCRIPTION FILL IN THESE BLOCKS FOR REVISIONS ONLY	CONSULTANT: DATE AND INITIAL	DEV. REVIEW DATE AND INITIAL
1	2/23/16	ESD's and Pond 6A modification	2/23/16	BUB 6-27-16 VL
4	10/15/17	IP RE-APPROVAL WITH NO REVISIONS	10/15/17	BB 11-6-17 VL
5	07/31/19	Rev: 5 Reapproval with No Proposed Changes	08/02/19	

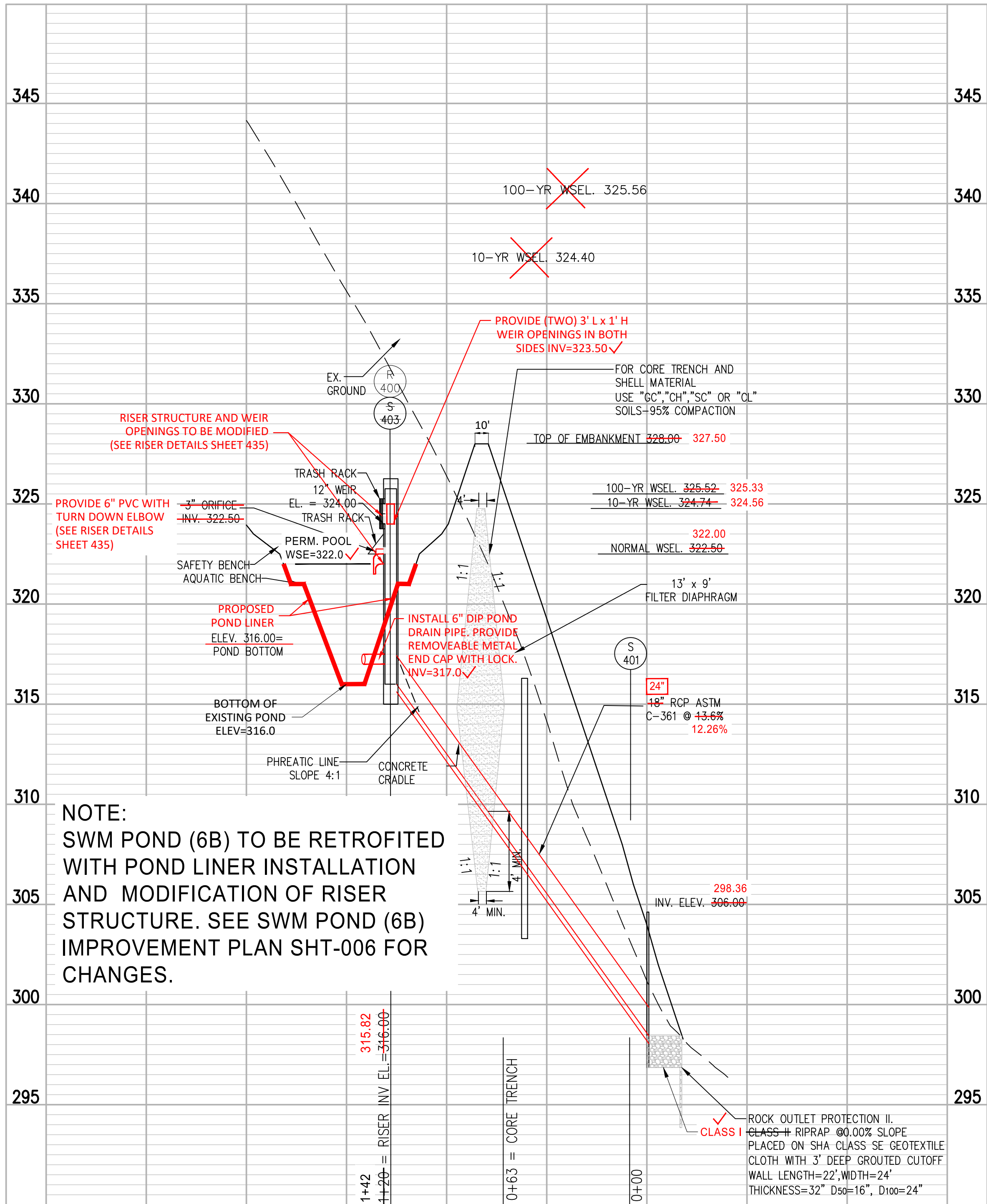


SHEET SWM-3

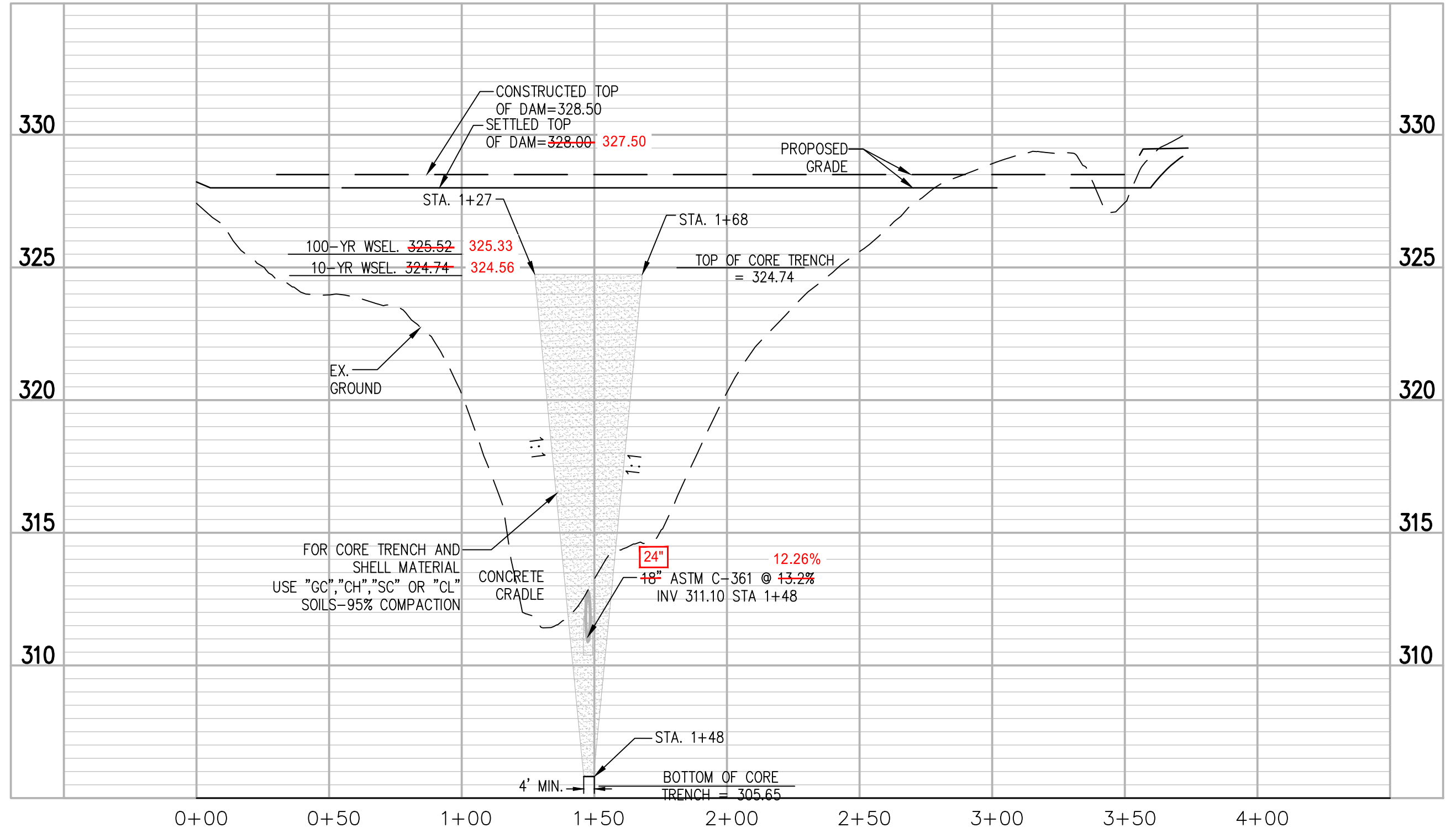


OWNER / DEVELOPER
MS GLADHILL FARM, LLC
8401 GREENSBORO DRIVE, SUITE 450
McLEAN, VA 22102
PHONE: 703-821-2500
CONTACT PERSON: BOB SPALDING

Cad file name : Z:\Draws\0059-00-00 - M&S - Tallyn Ridge\CAD\Phase 1A\Draw 10-as-built\Redline Pond 6B - County Engineering Use ONLY\As-built RETROFIT-SHA-4-A-435-A-SWMPOND6B_LINER_06.dwg



PRINCIPLE SPILLWAY PROFILE -- POND 6B PROFILE VIEW
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'



CENTERLINE OF EMBANKMENT -- POND6B PROFILE VIEW
HORIZONTAL SCALE: 1"=40'
VERTICAL SCALE: 1"=4'

Redlined Cross-Sections with key elevation being checked

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE INFORMATION AND BELIEF, AND AS OF THE LATEST DATE SHOWN, THAT THE AS-BUILT INFORMATION FOR TALLYN RIDGE PHASE 1A-1D-POND 6B SHOWN HEREON IS CORRECT, AND THAT THE LICENSEE EITHER PREPARED OR WAS IN RESPONSIBLE CHARGE OVER ITS PREPARATION AND THE SURVEYING WORK REFLECTED ON IT. ALL IN COMPLIANCE WITH REQUIREMENTS SET FORTH IN TITLE 09 DEPARTMENT OF LABOR, LICENSING, AND REGULATION, SUBTITLE 13 BOARD FOR PROFESSIONAL LAND SURVEYORS CHAPTER 06 MINIMUM STANDARDS OF PRACTICE, REGULATION 12 BUSINESS PRACTICE.

RENA D. BUTLER
PROFESSIONAL LAND SURVEYOR
MARYLAND LICENSE NO. 21617
LICENSE EXPIRES/RENEWES: JUNE 27, 2023

6/16/22 DATE

FREDERICK SOIL CONSERVATION DISTRICT

Steve Latham
Assoc. District Manager

2-14-22

SCD and NRCS approval for sediment and erosion control is contingent upon issuance of all applicable regulatory permits.

FREDERICK COUNTY, MARYLAND DEVELOPMENT REVIEW ENGINEERING			
APPROVED:	<i>David A. Cohen</i>	11/12/15	DATE
DEVELOPMENT REVIEW CHIEF			
APPROVED:	<i>J. L. Latham</i>	11/11/15	DATE
STORMWATER MANAGEMENT			
REVIEWED IN ACCORDANCE WITH LOCAL COUNTY REQUIREMENTS. FREDERICK COUNTY ASSUMES NO LIABILITY FOR DESIGN AND/OR CONSTRUCTION. APPROVAL IS VALID FOR TWO (2) YEARS [ONE (1) IF PUBLIC WATER AND/OR SEWER IS INVOLVED] AFTER THE LAST DATE SHOWN ABOVE. THE PROJECT MUST BE UNDER CONSTRUCTION BEFORE THE APPROVAL EXPIRATION TO BE CONSIDERED ACTIVE. OTHERWISE, RESUBMITTAL OF PLANS, INCLUDING APPLICABLE FEES, MUST BE MADE TO DEVELOPMENT REVIEW FOR REAPPROVAL. FEES FOR RESUBMITTAL CANNOT BE WAIVED.			
REV.	DATE	REVISION / DESCRIPTION FILL IN THESE BLOCKS FOR REVISIONS ONLY	CONSULTANT: DATE AND INITIAL
4	10/15/17	IP RE-APPROVAL WITH NO REVISIONS	10/15/17 BB
5	07/31/19	Rev. 5 Reapproval with No Proposed Changes	08/02/19 BB

AS-BUILT CERTIFICATION

I hereby certify that the facility shown on this plan as being constructed in conformance with the signed improvement plans and as highlighted on the as-built plans provided.

Signature

P.E. Number:
Date:

MISS UTILITY



BEFORE YOU DIG CALL
800-4-A-MISS
PROTECT YOURSELF, PROTECT THE TWO
WORKING DAYS NOTICE

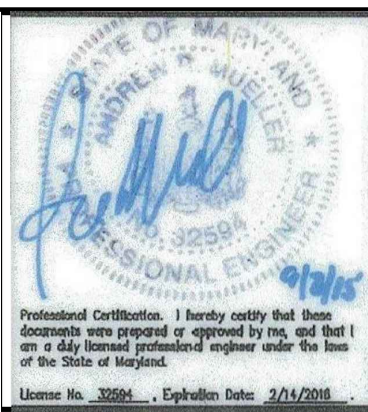
THIS DRAWING DOES NOT INCLUDE NECESSARY
COMPONENTS FOR CONSTRUCTION SAFETY. ALL
CONSTRUCTION MUST BE DONE IN COMPLIANCE
WITH THE OCCUPATIONAL SAFETY AND HEALTH
ACT OF 1970 AND ALL RULES AND
REGULATIONS THEREOF APPROPRIATE.

THE CONTRACTOR TO CALL MISS UTILITY TO
HAVE ALL EXISTING UTILITIES MARKED 48
HOURS PRIOR TO ANY CONSTRUCTION.

OWNER / DEVELOPER

MS GLADHILL FARM, LLC
8401 GREENDSBORO DRIVE, SUITE 450
McLEAN, VA 22102
PHONE: 703-821-2500
CONTACT PERSON: BOB SPALDING

PLAN STATUS	
DATE	DESCRIPTION
07/01/21	SWM POND 6-B RETROFIT DESIGN PLAN & CONVERSION
10/27/2021	SWM POND 6-B RETROFIT SCD RESUBMISSION
11/30/2021	SWM POND 6-B RETROFIT SCD UPDATED CALCS
12/07/2021	SWM POND 6-B RETROFIT SCD FOREBAY UPDATE
06/20/2022	SWM POND 6-B FINAL ASBUILT



CBM Consulting

FOR REVISIONS AFTER 7/31/2019 ONLY
FOR REVISIONS AFTER 9/01/2020 ONLY

NEW MARKET, ELECTION DISTRICT NO. 9

REDLINE RETROFIT SWM PROFILES - POND 6B

IMPROVEMENT PLAN
TALLYN RIDGE

FINAL ASBUILT POND 6B

TAX MAP 78, GRID 20, PARCEL 742, LOTS 1-4, TAX MAP 78, GRID 19, PARCEL 55, ACCT. # 09317546, # 09317554, # 09317562 & # 09317570

LIBER 9283 AT FOLIO 068

FREDERICK COUNTY, MARYLAND

Bowman Consulting Group, Ltd.
18 W. Church St.
Frederick, Maryland 21701

Phone: (410) 224-7590
Fax: (410) 224-7592

www.bowmanconsulting.com
© Bowman Consulting Group, Ltd.

Bowman
CONSULTING

AMKKMB	AMKKMB	JS
DESIGN	DRAWN	CHKD
SCALE	H:	
	V:	
JOB No.	5747-01-003	
DATE :	SEPTEMBER 2015	
SWM-32		
SHEET 434-A 6 OF 8		

